



# **The WaysTUP! project**

## **Transforming urban waste into valuable products**

**PERSEO solution for OFMSW and Cellulosic waste valorisation from WaysTUP!**

**Caterina Coll Lozano**



**WaysTUP!**

VALUE CHAINS FOR DISRUPTIVE TRANSFORMATION OF URBAN  
BIOWASTE INTO BIOBASED PRODUCTS IN THE CITY CONTEXT



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 818308.



## **Development and Engineering of Biotechnological Processes for Waste Valorization.**

**Development of Biotechnological Waste Valorization Processes, producing added value products, from laboratory scale to industrial implementation.**

- 🔍 **Laboratories.**
- 🔍 **Semi-industrial Demo Plant of 25 t/d capacity.**
- 🔍 **Process engineering and development of industrial projects with own patents.**
- 🔍 **Highly qualified multidisciplinary team.**
- 🔍 **More than 15 years of experience in development and scaling of biotechnological processes from waste.**

**TRANSFORM ORGANIC WASTE into Advanced Fuels, Bioproducts and Bioenergy**





## Laboratory optimization



## Process demonstration



## Process design and industrial plant



## Economic feasibility study



# WaysTUP!

The overall objective of WaysTUP! is to demonstrate the establishment of new value chains for urban biowaste utilisation for the production of higher value purpose products (i.e. biobased products, including food and feed ingredients), through a multi-stakeholder approach in line with circular economy.



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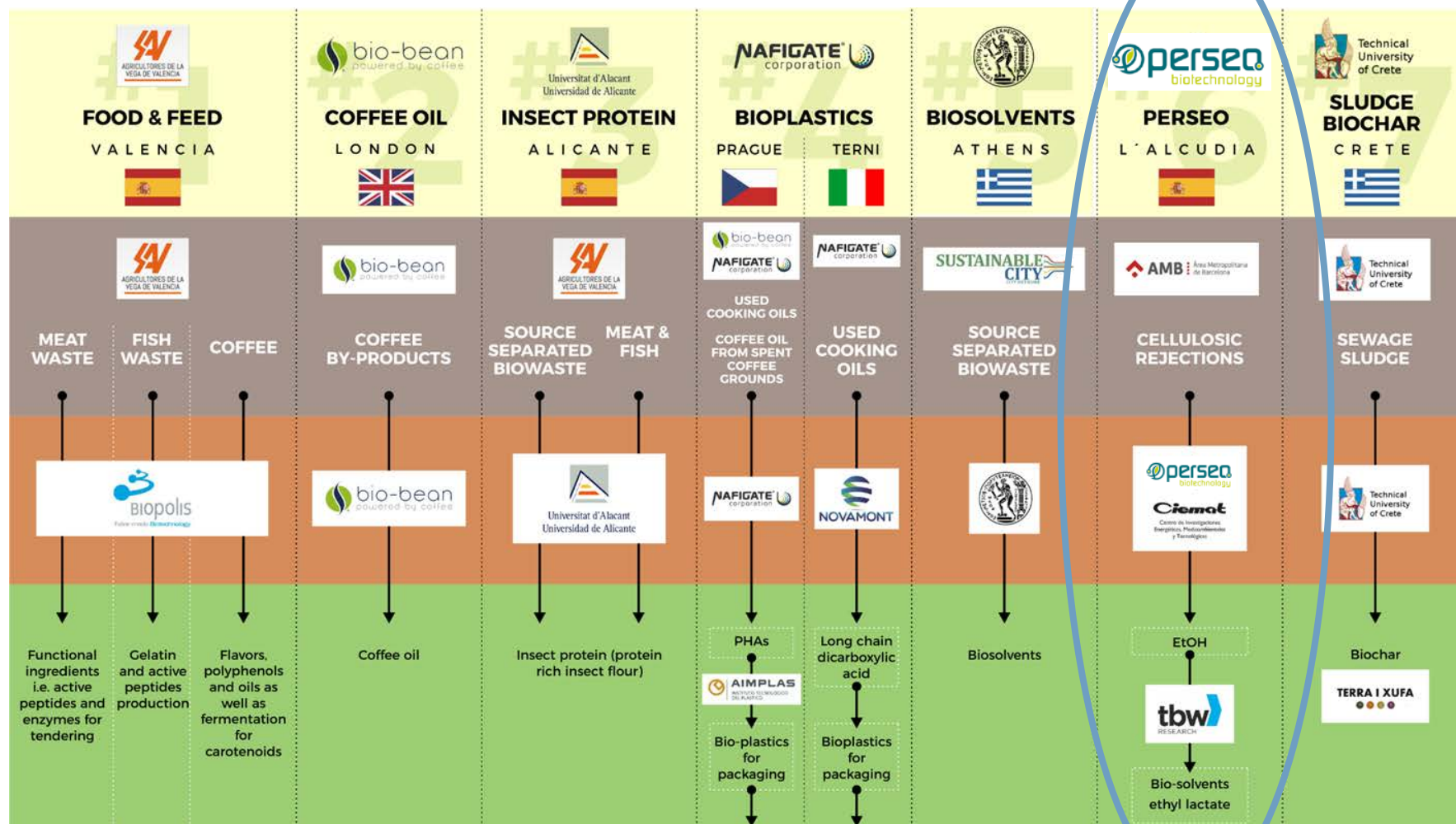


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# Pilots' overview

Pilot 6



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# Pilot 6:

## PERSEO BIOETHANOL®

### Bioethanol from cellulosic rejections streams of MWTP and WWTP

- Adapt the PERSEO Tecnologia to produce second-generation bioethanol from the organic fraction of MSW (PERSEO Bioethanol®).

### Objectives

- Succeed in circular bioethanol production from wastes.
- Ethanol will be further processed to produce ethyl lactate via a reactive distillation.



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WWTP wipes



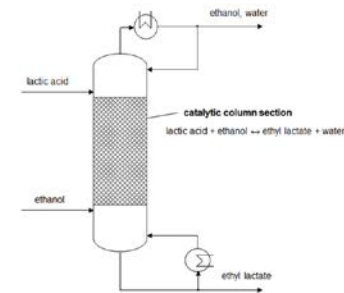
Paper & cardboard



Sanitary textiles



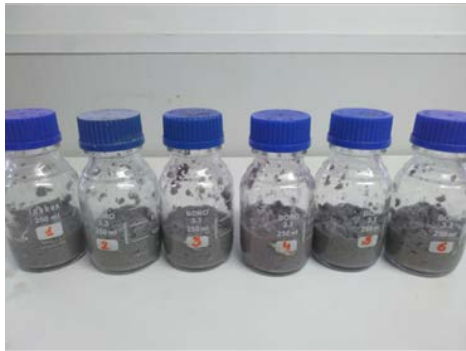
Bioethanol



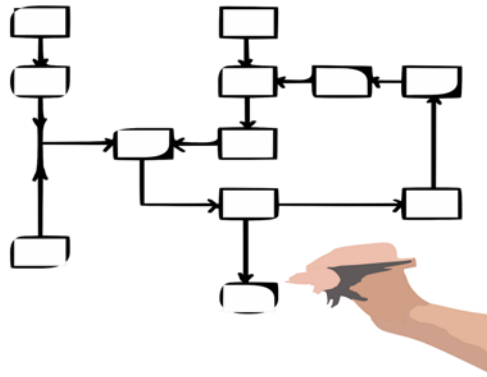
Ethyl lactate



- ✓ Process optimization  
Laboratory Scale



- ✓ Process definition  
and improvements



- ✓ Pilot plant start the  
DEMO activity.



# Thank you for your attention!



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