

Summary of SQW Evaluation

The strategic evaluation of the impact of DTI's BIO-WISE programme to promote awareness and uptake of industrial biotechnology was undertaken by *two* independent firms of consultants (SQW Ltd and Synovate Ltd) selected through competitive tender.

Given the level of public investment (£14.4m including £3.07m for demonstration projects), and the growing importance of industrial biotechnology on the international scene, DTI saw a need for a thorough examination of the BIO-WISE programme. Hence the evaluation has been cast into two parts: a 'qualitative' review looking at the context in which the programme has operated and degree of impact on UK suppliers and user communities; and a 'quantitative' review of the impact in terms of business benefits (which has been informed by SQW Ltd's work). Both reviews are intended to help inform the work of the Industrial Biotechnology Task Force and policy deliberations on future directions.

In considering context, impacts and possible future directions SQW Ltd were asked to engage a wide range of UK suppliers, companies (users and non-users of industrial biotechnology) and organisations that have had both direct and indirect interaction with BIO-WISE.

In particular, they were asked to reflect issues such as differences in the three targeted industry sectors – namely, chemicals, engineering and textiles & clothing (see chapter 6), and UK capability - in terms of specialist biotechnology companies and in scientific expertise and the report notes there has been in both of these bases./communities. Relevant science areas where the UK is thought to be particularly strong include: extremophiles, isotopes for industrial applications (potentially 5 years ahead of the US), microbial solutions, physics-based biotechnology, and bioremediation (particularly metal remediation and nuclear waste treatment).

Overview of key findings:

In general, both users and suppliers rated the effectiveness of activities under the programme as above average/well-above average and found BIO-WISE information relevant and up to date. Outside of the demonstration projects, users viewed workshops and helpline advice as being the most effective aspects while suppliers saw workshops and seminars as being the most effective aspects.

There have been tangible benefits (including increased competitiveness) to most suppliers that took part in demonstrator projects with most reporting additional investment as a direct result of their involvement. Demonstrator projects have also increased the likelihood of further business accruing in future, by building trust and deepening existing, or forging new, relationships. The projects had also been well received by academics and was seen to be a good way of increasing technology transfer from academia to industry.

Suppliers were strongly positive about the impact that BIO-WISE has had on the supplier base and on users. In particular, suppliers thought that the programme had had a positive impact on the sector's competitiveness and had helped increased interactions with the user base. It has not, however, proven possible for the programme to incentivise a self-sustaining single representative body through working with current intermediaries.

Impact on the wider user communities (e.g. companies not directly involved) has been less evident. The report finds, on the basis of the evidence surveyed, that there have been fewer instances of users taking up biotechnology applications to date (no higher than 5-10%.) than was expected (the original target was 20%). There is no single reason for this and the evidence suggests that there remain a number of barriers to the uptake of biotechnology within manufacturing industries. While suppliers saw regulation as providing positive opportunities for biotechnology, public perception is still seen as a potential threat.

Future Directions:

The report finds that there is a need for continued awareness raising (particularly in conservative/less pro-active sectors/firms) and that the UK supply base has neither the credibility or resources to undertake this. Given this, the slow rate of uptake to date, and the continuing advances in the science and technologies underpinning industrial biotechnology, the report concludes that there is a strong case for further public investment in this area.

In considering future directions the report points to a need to build on the investment already made in the three target sectors with further dissemination efforts maintaining the current sectoral/regional focus for at least a further 2 years, but packaged, as far as is possible, for cross-sectoral dissemination. The report also recommends that a partnership approach (i.e. involving industry bodies and the Research Councils) should be taken in the organisation and scoping of any future demonstration project competition and that thought should be given to requiring the involvement of an RTO or trade body in the dissemination phase.

Conclusions:

- There is a continuing need for a national information resource – primarily via a well maintained website – given the uneven availability of expertise in most regions (and economies of scale).
- There is a need to capture the outcomes of on-going demonstration projects and translation into material for further case studies. New and refreshed case studies to maintain momentum, take advantage of opportunities caused by incoming regulatory, and to reflect technological developments that would have a wide interest amongst the target audiences.
- There is scope for further demonstration projects – particularly if the Research Councils and academic community see them as making valuable contributions to their own agendas.
- Serious thought should be given to establishing a Managed Knowledge Transfer Network for industrial biotechnology. to enable continued networking and information exchange with experts in the field, intermediaries and relevant industry support organisations, to help guide future investments, source case study materials for the website, and to help DTI keep abreast of changes in international research and the UK industrial biotechnology sector.