



Agri & food waste valorisation co-ops based on flexible multi-feedstocks biorefinery processing technologies for new high added value applications

Christine Grabler

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1.3 Million tonnes of food is globally wasted yearly



32%
of the food
produced is
wasted



16% of food waste is generated at **field and processing level**

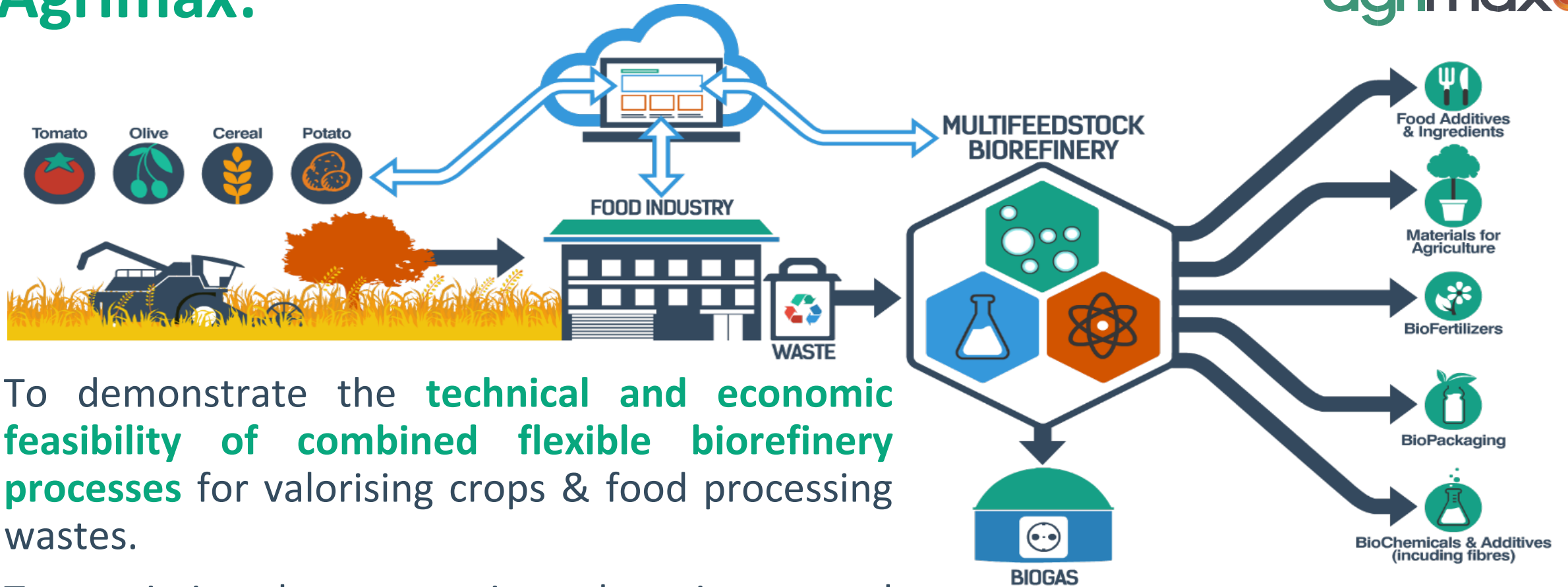
700 million tonnes of agricultural waste are generated in EU annually

1.3 Million tonnes of food is globally wasted yearly

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Agrimax:



To demonstrate the **technical and economic feasibility of combined flexible biorefinery processes** for valorising crops & food processing wastes.

To maximise the economic and environmental sustainability of the EU **agricultural and food sectors** while providing new **products to the food, packaging and agriculture sectors**

