

## Industrial Biotechnology – Enabling a Circular Bioeconomy in Europe



Industrial biotechnology (IB) is a central pillar of innovation in Europe. It is established as one of Europe's Key Enabling Technologies (KETs) for many years. Industrial biotechnology enables a more competitive, sustainable and circular bioeconomy, delivering solutions to the UN Sustainable Development Goals.

By harnessing the power of microbes for industrial and manufacturing applications, industrial biotech empowers the development of bio-based products in a range of sectors. This helps reduce CO<sub>2</sub> emissions, provide sustainable alternatives to fossil-based products, improve resource efficiency of industrial processes and deliver solutions to help improve health and nutrition. With close to 500.000 jobs in the value chain and more than €31 billion generated

in terms of value added, the sector already has a significant economic impact in Europe – and a large potential to grow. Outlook to 2030 shows that employment in the industrial biotech value chain may increase to well above one million jobs, contributing up to €99,5 billion to the EU economy.

As global challenges become increasingly pressing, so does the need to prioritise and invest in innovative solutions from cutting edge technologies like industrial biotech. There is also clear potential to further stimulate market uptake of bio-based products. We encourage all decision makers to consider our call to action.

### OVERALL ECONOMIC IMPACT



486.000  
jobs in the  
IB value  
chain



€31,6 billion  
added value



1:4 job multiplier  
For every job in the IB sector,  
there are 4 jobs created  
elsewhere

**In 2030**

Expected employment: 900.000 – 1.500.000  
Contributing between €57,5 and €99,5 billion to the EU economy

Source: EuropaBio, (2016),  
'Jobs and Growth Generated by  
Industrial Biotechnology in Europe'

## Call to Action

### 1. A long-term, stable and innovation-enabling policy and incentive framework

- Recognise the central role of industrial biotechnology as an enabling technology for a more competitive, sustainable and circular bioeconomy.
- Integrate the bioeconomy throughout relevant EU policies and support an ambitious implementation of the updated 2018 EU Bioeconomy Strategy.
- Ensure a science-based, proportionate and predictable regulatory approach to current and future biotech innovation, such as genome editing.
- Ensure appropriate and realistic policy and regulatory requirements for GMM<sup>1</sup>-derived food & feed products and additives such as vitamins and amino acids, to further contribute to improved nutrition for humans and animals.

### 2. Expand opportunities for feedstock production and use

- Ensure that the CAP<sup>2</sup> post 2020 is fit for purpose to incentivise the smart and sustainable use of biomass and encourage Member States to include concrete bioeconomy related measures in their future Strategic Plans, also considering industrial biotech enabled solutions for more sustainable agriculture and livestock production.
- Foster a balanced dialogue with all relevant stakeholders around the smart and sustainable future use of land and biomass.
- Prioritise the development of infrastructure for collection, storage and transport of biomass with a view of ensuring access to sustainably produced biomass.
- Further explore resource efficient novel biomass usage and future potential of wastes and residues as important resources for developing the bioeconomy.

### 3. Establish a supportive and predictable funding framework and promote science & innovation

- Confirm an appropriate level of funding for industrial biotech and the bioeconomy under Horizon Europe.
- Ensure an ambitious public-private partnership on bio-based industries as part of this commitment, building on the Bio-Based Industries Joint Undertaking's (BBI JU) successes.
- Improve coherence of different financing mechanisms.
- Involve EU regulatory bodies early in RD&I projects to shorten the time to market and reduce risk of failure.
- Prioritise life sciences and biotechnology in the future EU Industrial Policy and develop a new EU Life Sciences and Biotechnology Strategy to prioritise these KETs for the future.

### 4. Boost market uptake of bio-based products

- Encourage the use of bio-based alternatives in relevant sectors such as packaging, chemicals, energy, coatings, fertilisers, automotive, cosmetics etc.
- Adopt concrete and pragmatic measures to support the uptake of resource efficient and renewable products, such as the rolling out of public procurement initiatives and measures to raise awareness of their benefits.
- Ensure the right measures are in place to help appropriately communicate the properties of bio-based products, including meaningful and truthful labelling.

<sup>1</sup> Genetically modified microorganisms

<sup>2</sup> Common Agricultural Policy

