Internal / Client Use Only

Ipsos MORI
Social Research Institute

"Hearing and Being Heard"

The public's views on their future involvement in policy-making related to emergent science and technology

02 August 2013

sciencewise
EXPERT RESOURCE CENTRE

Legal notice

© 2013 Ipsos MORI – all rights reserved.

The contents of this report constitute the sole and exclusive property of Ipsos MORI.

Ipsos MORI retains all right, title and interest, including without limitation copyright, in or to any Ipsos MORI trademarks, technologies, methodologies, products, analyses, software and know-how included or arising out of this report or used in connection with the preparation of this report. No license under any copyright is hereby granted or implied.

The contents of this report are of a commercially sensitive and confidential nature and intended solely for the review and consideration of the person or entity to which it is addressed. No other use is permitted and the addressee undertakes not to disclose all or part of this report to any third party (including but not limited, where applicable, pursuant to the Freedom of Information Act 2000) without the prior written consent of the Company Secretary of Ipsos MORI.

Contents

Summary 2

1. Introduction 7
2. Priorities for the UK government and public involvement 11
3. Education 15
4. Health, healthcare, population & ageing 19
5. Energy & environment 25
8. Public safety 33
9. Government & politics 37
10. Information technology 44
11. Business & technology 47
12. Other themes 50
13. What made the public choose these issues? 51
14. Conclusions 59

Appendix 61

Summary

Background to the project

In January 2013, Sciencewise commissioned Ipsos MORI to carry out research into the public's views of emerging areas of policy involving science and technology. 30 issues were identified through a process of consultation with experts involved in policy making and science and technology at a workshop run by the Cambridge Centre for Science and Policy.

The issues were then brought to the public; this report summarises the views of participants at three day-long public dialogue workshops, and a half-day reconvened workshop.

At the workshops, participants were invited to prioritise which of the 30 issues they felt most important for Government, business and other opinion formers to consider in **science policy in the next 15 years.** They were also asked to identify which areas they felt it was **most important for the public to be involved in**, when it came to decision making. We also compared their priorities among the issues with their spontaneous views.

Key findings

Which were the priority issues for Government?
There was a high degree of agreement among participants from all three workshops about the issues that were **both most important for the UK government and priorities for public involvement,** as shown in the grid overleaf.

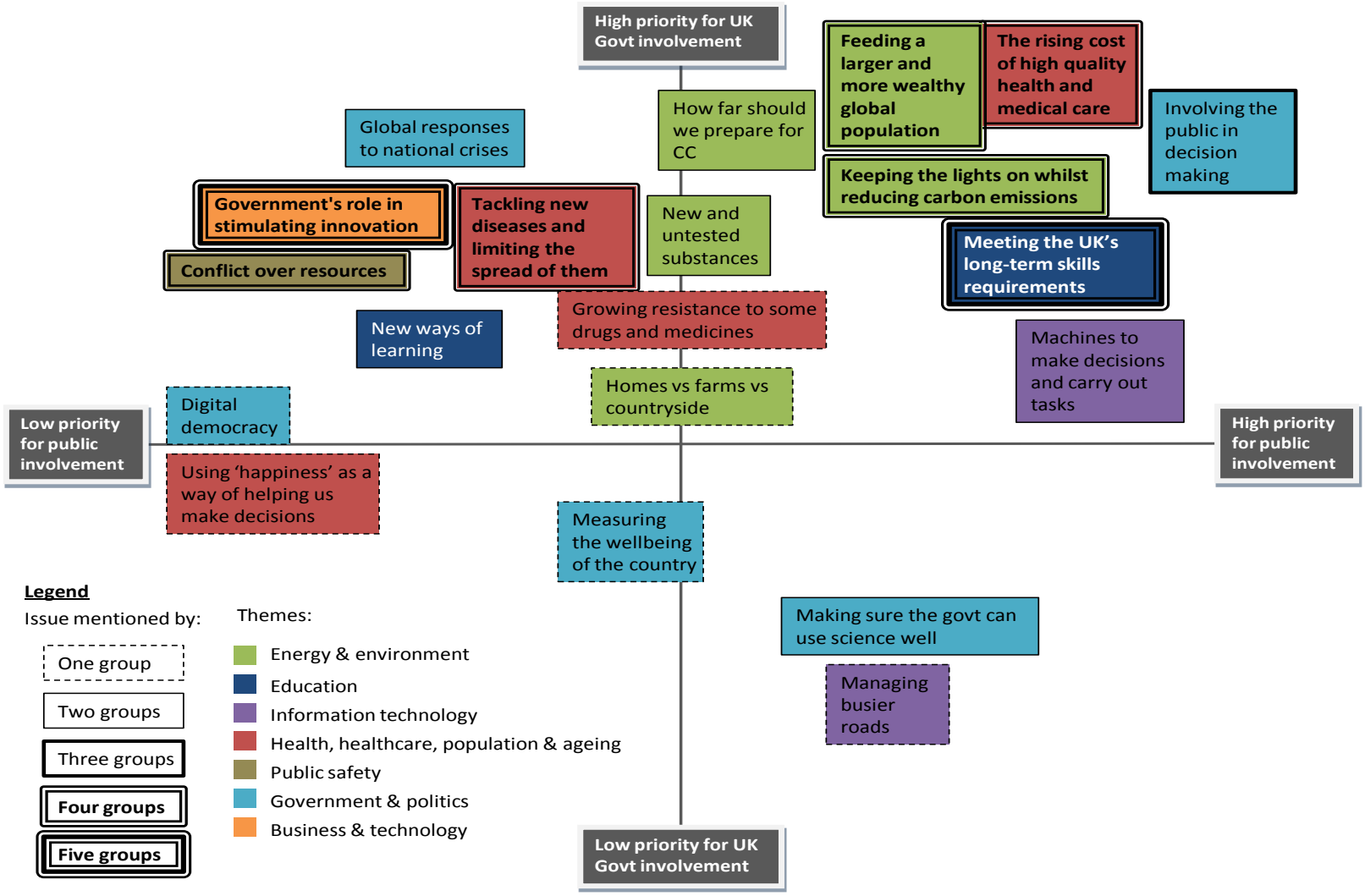
The priority issues were:

- **Feeding a larger and more wealthy global population:** Participants perceived this issue as urgent and as having a direct impact on them physically and economically.
- **The rising cost of high quality health and medical care:** Being healthy was seen as underpinning a life worth living. Participants viewed the NHS as a service they relied on in times of need and thought it was important to protect it. There is also an ethical debate to be had about public expectations of healthcare.
- **Keeping the lights on whilst reducing carbon emissions:** Participants felt that the public would be more likely to buy into policies addressing this if they had played a role in formulating them. They also thought the public needed to be educated about how their behaviours could contribute to the success of these policies.
- **Meeting the UK's long-term skills requirements:** Participants thought that the public, and businesses in particular, possessed knowledge about skills gaps in the labour market that the government did not. They thought the government needed to inform the public about emerging industries and skills shortages so that young people, and those needing to update their skills, could take note.
- **Machines to make decisions and carry out tasks:** This issue was controversial. Participants could see the benefits of this in some areas but were very concerned about it in others. They therefore thought the public should have a voice in policies about how to regulate the use of machines. This issue felt both immediate and concrete, and to have a strong ethical component.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Figure 1: Aggregated qualitative grid: Priorities for the UK government and for public involvement



This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

What made these issues relevant?

