



Case Study

# **Sciencehorizons**

# A dialogue with citizens on future applications of science and technology

# Vital statistics

# Commissioning body:

Department for Business, Innovation and Skills (BIS) (formerly the Department of Innovation, Universities and Skills - DIUS) and Sciencewise-ERC

# **Duration of process:**

May 2006 - December 2008:

- Planning: early 2006
- Dialogue events: January June 2007
- Publication of reports: August 2007
- Final workshop on policy implications: November 2007
- Evaluation report published: December 2008

# Number of public participants:

About 3,300 in total: Strand 1 = 31, Strand 2 = 842, Strand 3 = about 2,400

# Number of experts/stakeholders involved:

About 50 central Government policy makers from 25 different departments were involved in a workshop at the conclusion of the project. Scientists and other experts were also involved in all aspects of the project

# Cost of project:

Total cost of project: £306,000, all funded by Sciencewise-ERC

# Key messages from the public

 Broadly, people were likely to be positive, with important qualifications, about developments in science and technology that seemed to promise gains in choice, quality of life, longevity, In 2006, a project was commissioned by the Department for Business, Innovation and Skills to explore public views on possible future directions for science and technology, and to identify priorities for future public engagement on areas of science and technology.

The project considered topics emerging from two 'horizon scans' of future directions of science and technology published in 2006 by the Government's Foresight Programme's Horizon Scanning Centre (HSC). It offered a public-facing engagement process to add to the continuing work of the HSC's Wider Implications of Science and Technology (WIST) programme, which provides for expert and stakeholder appraisal.

The HSC scans identified issues that could contribute to the delivery of public services, challenge society, and/or affect wealth creation, the nation's security and vital interests over the period to around 2015-2020. This timescale and set of issues formed the context for the sciencehorizons project.

convenience, time-saving and environmental impact

- Potential impacts on social equity, freedom, privacy, and human autonomy and skills were regarded with considerable suspicion or hostility
- Trust in expert authorities in the abstract tended to be low, sometimes surprisingly so. There was pervasive anxiety about the potential abuse of technologies
- The Deliberative Panel process was very well received by the participants: people liked the engagement they had with issues and the expert speakers. There was a widespread view that the deliberative process ought to be used more and that this would be healthy for public life and policy development. However, people needed reassurance that their views really would be taken seriously and would inform policy discussions
- Exposure to approachable and articulate expert witnesses in person in the Deliberative Panel process tended to reduce initial fears, negative preconceptions and anxieties about new technologies.

# **Policy influence**

- The project contributed to the development of an evidence base that fed into the new Sciencewise Expert Resource Centre in 2008, providing a set of priority topics for future public dialogue projects
- The project, together with the findings from the WIST programme, provided the necessary information to support a workshop of 50 Government policy makers from 25 different departments to come together and agree priorities for future public engagement on science and technology



# Background

The sciencehorizons project was a highly innovative public-facing programme of activities designed to complement and strengthen the findings from the ongoing stakeholder consultation through the WIST programme carried out by the Government Office for Science's HSC. The aim of sciencehorizons was to explore public views on future applications of science and technology that emerged from two Horizon Scans – Delta and Sigma (For more information see www.bis.gov.uk/foresight/our-work/horizon-scanning-centre) – in which scientists and other experts identified new thinking about future science and technology.

sciencehorizons provided the opportunity for citizens to respond to possible future scenarios, and share their hopes and fears about specific technologies and general trends.

The project's overarching aim was to develop a range of public engagement activities, including an informed, deliberative dialogue process, bringing together citizens, scientists, policy makers and other stakeholders, in a working partnership with the broader science engagement community.

- Policy makers felt the process had also helped to:
  - Start public dialogue on what may be controversial future decisions at a very early stage
  - Fill a gap in the WIST exercise by bringing in 'public' views, thus strengthening the WIST process in identifying the key safety, health, environmental, ethical, regulatory and social (SHEERS) issues relating to emerging developments in science and technology
  - Challenge expert assumptions about what public views might be
  - Demonstrate Government's willingness to engage with the public on these issues.

