



Industrial biotechnology and net zero

Challenge – Reduce CO2 emissions faster in the biotechnology industry

Objective - Create a strategic roadmap of standards and regulations for the biotechnology industry

Industrial biotechnology (IB) is a strategically important part of a vibrant UK economy. It's also a valuable one, with an estimated turnover of over £7 billion.

IB uses biological resources such as enzymes and plants to produce energy, chemicals and materials. This makes it a key enabler of decarbonization – and its transformative technologies are crucial to helping the UK reach net zero.

To harness IB to speed up the reduction of CO2 emissions, Innovate UK and the Industrial Biotechnology Leadership Forum asked BSI to develop a strategic roadmap for standards and regulations affecting IB in the UK.

To develop this roadmap, BSI carried out an extensive research programme:

- In-depth interviews with IB stakeholders and subject experts from over 50 organizations, representing a cross-section of sectors, technologies, maturity stages and domain expertise
- Research into existing standards and the regulatory landscape

Driving the industry forward

Our team developed an insight-filled report that identified:

- The positive impacts the UK's IB activities could have on the UN Sustainable Development Goals
- The eight gaps creating barriers to IB innovation and commercial take-up in the UK
- A directional framework for addressing these gaps
- Which roadmap options to prioritize for the greatest impact
- Recommended action areas for standards and regulations, structured into four pathways, within an overarching strategic framework for IB development

Driving a sustainable cause

By recommending standards and regulations, the roadmap in the BSI report helps to support innovation in the UK by giving confidence to researchers, manufacturers and consumers.

The in-depth research will inform the UK's approach to expanding IB and its contribution to CO2 reduction across the sectors. It will also help UK companies to play a major role in supporting a prosperous and environmentally sustainable future.

[Download the full report here](#)
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