

URBIOFIN – FROM URBAN WASTE TO BIOPRODUCTS

The URBIOFIN project offers a new model for Organic Municipal Solid Waste (OFMSW) management, based on the Urban Biorefinery concept. URBIOFIN is a **modular** and **flexible, zero-waste urban biorefinery**, designed for municipalities with > 250,000 inhabitants.

THE USER GROUP

Companies in the plastic sector which want to offer **bioplastic solutions** to their customers, for example to produce cosmetic pots, garbage bags, or agricultural plastics from the biopolymer polyhydroxyalkanoates (PHAs).



BUSINESS SCENARIOS

Through this new model of biorefinery the organic fraction of municipal **waste is transformed into new sustainable products such as biodegradable packaging or biopolymers PHA**. URBIOFIN biorefineries are **modular, flexible and adaptable**, so you can choose to implement one, or several, URBIOFIN technologies, according to your needs and performance. The model can also be scaled up later based on the environmental and economic benefits desired.

YOUR BENEFIT

Users of this technology can enter the fast-growing market of bioplastic in Europe. The lower operational costs associated to the production of PHA compared to their petrochemical counterparts, together with the environmentally friendly image of these new bio-based processes will boost the plastic and packaging sector. Reduction in the amount of packaging and use of recyclable and biodegradable plastics a prime concern for consumers nowadays.

TARGET CARBON EMISSIONS REDUCTION

Although a life cycle analysis will be done at the end of the project, literature indicates that the PHA technologies, both for scl- and mcl-PHA production, entail a reduction of 20-40% of the environmental impacts compared to those for petrochemical-based polymers production.

MARKET FORECAST – BIOPLASTICS

One of the OFMSW-based products are biopolymers in the form of scl- and mcl-PHA. Both PHAs have demonstrated their suitability and cost efficiency for injection molding and film/sheet applications in the packaging and agricultural sectors. This is a great opportunity to enter the PHA market, which showed a significant growth in the past 5 years (CAGR of 11.2%) and whose current size (60 M€/year) is expected to rise to 100 M€/year in 2024.