SavingFood

An innovative solution to tackle food waste through the collaborative power of I&CT networks

DELIVERABLE

D5.4: Behaviour change analysis
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Executive summary

This deliverable reports the behaviour change results of the SavingFood project through a set of three white papers. A white paper format was chosen as to inform the reader about the actual set up of a behaviour change intervention, as well as to report the results and lessons learned to a broader audience. The first white paper focuses on the set up and lessons learned of the awareness-raising events that were able to reach more than 9000 citizens in the four pilot countries. The second white paper focuses on the pledge campaign, crowdsourcing campaign and the ambassadorship. The final white paper focuses on the development of the SavingFood platform in relation to the engagement and behaviour change strategy, with the organisation of 28 food saving events through the platform. In all three white papers, positive outcomes are reported in self-perceived change towards awareness, knowledge, concern or actual participation in fighting food waste. Results are reported through the collection of feedback from citizens (as volunteers), and from organised in-depth interviews with the coordinators of the four food redistribution organisations from the SavingFood project.

As a next step, the white papers will be published and disseminated through the SavingFood channels, and in the scientific community.

We want to thank all citizens who participated in the behavioural change studies of the SavingFood project, as well as the coordinators of the pilot organisations for their participation in the interviews and sharing of their experiences.
Introduction

This deliverable reports the outcomes of the behaviour change analysis that was performed during the pilot implementation trials of the SavingFood project. The pilot trials were set up in 2017 and continued until April 2018, with communities of the SavingFood food redistribution organizations in Greece (Boroume), Hungary (HFA), Belgium (FoodWin) and the United Kingdom (Feedback). During these pilot trials, the SavingFood platform was used for organizing two types of food saving events, being (1) gleaning events to collect leftover crops from farmers’ fields and redistribute it to recipient organisations, and (2) farmers’ market events to redistribute unsold food at the end of the market to recipient organisations. Through the SavingFood platform, coordinators of the food redistribution organizations were able to plan and schedule these events, while citizens (or volunteers) could subscribe and find all the necessary details about it. Through the provided ICT solution, the food redistribution organisations learnt new ways of how to organise their food saving events in a more connected way with volunteers, food donors and recipient organisations.

During the pilot implementation trials, the behaviour change analysis had the purpose to investigate changes in behaviour on the following levels: (i) the degree of participation and volunteer effort in food waste reduction such as during food saving events, (ii) the degree of knowledge about how to save food in a collective way and information gained about the food redistribution process, (iii) the degree of awareness about food waste in general. To reach these objectives, an extensive engagement strategy was set up that included different behaviour change techniques, being motivational videos, a quantification report with statistics about the amount of saved food, ambassador or leadership tactics, awareness raising events, social media pictures, crowdsourcing tips for new donors and charities, and a pledge campaign. The engagement-related behaviour change approach relied on principles of community based social marketing (Lee & Kotler, 2015) and the 7E-framework (Bambust, 2015). For more information about the outlined strategy, the following documents can be consulted:

- SavingFood Deliverable 2.5: Strategizing SavingFood – Engagement and behaviours V1
- SavingFood Deliverable 2.6: Strategizing SavingFood – Engagement and behaviours V2

In the following deliverable, the behaviour change results are reported through a set of white papers. In total, three white papers are provided that describe the processes of how to set up specific behaviour change techniques, followed with results and lessons learned about crucial factors influencing behaviour change. The results were collected via volunteers’ surveys and in-depth interviews with coordinators of the food redistribution organisations.

Since the aim is to redistribute wider these white papers, and to be spread independently – some white papers have repetitive sections in the introduction or theory. However, the actual implementation and results are specific for each white paper.
A short description of each white paper is provided below:

- **White Paper I – Supporting behavioural change around food waste through awareness raising events:**
  In this white paper, explanation is provided of how an awareness raising event about food waste can be organised, and how it can lead to behaviour change among citizens. The white paper specifically investigates the change in beliefs and knowledge about food waste with citizens through the participation in the awareness-raising events. Results and lessons learned are reported through a self-assessment survey filled in by volunteers and participants from the events in Greece, Hungary, Belgium and the United Kingdom.

- **White paper II: Supporting behavioural change around food waste through crowdsourcing, ambassadorship and pledges:**
  In this white paper, explanation is provided of how a crowdsourcing campaign can be organised for collecting tips from citizens about potential (new) food donors and charities as recipients, how ambassador and leadership tactics can be set up, and how a pledge campaign can be organised. Lessons learned are reported through collected logging statistics and interviews with the four food redistribution organisations.

- **White paper III: Supporting behavioural change around food waste through the SavingFood platform: gleaning and farmer market events:**
  This white paper focuses on the actual usage of the SavingFood platform for organising food saving events. The development process of the platform is explained, in relation to the development of the behaviour change strategy. Results and lessons learned are reported through a user survey with registered users from the platform, as well as through in-depth interviews with coordinators of the SavingFood pilots.
White paper I: Supporting behaviour change around food waste through awareness-raising events

Summary
This white paper learns from food waste warriors about how to set up an awareness-raising event around food waste, such as “disco soup” events, food festivals and wholesale markets, and how it supports in reaching behaviour change among citizens. The purpose of these awareness-raising events is to raise public awareness about food waste, and to inform citizens about the easy and effective ways of how to rescue and redistribute surplus food. During the SavingFood awareness-raising events, participants learnt how to make delicious meals out of saved surplus food through cooking demonstrations, and could participate in lots of different side activities such as informative workshops about food labels, interactive narration for children, photo exhibitions, etc. Participants were also motivated to take direct action by joining up as a volunteer at the local food redistribution organisations with support of the SavingFood online platform. Feedback was collected from 175 participants in the events through self-assessment surveys. The surveys investigated the self-perceived change in behaviours on the level of increased awareness, knowledge, self-efficacy and intentional behaviour towards fighting food waste. The results indicate that the awareness raising events were an effective means in supporting behavioural change towards the former stated variables and helped contributing in increasing motivation towards reducing food waste on the individual and collective level.

1. Introduction
During the SavingFood project (January 2016 – April 2018), a series of awareness raising events were organised by four local food redistribution organisations in Greece (Boroume), Hungary (HFA), Belgium (FoodWin) and the United Kingdom (Feedback). In total, eleven events were organised that reached in total around 9000 citizens in the four different countries. The purpose of these awareness-raising events was to increase public awareness around food waste, and to motivate citizens in taking direct action by joining the collective movement of saving and redistributing surplus food through the local organisations and with the support of the SavingFood online platform.

Feedback and FoodWin are specialised in organising “disco soups”. These events are fun feasts during which meals are cooked and consumed with surplus food that would have otherwise been wasted. In this format, participants learn how to make meals out of food waste ingredients, after which they are invited to celebrate it with a drink and a DJ party. Some side activities are also organised, such as a series of talks, film screening, juggling, fermenting/pickling workshops, etc.

Another format is the food festivals as practiced by Boroume and HFA. The food festivals were large-scale organised events in the public space, often in collaborative partnerships with other organisations. To reach as many citizens as possible, these events were promoted through radio announcements, television coverage, press releases, etc. During these events, different types of activities were organised to sensitize the general public around food waste, and which were made accessible for all age groups. Examples of activities include cooking demonstrations by well-known food bloggers, photo exhibitions, workshops on sustainable food systems, interactive narration for children and educational activities, “say cheese” photo booths with imperfect fruits and vegetables, etc. Last, there was also the format of wholesale markets as practiced by HFA, which is very similar to the set-up of food festivals, but mostly targets farmers and food donors.
From the above examples, it is clear that there is not a fixed format on how to organise an awareness-raising event. An awareness-raising event can include many different activities that create enthusiasm, make it fun and enjoyable, educate, and enable action. However, a choice in format is being made depending on the number of invited participants, the profile of the target audience (e.g. wholesale markets), the type of organised activities, and to what extent it is preferred to be positioned as a community feast (i.e. disco soups) or as a larger public awareness-raising campaign (i.e. food festivals).

The awareness-raising events organised in the framework of the SavingFood project were mostly done in collaborative partnerships with other organisations (e.g. with Ethelon and WWF Greece for Boroume in Greece). The partnerships were set up with organisations that set up similar activities with community groups, and were open to partner up about this particular cause. The partnerships strengthened the dissemination efforts and recruitment capacities of the event, and resulted in a more effective organisation and cost efficiency.

Depending on the type of activities that were organised during the awareness-raising events, an appropriate venue was chosen either indoors or outdoors (or combined). Ideally, a venue was chosen where similar types of events in sustainability were organised before, or which was managed by one of the hosts of the event. All venues were easily accessible for participants by public transport, and were located at a central spot in the city where also passers-by were motivated to participate. All venues had kitchen facilities, cooking equipment, and some tables and chairs. Further, space was also foreseen for organising a DJ party afterwards.

In advance of all awareness-raising events, surplus food was collected from food donors in the local neighbourhood, or through an organised gleaning or farmers’ market event. Through the SavingFood platform, a gleaning or farmers’ market event can be organised through which leftover crops from farmer’s fields can be redistributed, or from unsold food at the end of the farmers’ market (See White paper III). The surplus food, mostly fruits and vegetables, was used to cook and to demonstrate that delicious meals can still be made out of the waste ingredients.

Besides the central cooking activities, lots of side activities were organised to make the event informative and enjoyable at the same time. Examples of side activities were: juggling, fermenting/pickling workshops, talks by experts in food sustainability, workshops about food labels and how to conserve food at home, interactive narration for children, pottery sessions, photo exhibitions with food waste related pictures and projections and animations about food waste and how to prevent it, info points with brochures, “say cheese” photo booths with pictures of participants holding “imperfect” fruits and vegetables, etc.

![Figure 1: Food festival organised by Boroume (left) - Disco soup organised by Feedback (right).](image)
2. Behaviour change through eliciting engagement

Within the SavingFood project, the main objective of the behaviour change campaign is to set up a social movement consisting of citizens (as volunteers), food donors and recipient organisations to save food surplus through the organised food redistribution processes using the SavingFood ICT solution, therefore the online platform. By creating synergies among these three stakeholders, the project aims to increase the level of participation and volunteer effort of all stakeholders in redistributing surplus food, increase the degree of knowledge about how to save food in a collective way, and to increase the degree of awareness about food waste and food sustainability in general.

The behaviour change framework of the SavingFood project consists of eight behaviour change techniques, or interventions, that try to understand, and influence citizens’ behaviour related to food waste. The framework is based on insights from a large-scale survey that measured the initial motivations and barriers to take action against food waste prior to the deployment of the SavingFood platform\(^1\). This survey was launched among the existing communities of the four local food redistribution organisations, but also targeted at citizens without volunteer experience or awareness about the topic. The results showed that citizens were mainly interested in joining the SavingFood project out of social and intrinsic motivations. Citizens (volunteers) reported that they would like to become part of a broader like-minded online community, and that they would like to help and contribute to the organisation of food saving events and matching of food donors with charity organisations. Based on these insights, the SavingFood behaviour change framework outlined an approach with eight interventions to reduce barriers for participation and increase benefits for the encouraged behaviour. The behaviour change framework is underpinned by principles of community based social marketing\(^2\) and the 7E-framework\(^3\) (See info box 1).

Amongst those eight interventions, the awareness-raising events is one specifically chosen tactic to involve citizens, and to let them experience food saving practices in an enjoyable way. The SavingFood awareness-raising events show that a group of people are behind the action, and share the same concerns and beliefs.

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around food waste. The events support social behaviour and motivations, as participants could connect, collaborate together on a specific task and feel connected.

To enable behavioural change outcomes around food waste, the following principles were applied during and also after the events:

- **Supporting the group** in practising or showing the desired pro-environmental behaviour towards fighting food waste: During the SavingFood awareness raising events famous food bloggers were present that gave cooking demonstrations. They gave an (exclusive) example that others could follow. Furthermore, active volunteers of the local food redistribution organisations were also present during the events. These active volunteers exchanged their experience with potential new volunteers, and acted as an “ambassador” to motivate and build trust with others. During the events, information stands were also available where participants could gather some brochures, were educated about causes and impact of food waste, and could ask for more specific information about the food redistribution model of SavingFood.

- **Putting the group into the spotlight** through communicating stories and pictures of participants who adopt the desired behaviour: After and during the SavingFood awareness-raising events, photographs and videos were taken of participants that put the food saving behaviour into a positive spotlight. Pictures were taken of participants chopping and slicing vegetables and fruits, and these stories were shared (real-life) through Instagram and Facebook. As such, it triggered the curiosity of others, and also a fear of missing out (lots of others are doing it, why shouldn’t I?).

- **Feeling the group** - People often practice (a new) behaviour when they feel inner pressure, or group pressure: During the SavingFood awareness raising events, a public event was created on Facebook through which citizens could indicate their presence. This evoked the possibility that also others in the network saw this, and reacted or liked it. As such, it increased the chance of moving from an intention to join the event towards actual participation. Further, during the events, participants could also sign (online and offline) a pledge to state their good intentions for joining the SavingFood movement and fighting food waste. The amount of signed pledges is stated on the SavingFood website, which shows the size of the community and motivate towards signing it by others.
3. Behaviour change models and stages of change

For defining the behavioural tactic of the awareness raising events and measuring the actual change, principles of several theories on behavioural change models, and stages of change were followed. Behaviour change models help to explain specific behaviours by identifying the underlying factor that influence them. On the contrary, theories of change explain how behaviour can be changed over time, and how behaviour changes in stages from one type of behaviour to another one⁴. This paragraph shortly reflects upon these theoretical frameworks for the development of the tactic.