Participants prioritised issues which were :-

> **Urgent**: likely to occur and with effects already being felt. Longer term and more uncertain issues tended to be lower priority.
>
> **Specific** : with concrete outcomes on individuals or groups, such as affecting jobs, the health service, or food supply.
>
> **Multifaceted**: problems which, if tackled, could help solve other problems too, for instance investing in new skills in education could also help citizens move to carbon neutral technologies. There was some evidence that participants underestimated the interdependency of the UK on global supply chains, especially in agriculture, so more education would be needed in future dialogues.
>
> **The government's job:** Some issues were seen as a matter for individual preference rather than government action (for instance some issues in personal health). There was a range of views on the underlying tension emerging through many of the issues; how far can the government limit individual freedoms for the good of society?
>
> **With a moral or ethical dimension:** especially where that could be seen immediately, for example drones in warfare or the fairness of paying for healthcare. More broadly a philosophical concern came out when addressing all new technologies.
>
> Some participants feared many of the new technologies because they were concerned that any new advances should not erode essential human qualities like communication, health and the enjoyment of the outdoors, empathy and personal judgement.

For example, the top four issues identified overall were to do with health, food supply, maintaining the UK's energy supply, and keeping people in jobs. In all these concepts, the effect on people was directly related to the concept itself – they were seen as fundamental, "life or death", concrete issues.

Areas where the public wanted greater involvement in decision making

There were particular types of issue and policy area felt to be very suitable for public involvement, namely where there is a need for:

- **Informing**: the public needs to understand the policy and buy-in to make it work, and policy makers need to understand behaviour in order to best design policy.
- **Deliberating**: where the timeframe, intensity, location of impacts are uncertain and decisions must be made about investment.
- **Accessing a range of views:** on controversial and emotive issues where different publics have different views .
- **Counteracting** other vested interests: for instance where the public interest might conflict with the needs of business.

Just because participants did not prioritise issues highly does not mean they are automatically unsuitable for future public involvement – but it can mean that there are

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

assumptions about the issue which must be challenged before the public see it as relevant for their involvement.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Conclusions – some key questions for policymakers and dialogue practitioners

The findings from this dialogue are positive about the public's appetite for public engagement with many areas of science and technology, and there are many different approaches to engaging them. Key points to consider for the sector include:

- Government stakeholders should work together beyond departmental silos to engage the public in issues which are multi-faceted, multi-dimensional and have a bearing on many policy areas.
- Issues in dialogues must be framed so that they are relevant to the public, without oversimplifying. Participants have difficulty engaging in discussions about issues that are too abstract, far in the future or do not seem relevant to their lives.
- The public could fruitfully be engaged with the idea of risk, uncertainty and 'wicked' problems, possibly through a specific dialogue about how they want government to deal with risks.
- Find out more about underlying values, for example individual rights vs collective responsibilities, and how these bear on attitudes to science.
- Ensure dialogue takes place at the best time in the policy cycle for maximum credibility with participants.
- Ensure a structure for feeding back to the public, so that participants can feel comfortable that their voices will not be outweighed in decision-making by other vested interests such as business or political voices.

We also learned that this particular dialogue structure (quick-fire look at a lot of different issues) is a good way to

Gather spontaneous views on a wide range of subjects, helpful for communicators
Engage participants with the process of dialogue itself.

Therefore we suggest there is a role for this 'rapid first look' style of dialogue in future, and a possibility to extend it (and quantify findings?) using online crowdsourcing.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

1. Introduction

1.1 Background

As a part of Sciencewise-ERC's work identifying emerging policy areas involving science and technology where dialogue with the public offers the benefits of better policy, Sciencewise and the Centre for Science and Policy (CSaP) at the University of Cambridge held a workshop on 27 March 2013 in Cambridge as part of a process to identify the areas of policy considered as a priority for dialogue over the coming five to ten years[1].

The CSaP Workshop

- Email consultation with policymakers and academics to identify emerging policy challenges likely to face the UK in the following five to ten years
- Also the sorts of scientific and technological developments that were perceived as being likely to intersect with those challenges
- CSaP refined this list to 114 areas for discussion at the workshop
- Workshop attended by a wide range of experts involved in policy making and science and technology in the emerging areas
- Used small group discussion process and plenary consensus building process, to revise issues down to top 30, categorised into seven overarching policy areas.

Ipsos MORI then carried out a public dialogue designed to ensure that the views of the public were captured and included alongside the findings of the expert process. The dialogue initially elicited participants' spontaneous views on the seven themes; and also explored the top 30 themes identified at the CSaP workshop in more detail.

The combined findings from both projects will be presented at a conference for MPs organised by the Parliamentary Office of Science and Technology (POST), and will be used by Sciencewise in their discussions with government departments about where public dialogue might result in better policy.

1.2 Objectives

The principle objectives of the research were to explore which emerging areas of policy involving science and technology the public thought should be **priorities for the UK government**, and which **they would like to have input on**, beyond the normal democratic process. The research aimed to explore both the spontaneous views of participants, as well as their reactions to emerging areas of policy selected as priorities by experts involved in policy making and science and technology in the emerging areas.

1.3 Methodology

Three six-hour public dialogue workshops, each involving 12 to 16 participants, were conducted in London (27 April 2013), Manchester (11 May 2013) and Cambridge (18 May 2013). A total of 43 participants attended the three workshops.

Participants were recruited on the street. Quotas for gender, age, socio-economic group and ethnicity were set to ensure participation of individuals from a range of backgrounds

[1] University of Cambridge Centre for Science and Policy, To be published.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

reflective of the areas they came from and the broad diversity of the UK population. Soft quotas based on level of interest in science were also set, as it was hypothesised that general attitudes to science might impact on the views expressed in the workshops.[2]

A final three-hour reconvened workshop was conducted on 25 May 2013 in London, the aim of which was to involve participants in the analysis of the findings from all three workshops. A small number of participants from the London and Cambridge workshops were invited to attend this workshop, which ultimately involved 10 participants, six from Cambridge and four from London. Participants were chosen for their active engagement at the initial workshop and to ensure a range of views on the issues were reflected.

1.4 Materials development

Drawing on the descriptions of the policy areas and science and technology challenges developed by the experts, we designed stimulus materials to test the issues with the public. This presented a challenge as the wording of many of the issues had to be simplified as it was too complicated to use with the public, but without changing the scope and meaning of the issues. To ensure that this was achieved, Sarah Castell, Research Director for the project from Ipsos MORI, attended the experts' workshop and was responsible for internal sign-off of materials. We were able to draw on the emerging report from the CSaP workshop which summarised the 30 themes and was in the process of being collaboratively edited during the time the materials for the public dialogue were developed. Also, all materials were signed off by Sciencewise, who had oversight of both projects and also sent attendees to the CSaP workshop.

