

Promoting UK / Japan Science & Technology Collaborations

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Japan is the world's second biggest economy grounded, in part, on technological advances. Annual R&D spending totals approximately £90 billion, 3.35% of GDP. And due to recent increased investment in infrastructure, Japan now has some of the world's best-equipped research centres. This presents huge opportunities for British scientists and engineers. The Science and Innovation team in Japan aims to help realise those opportunities. Strengthening science and technology collaboration in key areas through bilateral linkages is currently a top priority. We have support for these activities at the highest levels, through the British and Japanese Prime Ministers' 2003 joint statement on S&T which established the UK Japan Programme on Emerging Technologies. Our flagship project is a unique collaboration on predicting climate change. Launched by the Foreign Secretary earlier this year, the project brings together two of our leading scientific centres on climate modelling with Japan's Earth Simulator, one of the world's most powerful supercomputers. This will enable climate modelling to be taken to a new level, allowing state of the art models to be run at unprecedented resolutions. This will give decision makers world-wide a firmer basis on which to assess climate change and its impacts. We were instrumental in bringing these partners together and providing pump-priming funding to get the partnership off the ground. We have also launched initiatives in nanotechnology, fuel cells and the hydrogen economy, structural genomics, gene therapy, sustainable building and "green" chemistry. A key part of our role is to inform the UK community of technology developments in Japan. The language barrier means that information in English on

breakthroughs and opportunities is not readily available. We therefore have a team of bilingual S&T experts who analyse and report on policies and developments in Japanese S&T. For example, Japan is a world leader in developing and implementing new technologies for energy efficiency. We have reported extensively on this, including informing the House of Lords Science & Technology Committee's recent inquiry on Energy Efficiency. All our reports are available through DTI's GlobalWatch website (www.globalwatchservice.com).

We also help high-tech UK companies and academics access and benchmark Japanese technology through organising DTI funded missions. A good example is a recent mission on Bioprocessing to look at Japanese approaches to reducing the environmental impact of its chemicals industry using biotechnology. Using our knowledge and contacts of the sector in Japan, we arranged visits to six leading Japanese companies and spent half a day with the leading Japanese academic, Professor Shimizu of Kyoto University. Several companies from the mission are now exploring potential collaborative opportunities in intermediates manufacture, and Professor Shimizu has since visited the UK to discuss academic collaborations.

Over the past 12 months we have organised 8 such missions covering, for example, "smart" textiles, global navigation systems, small scale semiconductor production, and technologies for elderly people. Through this work, we have enabled over 50 UK companies and universities to gain unique access to the expertise of more than 70 Japanese companies and research institutes. The strength of research and technology in Japan, the warmth of the welcome, and the potential and willingness for collaboration usually pleasantly surprise these mission teams.



As well as encouraging UK scientists and engineers to "think Japan", we are also very active in promoting the UK's strengths in S&T. For example, we have recently completed a year-long campaign, "Innovation UK", involving a huge number of special events including lectures by UK Nobel Prize winners and other "science stars", a mobile exhibition, special competitions and a series of "science in the pub" events. Post-campaign research revealed that Innovation UK had positively influenced perceptions of the UK as an innovative country. And this PR work continues. For example, in conjunction with our trade and investment colleagues, we are currently organising a seminar showcasing UK strengths in neuroscience and oncology at BioJapan 2005, the largest bioscience networking event in the Japanese calendar.

Over the next few months, special priority is being given to driving forward new projects under our UK Japan Programme on Emerging Technologies related to the EU and G8 presidency priorities. Three new collaborative initiatives are being pursued in infectious diseases, flooding and coastal defences and aircraft emissions. We have also launched a UK/Japan project on the health and environmental impacts of nanotechnology, aimed at ensuring early international engagement on the issues raised by nanotechnology developments.

In conclusion, we believe the UK/Japan S&T relationship is developing well. But the speed of change is very fast, and the science team in Japan will continue to work hard at identifying and reporting on new opportunities and to use our unique expertise and contacts with the Japanese S&T community to bring the right people together to realise these opportunities.