# The dialogue activities

The main objectives for the sciencehorizons project were to:

- Discover and assess views towards the issues raised by possible future directions of science and technological research from a broad set of public participants
- Inform policy and decision-making on the direction of research and the regulation of science and technology
- Help identify priorities for further public engagement on areas of science and technology

There were also secondary objectives for the project, which related to the overall objectives of the Sciencewise-ERC programme. These were to:

- Widen public awareness of the role of science and technology in shaping the future of the UK
- Improve public confidence in the Government's approach to considering the wider implications of science and technology
- Increase understanding of the value of public dialogue in shaping policy and decision-making in science and other policy areas
- Improve understanding of how to engage large numbers of people in discussions and dialogue on science and technologyrelated issues, particularly issues arising from new and emerging areas of science and technology
- Strengthen coherence and collaboration among science engagement practitioners.

Sciencehorizons used three strands of engagement, which reached a total of about 3,300 public participants. Each strand involved scientists and other experts, and used the same information materials (an information pack and DVD) covering four themes: mind and bodies, homes and communities, work and leisure, and people and the planet. The materials described 16 scenarios showing potential future uses of science and technology. The three strands of engagement were :

# Strand 1: deliberative panel

A narrow, but deep, public dialogue with 31 specifically recruited individuals with no previous interest in science and technology. The panel met twice in Bristol for a full day each time and the discussions were facilitated, recorded and reported by the core project team

# Strand 2: facilitated public events

Shorter, two-hour sessions in science centres and community spaces throughout the UK. 18 organisations ran 36 events involving around 842 people. These wider and less deep events were designed and delivered by organisers including science communicators. This Strand reached the 'interested public' who already had links with science and technology

# Strand 3: self-managed, small group discussions

These were run by community bodies throughout the UK, including schools, Women's Institutes, and environmental and faith groups. This was the widest engagement, comprising 78 group events involving around 2,400 individuals. Strand 3 reached the 'active public' who were already linked together, mostly through being in existing local and school groups. These individuals generally had no particular prior interest in science and technology

# Stakeholder Involvement

Scientists and other experts were involved in all aspects of the project, which helped build new relationships with individuals, public bodies and others who had not previously worked together.

# Key elements of involvement

Participatory stakeholder workshop – developing content

Oversight Group established – development and delivery advisory role

Project Board – formal governance

Individuals with a range of scientific knowledge and expertise were also involved in each strand of the sciencehorizons activities, taking part in sessions as expert speakers and/or participants.

# Summary of good practice and innovation

- During the project, significant effort went into outreach and publicity. There were four working lunches organised in partnership with the British Science Association that were very effective in promoting the project. Results showed that around 40% of the organisations that ran Strand 2 activities had attended the lunches
- A discussion paper was published for the launch of the project (with the Science Minister) at the Royal College of Art in January 2007. The paper provided background to some of the contentious issues and policy implications of the project. It also provided a valuable back-up to the media campaign that was designed to gain interest and encourage involvement
- Advice was provided on the website to support Strands 2 and 3 groups, such as how to organise an event, facilitation and suggested timetables. This enabled those not experienced

in interactive public engagement to develop their skills and experiment with new techniques

- Separate reports were produced on the conclusions for each strand, so similarities and differences could be identified
- A common, national framework was created to enable the public to engage with the project in a variety of ways. This allowed for a broad range of views to be included and a common 'sense of purpose' in participating in national policy issues
- After the conclusion of the project, a workshop was held to present findings from the project to Government policy makers. The workshop attracted around 50 central Government policy makers from 25 different departments. This resulted in an agreed set of priority issues for future public engagement.

