

## Bio-Based Industries BBI JU – Call 2019

<https://www.bbi-europe.eu/>

BBI JU is a public-private partnership between the European Union and the Bio-based Industries Consortium (BIC). Operating under Horizon 2020, it is driven by the Strategic Innovation and Research Agenda (SIRA).



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.

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.

The specific objectives of the BBI JU are to:

1. contribute to the implementation of Regulation (EU) No 1291/2013 and in particular Part III of Decision 2013/743/EU;
2. contribute to a more resource-efficient and sustainable low-carbon economy and to increasing economic growth and employment, in particular 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.

### Indicative timetable and budgets:

- Call opening 4<sup>th</sup> Aug 2019 – Call closure 4<sup>th</sup> Sep 2019 – Results December 2019
- 21 topics: 10 RIA topics 52 M€, 4 IA – Demo topics 31 M€, 3 IA – flagship topics 47 M€, 4 CSA topics 5 M€

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

Topic	Budget (EUR Mil)	Action
<b>Improve the utilisation of existing feedstock sources p. 26</b>		
BBI2019.SO1.D1 – Scale up conversion of lignin into valuable compounds for application in specific market sectors	7	IA – demo
BBI2019.SO1.D2 – Produce components for various materials, including for food and feed, from microalgae	7	IA – demo
<b>Expand the exploitation of under-utilised or new feedstock for the bio-based industries p. 30</b>		
BBI2019.SO1.R1 – Use tree species and/or varieties to create new bio-based value chains	2-5	RIA
BBI2019.SO1.F1 – Valorise the organic fraction of municipal solid waste through an integrated biorefinery at commercial level	max 15	IA – flagship

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

Topic	Budget (EUR Mil)	Action
<b>Pre-treatment p. 35</b>		
BBI2019.SO2.R2 – Develop breakthrough technologies to improve the cost-effectiveness and sustainability of pre-treatment steps within biorefining operations	2-5	RIA
<b>Conversion of pre-treated feedstocks to bio-based chemicals and materials p. 37</b>		
BBI2019.SO2.R3 – Apply microorganisms and/or enzymes to resolve end-of-life issues of plastics	2-5	RIA
BBI2019.SO2.R4 – Develop surface or bulk treatments for improved wood-based materials	2-5	RIA
BBI2019.SO2.R5 – Convert plant oils and fats into safe high-added-value products for various applications including food and personal care	2-5	RIA
BBI2019.SO2.F2 – Apply technological combinations to valorise all components of biomass feedstock	max 20	IA – flagship
<b>Downstream processing p. 45</b>		
BBI2019.SO2.R6 – Improve biorefinery operations through process intensification and new end products	2-5	RIA
<b>System modelling p. 47</b>		
BBI2019.SO2.R7 – Model the composition of bio-based residual streams and its evolution to optimise its management and processing	2-5	RIA

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

Topic	Budget (EUR Mil)	Action
<b>Bio-based products that outperform fossil-based counterparts p. 50</b>		
BBI2019.SO3.R8 – Develop sustainable bio-based materials for high-volume consumer products	2-5	RIA
BBI2019.SO3.R9 – Develop bio-based fibres and/or functional molecules to improve the performance of textile products	2-5	RIA
BBI2019.SO3.R10 – Develop bio-based high-performance materials for various and demanding applications	2-5	RIA
BBI2019.SO3.D3 – Produce bio-based functional ingredients and additives for high-end markets	2-5	IA – demo
BBI2019.SO3.D4 – Demonstrate bio-based pesticides and/or biostimulant agents for sustainable increase in agricultural productivity	max 7	IA – demo
BBI2019.SO3.F3 – Produce high-performance bio-based alternatives to harmful products or processes to protect and enhance human health and the environment	max 12	IA – flagship

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

Topic	Budget (EUR Mil)	Action
<b>p. 64</b>		
BBI2019.SO4.S1 – Assist brand owners to 'switch to bio-based'	1	CSA
BBI2019.SO4.S2 – Establish methods and communication for applying mass balance principles to attribute biomass co-feedstock to products	0.5	CSA
BBI2019.SO4.S3 – Shaping the bio-based economy through a participatory approach	2	CSA
BBI2019.SO4.S4 – Empower SME clusters to bring SMEs 'across the valley of death'	1.5	CSA

CSA = Coordination and Support Action, IA – demo = Innovation Action – demonstration action, IA – flagship = Innovation Action – flagship, RIA = Research and Innovation Action