Food redistribution in the EU: Analysis of existing frameworks

11 March 2019, Brussels
Task 2 – Mapping existing operational models from all EU MS

Objective

To map existing operational frameworks of the different redistribution models in all MS

• Listing of operators & actors involved in food surplus donation across EU-28

• Mapping of redistribution models

• Assess the strengths & weaknesses of each food redistribution framework/model

• Analyse how food redistribution framework/models relate to existing national and/or EU regulatory and policy measures
Methodological approach – key elements:

1. Literature review
2. Desk / online research (Country Experts)
3. Collection of actors (Excel template/database)
Representation of the main operating models for food redistribution

Operational model

- Donors from the food supply chain (FSC)
- Edible food, safe to consume, unsold / unused in the FSC
- Redistribution organisations (RO)
- B-2-B / back-line
- C-2-C / front-line
- Charity organisations (CO)
- End-beneficiaries

Mapping Criteria

- Capacity & Food Products
- Infrastructure
- Sourcing Sectors & Recipients
- Logistics
- Organisational capacity
- Network relations
## Sub-task 2.2 Mapping Criteria

<table>
<thead>
<tr>
<th>Mapping criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Capacity</td>
<td>Scale of operation (number of collaborators/beneficiaries)</td>
</tr>
<tr>
<td></td>
<td>Size of operation (amounts donated/redistributed)</td>
</tr>
<tr>
<td></td>
<td>Staff &amp; volunteer base</td>
</tr>
<tr>
<td>2. Food products</td>
<td>Type of products (date marking categories)</td>
</tr>
<tr>
<td></td>
<td>Categories of products, including fruits &amp; vegetables, bread &amp; bakery products, meat &amp; fish, dairy products, etc.</td>
</tr>
<tr>
<td>3. Sourcing sectors</td>
<td>Food supply chain sectors</td>
</tr>
<tr>
<td></td>
<td>Use of FEAD and/or CMO sources</td>
</tr>
<tr>
<td>4. Infrastructure</td>
<td>Warehouses, outlets, cold storage facilities and IT related items.</td>
</tr>
<tr>
<td>5. Logistics</td>
<td>Means of transport</td>
</tr>
<tr>
<td></td>
<td>Transportation</td>
</tr>
<tr>
<td></td>
<td>Supply &amp; demand alignment</td>
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<tr>
<td></td>
<td>Food safety / hygiene regulations</td>
</tr>
<tr>
<td></td>
<td>Quality assurance</td>
</tr>
<tr>
<td></td>
<td>Financial costs &amp; financial means</td>
</tr>
<tr>
<td>6. Network relations</td>
<td>With Donor organisations and (other) Charities / Facilitator organisations</td>
</tr>
<tr>
<td></td>
<td>With national competent authorities and DO irt food safety &amp; regulatory issues</td>
</tr>
</tbody>
</table>
Mapping criteria

Methodological approach – key elements:
1. Literature review
2. Input from the Advisors
3. Semi-structured, open-ended interviews by the CE

Scoping interviews
- 90 interviews in total
- 28 MS covered
- Mixed representation per MS of RO, CO and FO
- RO → 1st option = National foodbank representative (via FEBA)
- Implemented: July 2018 – February 2019

Figure 6 Number of respondents by EU MS (n=90)
- **Age** of the organisations: young, most after 1990, 1/3\(^{rd}\) after 2010
- **Scale and types of products**: different scale, mostly mixed product model
- **CO** tend to be smaller than the **RO** in terms of range of products distributed. In addition, the organisations in the Eastern region are also a bit smaller on average.
- The number of end-beneficiaries per year per organisation varies from a few hundred per year for smaller organisations to several million beneficiaries per year for very large organisations

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**Figure 4 Number of organisations by volume of redistributed food (n=60)**

**Figure 5 Number of organisations by number of beneficiaries per year (n=58)**
Volumes redistributed have been increasing in recent years. Just 11% of the organisations were observing a decrease (N=27). Most organisations were expecting an increase (86%) in the coming years.

Reasons for organisations to expect a decrease in redistributed volumes are: less people in need of help, less food surplus available.

The numbers of warehouses vary, with most organisations having 1-2 or 2-5 warehouses.
Sub-task 2.2 Mapping Criteria

- **Type of products:** Mostly Bread + F&V + dry; about 60% of the organisations are also redistributing meat and fish products (incl. 1/3 only processed). About 32 organisations reported to distribute prepared food or hot meals. The same number reported to distribute frozen food.

