BUILDING BRIDGES – LAYING DOWN SOME FOUNDATIONS

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Developments in Science, Engineering and Technology have much to offer Society yet many of the difficulties of transferring scientific evidence into strategies, policies and regulations still remain.

Newton's Apple Foundation was founded in 2006 with the objective of acting as a bridge between the science and engineering communities and policy makers in Government and Parliament *(Science in Parliament* (2008) vol 65 page 4). We believe that such bridges are even more important today than they were in 2006. Developments in Science, Engineering and Technology have much to offer society yet many of the difficulties of transferring scientific evidence into strategies, policies and regulations still remain. We saw it as a particular challenge to encourage younger scientists and engineers to engage with policy issues which affect the way they work, or to which their own research could make a contribution; and to understand the governmental and parliamentary structures and processes involved.

We therefore established a group of relevant experts charged with the task of looking at how we could meet this challenge. They devised the "Newton's Heirs Introduction to Science Policy Programme." This programme, launched in Westminster in October 2008, delivers workshops and was informed by our experience of running science policy events for the annual NESTA Crucible Lab projects, the British Association Communication Conference and the Women in Science – Policy and Networking Conference. It provides a forum in which scientists and engineers at the beginning of their careers can meet those involved in the processes of developing and implementing policies that are, or should be, underpinned by scientific evidence. We have run a series of these workshops over the last two years and have been encouraged by how the scientific community has responded to them.

Most workshops were held in London, often in the Palace of Westminster, but also in venues provided by Learned Societies and Trade Associations. It is not surprising therefore that the great majority of the participants came from institutions and organisations in London and the Home Counties. However we also had delegates from as far afield as the West Country, the Midlands, Scotland and Wales. In addition to the London-based events two workshops sponsored by the University of East Anglia were held in Norwich and a further two workshops were run as part of the NESTA Crucible Lab programme. In all over 380 people have attended one of these workshops the great majority (70%) being young researchers – PhD students and Post-doctoral fellows – but they also attracted a significant number of people from outside academia, including Research Council HQs and Learned Society staff and from industry.

Each workshop provides participants with a brief introduction to the way that Government and Parliament are structured, and how the policy and legislative processes are operated. Participants hear talks from a panel of experts in the various fields of policy formulation including an MP, someone with experience of a Government Department (usually a civil servant) and a representative of a Learned Society, with sometimes a speaker from industry with experience of science policy issues. In addition each is provided with copies of our three booklets *"Science Policy Explained and Explored"* and *"How Policy is made – a Short Guide"* and *"A Directory of useful Science Policy Websites."* The latter was created in response to requests from participants in the first workshop and includes web addresses for Government Departments, Parliamentary Select Committees, the major Learned Societies and other relevant bodies. An important part of the workshop is the discussion period which provides an opportunity for questions to be raised and issues discussed with the panel members. The discussion period is so popular that it often continues informally

with individual speakers after the meeting has ended.

The workshops highlight channels through which scientists and engineers may engage with policy formulation processes by providing their views, expert opinions and evidence when scientific issues are raised, or matters affecting the way science is conducted are involved;

- By responding to Government Consultations, Green Papers and Inquiries;
- By providing evidence to relevant Select Committee Inquiries;
- By supporting Policy Groups within their Learned Societies and becoming involved with the production of 'position papers'; and
- By acting as mentors to constituency MPs helping them understand the scientific method, the processes involved in research and the interpretation of scientific data.

Participant feedback provides us with information about the impact the workshops have on their understanding of policy formulation and implementation processes. Participants are asked to place their understanding of science policy and the processes into one of four levels before and after the event:

1. No understanding
2. Some understanding
3. Good understanding
4. In-depth understanding

The majority of participants (over 90%) came to the workshops claiming no, or only some, knowledge of science policy and the policy processes. At the end of the event the majority felt that their understanding had increased by at least one level (72%) and in some cases (17%) by two levels – or even three levels! A more detailed report on the workshops may be found on our website (www.newtons-apple.org.uk)

We have discovered that there is a real and growing interest amongst the younger generation of scientists in policy matters and a thirst for knowledge about the processes, and how they may become involved. All of our events have been greatly oversubscribed within a few days of being advertised. It is of particular interest that we have found an increasing number of questions at these events which centre around careers in the policy arena. A small number of participants have even gone on to take up temporary jobs as interns, fellows, etc in organisations that provide them with some hands-on experience. The workshops are therefore meeting a real need in the scientific community and are laying down some foundations in the building of the bridge between scientists and policy makers. We are therefore greatly encouraged as we move forward with our third programme of workshops in 2010/11 and as we start to develop further programmes to provide some more in-depth experience for young scientists and encourage a deeper engagement in the field of science policy. We are always open to ideas as to how this may be done as Newton's Apple is committed to consolidating the progress we have made and to forming yet stronger foundations.

Dr Michael Elves was a Former Director of Scientific and Educational Affairs, Glaxo Wellcome and a specialist adviser to the House of Commons Select Committee on Science and Technology 1997-2005

Business Secretary announces joint UK/China Investment in Solar Energy and Fuel Cells

Business Secretary Vince Cable announced a joint investment project between the UK and China on solar energy and fuel cells.

The Research Councils UK Energy Programme will invest £2.45 million and will work together with the Chinese Academy of Sciences to provide equivalent resources to fund the research.

Vince Cable's speech outlined the UK's ambitions for building on its science and innovation relationship with China and his ambition for an open international framework to promote innovation.

Extracts from the speech include the following:

"The UK envisages an ambitious programme of research engagement with China over the next five years. This recognises the priorities and strengths of the two countries, the capacity to deliver excellent research and the potential for co-investment from China (and from other UK sources) to support the delivery. As in science, we think that excellence and openness are vital for success in international innovation."

Dr Cable also announced that British company MRCT has signed agreements with Chinese companies to connect innovative research in the UK with development capabilities in China. This includes jointly developing a new drug for cancer.

Dr Cable highlighted the UK plans to promote technology-based innovation as a key driver of growth, as set out in the UK's Blueprint for Technology, launched by the Prime Minister on 4 November.

1. The UK Blueprint for Technology was published on 4 November. See http://www.bis.gov.uk/news/topstories/2010/Nov/blueprint-for-technology

2. The new collaboration in Solar Energy and Fuel Cells has been agreed between Research Councils UK Energy Programme and the Chinese Academy of Sciences. The UK will provide £2.45m, with matched resources from the Chinese Academy of Sciences. This new research initiative will fund five research projects which will address challenges in solar energy and fuel cells and contribute to tackling energy security and climate change. The successful UK recipients are Ifor Samuel, University of St Andrews, Wen-Feng Lin, Queen's University Belfast, Bryce Richards, Heriot-Watt University, Anthony Kucernak, Imperial College and Richard Catlow University College London. The Research Councils UK Energy Programme's total portfolio of collaborative energy research with China now stands at approximately £20m.