**Self-efficacy theory:** The tactic of organising awareness-raising events for reaching behavioural change is greatly in line with the principles of the self-efficacy theory⁵ of Bandura. The self-efficacy theory explains that one’s belief in one’s ability is related to judgements of how well one can execute a specific task. This judgement is based on different types of information that one has, such as personal bad or good experiences related to the task, vicarious knowledge gained through modelling, etc. The judgement about self-efficacy will determine if one has control to perform the behaviour or is less likely to do it. Through the awareness-raising events, one’s judgement might be affected by the provided information that can shape a positive attitude toward food surplus redistribution, and through the direct experience of making meals out of surplus ingredients, or modelling of the food saving behaviour of other volunteers. The possession of the necessary skills and knowledge, and one’s perceived capabilities to perform the behaviour are essential requirements to reach

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sustainable change in behaviour. Therefore, the awareness raising events organised particular activities to enhance skills and knowledge to influence the self-efficacy of citizens towards food saving behaviour.

**Self-perception-theory:** Another related behaviour change model is the self-perception theory of Bem. The **self-perception theory** investigates how people perceive themselves and develop attitudes after a certain experience. People observe their own behaviour and reflect if they will sustain the action. The theory also states that the more people are engaged in the desired behaviour, the greater the chances are to sustain it. This happens because people tend to perceive themselves as the type of person who participates in these types of actions, which upon reflection alters their beliefs about themselves. In other words, when someone engages in an awareness-raising event, it is likely that the person forms the perception of being a “food waste warrior”. Through the awareness raising events, people are also motivated to join in other (future planned) actions, such as in volunteering in gleaning and farmers’ market events, which in turn might lead to a greater belief in the importance of food surplus distribution and actual volunteering behaviour. The self-perception of being a food waste warrior is also reinforced through social media messages that are spread during and also after the organised events.

**Stages of change:** Last, the tactic of organising awareness-raising events also greatly contributes to raising consciousness among people who are not yet aware of the food waste issue. In order to maintain the pro-environmental behaviour towards fighting food waste and volunteering in food redistribution processes, one has to pass several stages from pre-contemplation (not intending to make a change), towards contemplation (intending to make a change), towards preparing the action, and maintaining it. Without the necessary support, people will remain in the first stages due to lack of motivation, especially those who are in the pre-contemplation stage. Therefore, in line with Prochaska and Johnson (1998), it is important to raise awareness and consciousness about the issue and provide feedback and information about the causes. During the SavingFood awareness-raising events, information about the causes of food waste and statistics were provided at a booth, or were shared by the food chefs who organised the cooking demonstrations. This information was provided to raise consciousness about the food waste issue and find motivation to act.

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4. Behaviour change results

During the SavingFood awareness-raising events, feedback was collected from participants to rate their experience with the event, and to know if any change occurred in their ways of thinking, attitude or actual behaviour towards fighting food waste. The feedback about the awareness raising-events was collected in different ways. In 2017, feedback forms were distributed during the events in Greece and Hungary that were printed on postcard size. After the completion of the questions, the participants could tear a food saving recipe along the dotted line from that postcard. In 2018, a survey was distributed during the events in Belgium, the UK and Greece and which participants could complete on paper or online through a tablet.

4.1. Feedback form – postcard

Design of the feedback form

In total, 91 responses were gathered through the feedback form during the food festivals, with 70 responses from Hungary and 21 for Greece. The postcard included six questions: (1) a satisfaction score from 1 to 10 to rate the overall experience with the event, (2) communication and dissemination channels through which participants heard about the event, (3-4) two rating scales to measure change towards food saving behaviour, one specifically about knowledge increase and one about self-efficacy, (5) the intention to join the SavingFood platform, and (6) an open text box for further feedback and comments.

Results

The mean satisfaction score about the overall experience with the event was 7.60 (on a scale of 10), with a minimum score of 4 and a maximum score of 10 (μ = 7.60; SD= 1.68). The mean score for participants in Greece (μ = 9.66) was higher than in Hungary (μ = 6.98). Most participants got to know the event through local organisations and volunteers who spread the word (63.74%), and social media (14.29%).

The outcomes on the behaviour change statements for increase in knowledge and perceived self-efficacy are reported in the table below:

<table>
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<th></th>
<th>Mean score</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
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<tbody>
<tr>
<td>Knowledge: By participating in this event, I feel my knowledge about food waste and surplus redistribution has increased</td>
<td>4.28</td>
<td>.719</td>
<td>90</td>
</tr>
<tr>
<td>Self-efficacy: By participating in this event, I feel I can take more individual action to help reduce food waste</td>
<td>4.17</td>
<td>.691</td>
<td>90</td>
</tr>
</tbody>
</table>

Table 1: Rating scales for measuring behaviour scale: knowledge and self-efficacy (1= strongly disagree, 2=disagree, 3= neutral, 4= agree, 5= strongly agree).

The high mean scores indicate that participants in the food festivals, for both Hungary and Greece, perceived to have learned something new about food surplus redistribution by participating in the events, and also felt more able and confident to take individual actions against food waste. These statements proof that organising awareness-raising events is an effective mean for supporting behaviour change around food waste, and support in an increase of the necessary skills and knowledge and one’s perceived capability to perform the behaviour.

Furthermore, a linear relationship could be identified between the satisfaction score about the overall experience with the event and the behaviour change statement on knowledge (r=.615, N=90, p.000 ➔
moderate to strong correlation), and the statement on self-efficacy ($r=.737, N=90, p.000 → strong correlation). This means that a higher satisfaction about the overall experience with the event is correlated with increases in rating of the behaviour change statements, a better overall experience with the event will thus more likely result in behaviour change. However, no significant results could be found between Hungary and Greece for these two statements.

Last, participants could also indicate their intention towards registering on the SavingFood platform as a volunteer, donor or recipient organisation. 79.1% of the participants affirmed to do so, 17.6% would not and 3.3% was already a registered member. It should be noted that at that point in time the SavingFood platform was still in beta-testing phase, and not open to the general public. Only a selected group of volunteers was permitted access to the platform for testing purposes. The intention to register on the SavingFood platform was higher in Greece than in Hungary, although no significant differences were found with the former mentioned variables on behaviour change.

In the open text boxes, some feedback was written down, such as the reasons for (not) willing or able to register, e.g. “no time”, “I don’t know how”, “would love to, but cannot”, “this is a lovely idea”, “keep going”.

Figure 2: Feedback form printed on postcard size (front and back).
4.2. Survey results

Design of the survey

During the awareness-raising events in March and April 2018 in Belgium, the UK and Greece, a survey was prepared for gathering feedback from participants. Again, the purpose of this questionnaire was to gather feedback about the overall experience with the event, and to investigate whether any behaviour change occurred on the levels of way of thinking, attitudes or actual behaviour towards fighting food waste. For this, five statements were included to measure the concept of behavioural change, and were related to different types of intrinsic motivations for joining the event and socio-demographic characteristics such as age and gender.

In total, 84 responses were gathered through the questionnaire during the events, with 53 responses from the UK, 25 from Greece and 6 from Belgium. Overall, there were more female participants who filled in the questionnaires at the events: 67.5% females, 28.9% males and 3.6% other; and most survey participants were between 21 and 30 years old (32.5%), followed by 41-50 years old (21.7%), younger than 20 years (16.9%), and 31-40 years old (15.7%). These results are in line with the first in-take questionnaire that was organised in August - September 2016 for having a baseline measurement about food saving practices, concern, knowledge and volunteering behaviour before the start of the SavingFood pilots and usage of the online platform9. During the events, there was a large presence of females and also a higher expected percentage of participants younger than 20 years old.

Results

In 2018, the mean satisfaction score about the overall experience with the event was higher, being 8.83 (on a scale of 10), with a minimum score of 3 and a maximum score of 10 (μ = 8.83; SD= 1.28). The mean score for Greece was higher (μ = 9.08) than the UK (μ = 8.62) and Belgium (μ = 8.17). Most participants got to know the event through social media (39.3%), via friends, colleagues or family members (33.3%), or via other means (23.8%), which were mostly via communications of other related food saving organisations or via collaborative organisations in the event (such as OLIO, Ethelon, etc.), or by noticing the event as a passer-by.

Participants’ motives for joining the awareness-raising events were mainly out of the intrinsic motivations for providing support to the food saving community (34.5%), out of interest (33.3%) and out of concern (27.4%).

Figure 3: Food festival in Greece (left), and disco soup event in Manchester (right).

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To measure any self-perceived change on the levels of knowledge, attitude or actual behaviour towards fighting food waste, five rating scales were included in the questionnaire. After participating in the event, participants could give a score on these statements (on a scale of 5) to indicate whether they felt more aware about the food waste issue, felt to have learned more about the causes of food waste and need for food surplus distribution, perceived to obtain more knowledge about how to get involved in reducing food waste, and if they feel more motivated towards taking individual and collective actions against food waste.

The outcomes on the behaviour change statements for increase in knowledge, awareness and change in behavioural intention are reported in the table below:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean score</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness: After attending the event, I am more aware of the importance of food waste</td>
<td>4.16</td>
<td>.956</td>
<td>83</td>
</tr>
<tr>
<td>Knowledge: By attending this event, I have learned more about the causes of food waste and the need for food surplus redistribution</td>
<td>4.24</td>
<td>.815</td>
<td>80</td>
</tr>
<tr>
<td>Knowledge: By attending this event, I have learned how I can get involved in reducing food waste</td>
<td>4.27</td>
<td>.786</td>
<td>82</td>
</tr>
<tr>
<td>Intentional behaviour (individual level): After attending this event, I am more motivated to reduce my own food waste</td>
<td>4.24</td>
<td>.840</td>
<td>82</td>
</tr>
<tr>
<td>Intentional behaviour (collective behaviour): After attending this event, I am more motivated to join a saving food action of the SavingFood food redistribution organisation</td>
<td>4.16</td>
<td>.853</td>
<td>82</td>
</tr>
</tbody>
</table>

Table 2: Rating scales for measuring behaviour scale: awareness, knowledge and intentional behaviour (1= strongly disagree, 2=disagree, 3= neutral, 4= agree, 5= strongly agree).

All rating scales obtained high mean scores, especially the statement about gained information about how to get involved in reducing food waste (μ = 4.27; SD=.786). Again, the high mean scores indicate that the participants in the food festival in Greece and the disco soups in the UK and Belgium perceived to have learned something new, are more aware and consciousness about the food waste issue, and feel motivated (especially on the individual level) to take action. These statements prove again that organising awareness-raising events is an effective mean for supporting behaviour change around food waste, and can help in increasing motivation towards the pro-environmental behaviour.

Further, a linear relationship could be identified between the awareness statement “After attending the event, I am more aware of the importance of food waste” and the knowledge statement “By attending this event, I have learned more about the causes of food waste and the need for food surplus redistribution” (r=.800, N=80 ➔ strong correlation). This means that a higher score for the awareness statement is correlated with increases in rating of the knowledge statement about the causes of food waste and need for food surplus distribution. This finding can be explained through the trans-theoretical model of behaviour change10, as in order to raise awareness and consciousness about a particular matter one has to share (educational) information, proof or confront people with the issue.

Last, the intention of participants after the event for sustaining the pro-environmental behaviour is also positive. 59.7% indicates that they would like to register as a volunteer for the next upcoming gleaning or

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farmers’ market event, and 50.6% states to visit the website of SavingFood after the event. By combining both questions, results show that 52.2% has the intention to visit the SavingFood platform and to register as a volunteer for the next upcoming gleaning or farmer market event (of which 11.9% is currently already registered). 20.9% does not have any further intention to sustain the action (neither to visit the website, nor to register as a volunteer for an upcoming event), while 26.8% indicates that their intention is rather likely that they will visit the website (again) and register as a volunteer for an event. This time, no significant relationship could be found between the satisfaction score about the event and the intention to register as a volunteer. Further, it should also be noted that the intention to join another SavingFood (or any saving food activity) event was higher for Greece (65.2%) and Belgium (100%), than the UK (51.3%).

Last, some feedback was given through the open text boxes. Overall, the feedback was very positive and mentioned that it was a great occasion to meet like-minded people. However, the feedback from the UK participants also revealed that some participants were already attending the events for multiple times. These participants mentioned that the events should be more widely advertised and broadened up to other target groups who are less aware of food waste.

