



FOOD CROSSING DISTRICT

The project deals with the agri-food production system of the Emilia-Romagna region, and it is focused on the development activities of the integrated and sustainable agri-food chains that promote valorization of agri-food by-products and wastes.

LEADER



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FOOD CROSSING DISTRICT INDUSTRIAL SYMBIOSIS: TWO NEW FOOD PRODUCTS FROM BY-PRODUCTS AND A CIRCULAR ECONOMY MAP IN THE EMILIA ROMAGNA REGION

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STATE OF THE ART

The agri-food sector generates significant quantities of by-products and waste, whose disposal produces negative environmental and economic impacts. The European policies on sustainability request the valorization of potentially added-value agri-food by-products and waste, by means of innovative technologies (**green** biotechnology) and systems (**industrial symbiosis**) to increase the competitiveness of enterprises and to create **new job opportunities**.

This type of approach applied to the agri-food chain of a given territory allows to plan a **systematic re-utilization** of resources, minimizing withdrawals from the environment and favoring the creation of a market of secondary resources and services.

THE PROJECT

Food Crossing District selects strategies and solutions for agri-food waste valorization and re-uses. The project involves the Interdepartmental Centre for Industrial Agrofood Research (CIRI AGRO) (with wide expertise on food processing and products) and ENEA-LEA (with large expertise on industrial symbiosis and eco-compatibility analysis by Life Cycle Assessment (LCA)). To identify solutions aimed at maximum utilization of food stuffs, the abovementioned research centers work together with two important food companies, Casalasco and Barilla. Food Crossing District also develops a **dynamic geo-referenced map of circular economies** related to the two food chains (tomato and durum wheat bran), to identify possible system synergies.



OBJECTIVES

- Use and valorization of agri-food chain by-products **by process optimization using technologies with low environmental impact**: co-milling of olives and tomatoes peels and seeds, defatting durum wheat by-products;
- Design of **new functional and/or nutraceutical food products**;
- Enforcement of **industrial symbiosis strategies** to improve **enterprises competitiveness**, territorial synergies, economic-logistical aspects, and communication between private companies and research centers.