- 4 types:
  - Long shelf-life model
  - Fresh model
  - Mixed model without freezing
  - Mixed model with freezing
Sourcing sectors and recipients:

- Retailers chains dominate
- Some organisations have indicated to distribute purchased food in addition to the surplus food, others mainly rely on purchased food.
- The numbers of donors vary per organisation

- A number of organisations participates in FEAD or gets food from farmers that get CMO funding; Some willing to do in the future. Some used FEAD in the past, but not anymore; some are not eligible to apply for the programme; some just never heard of it; some don’t want it; some indicate administrative barriers; use of CMO much lower, doubts whether (donors are) acquainted.
Some organisations redistribute food to a few charities, other organisations have a very large network of receiving charities (several thousands).  

**Infrastructure and logistics:** little sophisticated equipment like cool/freeze vans and a dedicated logistic centre  

Identification of various delivery models:

<table>
<thead>
<tr>
<th>Delivery models</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RO, CO and mixed RO+CO</td>
<td>The food is picked up at the donor’s site (including gleaning), and/or a food bank in case of COs. Sometimes the food is delivered to the organisation by the donor.</td>
</tr>
<tr>
<td>RO</td>
<td>Involved in re-packaging and sorting into the larger batches, which are either picked up by the CO or are delivered to the CO.</td>
</tr>
<tr>
<td>CO and mixed RO+CO</td>
<td>Are involved in re-packaging and sorting into the smaller batches, and/or in preparing meals. The food is then picked up by the beneficiaries or delivered to the beneficiaries.</td>
</tr>
<tr>
<td>RO, CO and mixed RO+CO with multiple outlets/warehouses</td>
<td>Food is often transported between the organisation’s different sites.</td>
</tr>
<tr>
<td>FO</td>
<td>Do not transfer food from their site but, rather, are involved in facilitating the process (e.g. matchmaking, quality control, awareness campaign).</td>
</tr>
</tbody>
</table>
Organisational capacity:

- Charities have the least employees. Most organisations rely on regular employees in combination with a volunteer base. A few organisations operate with volunteers only, and few have only employed personnel. Most organisations said to have about 10 to 50 regular volunteers.

- A source of (partly) paid and voluntary staff are the so-called ‘special groups’ within the society, e.g. people with disabilities, day release prisoners, asylum seekers, people from the civil service, or people that participate in government funded reintegration programmes.

![Figure 25: Number of regular volunteers (n= 49)]
Operational costs: ROs and CO+ROs have highest costs; personnel, house and storage rental, and logistics and transportation. Other costs are energy, website and IT solutions, purchased food and other goods for distributing, legal assistance and food safety control.

Large difference in operational costs per beneficiary (few – 150 Euros); Eastern MS tend to have lower costs per beneficiary.

Financial sources: donations, subsidies, public funding, operational credit, entrepreneurial activities, fee/payment models.

Network relations: for demand, supply and food safety issues. Including matching supply and demand of food surplus recovery and transfer, transport and logistics, food waste and/or poverty awareness, capacity issues, quality control and compliance with food safety and food hygiene issues.
Food Donation Data

FEBA member food banks distributed the equivalent of 2.7 million meals every day, which equals to **501 thousand tonnes** of food distributed to **6.6 million people** in Europe in 2017. 16,200 employees were involved in this process, of which 86% are volunteers.
## Sub-task 2.2 Mapping Criteria

### Food Donation Data (Reported by the Scoping Interview Respondents)

<table>
<thead>
<tr>
<th>Quantitative Indicator</th>
<th>Amounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of surplus food donated to the organisation, in tons</td>
<td>853.531</td>
</tr>
<tr>
<td>Amount of surplus food redistributed, in tons</td>
<td>845.616</td>
</tr>
<tr>
<td>Amount of surplus food redistributed to CO, in tons</td>
<td>366.220</td>
</tr>
<tr>
<td>Amount of surplus food redistributed to end beneficiaries, in tons</td>
<td>456.908</td>
</tr>
<tr>
<td>Number of donating organisations</td>
<td>22.098</td>
</tr>
<tr>
<td>Number of receiving charities</td>
<td>34.601</td>
</tr>
<tr>
<td>Number of receiving end beneficiaries</td>
<td>19.709.809</td>
</tr>
</tbody>
</table>

- Acceptance level (from DO to RO/CO): estimated 97%
- Redistribution level (from RO/CO to CO/End-beneficiaries): estimated 94% of accepted food surplus
### T2.3 Analysis of strengths & weaknesses

- Analytical framework
- Scoping interviews with D&R experts and MS respondents
- Online survey
- Interactive working session with Subgroup on Food Donation