Some illustrative quotes from participants at the event:

“Excellent event! I really enjoyed the time I have spent with the Boroume people. The volunteers were passionate about what they were doing! I understood that they really believed in the cause.” (Greece, female, 41-50 years)

“The place and venue was nice. Liked atmosphere and people. Good to meet likeminded people” (UK, female, 31-40 years old)

“Really good, could do more expansive advertisement on Instagram and around Manchester” (UK, male, 21-30 years old)

“I really liked learning how to use up all the broccoli and the soup was delicious” (Belgium, female, 20 years)

“Target more groups who are less aware of food waste, and advertise more widely on social media” (UK, female, 61 to 70 years old)

5. Conclusions

The organised awareness-raising events during the SavingFood project were able to reach out to a significant amount of citizens, donors and recipient organisations in the four pilot communities in Greece, Hungary, the UK and Belgium. In total, around 9000 citizens were engaged through these events, and which led to a positive behavioural change through their participation. The feedback form and the survey results showed that the events are an effective tool for raising awareness about food waste, help in increasing self-efficacy for fighting food waste on the individual and collective level, and in distributing knowledge about the matter. Further, the participants in these events were also very positive towards taking further action after the event, e.g. more than 50% indicated to have the intention to visit the SavingFood website, or to register as a volunteer in the next upcoming gleaning or farmer market event. The food redistribution organisations also testified that indeed a number of participants in these events joined as a new volunteer in their network (around 5 to 10 volunteers per event), and has led to an increase in visibility and recognisability of their organisation through the press contacts. Overall, the awareness-raising events were an effective tactic to engage citizens in a motivating way and in a festive atmosphere – and it will be sustained also after the SavingFood project as to further outreach and extend the food saving community.
Summary

This white paper discusses three behavioural change interventions of the SavingFood project that targeted citizens who are concerned about the issue of food waste, but who are not yet involved as a volunteer in a food redistribution organisation. The baseline survey organised by SavingFood in the four pilot countries in 2016 demonstrated that an important segment of citizens in the cities were the pilots are currently active are showing an interest to act against food waste, but are not able to participate in food surplus saving events because of several barriers, or are still hesitating to participate. Taking inspiration from the 7E-approach and from community-based social marketing, three behavioural change interventions were deployed that could provide these citizens with a concrete opportunity to act meaningfully and to support the battle against food waste: (i) making a commitment by signing a pledge, (ii) participating in crowdsourcing campaign or (iii) becoming an ambassador for the food redistribution organisation. The interventions were deployed in the final two months of the project from March to April 2018. The coordinators of the pilots who were interviewed about their experience with these three mechanisms have positive impressions from the actions, and confirmed that it are good ways to involve citizens who otherwise would not be engaged into the broader working of their organisation. In this way, the actions can contribute to a greater awareness of citizens (and other actors in the city) about the issue of food surplus redistribution, and to a greater visibility of the food redistribution organisations in the local neighbourhood. The experiences of the pilots teach us that it is important to contextualise these interventions and to embed them within the daily life context and habits of citizens. These not only allow, such as in the case of crowdsourcing, to capitalize on existing social contacts and trust relations between clients and shop owners, but also, such as in the case of ambassador programs, to involve a wide range of the population in a variety of tasks ranging from sharing posts on Facebook to tell school teachers about the existence of the issue of food waste and the food redistribution organisation. The SavingFood pilots will continue to use the designed interventions, will explore new opportunities and will refine them based on the lessons learned presented in this paper.

1. Introduction

Besides offering a platform that allows donors, recipient organisations and citizens to organise concrete food donations and food saving events, the SavingFood project also explored ways to create a broader movement and community around food surplus saving. In order to reach that objective a behavioural change strategy was devised based upon the 7E-model, and insights from Social Marketing and community-based social marketing.

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The target audience for these interventions were citizens in the countries where SavingFood was active: Hungary, Greece, the United Kingdom and Belgium. In this paper, we focus in particular on the role of 3 interventions: the pledge, the crowdsourcing campaign and the ambassadorship. For each of these interventions, we first briefly discuss the SavingFood rationale for deploying them, secondly, the way the intervention got implemented in each of the pilots and the results obtained, and thirdly, the experience of the coordinator of each of the pilot as well as some reactions from citizens. Each chapter ends with a conclusion where we present the main lessons learned.

In order to obtain these results, logging statistics were retrieved and also in-depth interviews with the coordinators of each of the pilots were organised in the last week of April 2018.

- **HFA and Filab**: Monday 23th April 2018, interview with Balasz Ceh
- **Feedback**: Tuesday 24th April 2018, interview with Dan Wooley
- **FoodWin**: Monday 23th April 2018, interview with Alice Codsi, responsible of FoodWin for the Belgian gleaning pilot
- **Boroume**: Friday 20th April 2018, interview with Dia Chorafa

The first part of the interview focused on the results in terms of numbers of tips received in the crowdsourcing actions or subscriptions to become an ambassador; the second part explored in more detail the concrete experience of the coordinators with the action and tried to identify the opportunities the intervention brought as well as the challenges for the future. Due to time constraints, we could not interview participants in order to understand their point of view. Nonetheless we tried to shed on the light of their experience via the eyes of the coordinator who stood in close contact with the people that signed the pledge, participated in the crowdsourcing exercise or signed up as an ambassador.

2. Behavioural change interventions

2.1. The pledge campaign

2.1.1. Why a pledge campaign for SavingFood?

The idea behind a pledge campaign is to let people make a small commitment in order to be able to ask later for a greater favour. The reasoning behind this commitment strategy is that when individuals agree to a small request, it often alters their perception about themselves and their attitudes towards the topic. In other words, building upon Darryl Bem, the commitment can cause the generation of a process by which people change their self-perception and gradually see themselves as the type of person who supports a cause and a certain initiative (McKenzie-Mohr, p.47). In the context of SavingFood, this reasoning was followed, seen the results of our survey in the pilot communities in 2016 (see D2.5: “Strategizing Saving Food: Engagement and Behaviours, v1”) that highlighted that a rather large segment of non-volunteers stated that they are concerned about the issue, but are still hesitating to join or experience barriers to participate in large tasks. Therefore, a pledge campaign was designed which the four food surplus redistribution organisations would propose people to sign it. The pledge was a clear commitment to support the battle against food waste and to become part of a larger group that wanted to stop it. Having signed the pledge, the four food surplus redistribution charities then requested via e-mail within two weeks to effectively sign up for the platform and to look at upcoming food saving events.
2.1.2. Implementation in the pilots

The implementation of the pledge campaign was common to the four pilots with respect to the wording of the pledge as to the process of asking requests.

2.1.2.1. The text of the pledge

In the SavingFood consortium, Feedback had already experience with working with pledges. They highlighted that the pledges should be of a general nature, encompassing all targeted actors of SavingFood. In other words one single pledge was needed that could incorporate a clear commitment that is valid for food donors, citizens and recipient organisations. Three different pledges would only generate confusion for people.

The following text was proposed as pledge:

**Saving Food is IN, are you?**

*Start saving food for you, your planet and mostly for those in need!*

*By signing our petition, you are:*

- Joining an expanding global movement promoting the end of food waste
- Supporting those in need and sharing positive vibes
- Helping our planet stay green

*It’s free, it’s quick and it helps you, those around you and those after you!*

*Even if you don’t have much time, you can be a signpost to something worth signing-up from.*

The chosen message focuses on the commitment of starting to save food instead of starting to save food in the ways the SavingFood platforms offers. Indeed, a food donor, a citizen or a recipient organisation can contribute by means of individual actions to avoid food waste: for example a store making a more efficient inventory of the needs of its customers or a household taking more care of the food quantities it buys in stores by avoiding purchasing bulk promotions. By committing to save food, we thus allow people to connect with ‘quick wins’ they can perform on an individual level. Nonetheless, the pledge already anticipates future steps. On the one hand, it highlights what signing actually means: joining an expanding movement to support those in needs and keep the planet green. On the other hand, the emphasis of being part of a network that transcends the individual act is already anticipated.

2.1.2.2. The pledging process

The pledging process consisted of three steps: signing the pledge, sending new requests based on the pledge commitment and finally follow-up response to these commitments:

1. Announcing and signing the pledge

The pledge could be signed in two ways: either online or either offline by means of a card. We therefore discuss here first the online process, followed by the offline process.

The four food surplus redistribution charities announced the pledge both via social media (mostly Facebook) but also via their digital newsletters or emails. SavingFood Ambassadors (see next section) were contacted to forward the pledge messages online to their network. On the SavingFood platform, the pledge was published in the section of ‘goodies’ and it was available for each organisation in the language of its country: English, French, Greek and Hungarian. By clicking on «sign» and granting (or not) us permission to publish publicly their details, citizens, donors and charities could make a commitment.
People could not only sign the pledge online, but could also do it offline by means of a postcard. These postcards were mostly disseminated at the awareness-raising events organised by the project partners. On the left side one could read the pledge and on the right side one could sign it. By only having to hand in to a SavingFood collaborator the right side of the post card, the person who committed could take his commitment home as a reminder. The side with the signature and contact details was collected by the pilot coordinator who then manually inserted the data into the online pledge system.

Since studies have demonstrated that making a commitment publicly has a higher impact on the subsequent action than keeping it private\textsuperscript{15}, SavingFood also asked permission to the people that signed the pledge to make their commitment public by at least publish their name and country on the platform’s pledge page.

2. Sending requests for further actions

Once a citizen, recipient organisation or a food donor signed the pledge, the coordinators of each of the 4 food redistribution charities used their contact details in order to gradually ask them more requests to build upon the initial commitment.

Within two weeks after having signed the pledge, the food redistribution organisations sent an email to remind people to have signed the pledge and to invite them to start avoiding generating food waste and to join the platform and become member of a concrete food saving community in their neighbourhood. In this way, the email thus moved the focus of commitments from individual actions to take actions as part of the saving food community. If the person effectively signed up as a new volunteer for food saving events on the platform, he/she became part of the platform communication process that supports gleaning and farmers’ markets on the platform. The same applies for a donor or charity in the general food rescue module on the platform. If the person who committed on the pledge does not register as a volunteer, a new reminder was sent after two weeks with this time highlighting results of food saving events in order to reinforce the message that building upon his/her new commitment is necessary and beneficial for those in need and for the planet.

\textbf{Figure 4: SavingFood online pledge – SavingFood Platform}

2.1.3. Results of the pledge campaign

The pledge campaigns were started by the 4 pilots end of February and ran for 2 months. In total, 1068 pledges were signed, divided as follows under the different pilots.

<table>
<thead>
<tr>
<th>Pilot</th>
<th>Total number of pledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boroume (GR)</td>
<td>220</td>
</tr>
<tr>
<td>HFA (HU)</td>
<td>363</td>
</tr>
<tr>
<td>Feedback (UK)</td>
<td>90</td>
</tr>
</tbody>
</table>
What is striking in this figure is the difference between the number of pledges collected by Boroume and HFA and the number of pledges collected by Feedback and FoodWin. An explanation for this difference emanates from the fact that Feedback, as mentioned above, had already its own pledge. It turned out more difficult as expected to campaign for a «new» pledge that in its core message did not differ that much from the current pledge. A lot of people within the current network of Feedback therefore reacted quite confused when confronted to sign a new pledge and therefore not only did not sign it, but also did not really forward or share the pledge message in their own networks. The importance of this ‘network’ effect for diffusing a pledge message can be actually demonstrated by the case of HFA. Here no pledge existed and in a few weeks more than 350 people signed a commitment.

A second observation is that the current number of signed pledges is above the desired objective of 1000 pledges. There are two explanations for this result. First, it should be noted that the pledge campaign until end of April only lasted 2 months and was mainly targeted towards the current audience of the food surplus redistribution organisations. Secondly, especially in the case of Boroume and HFA, we learned that a pledge campaign is a continuous and gradual effort whose results are also related to the expansion of the outreach of the organisation. This means that via social media an organisation can enlarge its online reach, but if the concrete ‘offline’ action does not follow (for example no one in a certain neighbourhood to actually start a local node of SavingFood or no saving food events organised on a regular bases), it becomes difficult for certain audiences to know/imagine what food surplus saving and in particular food surplus redistribution is all about.

### 2.1.4. Conclusions about the pledge campaign

To conclude we can say that a pledge seems an effective way to allow people to make an initial commitment to start saving food. However, its concrete impact could not be measured given the limited time of the pledge campaign (2 months). It is important for the case of food surplus redistribution, given the focus here on attracting new volunteers/donors/recipient organisations that do not necessarily know the organisation well, to focus the pledge on a step before – on committing to already do individual acts – while keeping a longer-term objective in mind – becoming part of a movement and concretely participate in food saving events or related behaviour beneficial for the food redistribution charity. This has also a practical advantage. Voluntary based organisations need also to grow their presence over areas along with the pledge. If these 2 processes are not happening simultaneously, the pledge as presented here allows you to keep people, in areas where an organisation is not active yet, engaged in other ways of food surplus saving or in actions that might support the set-up of food saving events (see section ambassadors).
2.2. Crowdsourcing campaign

2.2.1. Why a crowdsourcing campaign for SavingFood?

The idea of crowdsourcing has also done its introduction in many social innovation initiatives\textsuperscript{16}. By means of crowdsourcing, SavingFood wanted to explore the potential of ‘tapping into the wisdom of the crowd’\textsuperscript{17} and realise two objectives.

The first aim was to increase, thanks to tips of citizens, the knowledge of the food redistribution charities about potential food donors in their neighbourhood or farmers in the countryside. Secondly, by employing a crowdsourcing approach, Saving Food wanted to connect the food redistribution charities with more citizens in other ways than the more traditional ways that are currently done (informing and engaging for food saving events). Indeed, the survey in the pilot countries from 2016 (D2.5: “Strategizing Saving Food: Engagement and Behaviours v1.”) indicated that citizens that are concerned about food waste but probably are not able to participate in food saving events were stating that they might be interested in other ways to support the food redistribution organisation and the cause of saving surplus food.