1.5 How did we cover 30 issues in each workshop?

We began each workshop eliciting spontaneous views on seven policy areas (created by categorising the issues that experts had developed), as well as giving participants an opportunity to create their own themes if they thought any were missing. The seven policy areas were:

- Education
- Health, healthcare, population & ageing
- Energy & environment
- Public safety
- Government & politics
- Information technology
- Business & technology

This allows us to identify how the public's spontaneous language on these themes reflects, or differs from, the ways the experts conceptualised and discussed the issues. In each chapter of the report we discuss this by theme, identifying the implications for government and other communicators.

Participants were then presented with the stimulus materials that had been developed using the experts' ideas. Each idea was presented on a separate sheet of A4 divided into two boxes. The top box explained the changes might occur in society, while the bottom box gave

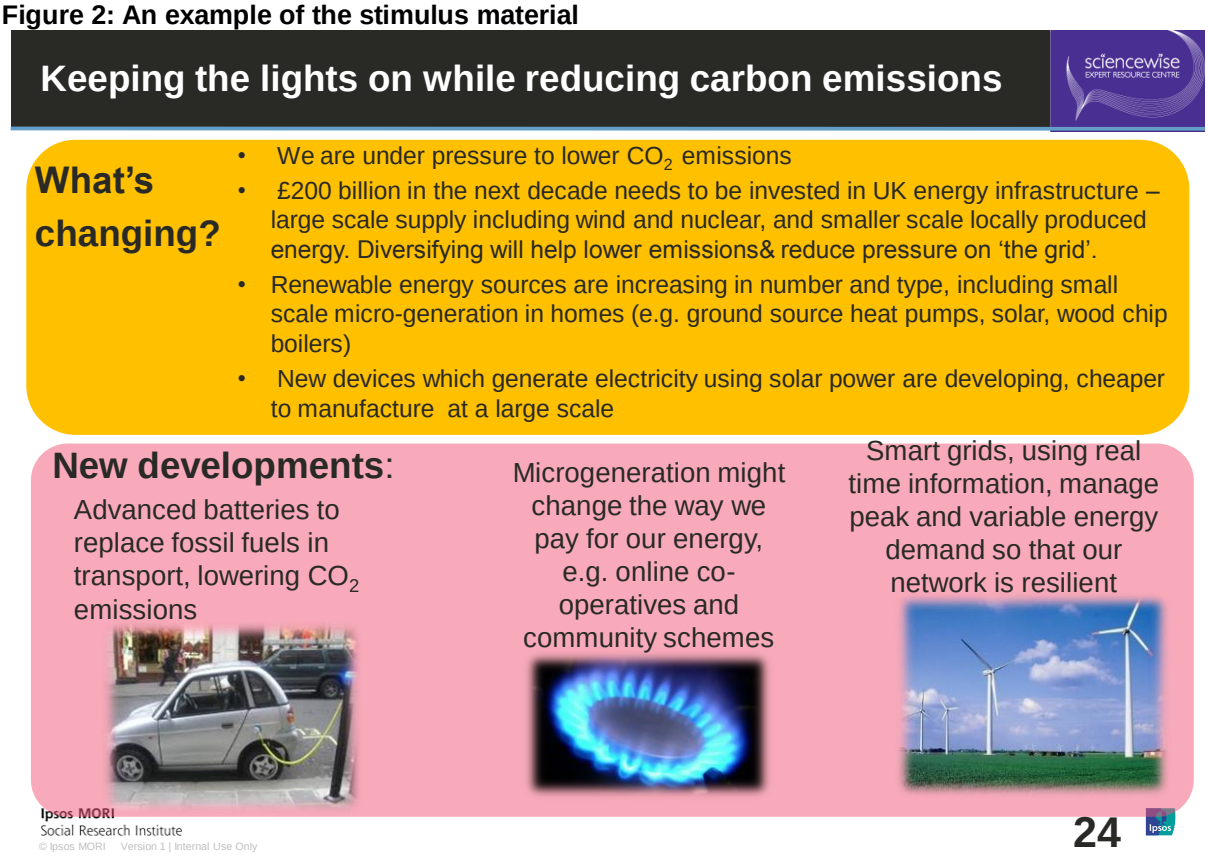
[2] On recruitment, participants were asked "To what extent would you agree or disagree with the following statement: 'It is important to know about science in my daily life'?" From previous quantitative work, we know that 15% of people respond neither/nor, and 16% disagree, so we aimed to have at least 2 participants but not more than 4 responding in each of these ways in each workshop.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

examples of the scientific and technological developments that might impact on those changes, including pictures to make the stimulus more engaging.

Figure 2: An example of the stimulus material



Care was taken to design the stimulus such that it reflected the discussions of the experts as well as the final wording they settled on for their themes. We included examples of how the issue could positively impact people's lives as well as potential risks, taken from the experts' summaries and some source documents referenced in the emerging CSaP report. Facilitators also explained that the examples of scientific and technological developments were illustrations of things that *might occur*.

Nonetheless, the stimulus did have an impact on the way that participants approached the issues. Participants paid significant attention to the pictures, examples, and aspects of the stimulus they understood best, and considered the issues in the contexts of their own lives. They often simplified the information by focusing on one or two points of the many raised on the stimulus. Thus, for example, one group came to call the issue 'Keeping the lights on whilst reducing carbon emissions' *"the renewables one",* although this was only a small part of the wider issue presented on the stimulus.

Participants discussed each issue in a policy area in turn, with facilitators probing on whether they thought the issues were likely to occur and how they felt about them. After every issue in a theme had been discussed, participants were asked to select the one or two issues they thought should be priorities for the UK government.

Each workshop was split into two sub-groups, and each subgroup looked at between four and six themes. This means not every participant saw every one of the 30 themes, but in each workshop every theme was somewhere discussed and plenary sessions allowed the sub-groups to look at and comment on each other's choices.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

1.6 A note on interpretation of qualitative data

Qualitative research approaches (including public dialogue workshops) are used to shed light on *why* people hold particular views, rather than *how many* people hold those views. The results are intended to be *illustrative* rather than statistically reliable and, as such, do not permit statements to be made about the extent to which something is happening. Given the qualitative nature of Sciencewise's current study, this report aims to provide detailed and exploratory findings that give *insight* into the perceptions, thoughts and feelings of people, rather than statistical evidence from a quantifiably valid sample.

It is not always possible in qualitative research to provide a precise or useful indication of the prevalence of a certain view, due to the relatively small number of participants generally involved (as compared with the larger respondent bases involved with quantitative studies). So, the views of proportions of the qualitative group should not be extrapolated to the population at large. Sometimes, ideas can be mentioned a number of times in a discussion, and yet hide the true drivers of thoughts or behaviours; or a minority view can, in analysis, turn out to express an important emergent view or trend. The value of qualitative work is to identify the issues which bear future investigation. Therefore we use different analysis techniques to identify how important an idea is.

In reporting we state the *strength* of feeling about a particular point rather than the number of people who have expressed that thought. Having said this, is it useful to note which ideas got the most 'air time' so we also favour phrases such as "a few" or "a limited number" to reflect views which were mentioned infrequently and "many" or "most" when views are more frequently expressed. Where views apply only to a subset of participants, e.g. participants in Cambridge, we have highlighted this in the text, as this may indicate differences by region. Any proportions used in our reporting (e.g. a 'couple' or 'handful' of participants), should always be considered indicative, rather than exact.