Agrimax in numbers



48 Months

29 Partners

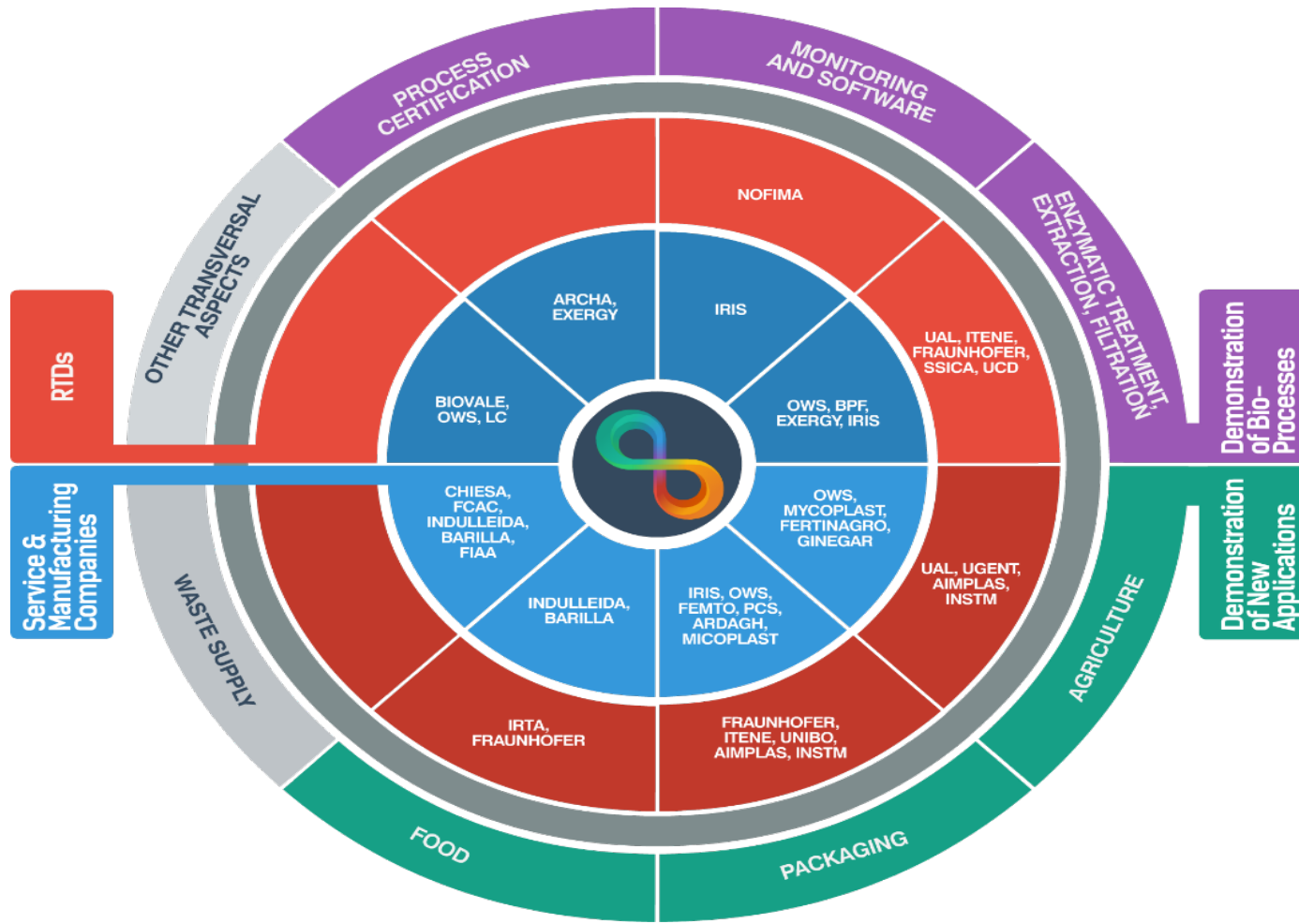
11 Countries (Austria, Belgium, Germany, Hungary, Ireland, Italy, the Netherlands, Norway, Slovenia, Spain, United Kingdom)

15 Million € (ca. 12 M€ EC contribution)

TRL >7 Demonstration Action

BBI VC3.D5 - 2015 Valorisation of agricultural residues and side streams from the agro-food industry