2.2.2. Implementation in the pilots

The design of the crowdsourcing campaign taught us three things. First, it became clear that applying a very open and transparent model in which citizens could drop an icon on a public available map to indicate the place where the potential food donor was situated, was not possibly due to welfare and safety concerns. Secondly, such an approach would also not be a good ground for building trust between the food surplus redistribution charity and the shop, store or farm. Establishing a trustful reliable food donation link requires more work than just contacting and linking. It might be for example necessary to first understand why the food surplus emerged and why the donor is confronted with this situation. In other words, an open approach can become involuntarily a ‘shaming’ tool. Thirdly, especially in the case of gleaning, such an approach would be counterproductive and also dangerous for the crowdsourcer, since it would often require that he/she must check fields or parts of the farm for which he/she actually needs an access permission from the farmer. Conflicts with farmers should be avoided as Feedback’s experience with gleaning informed the project that it is quite difficult to build a trust relationship with farmers.

In order to meet these three challenges, the approach was adapted to food surplus redistribution by choosing for a closed system where citizens could give tips about potential interesting food donors via a Google Form, email or phone. Secondly, it was important that the crowdsourcer had established previous contact with the donor before the information was sent to the food redistribution charity. The food redistribution charity would contact the donor only if the crowdsourcer confirmed that this condition was met.

While HFA and Boroume followed the initial challenge to collect tips about potential food donors, for the pilots that worked on gleaning (Belgium and UK) this was not possible and therefore the focus of the crowdsourcing effort changed to gathering various recipes and tips for food that is closed to its “best if used by day” date in order to avoid potential food waste.


Each pilot organisation distributed the crowdsourcing call from the 2nd week of March 2018 onwards and the campaign was running until the end of the project in April 2018.

2.2.3. Results and experience

2.2.3.1. Hungary

Implementation and results

In Hungary, the crowdsourcing campaign was organised to collect tips about potential farmers that might be interested in supporting gleaning activities, the type of food surplus redistribution that HFA introduced in Hungary thanks to the SavingFood project.

Via the newsletter of HFA, articles in journals, the social media channels of HFA as well as via its ambassadors (see next section) and contacts, it had gathered at the Budapest Wholesale Market (where one of its awareness raising events had taken place, see white paper I), the message to provide tips about potential farms that could be interesting for gleaning opportunities was sent. A special page was also published on the website of HFA. This dissemination strategy often lead to other people, such as the HFA-ambassadors, to pick up the call and provide contacts of people or associations that are interesting for HFA. For example, a famous garden expert in Hungary read the call in a magazine and contacted HFA that he would share the HFA crowdsourcing-call among his community of 400,000 followers.

What concerns the number of tips that led to successful contacts and/or concrete gleaning opportunities, HFA made the remark that it is currently better to speak of ‘leads’ to gleaning opportunities than concrete tips. This is due to the effect of the campaign that is more long term and secondly due to the fact that the gleaning season only starts from June 2018 onwards, so after the end of the SavingFood project. May and June 2018 is the season where strawberries and green peas are growing, which means that only from July a gleaning event can be organised. Moreover, vegetables that will have a bigger return such as tomatoes, zucchini and potatoes will only be available later in the year. For these reasons, HFA expects later this year to have a ‘boom’ in gleaning events organised.

The number of ‘leads’ collected so far indicates that this is not an unrealistic foresight. HFA collected in total the contact details of 150 potential interested organisations to set up a gleaning event. Out of these 150 tips, 30 to 40 can already be considered as concrete leads to gleaning opportunities in the summer of 2018. These contacts made the promise that they would call back HFA once the gleaning opportunity will be concrete from the summer onwards.

The concrete tips cover a diversity of actors spread all over the country and the leads cover big and small farms, although the central organisation of the country and the food sector make Budapest and its Wholesale market a well-connected hub for getting information about potential gleaning places.

Experience

For HFA, it is clear that experimenting with crowdsourcing allows them to attract actors – first opinion leaders, secondly citizens – into their working that otherwise would not be engaged. Organising a new crowdsourcing campaign and keeping experimenting with the mechanism is certainly an objective after the end of the project.

The crowdsourcing action creates an action opportunity that creates a good optimum between potential and new actors to be involved with. Crowdsourcing allows engaging citizens in other roles towards HFA and can also lead to pick up other roles on the long term, such as becoming a financial endorser or an ambassador.
The implementation of the crowdsourcing campaign definitely allowed HFA to engage broader sections of the Hungarian population and therefore was a concrete learning opportunity for the organisation and its staff. HFA also obtained via this action further experience in overcoming barriers from simply providing a tip to then further work on the lead or make people do more actions to realise a food saving action.

What concerns the experience of citizens with crowdsourcing, the HFA coordinator stated that an action like crowdsourcing is beneficial because people can immediately experience their impact. What is thus important, as was also the case in Greece, is to always thank the crowdsourcer: this simple act makes the crowdsourcer feel that his/her work is respected and meaningful but also makes him/her feel part of a broader network around the concrete food saving operations of HFA.

To what extent do you think that crowdsourcing:

- Allowed citizens to participate in your food saving operations, that otherwise would not have been so much involved or not involved at all? **Strongly Agree**
- Proved that your saving food operations can grow through the support or the power of a community of people engaged in such a way? **Strongly Agree**
- Demonstrated that ‘tapping into the wisdom of the crowd’ is beneficial for your saving food organisation? **Strongly Agree**
- Is a way to also engage citizens (in the long term) in other activities of your organisation (e.g. participating in gleaning and farmer markets)? **Agree**
- Was a learning experience for the coordinators and other staff members of the food redistribution organisation to engage citizens in the food saving operations? **Strongly Agree**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tips gathered during the crowdsourcing campaign</td>
<td>Around 150</td>
</tr>
<tr>
<td>Number of successful tips (successful = a new contact for your organisation, that results in a new donor/charity/farm/farmer market for your network)</td>
<td>30 to 40 out of the 150 list with candidates This are leads that actually confirmed their interest and to inform HFA when they have surplus later in the year.</td>
</tr>
<tr>
<td>Number of new donations or newly organised activities thanks to the provided tip (this indicators goes one step further than the previous one, here you already collaborate with the new contact)</td>
<td>Not yet, but process in place with 30 to 40 tips (see above)</td>
</tr>
<tr>
<td>Number of social media posts and mails to spread the crowdsourcing campaign</td>
<td>900 people via direct mail (newsletter) and 4 social media posts</td>
</tr>
<tr>
<td>Number of views of the social media posts, number of reads of the mails</td>
<td>Not retrievable</td>
</tr>
<tr>
<td>Any other possible indicator to track the positive outcomes of your crowdsourcing campaign?</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Figure 7:** HFA’s experience of the crowdsourcing campaign in five statements

2.2.3.2. Greece

Implementation and results
Boroume focused in their crowdsourcing campaign on getting tips about local shops or canteens that can become a potential food donor. The idea was that a citizen often has a more personal contact with a bakery or a canteen than with the management of a supermarket. This personal contact is a good basis to eventually introduce Boroume to the owner of the shop, bakery or canteen and hence in this way expand the knowledge Boroume has about potential food donors around them.

The message of Boroume for the crowdsourcing campaign alluded to the collective effort of food saving. It underpinned the need to work together in order to be effective and had a request to help the organisation. Special appeal was made to citizens that have a personal contact with a shopkeeper or canteen owner and are feeling sensitive to the issue of food waste and sustainability in general.

The tip could be given to Boroume via a Google Form or via email. Boroume noted a fast response rate after the launch of the call. It was mandatory for the provider of the tip, besides providing the phone number or email of the shopkeeper as a proof of having established prior contact, to provide his/her own phone number or email in order to be able to contact him/her again. Then, Boroume made the first contact with the donor. Finally, the giver of the tip was contacted to tell him/her if the contact was successful or not.

In total, 6 tips were collected and at the end of April 5 out of the 6 tips already led to a confirmation of the donor to get in contact with Boroume. At the end of April, no concrete food was thus saved, but preparations to start saving food were set in motion: the information to the donor was sent, the practical aspects on how and what to donate were worked out and food recipient organisations around the place of the donor were contacted in order to make a fast and efficient match.

The persons that provided the tips were not only volunteers (2), but 3 of the crowdsourcers were entirely new to the organisation and one provider of the tip was someone who had once registered to become a volunteer for Boroume but had never participated in any of its food saving event, so far.

*Figure 9: Call for tips about food donors launched by Boroume on its Facebook channel*
As HFA, Boroume was very pleased to be able to start a crowdsourcing campaign within the context of the project. It was a concrete learning experience for the organisation and it said it would definitely use the mechanism after the project for targeting the small donors.

The main lessons learned for them were that it is important to target the shops you want to know more about and that you can actually reach. Therefore, they are not sure about the potential for crowdsourcing for supermarkets or markets since the personal link of citizens with the management is of a different nature. Also, small shops are important for the Boroume model as they are often situated close to a food recipient organisation, so it helps to make new and efficient matches between two actors located in each other neighbourhood.

Besides continuing the crowdsourcing action, Boroume is also motivated to explore other topics. One alley they would like to explore is collecting recipes of food close to its ‘best before date’ or pictures of food saving actions by schools. Here again, Boroume pleads for a targeted approach that is in line with its modus operandi. A crowdsourcing action that connects with its current school program or with business canteens should therefore be envisioned.

This brings us to the third main lesson for Boroume: if you target your action very well with respect to donors or topics and you can build upon personal contacts, you are taking opportunity of capitalizing on current trust between the shopkeeper and the crowdsourcer. It is of course important for the food surplus redistribution charity to not endanger this trust relationship, so you need to offer precise and correct information to the potential donor.

Fourthly, for Boroume it is clear that crowdsourcing, given the profile and background of the crowdsourcers, is a good way to involve current volunteers in other ways to the organisation but, more importantly, to involve new people in broader aspects of food saving and food surplus redistribution. It is clearly an alternative way for citizens to take action and, given sometimes barriers to participate in food saving events, they can do it when they have time in their daily life rituals and in their immediate neighbourhood. It provides thus a new accessible and meaningful opportunity to act for citizens that due to different reasons would be more easily turned down to participate in food saving event. It is however too early to claim, given the short duration of the crowdsourcing campaign, that these 3 new people and the person that once registered as a volunteer will take the step to one day join a concrete food saving event.

Finally, Boroume learned that it is important to make sure that the crowdsourcing call can have a lasting effect on the long term. The 6 responses were provided very fast after the launch of the call (within certain days), so there is a need to plan the communication in such a way that the call can also work over a longer time period. This might be done via a targeted approach (for example: only one city at a time or one neighbourhood) or by having multiple actions after each other instead of one for several weeks as was the case with SavingFood.

With respect to the experience of citizens, Boroume has of course no sight on citizens that tried to provide a tip, but for some reason did not manage to complete the Google Form or ultimately did not participate. For those that participated, the coordinator pointed towards two important lessons.

First, Boroume highlighted that citizens like to be thanked for their effort but more importantly, informed about the status of the contact. Citizens feel very valuable if you tell them that the contact was established but seem also to be ready to offer their support if any problem has been occurred in convincing the potential donor to join the battle against food waste.

A second important lesson relates to the potential of citizens to become more aware of the work and importance of Boroume thanks to crowdsourcing. Boroume stated that what concerns the four people that
now got in contact with Boroume, it is clear that they became aware of the general idea and philosophy behind the organisation and the process of providing tips. It is however too early to state that they became aware of the whole process behind the matchmaking and eventually the saving food events themselves. This observation is thus in line with the lesson mentioned above that it is too early to state a certain direct relationship in the future between participating in a crowdsourcing action and eventually increasing the engagement of citizens with Boroume via a concrete volunteering role at gleaning or farmers’ market events. Nonetheless, the ambassador program can be a good mechanism to reinforce and further intensify the relationship and hence play the role of an intermediary step between initial engagement and volunteering.

