

CHALLENGE & VISION

Plastic production has surged from 1.5 Mt in 1950 to 8,000 Mt in 2020, leading to a significant increase in plastic waste and environmental threats, with 20 Mt entering aquatic ecosystems annually. Traditional waste management is failing, highlighting the need for sustainable solutions.

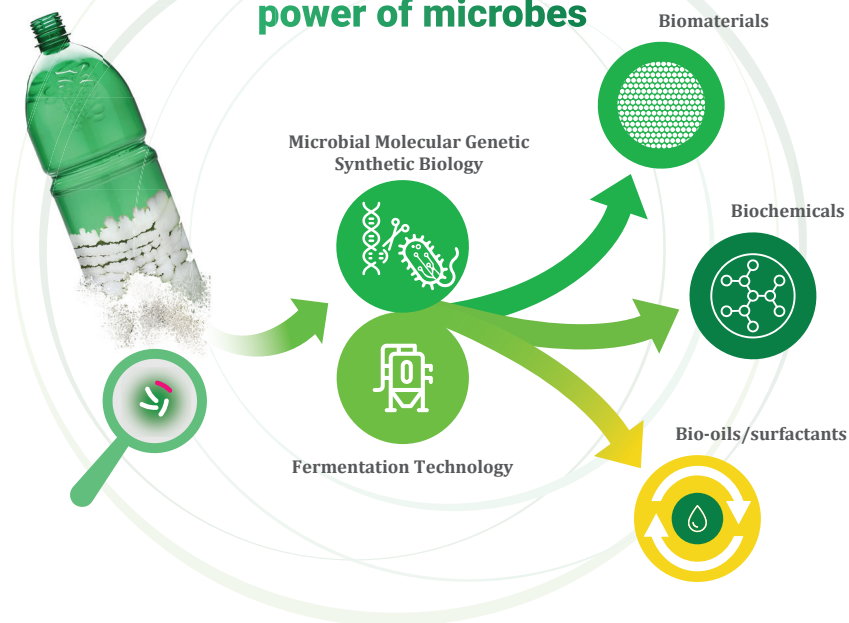
TwInn4MicroUp innovatively transforms plastic monomers from green depolymerization technologies into high-value biomaterials and bioactive compounds using Synthetic Microbial Biotechnology.

OUR MISSION

We aim to establish a cutting-edge Research and Innovation Hub for Synthetic Microbial Biotechnology, bridge the innovation gap among EU countries, and deliver significant socio-environmental and economic benefits through novel circular lifecycle approaches for petro- and bioplastics.

This project aims to create an EU value chain, **converting single-use and hard-to-recycle plastics** into next-generation **bioactive compounds and biomaterials**, ensuring high environmental and economic value.

Upcycling plastic waste into valuable bioproducts with the power of microbes



IMPACT

TwInn4MicroUp is set to redefine our approach to plastic waste management by harnessing the power of Synthetic Microbial Biotechnology, turning plastic waste into valuable resources, while aligning with the principles of a circular and sustainable economy.

The innovative solutions within this project hold the potential to mitigate the environmental impact of plastic waste while creating economic value and fostering new avenues of research and development.

Synthetic Microbial Biotechnology Hub will drive impact by forming strategic partnerships, setting new benchmarks in scientific excellence, and promote entrepreneurship and innovation.

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TwInn4MicroUp
Twinning Innovation Hub for Microbial Platforms in Plastic Upcycling



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