Another consideration in the interpretation of qualitative data is the role of *perceptions*. Different outlooks on an issue make up a considerable proportion of the evidence presented in this study. It is therefore important to bear in mind that although these perceptions may not always be factually accurate, they represent the truth for those who hold these views.

Verbatim comments have been included in this report to illustrate and highlight key points, i.e. those views either shared by a large number of participants or reflecting the strong views of a smaller subset. Where verbatim quotes are used, they have been anonymised and attributed by location, e.g. –London.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

2. Priorities for the UK government and public involvement

2.1 The aggregated priorities – which were the 'winners'?

Towards the end of the day participants used the issues they had chosen as priorities in each theme to create a grid, showing how important they thought each issue was, relative to others. On the vertical axis, they showed how **high a priority** they thought each issue should be **for the UK government**, and on the horizontal axis they showed how **high a priority** it should be **for the public to have involvement in policy-making related to the issue**.

During the analysis phase, the matrices were aggregated to show the results from all six groups (two from each workshop). The thickness of the outline of each box indicates how many groups selected the issue as a priority for the UK government, while the location of each box on the grid represents the aggregate positioning of the issue by each group. The aggregated grid is interesting because there was a high degree of agreement across the groups on the issues in the top right quadrant, that is, those issues which they thought should be both a high priority for the UK government and that the public should be involved in. Not only did three to five groups select the top five issues, they also converged in their agreement about where to place them on the grid.

> *"When we were choosing one thing from each [theme] I found some [themes] I would have found to be a lesser priority than others. So one thing from each group, I wouldn't have necessarily have wanted that to end up as what we chose."*
> - London (Reconvened)

The format of this exercise influenced the results in key ways.

1) We asked participants to select **one or two issues from each theme**, since Sciencewise needed to be able to use the results in discussions with a range of departments. Had participants been able to choose their top ten issues from across all the themes, some of the issues that figure on the grid may not have been selected. Indeed, at the reconvened workshop in London, several participants noted that they would have liked to have been able to select more issues from some themes, particularly the energy and environment theme which had eight issues, and none from others.

2) Not all participants in each group agreed with one another about where the issues should be placed on the grid. The groups had a limited amount of time to discuss where to position each issue, and often the final location was the result of a **compromise** between group members rather than a true **consensus**.

3) Because participants were working with issues that they had already selected as being a high priority for the UK government, many of the issues were placed very **close to one another**, and in some cases on top of one another, along the top of the grid, because participants struggled to prioritise one issue over another.

4) Results from the grids have been **aggregated**. This has added another layer of manipulation to the positioning of the issues on the aggregated grid – we have taken some interpretative decisions.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

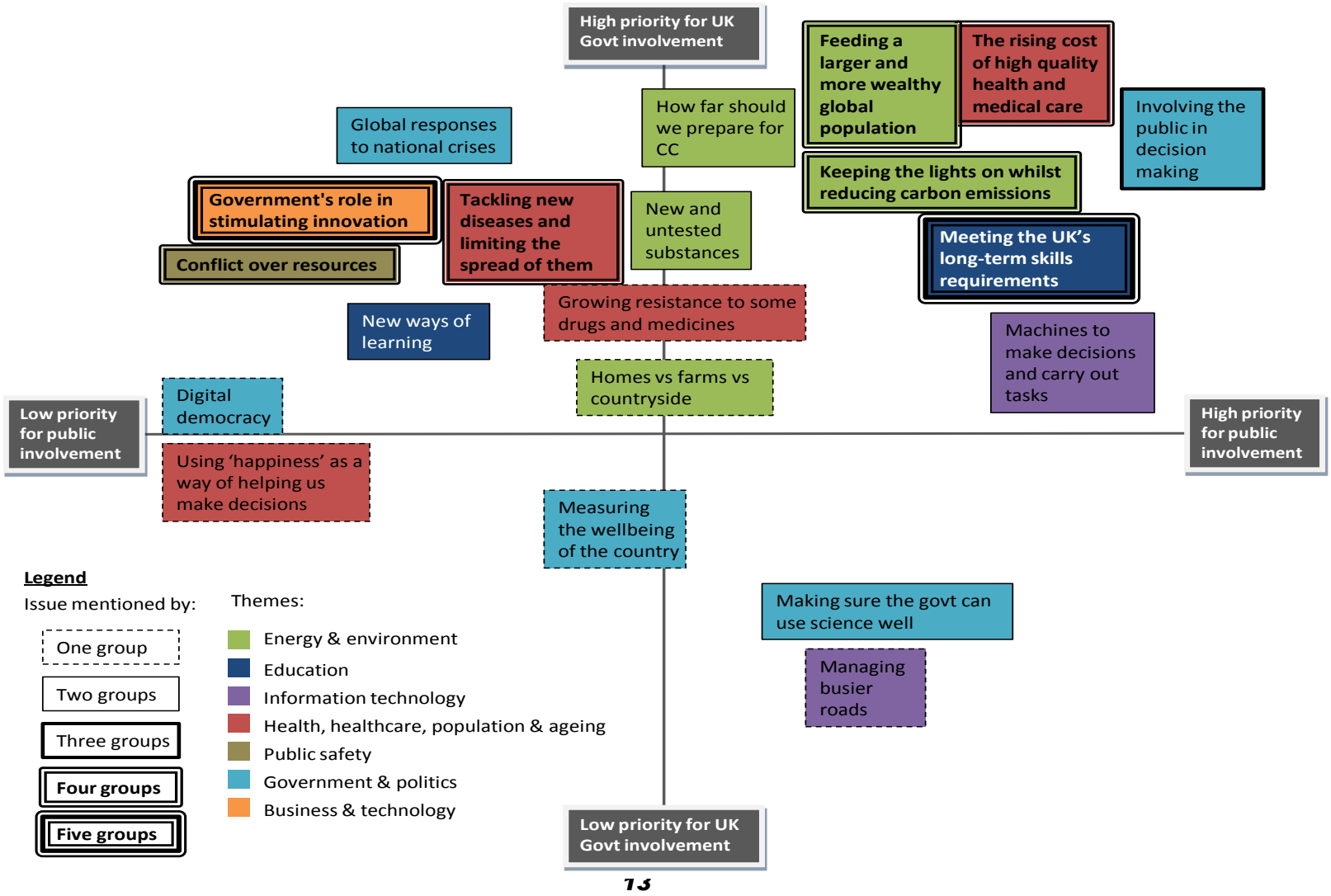
Thus when interpreting the aggregated grid, care should be taken not to place too much emphasis on the precise location relative to one another of issues that are very close together on the grid, such as those in the top right quadrant – i.e. it would be a misinterpretation to suggest that the public felt it was more important to be involved in policy about machines making decisions and carrying out tasks than policy regarding how to feed a larger and more wealthy global population. The grid should rather be used to garner an idea of the importance of the issues by quadrant – i.e. all those in the top right are seen as priorities for the UK government and for involvement, while those on the top left are still high priorities for the UK government but the public sees a smaller role for themselves in the policy-making process.