To what extent do you believe that crowdsourcing:

- Allowed citizens to participate in your food saving operations, that otherwise would not have been so much involved or not involved at all? *Strongly Agree*
- Proved that your saving food operations can grow through the support or the power of a community of engaged people in such a way? *Strongly Agree*
- Demonstrated that ‘tapping into the wisdom of the crowd» is beneficial for your saving food organisation? *Strongly Agree*
- Is a way to also engage citizens (in the long term) in other activities of your organisation (e.g. participating in gleaning and farmer markets)? *Agree*
- Was a learning experience for the coordinators and other staff members of the food redistribution organisation to engage citizens in the food saving operations? *Strongly Agree*

**Figure 10: Boroume’s experience of the crowdsourcing campaign in 5 statements**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tips gathered during the crowdsourcing campaign</td>
<td>6</td>
</tr>
<tr>
<td>Number of successful tips (successful = a new contact for your organisation, that results in a new donor/charity/farm/farmer market for your network)</td>
<td>5 The 1 tip that was not successful was due to the fact that the citizen had not make prior contact with the donor before providing the tip.</td>
</tr>
<tr>
<td>Number of new donations or newly organised activities thanks to the provided tip (this indicators goes one step further than the previous one, here you already collaborate with the new contact)</td>
<td>5 Confirmed interest and preparations are being made, but no donation made yet.</td>
</tr>
<tr>
<td>Number of social media posts and mails to spread the crowdsourcing campaign</td>
<td>1150 person reached to disseminate call via their mail/facebook) 1 reminder was sent beginning of April 1 newsitem on website</td>
</tr>
<tr>
<td>Number of views of the social media posts, number of reads of the mails</td>
<td>9650 views organic reach Social media</td>
</tr>
<tr>
<td>Any other possible indicator to track the positive outcomes of your crowdsourcing campaign?</td>
<td>The response was quite immediate after call</td>
</tr>
</tbody>
</table>

**Figure 11: Boroume’s results of the crowdsourcing campaign in numbers**

2.2.3.3. **UK and Belgium**

*Implementation, results and experience*
In the UK and Belgium, the pilot coordinators experienced difficulties with implementing this recipe track and create a positive vibe around it. The crowdsourcing campaign was therefore put on hold and effort was reoriented towards the ambassador programme in the UK (see next section). It seems that citizens mainly associate sharing recipes with cooking pages than with a food surplus redistribution. Secondly, recipes were provided in different forms (in terms of explanation or description of the recipes by citizens as well as in terms of ingredients) so that it becomes difficult to assemble concrete recipes without needing to do a lot of redaction work which would lead Feedback too far away from its core role: advocating against food waste and organising gleaning events.

2.2.4. Conclusion

The experience of HFA and Boroume showed that a crowdsourcing campaign can be a good tool for food redistribution charities to expand their network of donors and to reach out to citizens and actors that would otherwise not so get involved in saving surplus food. It has therefore, based on the provided result, a clear potential to change the awareness of citizens about the existing of a food redistribution charity and to make them act concretely and meaningfully while before they would not be triggered to call Boroume or HFA. The fact that both HFA and Boroume have the intention to deploy such a mechanism is the future is a good outcome of the project and opens new ways for explorations in the future. Nonetheless, we would like to conclude with 3 observations for the future of HFA and Boroume and other food surplus redistribution organisations that are tempted to launch such a campaign.

The crowdsourcing campaign taught us first that the mechanism seems to be the most fruitful for the general food rescue model between a shop and a charity. In the case of collecting tips for gleaning or farmers’ markets, the results are more diverse between the UK and Hungary. While the former one can’t actually risk organising a crowdsourcing due to safety reasons of the crowdsourcer, Hungary tried to work around the issue by looking for ‘leads’ to potential farms and farmers’ markets. Secondly, the general food rescue model has the advantage that it can target citizens in their daily life context in their search for small shops, canteens and other potential food donors in their neighbourhood and that it can build upon existing social contact between the crowdsourcer and the donor. This is essential since an important fact for a donation to happen via a food redistribution organisation is a trustful relationship between the food redistribution organisation and the donor. In the case of crowdsourcing for farmers this trustful relation between an ordinary citizen and a farmer is less frequently present. Boroume is taken this lesson that crowdsourcing for food redistribution organisations should capitalize on existing relations now further by exploring how crowdsourcing can help for their children program at schools.

The second important lesson from the project is that crowdsourcing is an interesting tool that besides being adapted to a specific case and target audience, also helps a food redistribution organisation to expand its own network within citizens and neighbourhoods beyond the mere fact of food surplus saving as such. Although there is no hard evidence from the project’s experience, one can suppose that these new encountered citizens might gradually become more involved with the food redistribution charity. It is therefore, important that the food redistribution charity does not consider the crowdsourcing campaign as an isolated event but tries to see this intervention within a broader scope to expand its network of volunteers. As was testified by Boroume, although the crowdsourcers (especially the new contacts) are since their participation better aware of Boroume and its works, there is still a way to go to make them more aware about the whole process of matchmaking and food surplus collection and redistribution.

Thirdly, it is important to highlight that the food redistribution charities active in the SavingFood project have already build up a certain activity the past years. One important challenge to organise such a crowdsourcing
action is of course to have enough capacity to follow it up. This concerns the monitoring of the campaign and the crowdsourcers as contacting potential new donors. Therefore, planning this capacity in terms of personal/volunteer involvement is a crucial component of the roll-out of a crowdsourcing campaign. An ambassador program that becomes mature can eventually be a solution for these capacity issues.

Finally, we should stress that thanking your crowdsourcer is an essential part of the action and it should be worked out well. As the case of Boroume shows, crowdsourcers are really interested into the outcome of their help and want to provide further assistance if they can in case the contact with a donor did not work out well. Also, HFA testified the importance of not neglecting your tip providers.

2.3. Ambassadorship

2.3.1. Why an ambassador program for SavingFood?
The ambassador program builds upon the notion of promoting social diffusion of the idea of the food surplus charity being active in the local neighbourhood. It builds upon the work of personal influence in the spread of certain opinions and ideas in society. By creating a certain group of volunteers that would be the “human proof” that the movement is alive and active, SavingFood wanted on one hand to create a visibility effect so that the interest of other citizens in a neighbourhood network would get triggered and they would start looking for information about what it all means. On the other hand, the ambassador program as a tool of social diffusion was conceived to be more than just a mere advertising instrument. It provided also a concrete opportunity for citizens to perform certain tasks that were essential for the food surplus redistribution. In particular, besides being a new platform for current volunteers of the food redistribution organisation that want to help their organisation in other ways, the ambassador program was also designed as an accessible opportunity for non-volunteering citizens that are concerned about food waste but are not participating in food saving events, yet. For these citizens, the program had to make it possible to act in a small but meaningful way and on their own pace. In this way, as with crowdsourcing, picking up the ambassadorship could be a first step in order to become one day a volunteer for food saving events organised via the SavingFood platform.

As with the crowdsourcing campaign, the pilots had to work out the concrete implementation of the ambassador program based on the principles outline above and in accordance with their needs and in their specific context.

2.3.2. Implementation in the pilots

2.3.2.1. Hungary

Implementation and results

The Ambassador program of Hungary was launched via the existing online social networks and newsletters/direct mails of HFA. In this way, a central management could be organised for the organisation of the communication in order to have a better coordination and monitoring of the work of the ambassadors.

Ambassadors in the Hungarian case were having different tasks with respect to disseminating communication and finding donors/charities/volunteers:

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• Disseminating general messages via social media or newsletters within their own network;
• Disseminating the pledge call in their network by resharing it in their own networks (online and social);
• Providing tips about donors/charities;
• looking for potential volunteers for food saving events.

Since the Ambassador program was launched for the whole country, these more general supportive tasks were more suited to request from people who lived remotely from the HFA headquarters than asking for supporting tasks in the administration of HFA or at the food surplus storage place of the foodbank (which volunteers are already doing right now).

In total, about 1000 people occasionally shared messages online that were launched as part of the ambassador program (these messages were labelled as part of an ambassador program) and 100 to 150 people registered to become regular ambassadors and promoting the pledge within their network.

**Figure 12: Call to ambassadors to share a message about food waste**

**Experience**

Since there was no direct contact between HFA and the ambassadors, it is difficult to grasp any dynamics from the side of the ambassadors with respect to their experience of the program. Nonetheless, the coordinator of HFA made the statement that they saw different age groups disseminating messages. Social media is more present with younger people, but older people have another online network that sometimes is also of a more diverse character than young people due to the work of adults or their involvement in local communities. As such, although their online activity can be seen as less intense (with respect to sharing), their actions can be more impactful. Secondly, it is also interesting for an ambassador program that focuses on online
disseminating that older people in Hungary are more and more using social media. This means that there is a potential present in the country to reach a broader and older audience in the near future.

What concerns HFA itself, they consider the ambassador program as an opportunity to involve citizens in important parts of their operations – in particular the communication parts – in which they would otherwise not be involved. As such, the ambassador program was a way to let these citizens get a closer and meaningful relation with HFA. Secondly, the program clearly increased the online visibility of HFA in Hungary as messages got shared on social media and in online communities. It is also via their sharing and dissemination activities that the crowdsourcing of tips of potential gleaning opportunities got spread and let to some concrete results (see section above).

Finally, HFA stated that implementing an ambassador program was useful and that it will certainly look for ways in the future to continue and expand the program.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of registered citizens for the ambassador program</td>
<td>1000 occasional</td>
</tr>
<tr>
<td></td>
<td>100-150 regular</td>
</tr>
<tr>
<td>Number of requests for more information about the ambassador program</td>
<td>n/a</td>
</tr>
<tr>
<td>Number of enrolled ambassadors in a training session</td>
<td>n/a (since online information on what to do as an ambassador)</td>
</tr>
<tr>
<td>Number of social media posts and mails to spread the ambassador program</td>
<td>3</td>
</tr>
<tr>
<td>Number of views of the social media posts, number of reads of the mails</td>
<td>n/a</td>
</tr>
<tr>
<td>Any other possible indicator to track the positive outcomes of the ambassador program?</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Figure 13: HFA’s experience of the ambassador program in 5 statements

Figure 14: HFA’s results of the ambassador program in numbers

2.3.2.2. Greece

Implementation and results

Boroume launched a call via its social media and its newsletter. A separate page was created on the website of Boroume to inform citizens about the ambassadorship. As with the crowdsourcing campaign, the message was addressed to citizens that are feeling concerned about food waste and was designed in such a way that it highlighted that their involvement is needed to effectively tackle food waste and that Boroume could use their help and effort.
Citizens that were interested to become an ambassador could register via a Google Form. After having completed their contact data, they could select the task they would like to perform from a list:

- Contribution to disseminating information material about food waste in general and Boroume in particular;
- Sharing SavingFood video’s and Boroume video’s;
- Encourage friends and relatives to save food from social and corporate events they attend;
- Provide tips to Boroume about potential charity organisations in their neighbourhood;
- Inform friends and relatives about the gleaning program;
- Set up a gleaning group and adopt a farmers’ market action in their neighbourhood;
- Support Boroume at school by telling teachers of their children about the existence of Boroume.

Once the form was completed, Boroume sent dedicated pdf’s that contained more information about the action with first assignments and concrete how-to-do tips. A task all ambassadors had to do was to share the links of the motivational video’s that were sent along with the pdf’s. Also, a follow-up mail was sent after two days to inform them about a training session in Athens in May where more details about the Ambassador program would be presented.

The citizens that signed up as an ambassador had a diverse background. Most people came from Athens and Thessaloniki and some even were living in places where Boroume is not active yet. These people will be especially targeted the coming months as they are a good base for setting-up a Boroume/SavingFood program or hub in these places. As with the survey, also more women signed up than men. Regarding the age, there is no information as this was not requested with the registration.
Experience

For the Boroume coordinator, setting up the ambassador program clearly has an added value for the organisation. It allowed to involve citizens with the work of Boroume, especially citizens that otherwise would not have been involved. An ambassador program is thus clearly a new way to explore and make connections with citizens. The fact that within a few days after the launch already 27 people signed up also showed that it appeals to citizens. The launch of the program is thus certainly also a fruitful way to be more visible and can lead to a good spread of the idea of Boroume and food surplus redistribution in a neighbourhood. Although it is difficult to make a hard claim for the coordinator, she suspects that the ambassador program attracted potential local influencers in a neighbourhood.

The SavingFood program also allowed to expand the current initiatives Boroume had deployed on a minor scale under the label ‘Boroume in the neighbourhood’. Compared to this initiative, that worked very local, the SavingFood Ambassador program was taken as an opportunity to expand the tasks an ambassador/citizen can do and to define this from his point of view and from concrete opportunities he/she has to act in her/his daily life.

With respect to the experience of citizens, Boroume stated that the procedure was well communicated because there were hardly any requests for explanations. The clear message might also be a reason for the success of the initiative given its 27 subscribers after just a few days. Nonetheless, as mentioned above, a training session will be organised shortly in Athens to explain further the ambassador roles and tasks.

Secondly, the driver for citizens seems to be the opportunity to become, in a via accessible way, part of a larger community that tackles a major issue in Greek cities. It is thus not so much the environmental dimension that is the main driver, but the social dimension of food surplus redistribution.

One of the major contributions according to Boroume is that the ambassador program can make citizens aware that even by doing one simple step, such as sharing a message on Facebook, they make a difference for Boroume. Although citizens could do such actions before, the ambassador program also had the advantage to provide a broader structure for the citizens. Now, they can do these small steps in a more organised way and it makes them feel clearly already a part of the movement while before they were associated ‘being part’ rather exclusively with picking up food at gleaning or farmers’ market events.