The consortium



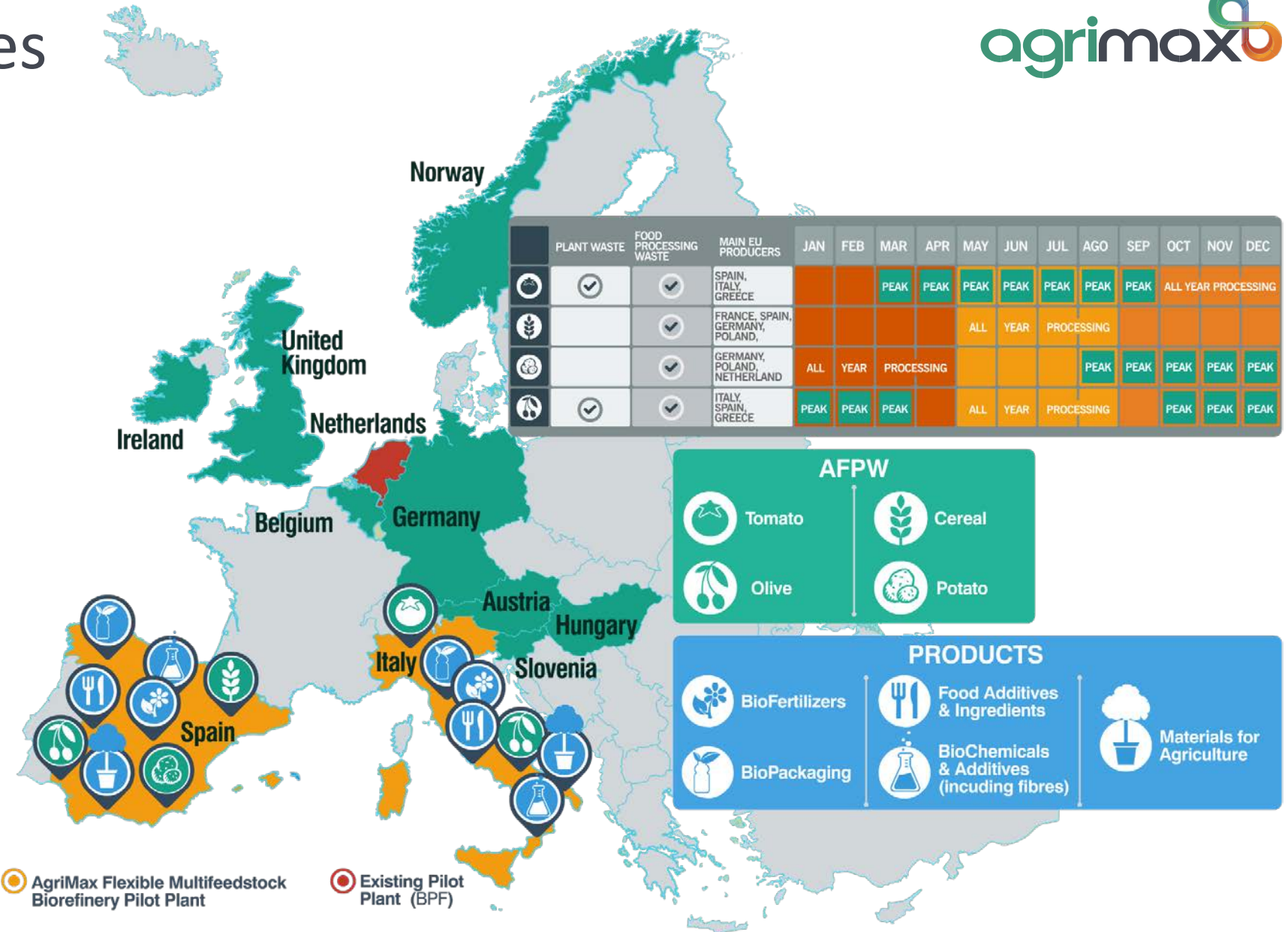
The whole supply and value chain is covered thanks to:

- **11 RTDs**
- **18 industrial partners** (12 SMEs and 6 large enterprises) of which 5 are multipliers

3 partners are **BIC members** and 8 **associated BIC members** to maximise the alignment with the BBI programme

2 pilot biorefineries

Two pilot plants are going to be designed and will run on a **cooperative base** to prove the viability of the proposed approach



Project steps

Design of the cascading approach

Conversion of the raw material

Validation of the products

Elaboration of the business strategy

Processing technologies



Thermal Treatment to prepare the biomass for the cascading processes

Enzymatic Treatment to upgrade the biomass or prepare the biomass for the cascading processes

Ultrasound Extraction to recover target compounds and prepare further steps

Solvent Extraction to recover target compounds and fractionate the biomass

Sedimentation & Precipitation to recover target compounds and fractionate the biomass

Filtration & Centrifugation to recover target compounds and fractionate the biomass

The final products

Safe and environmentally friendly Bio-Packaging

(bioplastic flexible and rigid packaging, active and barrier packaging, biobased coatings for metal packaging, biocomposites, as well as secondary packaging).

Healthier and functional Food products

(additives, ingredients, coatings, microorganisms used in production, enhanced food products)

Bio-based Agriculture products

(bioplastics embedding fertilisers based solutions for **biodegradable** mulching films and pots as well as biofertilisers with biostimulant and biocontrol properties)



The expected impact



Demonstrate **new value chains** for **higher added value products** and **open new markets**

Improve the **environmental performance and cost efficiency** of the biorefining process as compared to the current state of the art

Demonstrate an integrated process with **more than 40% of the raw material valorised** into high added value products

Validate new products with a **2-5 times higher value** than the current applications of the raw material, leading to a significantly higher total valorisation of the agricultural crops so contributing to **rural development and employment**

Thanks for your attention!



gianluca.belotti@iris.cat
Project Coordinator

emma.needham@biovale.org
Communications Manager

www.agrimax-project.eu
Website

@Agrimax_EU
Twitter