Perhaps more important than the positioning of the issues on the grid were the accompanying discussions of *why* participants wanted to place them where they did. Debate amongst participants was encouraged, with facilitators probing participants to explain their reasoning. Analysis of these discussions was conducted after three workshops had been held, and the hypotheses about the reasons for some issues being a higher priority than others were then tested at the reconvened workshop in London. Please see Chapter 13 for a discussion of these findings, and the wider question of which *types* of issues tended to be selected.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Figure 3: Aggregated qualitative grid: Priorities for the UK government and for public involvement



This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

2.2 The value of the spontaneous response – what happens when you discuss many issues in quick succession

Unlike some other public dialogues, which take one issue and go into depth (such as Sciencewise's dialogues on nanotechnology or geoengineering) this dialogue covered a plurality of topics, but looked at the surface of the issues to identify which would bear future public involvement. This meant every few minutes participants were presented with a new set of ideas and dilemmas. This new information had to be quickly absorbed, and participants tried to link it up to their existing assumptions and knowledge. We gathered three important learnings from this:-

What the public at large might say, when presented with similar information. Participants quickly revealed 'sticking points', myths, misconceptions or 'cultural baggage' which tend to come up immediately the issue is introduced. When government or others need to communicate on these emergent issues, they can learn something of **the expected start points of the public**, from the responses of participants in this dialogue. In the chapters below we have noted these where relevant to specific issues.

The role of **images and particular words** is very important. Participants focused on pictures to give them a strong emotional steer as to what the idea was all about.

Going through a lot of different areas meant that participants made bridges between the areas themselves. We found that they started to learn about the **process of decision-making around uncertain issues**. This enriched their ability to reflect on the role for public involvement in different decisions.

In the following chapters, one dedicated to each policy area, we present participants' spontaneous views of the developments that might happen and how science and technology might impact on this. Where issues were selected as priorities for the UK government, we show where the issue featured on the aggregated grid.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

3. Education

Spontaneous views

Participants saw education as a key policy area; some felt it was the most important area. Many thought that education could be used as a way of tackling problems in other policy areas. For example, they believed that environmentally-friendly behaviour such as switching off lights when leaving a room should be taught in schools, and that this would contribute to energy conservation.

Importantly, participants spontaneously linked good education with the health of the labour force and the UK's place in the global economy. They argued for several shifts in the way that children were taught, such that:

- The curriculum addressed areas where skills gaps in the labour force were predicted: Participants thought an analysis of the future skills needs of the economy was necessary, and that subjects that could address these should be given more emphasis. Some thought that young people should be incentivised to study subjects and learn skills that were in demand.

- Creativity and critical thinking were prioritised: These were seen as key skills that children needed to become innovators. Innovation, in turn, was thought to be very important for the economy and for maintaining the UK's place globally.

- Education in the sciences and information and communication technology (ICT) was more applied: Participants believed that children needed to be better prepared to use science and technology in the workplace to solve practical problems.

Participants thought that children using technology to learn had benefits, as children would be accustomed to it and develop skills that they would need in the workplace. However, participants also had some concerns about the extensive use of technology in classrooms, worrying that it might impede the development of social skills and limit critical thinking as children would grow dependent on finding answers on the Internet. Some participants were also concerned that differential access to technology outside of the classroom may widen inequalities amongst pupils from more and less privileged backgrounds.

Younger participants were particularly passionate about the need to address education as were those in Cambridge, (where, though participants were not necessarily involved with one of the universities, many were involved in education).

When discussing this policy area, it was apparent that many participants conceptualised the population of the country, and the labour market as a whole, differently from the way policymakers and experts might. When participants thought of *'changing the types of jobs people in the UK do'* they imagined that friends or families might lose their jobs, or have to retrain to do new sorts of jobs. There was a tension in the session between the idea that new areas for training might open up, but that individuals should not be 'forced' to retrain to do jobs they did not like. Many were concerned that low-skilled individuals might lose out because their jobs would be automated.

Policymakers, perhaps, would think in terms of country-wide populations, different age cohorts within the labour market, and the macro-level movements of labour from one sector to another, when considering the UK's skills gap. The language of the topic card suggested

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

this point of view. When communicating with the public, the different standpoint of participants in this dialogue should be noted.

Topic cards

The two issues under the theme of education were:

- What approaches can we take to meet our long term skills requirements?
- New ways of delivering learning may require fundamental re-evaluation of the structure of education

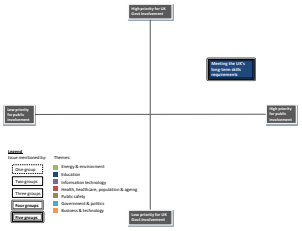
This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Meeting the UK's long term skills requirements

What's changing?

- By 2020, 2 million new jobs, requiring new skills; more jobs in certain service occupations (e.g. leisure, caring) and fewer in manufacturing
- More of us doing degrees but fewer doing STEM (Science, Technology, Engineering and Mathematics).
- We may not be developing right skills to take advantage of new science markets (nanotech, nuclear fission, carbon capture & storage…)



New developments:

Computers are able to predict future skills gaps/shortages, to anticipate and meet demand

Robots can perform some tasks currently performed by humans

IT can help us identify our own skills gaps; and help us learn new skills more effectively

Ipsos MORI
Social Research Institute

16

- **Why was this important?**
  - This issue might impact on them personally and/or their children
  - Employment is a key concern, and participants linked this issue to the ability to find jobs
  - There was a concern about protecting more vulnerable groups – helping people move from manufacturing jobs into occupations requiring a different skill set
  - Participants were concerned about the UK's status internationally: there was a perception that emerging economies such as China are investing in ensuring their populations have these skills, and that the UK would not be able to compete unless it also makes this a priority
- **Salient issues**
  - The impact of automating some processes or robots doing jobs currently done by humans on employment was a major concern
- **Implications for dialogue**
  - The dialogue may need be positioned as supporting policy development to help those who have lost jobs due to advances in technology making them redundant, and those in sectors that are in decline as other economies such as China and India can compete better in them (e.g. manufacturing)
  - Participants felt policies would be better if businesses were involved in developing them, since they are seen to have a better understanding of the skills required in the workforce today – so need to ensure businesses are involved