To what extent do you believe that the ambassador program:

- Allowed citizens to participate in your food saving operations, that otherwise would not have been involved so much? **Strongly Agree**
- Allowed my food redistribution organisation to be more visible and recognizable in the food saving community? **Strongly Agree**
- Allowed my food redistribution organisation to engage people who are local influencers towards friends and family for joining the activities of our organisation? **Agree**
- Was a learning experience for the coordinators and other staff members of my food redistribution organisation to recruit new citizens in the food saving operations? **Strongly Agree**

Figure 15: Call for Ambassadors disseminated by Boroume on Facebook

Figure 16: Boroume’s experience of the ambassador program in 5 statements
### Indicator | Number
--- | ---
Number of registered citizens for the ambassador program | 27
Also a hotel in Athens, where the staff would be trained to become an ambassador, is on board
Number of requests for more information about the ambassador program | 0
Number of enrolled ambassadors in a training session | One-on-one training so far
Session is planned in May in Athens
Number of social media posts and mails to spread the ambassador program | 2
email base of volunteers to further promote it
email send to partners such donors, food companies, retail (hotel was recruited via this mechanism)
Number of views of the social media posts, number of reads of the mails | 7000 organic reach
Any other possible indicator to track the positive outcomes of the ambassador program? | n/a

Figure 17: Boroume’s results of the ambassador program in numbers

### 2.3.2.3. United Kingdom

*Implementation and results*

The ambassador program was trialled in the West-England Gleaning region, in particular in the city of Bristol. Students at the local universities and high schools were in particularly targeted. This target group was selected because the ambassador program consisted of creating a community of young and like-minded people that could support SavingFood and, in particular after the project, Feedback. Students can be considered as a good target group as they share a common space – the university – and age and SavingFood could be for young people a way to discuss common concerns with like-minded people in a clear setting.

In practice students had to:

- Raise awareness in the university about the issue of food waste and what a university can do to prevent food waste;
- Create a group of volunteers in their peer group and perform a small but meaningful action to raise awareness and reduce food waste, by for example organising a debate evening with local food waste initiatives or by creating a Facebook group about the topic in which students could share tips and recipes and share the motivational videos of the project;
- Try to form a group of volunteers for food saving events;
- Inform local supermarkets about SavingFood and Feedback.

The students that registered as an ambassador received documentation to support them with these 4 tasks.

In order to recruit students, Feedback attended the local Freshness fair which is an orientation session for new students at the university and besides this presence, Feedback organised 2 events at the university. Flyers and leaflets were also distributed on campus and one pub session was organised where students could meet Feedback people.

The ambassador program was launched in March and was also repeated in Manchester at the same time as the awareness-raising event organised by Feedback.
In total 6 students registered immediately to become an ambassador while 12 students signed up the request for more information. As so far, no training session has been organised, people did not attend such a session yet. Nonetheless, Feedback is currently looking for an opportunity to organise a training session in Bristol to explain more what an ambassador can do and help support the currently enrolled students.

The majority of these contacts obtained via the ambassador efforts were new to Feedback.

**Experience**

For Feedback, setting up the ambassador program, even in trial mode, had a positive impact for the organisation. For Feedback the ambassador program was according to the coordinator one of the most effective actions they did in SavingFood. It would have been better to have started this earlier in the project, for example in line with the awareness-raising events. The connection with the platform not only lead to a delay of such an important initiative but it also frames such a program in a way that other interesting aspects are concealed or not explored.

Feedback believed that thanks to this initiative they can attract other people than those that sign up for a gleaning event and that it allowed them to give these students a greater and deeper involvement with food saving than would not have been the case without such a program. Important of course is that the program is well targeted to a group and to a region, as was the case in Bristol.

Secondly, as mentioned above, the majority of the students that registered as an ambassador or signed up for more information, were new to Feedback. The ambassador program thus allowed to create more visibility among students in Bristol. In practice the ambassador program allowed Feedback to reach out to students that are sensitive for sustainability issues and are active in groups working on such issues. It is therefore an interesting lesson for Feedback to not create again a new SavingFood group, but rather to connect with the existing initiatives where these students are involved in.

The experience with the ambassador program is certainly going to be extended. Currently Feedback is looking to set-up an ambassador program in Kensington in Sussex. Compared to Bristol, where the action will be continued, the focus will now be on elderly and retired people. As was also the case with Hungary, elderly people are interesting as they, compared to young people and students, have another kind of network that is often, due to life history and work experience, more rooted or connected to organisations that matter in a certain region or field.

With respect to the experience of young people, Feedback told us that the Bristol experience so far taught them that even students need a lot of face-to-face contact in order to move forward with the program. This is certainly a point to work on. The reason why students signed up as an ambassador was, besides the concern over the issue, a desire to meet likeminded people in a new unfamiliar context. This is an important aspect when targeting your ambassador program to young people: the issue is an important factor, but determinant in concretely taking action is providing a space where likeminded young people can meet each other and workout an action.

<table>
<thead>
<tr>
<th>To what extent do you believe that the ambassador program:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Allowed citizens to participate in your food saving operations, that otherwise would not have been involved so much? <strong>Agree</strong></td>
</tr>
<tr>
<td>- Allowed my food redistribution organisation to be more visible and recognizable in the food saving community? <strong>Agree</strong></td>
</tr>
</tbody>
</table>
Allowed my food redistribution organisation to engage people who are local influencers towards friends and family for joining the activities of our organisation? **Strongly Agree**

Was a learning experience for the coordinators and other staff members of my food redistribution organisation to recruit new citizens in the food saving operations? **Strongly Agree**

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**Figure 18: Feedback’s experience of the ambassador program in 5 statements**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of registered citizens for the ambassador program</td>
<td>6</td>
</tr>
<tr>
<td>Number of requests for more information about the ambassador program</td>
<td>12</td>
</tr>
<tr>
<td>Number of enrolled ambassadors in a training session</td>
<td>0 (but session is planned in Bristol in the near future to support the created group of ambassadors)</td>
</tr>
<tr>
<td>Number of social media posts and mails to spread the ambassador program</td>
<td>Difficult to tell as we mainly used leaflets and flyers</td>
</tr>
<tr>
<td>Number of views of the social media posts, number of reads of the mails</td>
<td>See above</td>
</tr>
<tr>
<td>Any other possible indicator to track the positive outcomes of the ambassador program?</td>
<td>New program set-up in Kensington with elderly based upon the good experience in Bristol</td>
</tr>
</tbody>
</table>

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**Figure 19: Feedback’s results of the ambassador program in numbers**

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**2.3.3. Conclusion**

The ambassador program was implemented in all three pilots. As with the crowdsourcing campaign, all participating pilots were in the end enthusiastic about the experience and have ambitions to continue this kind of engagement strategy after the project. Notwithstanding the modest rollout, it becomes clear that, like crowdsourcing, an ambassador program can be a good intervention to on the one hand expand the network of the food redistribution charity in neighbourhoods or groups beyond the aspect of volunteering for food saving events and on the other hand to increase in such a way its visibility in a local community.

The ambassador program is a very flexible approach as it allows, within the framework of its two objectives, that each food redistribution charity can adapt its deployment in line with its own particular needs. As such each pilot adopted its own strategy – students in the case of Feedback, sharing communication in the case of HFA and a variety of tasks in the case of Boroume. Nonetheless, to start an ambassador program, SavingFood recommends starting very focused, especially when a food redistribution organisation does not possess a lot of staff or volunteers to monitor and manage it. As the 3 pilots indicate, response can be very fast, and it is important to build upon this response in a very concrete and immediate way. This means that deploying an ambassador program means also that the action is well prepared and sustained over a long period of time: on the one hand a food redistribution charity needs to provide training and secondly ambassadors, in contrast with crowdsourcing, are not expecting to do an action once, but to perform a more continuous activity.

As with crowdsourcing, follow up on your audience is important. Here the focus is not only on thanking your ambassadors for their effort, but the value of a registration can also lie in potential actions of the food redistribution organisation. As in the case of Boroume, it might be that people register as an ambassador but are not living in areas where the food redistribution organisation is active. In that case, an ambassador
campaign can focus on helping these people to create a first hub or community that creates awareness about the issue before starting one day food saving events.

Thirdly, it is also remarkable that an ambassador program can be targeted at different age groups. While crowdsourcing can attract a technical savvy audience, an ambassador program has, as Feedback’s future plans show, and HFA experience learns, a potential to encompass all ages. This is an advantage as the observations of HFA and Feedback tell us that elderly people have the advantage of often having a more diverse network due to their life cycle and work experience.

Finally, we should observe that it would be a mistake to separate a crowdsourcing and ambassador action from each other. Just as with crowdsourcing, the ambassador program should not be seen in isolation, but part of a broader strategy of interventions as we did in SavingFood and as a first step to getting new citizens later involved in other saving surplus food actions. Moreover, in practice, HFA and Boroume also redirected some aspects of crowdsourcing to the ambassador program.

3. CONCLUSIONS

This paper discussed three behavioural change interventions that were designed within the SavingFood project and deployed into three of its pilots: Feedback in the UK, HFA in Hungary and Boroume in Greece. Their deployment was inspired by the insights from the 7E-strategy that stated that behavioural change is the results of a catalysator effect brought about by different interventions that each focus on a certain domain that influences behaviour – knowledge, beliefs, motivations, habits, and opportunities to act.

The pledge, the crowdsourcing campaign and the ambassador program had the common objective to reach out to citizens that are concerned about SavingFood but are not participating in food surplus saving events yet. Although all three are of a different nature, they all provided opportunities for these concerned citizens to act and contribute hence in meaningful ways to the cause of saving surplus food. Due to belated implementation of the platform and the initial connection that was made between these interventions and the technical solution, the pilots only implemented these interventions in the two final months of the project, meaning that we could only report on their initial success and we cannot make statements about their lasting impacts. Nonetheless, we highlighted after each discussion of these interventions some important lessons for future work since all pilots were after this first trial convinced about the benefit of these three actions for their operations and for expanding their network.

The pledge strived to make citizens to commit themselves to start saving food on an individual scale. Consequent small requests to build upon to this commitment should support the process of change in self-perception of people that they can actually be a food surplus saver and sign up to the platform. In total the project reached its objective of having 1000 pledges and pilots are currently busy with sending the follow-up request to foster behavioural change towards registering to the platform. The crowdsourcing campaign learned that it should best be used in a context where personal relations exist between the crowdsourcer and the donor. Finally, the ambassador program turned out to be a very flexible tool that allows to target all age groups and let them perform, depending on the tasks provided, simple tasks. This is especially interesting when working with elderly people as they often have, due to their life experience, a more diverse network of actors that can help with developing saving surplus food actions in new neighbourhoods. Finally, the crowdsourcing and the ambassador program highlighted that these interventions should be designed in such a way that they are perfectly embedded in the daily life context of citizen. If a citizen goes every day to a certain shop, he does not have to change his/her habits to help SavingFood. If the crowdsourcing action is well
designed, it builds upon this daily ritual to provide the concerned citizen with an opportunity to act when he/she has his daily chat with the shop or canteen owner.

Perhaps the main final lesson for the project was that we tied these 3 interventions in our behavioural change strategy towards the platform in line with the initial outline of the DOA. A looser connection would have allowed the pilots to create a group of enthusiast citizens that were already doing little actions before ultimately joining the platform.
Summary

This white paper focuses on the usage of the SavingFood platform for organising food saving events, and how it supports in establishing behaviour change around food waste. Currently, the SavingFood platform supports two types of events, being farmers’ market and gleaning events. Through the event modules, food redistribution organizations can recruit and engage citizens (as volunteers) in the collection of surplus food, and communicate all practicalities of the event, such as date, start and end time, amount of volunteers needed, materials, etc. During the period March-April 2018, 28 food saving events were organised through the SavingFood platform by HFA and Boroume, with 112 registered volunteers. The behaviour analysis investigated whether participating in these events caused a change in awareness, knowledge, and concern around food waste. The collected results from volunteers indicate an increase in self-perceived knowledge and concern after the participation in a food saving event, even when their concern or knowledge was already high. Further, in-depth interviews were organised with coordinators from the pilots in Hungary and Greece to explore the change in efficiency and effectiveness in organising a food saving event online. For HFA and Boroume, the SavingFood platform leads to a time efficiency in the communication between a volunteer and a coordinator, and in finding the minimum amount of required volunteers for an event in a quicker way. Through this success, Boroume is able to expand the farmer markets program, while HFA will further decentralize their redistribution activities from central storage to more direct, and quicker redistribution.

1. Introduction

The SavingFood project ran from January 2016 till April 2018, and had as main objective to develop an online platform for enabling a more efficient redistribution of surplus food between food donors, recipient organisations, food redistribution organisations and volunteers. Further, through the creation of an online community and the development of engagement strategies (See White paper I and II), SavingFood empowered citizens and food waste stakeholders to take direct action and to become part of a new social movement for tackling food waste and influencing sustainable lifestyles.

The central functioning of the SavingFood platform exists of three modules, or food saving scenarios: (1) gleaning events: this is the collection of leftover crops from farmers’ fields by volunteers after they have been commercially harvested, or from fields where it is not economically profitable anymore to harvest, (2) farmers’ market events: this is the collection of surplus food by volunteers at the end of the market, and (3) general food rescue with direct redistribution of surplus food between a food donor and recipient organisation. The events modules help to recruit citizens (as volunteers) to help collecting surplus food through gleaning on famers’ fields, or through the collection of surplus food at farmer markets. Through the SavingFood platform, the coordinator can communicate all details of the event towards interested volunteers, and offers an overview of events by place, date and amount of signed up volunteers.

For the third food saving scenario, the platform functions as the following: organisations that have food surplus can enter this into the system, and other organisations that have a need for this type of food can acquire the donation through matchmaking by the coordinator.
The coordinator will match the food offers with the demands, and this based on several criteria such as current needs of the recipient organisation, geographical proximity and history.

