



## A first-of-its-kind flagship biorefinery turning urban waste streams into value-added products for cities

EU member states have committed to a 55% net reduction in greenhouse gas emissions (GHG) by 2030. Replacing 30% of existing petroleum-based products with bio-based versions could help reduce GHG emissions by up to 50% and support the transition from a linear to a circular economy.

As part of the transition towards a post-petroleum society, bio-based industries, which use renewable biological resources for the production of bio-based products and biofuel, offer a unique opportunity to establish sustainable, innovative and competitive value chains, thereby decoupling economic growth from resource depletion and negative environmental impacts.



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Bringing together pan-European and cross-sector industries, large companies and SMEs, research organisations, universities, regions, and countries, through projects, like **CIRCULAR BIOCARBON**, the Bio-based Industries Joint Undertaking (BBI JU) was established in 2014, and aims to implement the Strategic Innovation & Research Agenda (SIRA), which was developed by industry in collaboration with the EU to realise a bio-based economy as part of the broader *Circular Economy Action Plan* for Europe.

### Creating a first-of-its-kind flagship biorefinery in Europe

**CIRCULAR BIOCARBON** is a first-of-its-kind flagship biorefinery designed to turn the organic fraction of municipal solid waste (OFMSW) and sewage sludge (SS) into added-value end products, including: plastic moulding tools, mechanical moving parts, direct consumer products, night vision cameras, devices for 5G telecommunications, bags for biowaste collection, biodegradable in soil mulch films, liquid microalgae biostimulant fertiliser or solid organ-mineral fertiliser with biostimulant properties

The biorefinery will be operated for three years in Spain and Italy, and will use a pool of technologies, start from anaerobic process steps (after proper pre-treatment) of mixed urban waste streams, in order to treat all the biowaste produced by a medium-size city. At the end of the project, a commercial scale biorefinery will be in full operation.

The project will set the basis for the demonstration, at commercial level, of the feasibility of a biorefinery as a new waste treatment model for cities. It will open up the market for new products and new business frameworks based on a circular vision of waste treatment in a cities and help pave the way towards a sustainable bioeconomy.



## Interested in finding out more?

Cities who are interested in following the project more closely, or who would like to take part in the affiliated study visits, trainings and workshops, will have the opportunity to join the **CIRCULAR BIOCARBON** city interest group, which will be established in the third quarter of 2021.

Those who are interested in keeping up-to-date with the latest developments and opportunities as part of this European flag-ship project can contact us at [info@circularbiocarbon.eu](mailto:info@circularbiocarbon.eu) or visit:



[www.circularbiocarbon.eu](http://www.circularbiocarbon.eu)



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## Partners involved

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