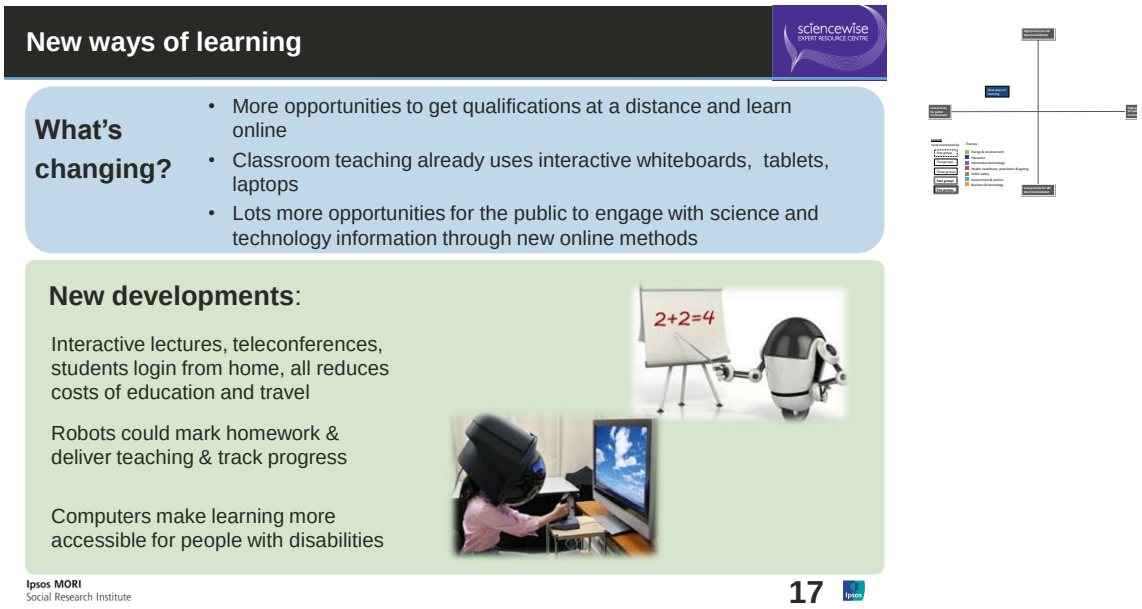
"[Some UK citizens currently only have the skills to work in] putting lids on toothpaste... [we need to] take care of those groups."
– Cambridge

"I think predicting future gaps in the market is important. If they predict gaps we need to do it to be competitive with other countries."
– Cambridge

"When government comes up with a big idea, there's usually something wrong with it. These people, who run businesses, know about what kind of jobs they need. You would get it spot on by talking to businesses, people; rather than [doing] data analysis."
– Cambridge

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.



- **Why was this less important?**
  - Many participants thought this would happen without government involvement, and thus did not think it needed to be treated as a priority
- **Salient issues**
  - Participants were divided on the impact of increasing the use of technology in education
  - Those who saw this development positively thought using technology more in the classroom would engage children more because they enjoy using it, and would especially benefit children with learning difficulties or disabilities
  - Some participants focussed on the example of robot teachers, and were concerned that the human part of teaching, such as the ability of a teacher to inspire pupils, would disappear
  - Participants were also concerned about the impact that using technology extensively would have on children's interpersonal and critical thinking skills
- **Implications for dialogue**
  - Figures about levels of historic, current and projected government investment in ICT in schools might help the public understand that this will not happen automatically
  - Public may need examples of technology enhancing human connections

"My daughter is dyslexic… at one time she would have been put aside but because of the computers and other resources she was able to finish school and go to university."

– Cambridge

"It's different [using machines/robots] in education because it is personal. [Teachers] are giving you the benefit of their knowledge and experience; they can explain things in a different way. It seems so impersonal, not (reacting to) personality..."

– Cambridge

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

4. Health, healthcare, population & ageing

Spontaneous views

Participants saw being healthy as underlying a life worth living, and therefore felt that health-related issues were particularly relevant to them personally. When asked first about what they associated with health, in London some immediate concerns came to mind, such as mental and occupational health; the rise and normalisation of plastic surgery, and their concerns about young people's body image; and the rise of obesity.

Beyond this, and in the other two locations, participants were most concerned about the sustainability of the National Health Service (NHS) in the face of an increasing population, an ageing population and a population increasingly suffering from chronic disease. They wanted access to good quality, free healthcare to be protected, and believed that this could be achieved, at least in part, by reducing inefficiencies by using new technologies, such as text message reminders of appointments and electronic patient records.

Participants believed that healthcare was already becoming, and would continue to become, more personalised, such that genes could be used to predict predispositions to certain illnesses. They also believed that scientific developments could lead to new cures for diseases such as cancer and HIV. However, there was concern that cuts to health research would jeopardise these kinds of developments or mean they would be slow to materialise.

Some participants believed that our lives were becoming more and more complex and people were becoming more dependent on technology, and linked this to a worsening of mental health problems.

Finally, many participants mentioned that self-diagnosis using information found on the internet was increasingly common. Some viewed this positively, believing it would decrease the burden on the NHS because people would not have to go to their GP as often if they could diagnose a minor condition that would heal on its own, while others thought people might be endangered if they decided not to see the doctor when they should. Ultimately, participants agreed that obtaining information from the internet was increasingly a feature in people's decisions about when to seek medical attention, and that the quality of that information was extremely variable.

When participants started talking about public health they talked in the language of resource allocation and fairness. Some felt it might be challenging, even unfair, to ask the public to behave in ways which might be in the *public* interest, but might not be in the *individual's* interest (for example doctors reducing prescriptions of some antibiotics for a time). While they wanted to be involved in discussions on the morals and principles underlying public health decision making, they did not necessarily feel that the public should be the ultimate decision makers on these topics, because they felt each individual might hold his or her own bias.

Topic cards

The issues under the theme of health, healthcare, population and ageing were:

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

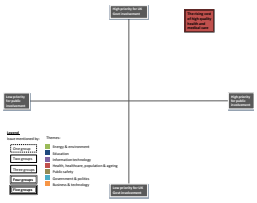
© 2013 Ipsos MORI.

- How do you deliver an effective health system within a finite budget that meets rising expectations and demands and creates opportunities for innovation by the UK's life science sector? / What are the implications of changing demography?
- Effective and timely risk management responses to emerging disease threats
- How do we tackle infectious diseases in the context of antimicrobial resistance?
- What are the opportunities and risks of using happy life expectancy as a criterion for making decisions about the allocation of resources/priority between different sectors of government?

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

The rising cost of high quality health and medical care



What's changing?

- People have higher expectations of health – we expect to live long and be free from pain
  - In an on-going recession, healthcare must be delivered fairly and also economically
    - We know more about preventing ill health so will need to focus on preventing illness as well as curing it

New developments:

Wider use of electronic health records

Technology can help us live healthier lives (e.g. smartphones to monitor blood pressure and weight)

'Telehealth' – technology to allow care and health advice to be provided in homes instead of hospitals (alarm systems, mobile phone apps linked to hospitals to alert medication changes) helping people live independently.

Ipsos MORI
Social Research Institute
© Ipsos MORI · Version 1 | Internal Use Only

84

- **Why was this important?**
  - This issue arose in spontaneous discussions with participants
  - The NHS is very important to participants – they feel they depend on it – and they want to make sure that care remains free at the point of use
- **Salient issues**
  - Participants were split in their feelings about using technology in healthcare
  - Some saw developments such as telehealth positively, especially when thinking about older people and helping them stay in their own homes and live independently
  - Some were concerned about healthcare becoming too impersonal, with technology completely replacing face-to-face contact
  - Many participants felt that education was key to keeping healthcare costs manageable – people living in the UK need to know how to keep themselves healthy to prevent them from getting diseases; but there was a tension between people *wanting* to be healthy and the fear that they would be *pressurised* by government to be healthy.
- **Implications for dialogue**
  - Having a realistic debate about the role of technology in health will require participants to understand the extent of the pressures on the NHS and the role technology can play in easing them

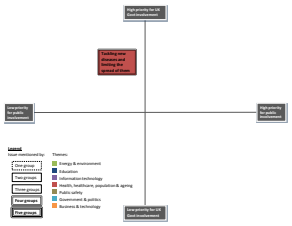
"To me this is one of the most important things – the rising cost of health. [In the future] people won't have the same access to healthcare, it will depend on your money."
– London

"[Telehealth products] are really very good in protecting people, help people live more independently. I like that."
– London

"It's quite impersonal if it's gonna be done remotely – you'd still have that initial face to face contact but for people my age that would be hard to come to terms with. I'm sure it will happen in the future so younger generations will be used to it, it will become the norm."
– Cambridge

© 2013 Ipsos MORI.

