

Introduction: A year in perspective for the EFIB Statement

The inaugural EFIB¹ Statement of October 2021 created a baseline for industrial biotechnology and bioeconomy vision in policy, regulatory and landscape development.

Since then, the challenges of Covid recovery plus supply chain and energy security have been amplified by the Russian invasion of Ukraine. The European Union and global partners must address both with short-term urgency and long-term economic re-orientation.

Europe's Industrial Strategy, with the twin pillars of green and digital transition, has been augmented with recovery and resilience programmes, as well as transition pathways underway for European industry across sectors. This expanded EU approach aims to address the shock to European energy and supply chains coupled with the extreme weather that now defines agricultural production, with an emphasis on Europe's competitiveness and strategic autonomy.

The global position of Europe was also brought into focus in 2022 through the September White House Executive Order on 'Advancing Biotechnology and Biomanufacturing Innovation for a Sustainable, Safe, and Secure American Bioeconomy'². Europe needs to recognise its own biotechnology industry as a key enabler in the green transition, through facilitating innovation ecosystems, regulation for investment and a workforce for a modern economy.

The EFIB Vilnius Statement of 2022 evolves to address the long-term vision and ambition from the EFIB 2021 statement within the context of challenges and needs over the next 12 months.

Next generation economies - Industrial Biotechnology for a sustainable society

Industrial biotechnology and biomanufacturing are recognised as being part of the response to some of today's pressing global challenges. Delivering on EU Green Deal objectives whilst strengthening resilience and independence of European industries is increasingly critical.

Developing innovative food and feed, supporting sustainable crop cultivation and providing alternatives to fossil-fuel derived products are areas where industrial biotechnology and bioeconomy innovation can deliver for Europe. Established advantages include reduced CO₂ emissions, improved resource-efficiency of industrial processes and alternatives to fossil-based products based on renewable raw materials. This bio-driven transition is not only in response to current pressures but a generational competitive transition as technology matures into next generation biomanufacturing.

Genetically Modified Microorganisms (GMMs), including those developed using New Genomic Techniques (NGTs), are now widely used in the biomanufacture of everyday products, including fermentation products that offer a range of opportunities for safe and more sustainable food production. The economic contribution of biotechnology to Europe's economy is almost €80bn (GVA), 900,000 jobs and an average annual growth rate of 4.1%, twice as fast as the EU's overall economy³.

By embracing innovation and technology at globally competitive commercial scales, Europe can further demonstrate that it is using the best available tools to address key challenges and deliver new solutions as a market leader. Modern, responsive and fit for purpose regulation is a key part of this if the European Commission's aim that 'the future of industry is made in Europe' is to become a reality.

¹ European Forum for Industrial Biotechnology and the Bioeconomy, <https://efibforum.com/>

² Executive Order on Advancing Biotechnology and Biomanufacturing Innovation for a Sustainable, Safe, and Secure American Bioeconomy, 12 September 2022, <https://www.whitehouse.gov/briefing-room/presidential-actions/2022/09/12/executive-order-on-advancing-biotechnology-and-biomanufacturing-innovation-for-a-sustainable-safe-and-secure-american-bioeconomy/>

³ 'Measuring the Economic Footprint of Biotechnology Industry in Europe' 2021: WifOR Institute

EFIB Vilnius Statement – a focus for 2023 and beyond

The EFIB Statement 2021 set the stage with three long term asks: 1) Modernising regulation and policy; 2) Education and awareness; and 3) Financing innovation. The EFIB Vilnius Statement builds on these asks with priorities for 2023.

Ask 1: Modernising regulation and policy: enabling impact

At a critical time of industry transition, companies are making long term strategic, market and investment decisions. Regulatory frameworks are a key driver behind such decisions. Europe must be a frontrunner in long term and predictable regulation that create incentives to accelerate transition to a sustainable and flourishing economy.

Europe is currently reviewing its approach on NGTs, with a focus on plants. It is clear that any policy action on NGTs for plants will shape the ground for subsequent policies, thereby also impacting microorganisms. Many highly advanced genetic engineering techniques were initially developed in microorganisms and are already actively used in contained use applications.

For a cohesive approach across sectors, advanced knowledge on microorganisms should be recognised and considered when developing the policy action for plants developed using NGTs.

Ask 2: Education and awareness: enabling citizens

European policy makers must lead public engagement on the role of advanced solutions and technologies in helping to address climate and environmental objectives. A positive narrative based on contributions from biotechnology and bio-based solutions is needed to move Europe towards proactive consumer and citizen demand for sustainable products and processes in their daily lives.

2023 is the European Year of Skills, with the 2022 State of the European Union Address correctly identifying skills as a rate limiting step for Europe. Within biotechnology, companies of all sizes cite access to skills as a barrier to growth, with advancing technologies running ahead of the skilled staff to enable leveraging their full potential. The European Industrial Strategy, and supporting Industrial Forum, has a strong focus on skills as a catalyst for economic development across all sectors, a clear call from industry that such a focus will result in new skills, reskilling and upskilling boosted high quality employment and resulting economic growth across Europe.

For maximum economic return from advanced technologies, supporting skills should be a priority throughout Europe, integral to all industrial and innovation development.

Ask 3: Financing innovation: enabling technologies

EU financial tools and frameworks should focus on translating scientific advances into scalable products and processes to stimulate economic activity and address European Green Deal goals as an innovation leader.

The EU Taxonomy Regulation, and its associated Delegated Acts covering six environmental objectives⁴, aims to provide a framework to classify economic activities in order to support the scaling up of EU sustainable investment. Investment into commercial scale up of novel bio-based technologies and processes within Europe should be a priority for impactful performance in mainstream manufacturing across economic activities.

The power of industrial biotechnology as an enabling technology should be recognised within financial frameworks to allow a substantial contribution in key economic sectors.

⁴ The six environmental objectives that the Taxonomy Regulation addresses are: climate change mitigation; climate change adaptation; sustainable use and protection of water and marine resources; transition to a circular economy; pollution prevention and control; protection and restoration of biodiversity and ecosystems.