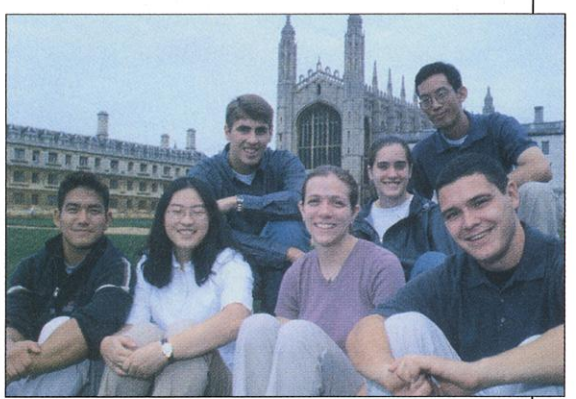
A Cultural Change in UK Universities

Britain has an excellent track record of world-class scientific research and is home to strong science-based industries in aerospace and pharmaceuticals, as well as being a leading center for optoelectronics, computer games, and mobile telephone software and services. Fifteen of the world's top 75 medicines were discovered and developed in Britain. But in the past, we have not innovated fast enough across the full range of our industries, and the present government is committed to improving the exploitation of our outstanding science base. This is not about moving funds from basic research to applied research, but putting in place the mechanisms and incentives to encourage knowledge transfer to take place.

In the United Kingdom, the greatest amount of knowledge transfer takes place from universities, which are leaders in basic research. We have many world-class research universities, and we see them as a key part of the productive economy and not a burden on it, as was sometimes the case in the past. The government has taken a number of key steps to increase knowledge transfer. The University Challenge Competition has enabled universities to access seed funds in order to assist the successful transformation of good research into good business propositions that might be of interest to venture capitalists. Nineteen seed funds have been set up, involving some 57 institutions, with £60 million pounds of funding.



MIT students visiting King's College, Cambridge, during the Cambridge-MIT Institute undergraduate exchange program.

We have also created, through the Science Enterprise Challenge, a network of centers in UK universities to provide access to entrepreneurial skills to science and engineering undergraduates and graduates. Thirteen centers have been set up, with over £40 million pounds of funding. The UK's Higher Education Innovation Fund (HEIF), worth £80 million pounds over the next 3 years, aims to help universities transfer their knowledge into companies, building on the potential of universities to act as drivers of growth in the knowledge economy. HEIF provides funding for incentives and mechanisms to encourage universities to work more closely with industry. And we have set up the Cambridge-MIT Institute, a collaboration between Cambridge University and the Massachusetts Institute of Technology, which aims to enhance the contribution that scientific research and innovation make to economic success and entrepreneurship. Research projects have been commissioned, exchange programmes initiated, executive courses introduced, new Master's courses developed, and workshops held.

All this is helping to bring about a cultural change in our universities We recently did a survey of the interactions between our universities and industry. This showed a very encouraging picture. In 1999–2000, 199 spin-offs were established in the United Kingdom in which there was some form of university ownership or intellectual property involved. In the previous 5 years, the average annual rate was just under 70. These figures undermine the received wisdom that UK higher education institutions are not entrepreneurial.

The government also believes that action is needed to encourage international collaboration. As companies respond to the new challenges of the knowledge-driven economy by shifting the focus of their innovation from central R&D laboratories to global R&D networks, government needs to provide the best framework for scientists and businesses to make international links. We have, therefore, doubled the size of our International Technology Service as well as the number of scientific attachés in our embassies. The International Technology Service has a 16-person team of specialists who help to forge partnerships between British companies and overseas sources of technology, and it supports some 30 fact-finding technology missions a year to identify the latest developments around the world. To help small business, the service funds some 50 individuals, from a wide range of businesses, to learn new techniques by working with leading overseas companies for up to a year.

Public perceptions can take a long time to change, but no longer is it true to say that the United Kingdom is good at scientific research but poor at innovation. We are now increasing our rate of innovation so that our science base produces increased benefits for our citizens in terms of both wealth creation and improvements in the quality of our lives.

Lord Sainsbury

Lord Sainsbury is the Science and Innovation Minister of the United Kingdom.

CREDIT: GAIR FRASER