Tackling new diseases and limiting the spread of them



What's changing?

- More people, plants and animals are increasingly coming into contact
  - New diseases emerging and being spread more quickly, sometimes moving from one 'host' to another and across species barriers (e.g. Bird Flu)
- Crops and livestock less resistant to disease, and there is a greater risk of pandemics among humans (like SARS or influenza)

New developments:

Vaccines for new viruses

Developments in immunology where the body's response to a disease will be triggered without a person needing to be infected

Satellites and other surveillance technology can help predict outbreak and spread of diseases, allowing us to prepare

Ipsos MORI
Social Research Institute
© Ipsos MORI Version 1 | Internal Use Only

20

- **Why was this important?**
  - Most participants recognised that disease could spread more quickly now due to increased international mobility, and some saw mapping disease as a good starting point for tackling this
- **Salient issues**
  - Some thought the problem was too big for the UK government to do anything about
  - There was concern that pharmaceutical companies would take advantage of the situation in a way that would be against the interests of the public
  - Some participants were concerned about "over-vaccination" and the risks of this
  - Participants worried that other countries might not be doing enough to limit the spread of disease, and did not want the UK to pay for immunising the populations of other countries
- **Implications for dialogue**
  - Information about what the government can do about this, how vaccination works and whether it is possible to be 'over-vaccinated', and how immunisation in the UK can help even if vaccination levels in other countries are low, will make discussions more productive
  - Getting past scepticism about the motives of pharmaceuticals companies may be difficult – having doctors (a trusted profession) present to explain the benefits of immunisation may be helpful
  - Framing the discussion more explicitly as a debate about individual freedom versus collective benefit may be constructive

"There are so many diseases that it's unrealistic for the government to do anything."
– London

"Limiting is taking a vaccine, but how many vaccines can we take, how much can our immune systems take?"
– London

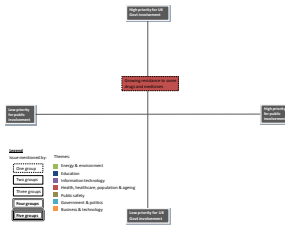
"I'm not sure I trust the government to do it properly. They're run by pharmaceutical companies and big business."
– London

"Who, financially is gonna immunise in developing countries where the diseases start, is it us as tax payers?"
– London

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Growing resistance to some drugs and medicines



What's changing?

- Harmful bacteria are becoming resistant to treatments like antibiotics. New strains are emerging which existing drugs can't cure
  - In part, this is due to the misuse and over prescription of antibiotics around the world
  - Also due to populations moving around more, so there are more people who haven't had childhood jabs
- Greater risk of outbreaks (e.g. MRSA)

New developments:

Education and awareness to prevent misuse of antibiotics, e.g. smartphone apps to remind a patient to finish a course of antiobiotics

Better assessment to target antibiotics more precisely

Measures to prevent spread of microbes in hospital (better bacteria-detecting tools, smaller incisions used in operations)

Ipsos MORI

82

- **Why was this important?**
  - As with all health-related issues, participants felt this impacted on them personally
- **Salient issues**
  - Many participants argued that individuals need to take responsibility for things like finishing a course of antibiotics – some did not see this as an area where government involvement was desirable
  - Some went as far as saying that an app providing reminders was "paternalistic"
  - Most participants agreed that education was important – the public need to understand the consequences of their actions and their wider impact
- **Implications for dialogue**
  - Participants paid particular attention to the example of finishing antibiotics courses, perhaps because it was better understood than the other examples – providing more information about other ways to reduce antimicrobial resistance and discussing the desired level of investment in those may help to ensure the debate is well-rounded
  - Framing the discussion more explicitly as a debate about individual freedom versus collective benefit may be constructive

"I think people are capable; we have a certain responsibility to manage our own health."
– Cambridge

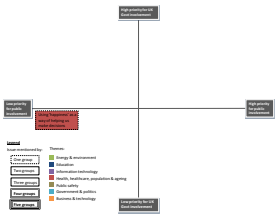
"I think the education part of that is good – more antibiotics are used today because bacteria becomes immune so the antibiotics become useless, so doctors say only use if you really need to use it."
– Cambridge

"I would get so annoyed if my smart phone told me when to take medication. I would find it patronising."
– Cambridge

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Using 'happiness' as a way of helping us make decisions



What's changing?

- Increasingly, we can calculate different ways of deciding whether someone is having a 'good life' – their happiness, perception of wellbeing can be used, as well as their life expectancy
- If we measure 'happy life expectancy' we might change the way we allocate resources

New developments:

Social media and 'real time' data could give a more accurate picture of what makes us happy

New metrics and models could be developed to help government decide which policies to implement across a range of areas (beyond health) and compare which policy works best to make the greatest number of people happiest

Ipsos MORI
Social Research Institute
© Ipsos MORI Version 1 | Internal Use Only

113

- **Why was this less important?**
  - Many participants did not believe that happiness could be measured, partly because of their perception of happiness as a temporary and very personal state
  - They were also unsure how the government would use this kind of information because different things make different people happy
  - Some people suggested that it was not government's job to keep us happy, but to provide the conditions in which we could make ourselves happy. (This is in itself a key question for those bringing wellbeing into public life; so, even though participants rejected this theme, the fact they brought up these issues signals that dialogue could be profitable)
- **Implications for dialogue**
  - Participants will need information about how happiness can be measured – perhaps drawing on the Sarkozy commission findings and the ONS's work in this area

"The problem is it's all so subjective."
–London

"Patronising BS. The Government want to look in your brain to see if you're happy."
–London

"Some people are happy stagnating, others have massive ambitions."
–London

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

5. Energy & environment

Spontaneous views

This was one of the themes about which participants were most concerned. They spontaneously raised the issue that increased urbanisation will lead to more building on green spaces and were concerned that there will be depletion of resources and competition for land between residential, agricultural and other uses. They recognised this problem will become more acute if there is population growth. Some participants discussed the problem of waste and a lack of recycling points.

In Cambridge, participants brought up the increasing need for rare earths and new metals in creating new technology.

Concern about climate change was mixed – some participants were very concerned, whilst others were sceptical that it is happening. However there was a reasonably wide recognition that fossil fuels are being depleted, therefore some participants supported the increased uptake of green technologies on these grounds, rather than in terms of carbon emissions. There was therefore some belief that the UK must innovate in green technology, otherwise they will become left behind as fossil fuels run out.

Most participants acknowledged that there would be some difficult decisions to take, on a global level, about climate change.