#### Lessons for future practice include:

- Different approaches to public engagement may generate similar information on hopes and fears towards innovation.
   However, only Strand 1 (deliberative dialogue) provided insights into the deeper values underpinning public views and priorities
- Different approaches may be more effective for different types of objective and content: Strand 1 worked well in addressing contentious issues with scientific uncertainly. Strands 2 and 3 worked well to generate wider public awareness and interest
- Diversity of participants is important where the aim of the project is public engagement, but fuller demographic representation of the UK population may be more important if the project has specific research and/or policy aims. If participants are not recruited for demographic representation, sufficient statistics need to be gathered about the participants to demonstrate diversity and broad representation that will help to validate the results of the engagement process in terms of research sample
- The six months available between the launch and the deadline for sending in feedback to the project was felt, by some organisers in Strands 2 and 3, to be too short to find out about the project, plan and publicise events, recruit participants, deliver events and return feedback to the project. There was a sense that momentum was just starting to really build up as the project closed
- Most of the participants were satisfied with the information pack provided, but the materials did not work equally well for all. Some participants found the information to be good and prompted discussion, but others found it too simplistic
- Feedback from Strand 2 organisers suggests it can be difficult to attract the public (without financial incentives) on science and technology issues that are so far upstream that it is not clear where controversy may exist and there are no policy developments currently planned
- Topicality and being able to potentially influence policy were seen as likely to help achieve good attendance at events
- Direct links to national policy development are important to participants
- Ideally, all public dialogue projects should include planning for feedback to participants about the impact of their input on policy as well as continuity of contact after the end of the project.

Was very interested to run a public engagement session that, in theory, had direct connection to policy-making. Everyone who attended really enjoyed it and said they liked the fact that people were interested in their views and glad to express them. (Participants)... enjoyed explaining their thoughts and were interested in the Government listening to what they said. The material raised many issues for discussion and made the group aware of new developments. With the references to the scans, there was much useful information. [It was]... Most helpful to have a 'where we are now'. The cartoon presentation was liked. They certainly started off discussions and made us re-think.

**Strand 3 respondents** 

#### Strand 2 respondents

#### Impacts

Policy impacts are covered on the first page of the summary. This section examines the impacts on all of the participants in the process.

#### Impacts on policy makers and policy organisations

- The dialogue project generated significant levels of learning about different public engagement methods, and demonstrated that public dialogue generates richer and deeper levels of understanding of why the public has certain views
- The project brought together policy makers and others from different Government departments in the Oversight Group, the Project Board and the policy makers' workshop, who had not previously worked closely together.

#### Impacts on public participants

- Public participants learnt a great deal: 96% of Strand 1
  participants said they had learned something new and that the
  events helped them to think more clearly about issues
- Public views were changed by being part of the project. 76% of Strand 1 participants said being involved had made a difference to what they thought about science and technology-related issues. 20% of these specifically mentioned that they felt more positive, enthusiastic and/or less worried about science and technology as a result of being involved. The remainder did not indicate how their views had changed
- The project generated a lot of interest and enthusiasm for further engagement on science and technology. The majority of participants thought there should be more events for the public on these issues, and more discussions on science and technology.

#### Impacts on scientists/experts and other stakeholders

- Six new collaborative initiatives were established among stakeholders as a result of the project. These involved institutions including the Royal Academy of Engineering, The Dana Centre, Spectrum Drama, Glasgow Science Centre, Science Oxford, the Teacher Scientist Network and the Inspire Discovery Centre
- Staff in science centres and other Strand 2 organisers learnt new techniques for working interactively with the public.

<sup>1</sup>Wider Implications of Science and Technology (WIST) Programme, for full report visit: http://tinyurl.com/6x3ucyd

#### **Overall impacts**

- A new phase of Sciencewise-ERC public dialogue projects was initiated using the themes and issues identified during sciencehorizons and the wider WIST initiative
- Links made with a range of policy makers during the yearlong project led to further awareness raising of the benefits of dialogue to the policy-making process
- The results of the sciencehorizons project were expected to help inform further areas for public dialogue
- Following the workshop, an online mapping exercise was launched (in November 2007) to identify which of the 16 themes identified in the final WIST/sciencehorizons integrated report<sup>1</sup> related to existing areas of interest and activities within Government departments. The mapping resulted in demonstrating that all 16 issues were of active interest to at least one Government department.

#### **Contacts and links**

#### Commissioning body

Department for Business, Innovation and Skills and Sciencewise-ERC

#### Sciencewise-ERC contacts

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The sciencehorizons project was run by a consortium, comprising: Dialogue by Design, Graphic Science, BBC Worldwide Interactive Learning, Think-lab and Ian Christie.

#### Project evaluator

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#### Reports

Full project and evaluation reports available from Sciencewise-ERC on **www.sciencewise-erc.org.uk/cms/** sciencehorizons