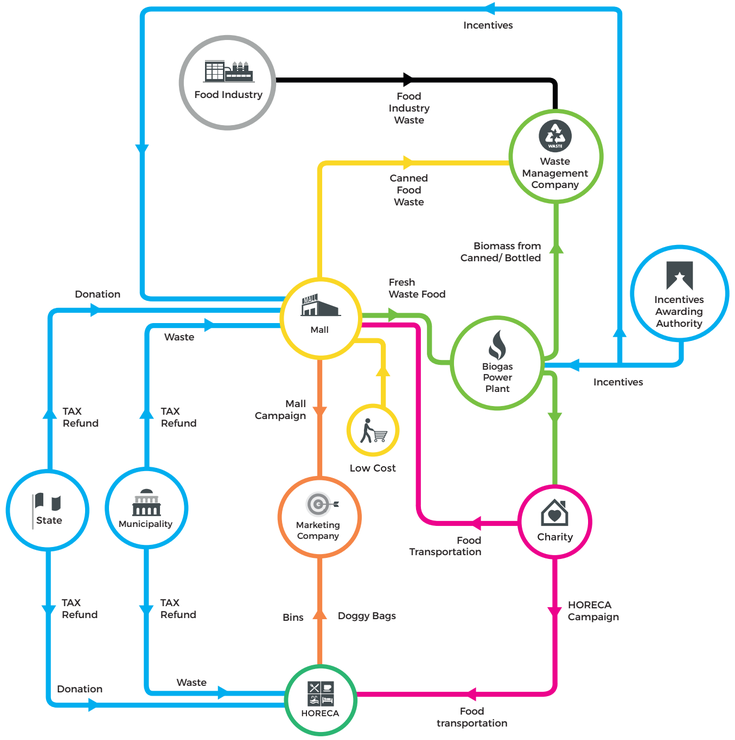
i-Rexfo business model

i-REXFO is an innovative business model to reduce significantly the amount of food waste which is produced and landfilled. The actions to reduce food waste are economically sustained by public incentives, tax reductions and private revenues from the energy valorization of residual food waste.

The project is focused on food waste produced by food industries, farms, malls, catering sector (hotels, restaurant and bar – HORECA) and consumers.

FINANCIAL FLOW
i-REXFO business model



www.irexfo.eu

i-REXFO

increase in reduction and recovery of expired food

LIFE16 ENV/IT/000547

i-REXFO started on September 1st, 2017 with the contribution of the LIFE financial instrument of the European Community LIFE16ENV/IT/000547.
Coordinator: Department of Engineering - University of Perugia - Italy

i-REXFO is an official partner of FAO's Save Food programme
www.fao.org/save-food

Our partners

i-REXFO

increase in reduction and recovery of expired food

1 WHY

With one-quarter of the world population at risk of poverty and social exclusion, one-third of the food produced in the world gets lost or ends up in landfills. But there's more. The production of uneaten food involves the use of 250 billion m^3 of water, occupies 30% of the world's agricultural land area, and release 3.3 billion tonnes of climate-altering gases. The direct economic consequences of all this waste amount to 750 billion dollars each year (source: FAO).

According to FAO, food waste in industrialised countries are caused by a combination of factors:
- **consumers' behaviour**: incorrect shopping planning, poor understanding of best before and use by dates, excess purchases, and lack of the habit of storing and eating leftovers;
- a **production-procurement-distribution chain** that does not give enough value to food that is near its expiration date, non-conforming products, and the donation of surplus;
- a **legal and authorisation system** that does not promote the reuse of food waste in the animal feed industry or, more recently, its use in biomass-fed biogas production plants.

2 OUR GOAL

The i-REXFO project aims at demonstrating that food waste can be reduced through an **innovative business model** that is both economically and environmentally sustainable.

i-REXFO is based on an integrated model, in which **expired food to energy** (EFE) valorisation supports the **Reduction of Expired Food** (REF) chain.

3 HOW

The project focuses on food waste produced by the food industry and farms, large-scale distribution, the catering industry (hotels, restaurants, bars, HORECA), and consumers. It does so through measures that reduce food waste and increase waste-to-energy valorisation.

Based on the **good practices in Europe (Denmark)**, i-REXFO has developed open-source software to plan and **optimise** the integrated model from a **technical, economic, and environmental point of view**.

The i-REXFO model **raises the awareness of consumers** and operators in the large-scale distribution and HORECA sectors; **promotes the sale** and use of food that is near its expiration date, less aesthetically pleasing, and increases donations of surplus food to charities and food banks. These measures are **backed by the collection** and use of expired food for the production of biogas in anaerobic digestion plants, which use the resulting digestate as a fertiliser, thereby completing the cycle. The i-REXFO model will be **demonstrated in** Umbria **and then transferred to other countries** (Hungary).

4 IMPACT

8.500 tonnes of **CO_2 emissions avoided every year**;
3.400 tonnes of **food waste** a year from the food industry, farms, shopping centres, and restaurants **that don't end up in landfills**;
480.000 m^3 of **water saved every year**;
2.800 MWh a year of **energy produced from renewable sources**;
2.400 MWh in **energy savings every year**;
1.100 ha a year in **reduced soil consumption**;
128.000 **aware consumers**, thanks to the project's campaigns and activities.

SHARE THE PROJECT

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