In comparison to other food redistribution platforms, SavingFood offers the added value of having a central coordinator in the system. The coordinator is the intermediary actor between a food donor and recipient organisation, or between a farmers’ (market) and volunteers. The presence of an online coordinator in the system ensures that a fair food redistribution process can be set up among recipient organisations, and that a food offer reaches the final beneficiary in time. Further, the coordinator on the platform can also support users with knowledge about legislation concerning food donations, safety and other issues, and can take over efforts that otherwise should be made by the employees of the donor or the recipient organisation. Besides these three central modules, the SavingFood platform also offers a variety of support tools to create awareness and share knowledge around food waste: a food waste calculator for food businesses and organisations, awareness-raising videos, a pledge campaign and training material. For each food redistribution organisation in the project, a local instance was created (See info box 1).

In the following paragraphs, the Living Lab approach for developing the SavingFood platform is described, which explains how the platform was developed with the involvement of prospective end-users in the early design and co-creation of the solution, till beta-testing through fictive scenarios and real-life testing. When the platform was ready to go life, the behavioural change analysis investigated among registered volunteers whether a change occurred in perceived knowledge, concern and general beliefs after attending a food saving event.

2. The SavingFood platform: Supporting communities in fighting food waste

2.1. The development of the platform through the Living Lab approach and co-creation with users

The SavingFood platform was developed according to the principles of the Living Lab methodology. The ‘Living Lab’ concept has its roots in theories such as the ‘Mutual Shaping’ perspective or in ‘Social construction of Technology’ from Science and Technology studies. The general beliefs from these theories are that society and technology are not mutually exclusive, and that for understanding the complexity, and unpredictability of interaction with technology one must study new technology related to users’ discourses and practices. According to Westerlund and Leminen, the Living Lab methodology can be defined as “physical regions or virtual realities where stakeholders form public-private-people partnerships (4Ps) of firms, public agencies,
universities, institutes and users, all collaborating for creation, prototyping, validating and testing of new technologies, services, products and systems in real-life contexts\textsuperscript{20}.

This definition stresses that new technologies should be the outcome of a collaborative process between multiple and diverse stakeholders, and should encounter multiple iterations in the development process. Therefore, multiple feedback loops with prospective end-users were set up in the SavingFood project that iteratively defined the solution:

In the first year of the project, co-creation workshops were organised in the four pilot locations to identify and validate the user requirements for the platform. During these co-creation workshops, creative exercises such as user scenarios, wire framing, user voting, etc. were set up to collect user wants and needs. Different citizen communities and food waste stakeholders were invited to gather multiple viewpoints and create common understanding among them. For some of the SavingFood pilots, it was the first time that all stakeholders, being food donors, recipient organisations and volunteers, were sitting along the same table and could discuss their current and future envisioned working processes together. From the collected user wants and needs, user requirements were distilled that informed the technical development of the platform. As a next step, these requirements were prioritized and split up in ‘batches’, and implemented according to an agile development process. During the first year in the project, the strategy for analysing behaviour change was also developed (See SavingFood Deliverable 2.4 and 2.5: \url{https://savingfood.eu/deliverables/}).

After the development of a first prototype in the second year, the SavingFood platform was beta-tested with a selected group of volunteers. During this testing phase, fictive scenarios were set up to measure the user experience and acceptance of the solution. For instance, volunteers were requested to register on the SavingFood platform and to sign up for a fictive event created by the coordinator. In a first set-up, the volunteers and coordinators were sitting along the same table to test out the solution, while in a second stage volunteers were testing the platform remotely. During the second year, the first dissemination and awareness raising activities also started, such as the organisation of awareness-raising events (See white paper I), and the

dissemination of the educational videos, food waste calculator tool, etc. After implementing user feedback and solving usability issues, it was decided in March 2018 to use the SavingFood platform for real saving food events. Since March 2018, 28 food saving events were organised through the platform by Boroume and HFA, and for which a behavioural change analysis was conducted. This was further supported with extended dissemination and awareness-raising activities.

INFOBOX 2. Features of the SavingFood platform.

The SavingFood platform enables the following activities and tasks:

- A coordinator can create a food saving event and save it as a draft, publish it on the platform, cancel it or change the status to ‘completed’. The coordinator can choose to either create a gleaning or a farmers’ market event, or can also replicate events.
- A coordinator can enter all the necessary details around the food saving event: date, start and end time, minimum required amount of volunteers, description of the event, location (and save locations) and route description.
- The SavingFood platform displays all organised events in list view, and on a map. The SavingFood platform guarantees location privacy, the full address of a food saving event is only displayed to volunteers once they are registered for the event.
- A coordinator can approve new registrations on the platform from volunteers, food donors and recipient organisations. New users should first be granted access to the platform by the coordinator before they have full access rights and can subscribe for events, or start donations.
- User management: coordinators have a database of all registered users on the platform, and can decide about user roles (volunteer, recipient or donor). A user can have multiple roles on the platform.
- Volunteers can subscribe for a food saving event, by simply clicking one button ‘Volunteer’. The volunteer can also decline participation.
- Volunteers have an overview for all events they registered, and receive notifications about it.
- Volunteers can contact the coordinator and other registered volunteers of the same event through a comments section.
- A donor is able to enter a donation on the platform, and a recipient organisation is able to accept the food offer after the matchmaking by the coordinator. The coordinator can make the match based on the needs of the recipient, and geographical proximity.
- Quantification report: coordinators are able to track the amount of saved surplus food through the organised food saving events, or from the food donations. Coordinators are able to manage food types, and food units.
2.2. Enabling behaviour change through the SavingFood platform

The development of the SavingFood platform is strongly connected to the engagement and behavioural change strategy of the project. The behaviour change strategy has the objective to set up a social movement with citizens (as volunteers), food donors and recipient organisations to save food surplus through the organised food redistribution processes with the online platform. By creating synergies among these three stakeholders, the behavioural change campaign aims to increase the level of participation and volunteer effort of all stakeholders in redistributing surplus flood, increase the degree of knowledge about how to save food in a collective way, and to increase the degree of awareness about food waste and food sustainability in general.

The behaviour change framework of the SavingFood project consists of eight behaviour change techniques, or inventions, that try to understand, and influence citizens’ behaviour related to food waste. The behaviour change techniques were designed through the principles of community based social marketing\textsuperscript{21} and the 7E-framework\textsuperscript{22} (See info box 3). By following these theories, all designed behavioural change interventions start with an “E”, of which the SavingFood platform is the ‘enabler’ for moving from intentional behaviour towards fighting food waste with concrete actions.

From behavioural change point of view, the SavingFood platform enables citizens to participate in food saving events, and provides the necessary

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support by the coordinator. For supporting behaviour change through the platform, the following principles were applied:

- **Make it possible**: This is the most obvious principle to apply; in order to participate in food saving events, citizens should know the website link, register and have access to the Internet. From the initial baseline measurement around behaviour change, it became clear that not everyone has access to the Internet, and especially not at premises of charity organisations. Further, food donors stressed that entering information into the system should be made as simple as possible, and should be made accessible through a mobile-friendly interface. For volunteers, having a mobile-friendly solution was also a necessity in order to being able to access the information about the events while they are on the move.

- **Make it simple**: For food saving events, the process for signing up as a volunteer was made as simply as possible by only clicking one button ‘volunteer’. Of course, the volunteer has to register first on the platform, which might be perceived as a barrier by some.

- **Provide support**: On the SavingFood platform, volunteers are able to access the coordinators profile, and check the contact details for support. Further, training sessions are also being organised for learning how to use the platform by food donors and recipient organisations.

- **Inform wisely**: The SavingFood platform was disseminated on various occasions, and via different channels. Once people were made enthusiastic about fighting food waste, the opportunity was provided to them to act and register on the platform. For instance, during awareness raising events, volunteers could leave their contact details behind, after which they received a thank-you email with a link to the platform and option to receive a newsletter. Further, at the end of each motivational video, the message ‘Come on... Join the revolution – start saving food now! Find out more: www.savingfood.eu’ was displayed.

- **Make it flexible**: If volunteers do not have the time to participate in a food saving event, the project also offered other possibilities to contribute. Citizens can be involved in different activities, with a variation in small or bigger tasks, such as the providing tips about potential new donors in the neighbourhood, signing a pledge or becoming an ambassador (See White paper II).

### 3. Behaviour change results

During the period March – April 2018, 28 food saving events were organised through the SavingFood platform by HFA and Boroume, of which 23 farmers’ market events, three gleaning events and two other types of events (a conference, and a charity award). In total, 5960 kilos of surplus food were saved and redistributed to recipient organisations. During these events, 127 volunteers participated, of which 112 registered through the SavingFood platform. It should be noted that these numbers are not unique volunteers, and that some people participated multiple times during the occurring events. Therefore, logging statistics were also retrieved from Google Analytics to check the amount of unique users during this period.

After the organised food saving events, the coordinators of HFA and Boroume requested volunteers to complete a survey, either on paper or online. The survey had the objective to analyse a self-perceived change in knowledge, concern and belief around food waste. Further, at the end of April 2018, in-depth interviews with coordinators from the food redistribution organisations were organised as to explore the change in efficiency and effectiveness in organising a food saving event online, in communicating and recruiting volunteers, and in the established processes and routines about the redistribution of surplus food on the logistic level.
3.1. Statistics from the SavingFood platform

During the period 1/3/2018 – 30/04/2018, HFA and Boroume published and organised 28 food saving events in Hungary and Greece, for which 112 volunteers registered through the SavingFood platform. To check the total amount of new and returning users, statistics from Google Analytics were retrieved. In total, 728 users visited the SavingFood platform, with 17.9% returning visitors, 82.1% new visitors and 8,693 page views in total. In terms of amount of users per country, Boroume had 369 users (50.62% of total visitors, with main cities: Athens: 28.40% and Thessaloniki: 13.09%), and HFA had 251 users (34.43% of total visitors, with main city Budapest: 20.55%) – other countries visiting the platform are the United Kingdom (5.62%), Peru (2.74%), United States (1.78%), etc. The average duration session was 6 min. 56 seconds, and users mostly visited the SavingFood platform through their desktop (52.6% - versus 43.96% for mobile, and 3.43% for tablets).

A clear relationship can also be investigated between the confirmed dates of food saving events, and a growing peak in the amount of users close to the date for signing up:

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Amount of volunteers registered through the SavingFood platform</th>
<th>Amount of visitors on the SavingFood platform during this period for Hungary</th>
</tr>
</thead>
<tbody>
<tr>
<td>HFA- farmers’ market - Budapest Nyugati tér</td>
<td>2/3/2018</td>
<td>4</td>
<td>110</td>
</tr>
<tr>
<td>HFA- farmers’ market Budapest Fővám tér</td>
<td>10/3/2018</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>HFA- farmers’ market Budapest Fehérvári út</td>
<td>10/3/2018</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Figure 22: Google Analytics: Period 1/3/2018 – 11/03/2018 – peak in amount of users for HFA’s farmers’ market events.

3.2. Survey with volunteers

After the organised gleaning and farmers’ market events, a survey was distributed for gathering feedback about the volunteers’ experiences. In total, 22 volunteers filled in the survey, of which 10 in Greece and 12 in Hungary. The survey had an estimated response time of seven minutes, and included questions about socio-demographic characteristics (gender, age), experience in volunteering (beginner, or regular volunteer), level of engagement with SavingFood through other tactics, knowledge increase, concern increase, beliefs around food waste, general user experience and usability of the platform, and intention to use the platform for subscribing for food saving events.

Profile of the participants

The survey was filled in by 14 females and 8 males, who were mostly between 21 and 30 years old (N=11). Further, there were six participants who are older than 50 years old. 11 participants confirmed to volunteer
on an occasional basis, while 9 mentioned to volunteer regularly. Two participants joined a gleaning or farmers’ market event for the first time in Greece.

A remarkable result is that this group of volunteers is also being involved in the SavingFood project through (on average) 2 to 3 other engagement tactics. 17 volunteers are also following the social media pages of the SavingFood project, and 10 volunteers also participated in one of the awareness-raising events organised by HFA or Boroume. 8 volunteers also signed the SavingFood pledge, and 7 of them are being involved in the ambassador program. These results indicate that the engagement strategy of the project succeeded in involving citizens through multiple activities in a reinforcing way, and also for citizens who did not have any volunteer experience, to rather limited or very experienced.

Last, it also has to be noted that 19 citizens participated in the event and registered on the SavingFood platform, while 3 citizens participated in the event but did not register on the platform. It often occurs that when someone registers for an event, that he/she brings along a friend.

This is encouraged by the local food redistribution organisations, and is also going to be supported by the SavingFood platform by mentioning the amount of friends that will come along with you to the event without the necessity to also register. The survey was designed as such that each participant had to answer the behaviour change questions, but not the questions related the registration and the general user experience of the platform.

*Behaviour profile*

The volunteers rated their knowledge on food waste as basic (N=8, or 36,4%) to good (N=13, or 59,1%), while most of them said that through their participation in the food saving event their knowledge increased to a *moderate extent* (N=12, or 57,1%). All volunteers, either volunteering for the first time or very regularly, affirm that through their participation they have learned something new – even when they consider to have already good knowledge on the topic. Most volunteers mentioned that they learnt something about the rules and practicalities about how to volunteer in a food saving event, the amount of surplus food that was collected and about the objectives of the SavingFood project. The results indicate that more information can still be shared with volunteers about the donors and/or charities that are connected to the food saving event, as most volunteers indicate to have not learnt anything about it (N=3) or only partially (N=12).

