

BBI JU 2014-2019

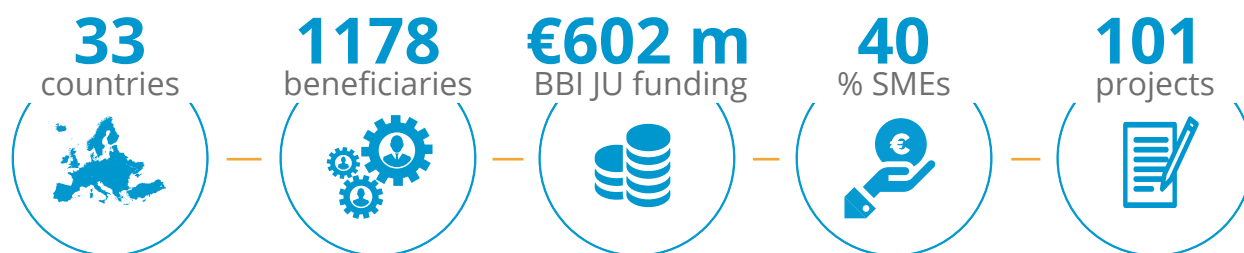
Achievements of a high-impact initiative for the bioeconomy in Europe



Bio-based Industries
Joint Undertaking



BBI JU PROJECTS - KEY FIGURES



TYPES OF PROJECTS



52 granted projects • BBI JU funding of 176 million euros

Research and Innovation Actions (RIAs) aim to fill the technological gaps within value chains leading to the development of new knowledge or a new technology.

For example, by bringing together academia, research centres and industry, our BARBARA project is developing new bioplastic materials from agro-food waste via 3D printing, for use in the building and automotive sectors.



29 granted projects • BBI JU funding of 221 million euros

Demonstration Actions (DEMOs) include the establishment of demo-scale production facilities in Europe.

For instance, our PULP2VALUE project is demonstrating the potential of sugar beet industry sidestreams by refining underutilised sugar beet pulp and delivering high value compounds for consumer products, such as cosmetics and food products.



9 granted projects • BBI JU funding of 195 million euros

Flagship projects (FLAGs) aim to support first-of-their-kind biorefineries in Europe.

As an example, our First2Run project built an integrated biorefinery to process cardoon crop from marginal lands into bio-based vegetable oils which can be used to manufacture bioplastics, cosmetics, additives and biolubricants.



11 granted projects • BBI JU funding of 10 million euros

Coordination and Support Actions (CSAs) address cross-sectorial challenges in the bioeconomy in order to accelerate the market uptake of bio-based products.

To illustrate, our Pilots4U project has set up a database of more than 260 open access pilot and multipurpose demonstration infrastructures for the European bioeconomy, helping innovators bridge the gap between laboratory developments and market introduction.



- ▲ Project coordinator
- Project partner
- 🏭 Demonstration plant
- 🏭 Flagship plant



BBI JU ON TRACK TO DELIVER BEYOND THE 2020 TARGETS



STRUCTURING AND MOBILISING BIO-BASED INDUSTRY

The two main positive effects of BBI JU are the structuring effect in organising the value chains across sectors and the innovation-driven mobilising effect of all key stakeholders across sectors and geographies.

BBI JU is contributing to the fast transformation of the bio-based sector: processes, feedstock and actors that were not traditionally part of the bio-based economy are now becoming fully involved in it. Through our projects, we foster new cross-sectoral collaborations, transforming once linear value chains into more interconnected ones.

- **113 new bio-based value chains expected by 2020**
versus the 2020 target of 10 new ones
- **143 new cross-sector interconnections expected by 2020**
versus the 2020 target of 36 new ones

For example, our EFFECTIVE project has created innovative value-chains by combining different biomasses (e.g. sugar beets, beech wood) to produce bio-based nylon. Bio-based nylon is a valuable material for a wide range of applications such as garments, carpet solutions and primary packaging.



BOLSTERING MARKET UPTAKE

BBI JU is supporting the introduction of innovations into the market by boosting large-scale production and the creation of sustainable products and materials with an equal or overall better performance than their fossil-based counterparts. This results in a plethora of innovations aimed at satisfying consumer and industrial needs.

- **147 new bio-based materials expected by 2020**
versus the 2020 target of 50 new ones
- **67 new bio-based chemical building blocks expected by 2020**
versus the 2020 target of 5 new ones
- **65 new bio-based products expected by 2020**
versus the 2020 target of 30 new ones

For instance, starting from algal biomass, our SpiralG project is expected to produce bio-based food dye, bio-stimulants for plants, functional protein-rich compounds for pet food and higher quality protein bioactive compounds to be used in the pharmaceutical industry.



SCIENCE AND KNOWLEDGE CREATION

BBI JU enables scientific advancements and knowledge creation in the context of bio-based innovations, by spurring collaborations between actors that would not interact otherwise.

