

IMPACT

The URBIOFIN project is aiming to deliver the following results:

- To demonstrate an enhanced valorization pathway of the entire organic fraction of MSW, as compared to the current valorization processes, by converting it into chemical building blocks, biopolymers and additives.
- To achieve a competitive price for the products derived by the URBIOFIN process.
- To prepare the market for future introductions and commercialisations by ensuring products comply with requirements of EU legislation for safety, quality and purity.
- To boost the uptake of the Urban biorefinery concept in Europe by offering a sustainable and economically interesting approach to valorise the organic fraction of MSW.
- To reduce GHG emissions and contribute to the shift from a linear to a circular bioeconomy.



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Bio-based Industries Consortium

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URBIOFIN
urban biorefinery

FROM URBAN WASTE TO BIOPRODUCTS THROUGH BIOREFINERY



WWW.URBIOFIN.EU

URBIOFIN

The demonstration of an integrated innovative biorefinery for the transformation of Municipal Solid Waste into new Biobased products.

Each person in Europe generates an average of 500 kg of municipal solid waste (MSW) per year. Around 50 percent of this is **organic waste**, made up of carbohydrates, proteins and lipids, all of which represent useful **raw materials for creating valuable products**. However, until today this potential has not been fully exploited.

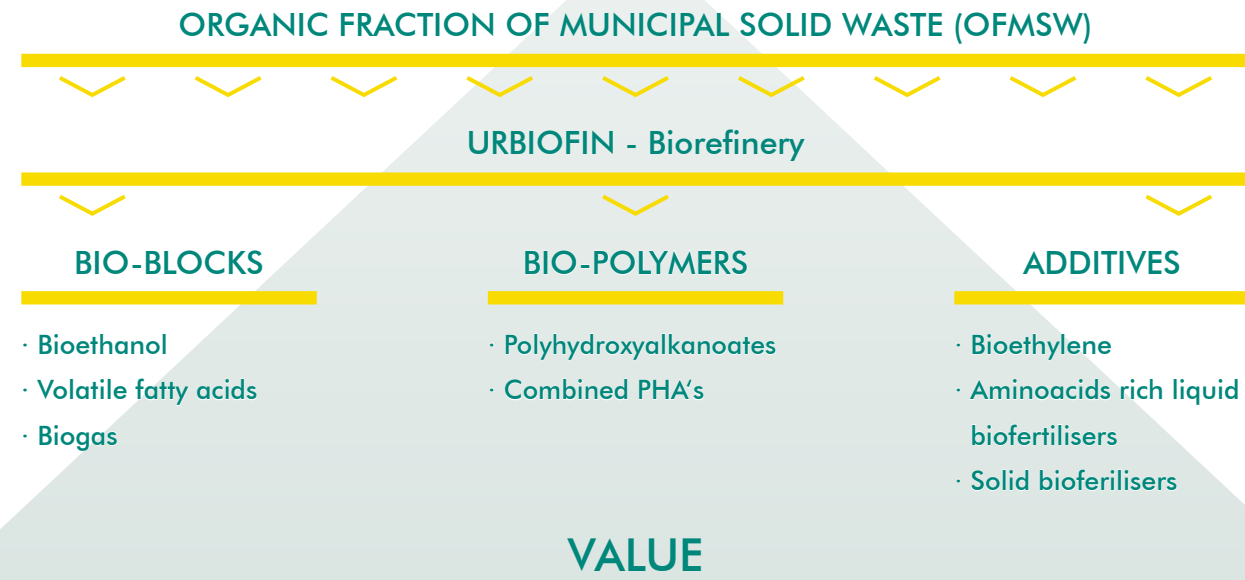
Therefore the URBIOFIN project will demonstrate the techno-economic and environmental viability of converting the organic fraction of MSW into **chemical building blocks, biopolymers and additives**.



ABOUT

The aim of the URBIOFIN project is to demonstrate the techno-economic and environmental viability of the conversion of 10 tonnes per day of the organic fraction of MSW into:

- Chemical building blocks (bioethanol, volatile fatty acids, biogas)
- Biopolymers (short and medium chain polyhydroxyalkanoates, composites combining different PHAs)
- Additives (bioethylene, microalgae derived biochemicals)



BIOBASED PRODUCT

- Bioethanol
- Medium chain fatty acids (MCFA)
- Biogas
- Bioethylene
- Short chain polyhydroxyalkanoates (scl-PHA)
- Medium chain polyhydroxyalkanoates (mcl-PHA)
- Biocomposites of scl-PHA and mcl-PHA
- Aminoacids
- Dry organic-mineral granules

USE/FINAL APPLICATION

- Chemical building-block for bioethylene production and VFAs elongation
- Chemical platform for mcl-PHA production
- Chemical building-block for scl-PHA production and for microalgae production
- Ripening gas in post-harvest fruit chambers
- Agriculture bioplastics and household plastic bags
- Cosmetic bio-packaging
- Cosmetic and hygiene bio-packaging
- High value-added liquid biofertilizers
- Solid biofertilizers

PERSEO Bioethanol® Pilot Plant



CIAM Innovation Center



CLAMBER Pilot Plant

