

Investing for impact: building Europe's bio-based future

The Bio-based Industries Joint Undertaking (BBI JU), a Horizon 2020 public-private partnership between the EU and the Bio-based Industries Consortium, supported the scale-up in Europe's bio-based sector. By linking research and industry, supporting SMEs and bringing bio-based solutions to market, it transformed the European bio-based landscape and laid the foundation for CBE JU, which continues to drive the shift from fossil-based to sustainable, circular bio-based production and consumption.



138
projects
funded



1,100+
beneficiaries
(**35% SMEs**)



€822M
EU funding



€2.6B
total
investment



260
new bio-based
materials



141
new consumer
products developed

By scaling up advanced bio-based solutions, BBI JU projects helped bridge the innovation gap and strengthen Europe's bio-based value chains

FROM LAB TO MARKET

 **106 new**
bio-based
products

 **92 new bio-based**
industrial processes




PEference The Renewable Innovation

Europe's first industrial biorefinery producing FDCA (furan dicarboxylic acid) and PEF (polyethylene furanoate) for packaging applications, replacing fossil-based plastics with fully recyclable, bio-based alternatives.

- 5,000 tonnes/year of FDCA produced for bio-based polyesters
- **100% bio-based end products**, such as a bio-based Carlsberg beer bottle that holds the beer fizz eight times better than any fossil-based bottle.

SMALL ENTERPRISES, BIG IMPACT

 SMEs brought
240 innovations
to market



SWEETWOODS

This SME-led project established the world's first industrial-scale biorefinery in Estonia, converting hardwood residues into lignin and sugars for renewable biomaterials.

- Lignin converted into a sustainable, carbon-neutral substitute for bitumen in **asphalt** made of hardwood residues, already used to pave streets in several municipalities in Estonia.
- Developed **four novel bio-based materials** for insulation foams and injection moulding.

SUSTAINABILITY IN ACTION

- 70% of projects reduced or reused waste
- 65% projects reduced GHG emissions



AFTER | BIOCHEM

- Transforming sugar beet sidestreams into bio-based molecules, creating added value and reducing environmental impact.
- Producing esters, vinyl acetate and cellulose acetate via a zero-waste process.
- Creating 80 direct and 240 indirect jobs in France's Grand Est region.

SCIENCE AT THE FOREFRONT

- 149 patents filed
- 26 granted patents
- 1,400+ prototypes & testing activities



EFFECTIVE

- Developing cost-effective bio-based polyamides (nylon) and polyesters from sugar beet processing by-products to replace fossil-based materials in textiles, packaging and beyond. The project demonstrated real consumer products with enhanced performance and lower environmental impact.
- Bio-based fibres and films produced from renewable resources such as wood waste, sugar beet and straw waste.
- Demonstrated in real applications across textiles, construction and packaging sectors.
- Example products:** recyclable swimsuit and cycling pants made from bio-based materials.

CONNECTING REGIONS

- Projects active in 35 countries across Europe
- 319 new cross-sector interconnections



- Converting used diapers and other absorbent hygiene products (AHPs) into secondary raw materials for packaging and construction.
- Developed a recycling plant in Treviso, Italy converting local waste into secondary raw materials.
- Boosts regional innovation** with clusters and SMEs.

From BBI to CBE JU:
transforming European innovation
into sustainable growth.