To this end, all our projects work to increase maturity levels in technologies, enabling the leap from lab-scale testing to industrial scale biorefineries.

- **our RIA projects expect at least one technological advancement for 33 core technologies by 2020**
versus the 2020 target of 20 new advancements

To illustrate, our NEWFERT project developed new chemical and bio-electrochemical technologies to extract nutrients from ashes of different origins and livestock effluents, which are then used in the production of advanced fertilisers. The project propelled these technologies from the laboratory to the first demonstration facility in Europe.

BBI JU EXPECTED SOCIO-ECONOMIC AND ENVIRONMENTAL IMPACT

Through the implementation of its mission, BBI JU is delivering concrete socio-economic and environmental benefits to Europe.



CREATING JOBS

80%

of ongoing projects support the creation of new skilled jobs in the bioeconomy, many of them in rural and coastal areas. Our first seven flagship biorefinery projects alone will generate more than 3 000 direct and 10 000 indirect jobs.



REDUCING EMISSIONS

71%

of ongoing projects expect to deliver bio-based products with lower greenhouse gas emissions than the fossil-based alternatives.



LEVERAGING INVESTMENTS

€1bn

Our first seven flagship biorefinery projects alone are expected to generate more than 1 billion of investments from private industry.



ENHANCING SUSTAINABILITY AND CIRCULARITY

66%

of ongoing projects contribute to waste reduction, reuse, recycling, as well as turning waste and sidestreams into added-value products, supporting the build-up of a circular economy.



FOSTERING COLLABORATIONS

80%

of our ongoing projects increase the cooperation between academia and industry, paving the way for further bio-based developments.

The BBI JU actively contributes to the EU bioeconomy strategy which aims to:



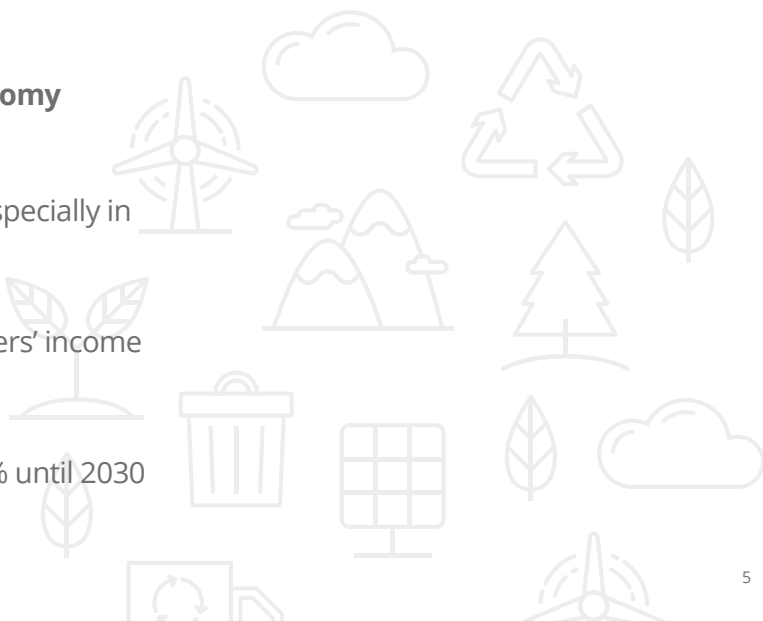
Create up to 1 million green jobs by 2030 especially in rural and coastal areas



Increase diversification and growth of farmers' income by adding up to 40% in additional revenues



Decrease greenhouse gas emissions by 50% until 2030





ABOUT BBI JU

The Bio-based Industries Joint Undertaking (BBI JU) is a €3.7 billion public-private partnership between the European Union and the Bio-based Industries Consortium (BIC). BBI JU aims at bridging the gap between bio-based innovations and the market, stimulating research & innovation in Europe and integrating economic actors along the whole value chain in the bio-based industries sector. This EU body works to de-risk investments, organise the sector by spurring collaborations, and reach a critical mass to address the strategic challenges of creating a sustainable and flourishing bioeconomy, thus enhancing European competitiveness on a global scale.

About the bio-based industries sector



The **bio-based industry** is an emerging sector organised between interconnected value chains, which aims at transforming renewable biological feedstocks (such as agricultural residues, bio-waste and aquatic biomass) into bio-based products, materials and energy, replacing their fossil-based versions. It offers a huge potential to tackle societal challenges ranging from environmental degradation to climate change. Additionally, the bio-based industry plays an important role in spurring sustainable growth and boosting Europe's competitiveness by re-industrialising and revitalising rural and coastal areas, thus providing tens of thousands of jobs.

Data: June 2019

Contact us

info@bbi.europa.eu
www.bbi-europe.eu

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