#### For four different types of organisations, a number of operational models were defined

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>Small CO with kitchen and deliveries, no storage</td>
<td>Small / medium size CO with pick-up model</td>
<td>Small CO, pick-up and delivery, with storage</td>
<td>Large charities</td>
</tr>
<tr>
<td>RO</td>
<td>Large national food banks</td>
<td>Smaller national food banks</td>
<td>Smaller ROs that are not national food banks</td>
<td></td>
</tr>
<tr>
<td>RO+CO</td>
<td>Large national food banks with local outlets</td>
<td>Small food banks with local outlets</td>
<td>Local Red Cross model</td>
<td></td>
</tr>
<tr>
<td>FO</td>
<td>NGOs targeting food waste</td>
<td>Online platforms to connect donors and beneficiaries</td>
<td>Management, legal, logistical support</td>
<td>Social supermarkets, social fridges</td>
</tr>
</tbody>
</table>
Age: Organisations that are older will have more established operational models and will also tend to be larger; The younger organisations are most typically facilitating organisations.

Size: For all types of organisations the amount of redistributed food tends to increase with the age of the organisation.

Sourcing sectors: Positive relation is confirmed for ROs.

Recipients: For all types of organisations the number of beneficiaries tends to increase with the age.

Infrastructure & logistics: Positive correlation was found for the number of warehouses.

Organisational capacity: Positive correlation with the number of volunteers.

No significant relations were found with the frequency of the various barriers for redistribution.

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**Table 15 Relationship between maturity and the operational models**

<table>
<thead>
<tr>
<th>Model</th>
<th>Age</th>
<th>Mean age</th>
<th>Size in tons</th>
<th>Mean size, in tons</th>
<th>Size in employees</th>
<th>Mean employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>RO, model 1</td>
<td>+</td>
<td>0</td>
<td>26</td>
<td>0</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>RO, model 2</td>
<td>-</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>RO, model 3</td>
<td>+</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>RO, model 4</td>
<td>-</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>RO, model 5</td>
<td>+</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>RO, model 6</td>
<td>-</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>RO, model 7</td>
<td>+</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>RO, model 8</td>
<td>-</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>RO, model 9</td>
<td>+</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>RO, model 10</td>
<td>-</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>25</td>
<td>6</td>
</tr>
</tbody>
</table>

++ and +, and - and - indicate significant differences from other group members (organisation types CC, RO, CO+RO, FO), while 0 indicates no significant difference from group mean.
Charity organisations
1. Volunteers / Staff
2. Financial resources
3. Number of donations/donors
4. Storage capacity

- Model 1: Small charities with kitchen, deliveries, no storage. Organisations have reported fewer problems with logistics, financial resources and storage capacity.
- Model 2: Medium charities with storage and pick-up by beneficiaries. Organisations report fewer logistical problems, but more financial limitations.
- Model 3: Medium charities with storage and delivery to beneficiaries. Organisations report more problems with ICT systems and volatile supply/demand.

Redistribution organisations
1. Financial resources
2. Logistics
3. Staff / volunteers
4. Regulatory barriers

- Model 1: Smaller food banks with limited geographical coverage. Organisations report fewer limitations in the number of donations.
- Model 2: Smaller national food banks. Organisations report more problems with regulations and general awareness about food waste.
- Model 3: Large national food banks. Organisations report more problems with logistics and cold chain, but fewer problems with regulations.

CO + RO organisations
1. Regulatory barriers
2. Financial resources
3. Staff / volunteers
4. Logistics / storage capacity

- Model 1: Large national food banks with local outlets. Organisations report issues with liability and with training of volunteers/staff.
- Model 2: Small food banks with local outlets. Organisations report fewer problems with training, ICT and cold chain.
- Model 3: Local Red Cross model. Organisations report issues concerning opening hours of donors and perishability.

Facilitating organisations
1. Regulatory barriers
2. Financial resources
3. Staff
4. Logistics

- Model 1: NGOs targeting food waste. Organisations report about logistics, financial resources and storage capacity.
- Model 2: Online platforms to connect donors and beneficiaries. Organisations report problems with number of donors, but fewer issues concerning storage and logistics.
- Model 3: Management, legal, logistical support. Organisations mention ICT tools to match supply and demand and opening hours of donors as limitations.
- Model 4: Social supermarkets, social fridges: Organisations report about regulatory barriers and the fact that FEAD is not available due to strict rules.
Most actors participating in this study are highly aware of the applicable legislations regarding food safety and hygiene, information (mainly date marking items) and fiscal instruments (VAT issues).

Legislative barriers are not necessarily the top limitations for food donation and redistribution (33/94 respondents)

Main legislative barriers are related to food & hygiene regulations

More important are barriers related to:
  - Financial costs
  - Organisational capacity
Thank you for your attention!

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