

The Industrial Biotechnology Innovation and Growth Team (IB-IGT) was formed in November 2007, to facilitate a collective view from the UK chemical and bioscience industries on the innovation and growth challenges in industrial biotechnology. It is an industry-led project facilitated by the Department for Business Enterprise and Regulatory Reform's (BERR) Bioscience and Chemicals units. Its work will be delivered through an industry-led Steering Group chaired by Ian Shott of Excelsyn.



Ian Shott - IB-IGT Chairman

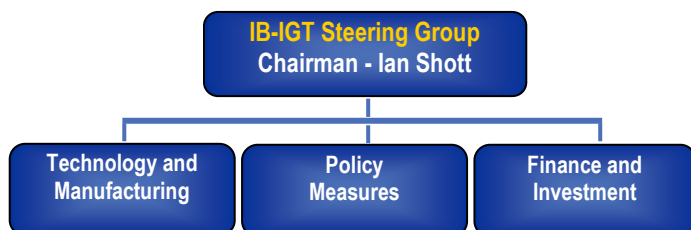
As the world moves increasingly towards the bio-based production of energy, transport fuels, chemicals and related materials, the work of the IB-IGT will be key to ensuring that the UK's industrial biotechnology (IB) sector is well placed to meet the sustainable development and consumption needs of the 21<sup>st</sup> Century.

During 2008/9, the IB-IGT will look specifically at the:

- ◆ opportunities for industrial biotechnology in the UK
- ◆ barriers and obstacles to realising these opportunities
- ◆ strategy & mechanisms for accelerating progress

In Spring 2009, the IB-IGT will publish a comprehensive report with key recommendations and an action plan for the sector to 2020. The outputs will also be fed into Government policy debates surrounding manufacturing, low carbon strategy, sustainability, science and skills which will all be impacted by, and have an impact on, industrial biotechnology.

This newsletter is part of a wider communication programme that aims to keep stakeholders informed of the status of the IB-IGT work and the key themes emerging from the three work groups set up to support the IB-IGT Steering group.



For further information on the objectives of the IB-IGT, including personal profiles of the steering group members and reports from each of the work group meetings - visit the IB-IGT website at:

[www.berr.gov.uk/whatwedo/sectors/biotech/IBIGT/page44395.html](http://www.berr.gov.uk/whatwedo/sectors/biotech/IBIGT/page44395.html)

The IB-IGT aims to ensure that the UK builds on its world renowned research and knowledge base to develop the full range of technologies and mechanism required to ensure that UK companies are better positioned and encouraged to leverage opportunities in IB.

The IB-IGT will also contribute to addressing a number of major challenges facing society in terms of :

**Limited Resources of Raw Materials & Energy  
Global Warming**

*Driving* ↓ *towards*

**Low Carbon dependency  
Knowledge based bio-economy**

By 2010 it is predicted that US\$125 billion of chemical sales will involve the use of biotechnology

The estimated value of the novel global market by 2030 is US\$300 billion

## Scope of the IB-IGT

### GREEN Biotechnology:

The discovery and use of novel genes, processes and materials in land plants, agricultural crops and forestry

### WHITE Biotechnology:

IB using micro-organisms, biochemistry, biocatalysts, engineering and fermentation

### BLUE Biotechnology:

The discovery and use of novel genes, processes and materials in freshwater and marine organisms

### Areas of focus include:

Industrial biotechnology for the design, feedstock derivation and processing of raw materials.

Industrial biotechnology for onward processing and manufacture of products.

## IB-IGT - Policy Measures Work Group

Joint Chairs: Stewart Davies, John Sime

The Policy Measures group will investigate how industry and government can work to create an **encouraging and enabling political and economic framework** to catalyse growth in IB products, processes and technologies.

Key focus of activities for the group include:

- a review of regulatory, policy and incentive mechanisms
- identification of mechanisms required to encourage the expansion of industrial biotechnology in the UK
- creation of a coherent set of desired policy outcomes
- action plan with identified initiatives and outcomes.

## IB-IGT Technology and Manufacturing Work Group

Chair: Colin Harrison

The Technology and Manufacturing group will examine the current developments in IB, requirements for future markets and any existing or potential barriers to growth.

The group is considering a number of key issues around:

- the assessment of existing technologies, markets and capabilities
- opportunities, gaps and barriers for the chemistry-using industries in utilising the potential of IB
- societal issues and how best to communicate the benefits of IB to society

## IB-IGT Finance and Investment Work Group - Joint Chairs: John Berriman, Andrew Mitchell

The Finance and Investment work group will examine the funding models which encourage the adoption of IB and provide advice on the funding and investment implications for IB market opportunities in the UK as identified by the work groups.

The group is currently focusing on three specific areas:

- Assessing previous IGT reports and other related industry and Government reviews to establish a context for this work
- Review of UK government interventions and those of other countries successfully supporting the uptake of IB.
- Review of the commercialisation of IB and facilitators and barriers to it - particularly in relation to Universities.

### Global horizon scanning

As part of developing a robust evidence base, a global horizon scanning exercise is being undertaken that will help the IB-IGT access:

- ★ current activity in the production of platform chemicals from renewable sources
- ★ the state of science and technology in the areas of biocatalyst performance and process intensification, plants as chemical factories and the broad impact of new developments in genomics and related science areas on industrial biotechnology.

### Key issues identified so far.....

The IB-IGT has identified a number of important issues to be addressed along with potential policy levers that can be used by both Government and industry. These include:

- Life Cycle Analysis and customer friendly methodologies and outputs
- De-risking access to new products and technologies by
  - a) funding R&D in industrial biotechnology
  - b) providing access to demonstrator facilities
- Taking the lead in promoting the benefits of IB

### Understanding Public Perception

The IB-IGT has identified that to enable it to effectively influence Government policy it is key to have an evidence base which includes an understanding and appreciation of the public's perspective of IB and its potential uses.

BERR, in conjunction with DIUS Sciencewise programme, are undertaking a project to assess the public perception of industrial biotechnology. This will involve seeking the public's views on a number of IB and chemical-related issues which can then be fed into the IB-IGT during the development of its recommendations and final report.

Further information is available at:

<http://www.sciencewise-erc.org.uk>

### Inputting to the Skills Agenda

The IB-IGT recognises that several aspects of the skills agenda are currently being assessed by organisations including Defra, BIA, BBSRC, EPSRC and DIUS and the IB-IGT is actively inputting to these programmes to ensure that the specific skill set and needs of the IB sector are recognised.