Next, for perceived concern, most volunteers feel concerned about food waste (N=11), while four are feeling somewhat concerned and six very concerned. Those who volunteer regularly are mostly feeling concerned (N=5) to very concerned (N=3), while those who volunteer occasionally are mostly feeling somewhat concerned (N=4) to concerned (N=5) about the issue. After the participation in a food saving event, most volunteers mention that they feel *slightly more concerned* (N=8) or *much more concerned* (N=7). Five volunteers affirm that their concern remained the same, while one volunteer mentioned that his/her concern declined. Those whose concern remained the same were mostly already very concerned about the food waste issue, while others move from ‘concerned’ to slightly more concerned or much more concerned. In the open text boxes, two testimonials of volunteers were provided about their increase in concern:

“I was already concerned, but watching at the markets how much food would have wasted, I now try to save food even better” (Greece, female, above 60 years old, feeling much more concerned after participation)

“I saw the alternative ways that can be used to save food, instead of just throwing it in the dumpster” (Greece, female, 21-30 years old, feeling much more concerned after participation)
Last, related to the volunteers’ beliefs around these organised food saving events, it is clear that most agree (N=14) to strongly agree (N=7) that these events are an effective means for people who suffer from food insecurity. Further, volunteers strongly believe that these food saving events also help in creating new ties in the neighbourhood around food waste. However, there is a slightly opposing opinion among the volunteers in the belief whether these food saving events can help pushing local authorities towards taking measures in reducing food wastage: 6 volunteers are neutral, 3 disagree, 12 agree to strongly agree.

**General user experience and usability of the platform**

Overall, the volunteers who registered through the platform for the food saving events were satisfied with the general navigation and user experience. The mean scores are all within the range of being ‘satisfied to extremely satisfied’, and especially the level of completeness about the information provided and the overall look-and-feel obtains a very good score:

<table>
<thead>
<tr>
<th></th>
<th>Mean score</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>User satisfaction: Level of completeness of information provided</td>
<td>8,4</td>
<td>1,3</td>
<td>18</td>
</tr>
<tr>
<td>User satisfaction: Reaction time of the platform</td>
<td>7,7</td>
<td>2,3</td>
<td>18</td>
</tr>
<tr>
<td>User satisfaction: Overall look-and-feel</td>
<td>8,4</td>
<td>1,8</td>
<td>18</td>
</tr>
<tr>
<td>User satisfaction: The amount of notifications</td>
<td>7,8</td>
<td>2</td>
<td>18</td>
</tr>
</tbody>
</table>

Table 4: Satisfaction scores about the usability and user experience with the SavingFood platform (scale from 1 to 10, 1 being extremely dissatisfied and 10 being extremely satisfied).

Related to the reaction time of the platform and the amount of notifications, it is clear that opinions are opposing about these aspects (high standard deviations). During the period March-April 2018, several measures have been taken to improve these aspects. Some volunteers contacted the coordinators of the food
redistribution organisations to say that there were too frequent notifications around the publishing of an event (e.g. new event published, new event confirmed, new registration, etc.), and that it was perceived as annoying. Therefore, the coordinators redesigned the amount of notification messages send to volunteers. Further, the hosting server was changed in order to be able to manage the amount of users and the traffic size. Due to increased activity from the food saving events by the pilots, the capacities of the server were increased.

Related to the user experience, volunteers also rated several statements on a five-point Likert scale to know their opinions related to easiness and efficiency of using the online platform for signing up:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean score</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thanks to the SavingFood platform, it is easier for me to find food saving events in my neighbourhood</td>
<td>4,41</td>
<td>.795</td>
<td>17</td>
</tr>
<tr>
<td>The SavingFood platform makes it easier for me to sign up as a volunteer and plan my participation in the event</td>
<td>4,82</td>
<td>.393</td>
<td>17</td>
</tr>
<tr>
<td>The SavingFood platform helps me to connect better with the coordinator and other volunteers in the event</td>
<td>4,18</td>
<td>.951</td>
<td>16</td>
</tr>
<tr>
<td>In general, I think that the SavingFood platform is a great online tool for efficiently organising food saving events</td>
<td>4,50</td>
<td>.894</td>
<td>18</td>
</tr>
<tr>
<td>I rather prefer other channels for signing up for food saving events (e.g. via email, social media)</td>
<td>2,72</td>
<td>1,2</td>
<td>18</td>
</tr>
</tbody>
</table>

Table 5: Statements about the user experience with the SavingFood online platform (1= strongly disagree, 2=disagree, 3= neutral, 4= agree, 5= strongly agree).

Volunteers have a clear positive opinion about the easiness of the platform for signing up for a food saving event and to plan their participation in the event ($\mu = 4,82; SD= .393$). This is a very positive result, as most participants volunteer occasionally or very regularly and can thus compare the situation prior and after the launch of the platform. The SavingFood platform also obtains high scores for efficiency in organising events ($\mu = 4,50; SD= .894$), and easiness for finding events in the neighbourhood ($\mu = 4,41; SD= .795$). A lower mean score, although still good, is obtained for rating the perceived connection with donors and others volunteers who sign up for the event. At this moment, the platform only supports a general comment section, whereby one user can reply to the questions or feedback of others. However, one-to-one private conversations amongst volunteers or between one volunteer and a coordinator are currently not supported.

Last, a mediocre score is obtained for the statement whether volunteers would rather prefer other channels for signing up for food saving events ($\mu = 2,72; SD= 1,2$). Once again, this is a good score, as a lower mean score here means that volunteers rather prefer the SavingFood platform versus other suggested channels, such as email or social media. Ten volunteers disagree to strongly disagree that other channels are preferred, while 5 volunteers are rather neutral and 3 strongly agree. Although some volunteers differ in opinion here, the final question in the survey reveals that all volunteers would like to take part again in upcoming food saving events of HFA and Boroume, and that they would also recommend the platform to friends and relatives. As such, it can be concluded that both the experience prior as during the food saving event was positive for most of the volunteers, and led to a change in perceived knowledge and concern and also overall satisfaction with the navigation and registration online.
3.3. In-depth interviews with coordinators: digital social innovation for fighting food waste

Apart from the behaviour change analysis with volunteers, in-depth interviews were also organised with coordinators of HFA and Boroume. During these interviews, specific questions were asked about their satisfaction with the platform, and how they perceived the change in processes and routines to organise food saving events through the online tool. Prior to the SavingFood project, Boroume was organising food saving events, including the communication and recruitment, through e-mail, social media or through word-of-mouth communication. HFA did not have any experience with organising food saving events prior to the SavingFood project. Feedback and FoodWin are very experienced in organising gleaning events, and mostly do this via e-mail and social media. The interviews explored whether the coordinators of the local food redistribution organisations perceived a change in efficiency and effectiveness in organising a food saving event online (e.g. amount of hours spent, and amount of staff involved for organising an event), in communicating and recruiting volunteers, and in the established processes and routines around the redistribution of surplus food on the logistic level. The interviews were organised in April 2018, and lasted approximately 40 minutes to 1 hour.

The four food redistribution organisations have a different modus operandi, and implement different food saving scenarios. Therefore, the following results and experiences with the platform are not comparable and are very context specific to the modus operandi already established at the organisations:

**Greece - Boroume**

In Greece, **Boroume** is a key player in redistributing surplus food through direct redistribution from a food donor to a recipient organisation, and also through their farmer markets and gleaning programmes. Boroume testified that thanks to the SavingFood platform a food saving event is organised in a much quicker way, and proofs to be useful in finding volunteers and setting up communication with them in advance of an event. For the Boroume coordinators, the preparatory work in advance of an event has not changed. Coordinators are still contacting representatives from farmer markets and the agriculture sector by phone, and also the collection time during the events of the surplus food has not changed. What has changed, or what has definitely been improved, is the process of how volunteers confirm their participation in the event online. Volunteers now confirm (or decline) their participation through clicking one button, while this was formerly managed through a whole process of communicating back and forth via email between the coordinator and the volunteer in order to reach the minimum amount of required participants per event. Furthermore, the SavingFood platform allows the coordinators of Boroume to replicate events, which is particularly useful for the farmer markets program. Boroume organises food saving events at a weekly basis at particular farmer markets in Athens, and through this feature the coordinators can easily re-use information from previous created events. Further, Boroume also testifies that through the platform they have a better overview of all organised events in different locations (also remotely), and about the amount of registered participants per event:

“There is definitely a time efficiency in the communication between a volunteer and a coordinator. Through this efficiency, it allows us to expand our activities – and especially our farmer markets program” (Boroume)

Besides the SavingFood platform, Boroume sees that also other digital channels are used among volunteers to communicate. Messenger groups are created among the subscribed volunteers to share pictures with each other, and to meet besides the food saving events for a drink. Boroume greatly supports this, as it creates bonding among the volunteer group. The SavingFood platform allows for basic communication in the group in a formal way, while the sharing of pictures and informal gatherings are organised outside the platform. The social media pages of Boroume are also still used for posting pictures of the events.
To conclude, in the period March-April 2018, Boroume has organised 19 events through the SavingFood platform and will continue publishing food saving events in the future. Boroume testifies that using the SavingFood platform has become a habit for them in a very short time, and that all gleaning events will be organised through it in the future and that they will also expand farmer market activities through it. For instance, since February 2018, Boroume was able to start a collaborative partnership with two farmer markets in Thessaloniki, and to manage the volunteer registrations remotely through the SavingFood platform. Last, the efficiency gains in amount of time spend is estimated to be reduced from 80 to 20 minutes to organise the communication with volunteers, and is therefore the ultimate proof to continue to use the platform.

**Hungary – Hungarian Food Bank Association (HFA)**

HFA has a different modus operandi compared to Boroume. HFA applies the indirect food redistribution model whereby surplus food is collected and first stored at the warehouse before it reaches the final beneficiary. Through the SavingFood project, HFA is restructuring its redistribution activities from indirect towards more direct food redistribution activities through the gleaning and farmer markets programmes. Organising gleaning and farmer market events are thus new activities for HFA, and the coordinators of HFA testify that through the SavingFood platform it is enabling them to find volunteers in a quick way, and proofs to be useful in finding volunteers and setting up communication.

However, HFA also learnt that other engagement tactics should be used in combination with the platform, and which proofed to be more supportive in recruiting volunteers, such as social media and the ambassador program:

> “Engagement is more important than technology, technology is not solving how to involve your stakeholders in food waste. We learnt a lot how to concretely engage different target groups with different tactics, and what the barriers or enablers may be in actually doing and showing up.” (HFA)

In the period March-April 2018, HFA organised ten food saving events through the platform and will continue to use the platform to expand its activities. HFA is currently also exploring another type of event that can be organised through the platform, being “catering events”. This type of event is the collection of surplus food at the end of a party or celebration, whereby volunteers are needed for packaging and collecting the food. HFA has the opinion that the SavingFood platform is flexible in control and management, and can therefore also manage other types of events that might come to existence in the future.

**Feedback and FoodWin**

Feedback and FoodWin are two organisations that are specialised in organising gleaning events, and are not redistributing or storing surplus food from food donors or retailers. Both organisations have a large volunteer base that they invite for various gleaning events throughout the year in the United Kingdom and Belgium, and who collect leftovers crops directly from the fields. However, since Feedback and FoodWin have already well-established procedures and routines for inviting volunteers through social media, it proofed to be difficult for the coordinators to convince volunteers to create an additional account and confirm their presence via another online tool. Volunteers had to learn to use another online tool for which they had to register, and also had to change their habits for confirming their participation. During the period March-April 2018, fictive events were organised with volunteers to gather their experience and volunteers perceived the processes as too cumbersome. After this trial period, it was decided to not to use the online platform for recruiting volunteers and only as an awareness raising tool for consulting videos, signing the pledge, etc.
4. Conclusions

Since the launch of the SavingFood platform in March 2018, 28 food saving events were published, with 122 registered volunteers. The amount of activities and number of registered volunteers through the platform is expected to continue to grow after the project ending, seen the trials were perceived as successful for the pilots in Hungary and Greece. In these two countries, 5960 kilos of surplus food were saved through the platform and redistributed through recipient organisations, and which also led to behavioural change among volunteers after their participation. The survey results showed that participating in a food saving event caused to an increase in knowledge and concern among volunteers – even though when this was already high to moderate. Volunteers testified that they learnt more about how to save food in a collective way, the food redistribution process and the amount of saved food. Further, volunteers also mentioned that their concern increased by seeing how much would otherwise been wasted at the market, if they did not redistribute it. Further, from coordinators’ point of view, time efficiency in communication between a volunteer and coordinator was created (e.g. for Boroume from 80 to 20 minutes for publishing an event and finding volunteers), leading to time and staff resources that can be devoted to expanding activities. In Greece and Hungary, the SavingFood activities will be further sustained, and whereby a combination of different digital channels will be used to communicate with volunteers in a formal and informal way. However, the pilot trials in the UK and Belgium were not that successful, seen the process of change for volunteers was perceived as too cumbersome. In these cases, the SavingFood platform was further on used as a support tool for raising awareness and sharing knowledge about food waste.