

# Bio-Based Industries BBI JU - Call 2019

(Joint Undertaking; EU/European industry - H2020 participation rules)



The overall objective of the BBU JU is to implement a programme of research and innovation activities in Europe that will assess the availability of renewable biological resources that can be used for the production of bio-based materials, and on that basis, support the establishment of sustainable bio-based value chains. Those activities should be carried out through collaboration between stakeholders along the entire bio-based value chains, including primary production and processing industries, consumer brands, SMEs, research and technology centres and universities.



Bio-based Industries  
Consortium

[www.bbi-europe.eu](http://www.bbi-europe.eu)

## Tackling society's major challenges

---

A strong European bio-based industrial sector will significantly reduce Europe's dependency on fossil-based products, help the EU meet climate change targets, and lead to greener and more environmentally friendly growth.

The key is to develop new biorefining technologies to sustainably transform renewable natural resources into bio-based products, materials and fuels.

## Focus

---

- **Feedstock:** foster a sustainable biomass supply with increased productivity and building new supply chains
- **Biorefineries:** optimise efficient processing through R&D and demonstrate their efficiency and economic viability at large-scale demo/flagship biorefineries
- **Markets, products and policies:** develop markets for bio-based products and optimise policy frameworks
  - ➔ BBI JU aims to contribute to resource-efficient, sustainable low-carbon economy, economic growth and employment, particularly in rural areas, by **developing sustainable and competitive bio-based industries in Europe** based on advanced biorefineries that source their biomass sustainably, and in particular to:
    - i. demonstrate technologies that enable new chemical building blocks, new materials, and new consumer products from European biomass, which replace the need for fossil-based inputs;
    - ii. develop business models that integrate economic actors along the whole value chain from supply of biomass to biorefinery plants to consumers of bio-based materials, chemicals and fuels, including through creating new cross-sector interconnections and supporting cross-industry clusters; and
    - iii. set up flagship biorefinery plants that deploy the technologies and business models for bio-based materials, chemicals and fuels and demonstrate cost and performance improvements to levels that are competitive with fossil-based alternatives.

## Highlights of Call 2019 (indicative budget 135 M€)

---

- The Call 2019 is the sixth in a total of seven Calls between 2014 and 2020
- 4 strategic orientations: Feedstock, Process, Products, and Market uptake
- 21 topics: 10 RIAs, 4 CSAs, 4 DEMOs, 3 FLAGs
- Call opening 04 April 2019 - Call closure: 04 September 2019 -> Results (indicative): December 2019

Strategic orientation 1: Foster supply of sustainable biomass feedstock to feed both existing and new value chains.....

Improve the utilisation of existing feedstock sources .....

*BBi2019.S01.D1 – Scale up conversion of lignin into valuable compounds for application in specific market sectors.....*

*BBi2019.S01.D2 – Produce components for various materials, including for food and feed, from microalgae.....*

Expand the exploitation of under-utilised or new feedstock for the bio-based industries.....

*BBi2019.S01.R1 – Use tree species and/or varieties to create new bio-based value chains .....*

*BBi2019.S01.F1 – Valorise the organic fraction of municipal solid waste through an integrated biorefinery at commercial level.....*

Strategic orientation 2: Optimise efficient processing for integrated biorefineries through R&D&I .....

Pre-treatment .....

*BBi2019.S02.R2 – Develop breakthrough technologies to improve the cost-effectiveness and sustainability of pre-treatment steps within biorefining operations .....*

Conversion of pre-treated feedstocks to bio-based chemicals and materials .....

*BBi2019.S02.R3 – Apply microorganisms and/or enzymes to resolve end-of-life issues of plastics .....*

*BBi2019.S02.R4 – Develop surface or bulk treatments for improved wood-based materials .....*

*BBi2019.S02.R5 – Convert plant oils and fats into safe high-added-value products for various applications including food and personal care .....*

*BBi2019.S02.F2 – Apply technological combinations to valorise all components of biomass feedstock .....*

Downstream processing .....

*BBi2019.S02.R6 – Improve biorefinery operations through process intensification and new end products.....*

System modelling.....

*BBi2019.S02.R7 – Model the composition of bio-based residual streams and its evolution to optimise its management and processing.....*

Strategic orientation 3: Develop innovative bio-based products for identified market applications .....

Bio-based products that outperform fossil-based counterparts.....

*BBi2019.S03.R8 – Develop sustainable bio-based materials for high-volume consumer product .....*

*BBi2019.S03.R9 – Develop bio-based fibres and/or functional molecules to improve the performance of textile products.....*

*BBi2019.S03.R10 – Develop bio-based high-performance materials for various and demanding applications .....*

*BBi2019.S03.D3 – Produce bio-based functional ingredients and additives for high-end markets.....*

*BBi2019.S03.D4 – Demonstrate bio-based pesticides and/or biostimulant agents for sustainable increase in agricultural productivity .....*

*BBi2019.S03.F3 – Produce high-performance bio-based alternatives to harmful products or processes to protect and enhance human health and the environment.....*

Strategic orientation 4: Create and accelerate the market-uptake of bio-based products and applications .....

*BBi2019.S04.S1 – Assist brand owners to ‘switch to bio-based’.....*

*BBi2019.S04.S2 – Establish methods and communication for applying mass balance principles to attribute biomass co-feedstock to products .....*

*BBi2019.S04.S3 – Shaping the bio-based economy through a participatory approach.....*

*BBi2019.S04.S4 – Empower SME clusters to bring SMEs ‘across the valley of death’.....*