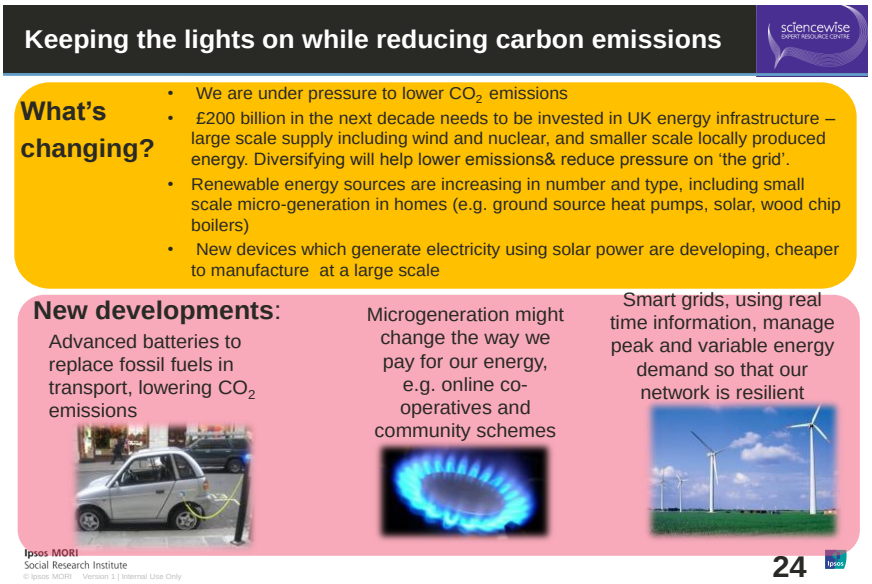
Topic cards

The eight issues under the theme of energy and environment were:

- Developing effective policy mechanisms to stimulate a low carbon industry to contribute to national energy resilience
- Developing policy for whole energy systems that are becoming increasingly distributed
- Meeting the challenge of feeding a larger and more wealthy global population sustainably and equitably
- Providing sustainable energy and transport infrastructure that reflects changing work and living pattern
- Identifying risks from sudden environmental changes (e.g. climate 'tipping points')
- A more urgent, sophisticated and evolving institutional (national & local) response to the need for climate change adaptation
- Is there a role for major geo-engineering projects (including NETs) in managing global challenges?
- Develop integrated land-use planning that protects ecosystem services whilst enabling risk mitigation and opportunity exploitation (multi-functional)
- Managing the release and impact of novel substances in the environment

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.



- **Why was this important?**
  - This was seen as the most important card under energy and environment
  - Participants were concerned about the impact of not keeping the lights on on them personally, and many thought it was important to make greater use of renewable energy as fossil fuels run out
- **Salient issues**
  - Some participants were concerned about the effect this would have on electricity prices for consumers, possibly reducing standard of living, therefore would support increased use of renewables only if it were more economical
  - Some participants worried that the UK would be left behind economically if other countries didn't take similar action, suggesting that an important role for government is ensuring international cooperation on this issue
  - Some participants were sceptical as to how the big energy companies could be brought on board
  - Some favoured small changes, rather than wholesale reform of the grid
- **Implications for dialogue**
  - Presenting an economically sound case for investing in renewables will be important and presenting the tradeoffs and options for payment clearly
  - Participants did not generally have a good understanding of how energy is generated and distributed – this will need to be explained

"Anything that takes pressure off non-renewable resources, has to be the most important thing."
–Cambridge

"What if that retards our place in the world in terms of our standards of living?"
–Cambridge

"People will always fit the cheapest – at the moment that is the combi boiler. If you could fit solar panels and it was cheap you would do it."
–London

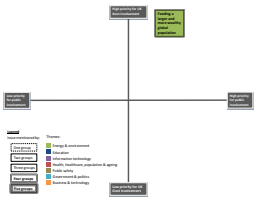
"I think we need to start with the little things, running before we walk. Then plough all this money in."
–Manchester

© 2013 Ipsos MORI.

Feeding a larger and more wealthy global population

What's changing?

- World population is set to rise from 6.5 billion (today) to 9 billion by 2050
- Countries demand more food per person, particularly more energy intensive foods like meat, as they develop and get wealthier. More food needs to be produced to avoid serious food price rises
- Food is not evenly distributed across the world, leaving 2 billion people malnourished today
- More food production means more land is used for agriculture – this needs to be achieved without damaging the environment.



New developments:

Increasing yields without increasing land use

'Precision farming' ensures crops only given the water and nutrients needed

Nanotechnology used in packaging to prevent spoiling

Vertical agriculture – in high rise structures to save space

Ipsos MORI
Social Research Institute
© Ipsos MORI Version 1 | Internal Use Only

27

- **Why was this important?**
  - Food was seen as a 'life and death' issue – and therefore ensuring everyone has enough to eat is one of the most important things
  - Participants were also very concerned with the injustices they see in the global food system, with some populations eating larger quantities of food, more meat, and particularly wasting food, while others do not have enough to eat
  - Participants spontaneously mentioned competition for resources and land which is linked to this issue – they were concerned that a growing population necessitates further land for both housing and agriculture
- **Salient issues**
  - Much discussion on this topic focused on waste, both of surplus food and in its packaging
  - Several participants stated that the problem will be as much if not more about ensuring an equitable distribution of food than the amount of food
  - Some participants felt that from a UK perspective it would be sensible to eat more food grown locally than imported food
  - Nanotechnology was not well understood and there are some fears about the unknowns around nano and GM.
  - Many people jumped to the conclusion that the solution would involve individuals doing more to produce their own foods – one example of the public 'making the issues personal'
- **Implications for dialogue**
  - This is a topic on which there appear to be many 'popular myths' – e.g. if food were equally distributed there would be enough to go around, or the UK can grow all its own food with no effect on consumer choice – participants will need facts on these

"Maybe in Canary Wharf with all the yuppies, [vertical agriculture] might work ... but personally I can t see where the masses [have] the social community structure that would be needed to pull that off."
–London

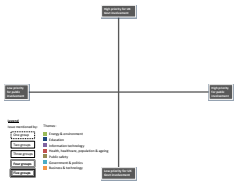
"Supermarket offers 3 for 2... you don't really need 3 but you buy it, and it just goes in the bin."
– Cambridge

"Why are we eating kumquats from the Caribbean? The government should encourage us to eat turnips, local foods."
–London

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Adapting to changes in how we work, live, move around



What's changing?

- Working and living patterns are changing, requiring changes in energy and transport infrastructure
- More people are living in cities, but also commuting into city centres from the suburbs or countryside
- More people manage family and childcare by flexi-hours / working from home, so we need more energy in our homes, less in offices
- Online meetings are becoming more popular than face to face

New developments:

Large data sets, statistical tools and modelling can show us where and how to invest, to manage new ways of living and working

New IT allows more people to work from outside the office (e.g. at home) reducing congestion and fitting in with changing living arrangements

New ways to prevent congestion hot-spots e.g. Bicycle Superhighways

Ipsos MORI
Social Research Institute
© Ipsos MORI Version 1 | Internal Use Only

32

- **Why was this less important?**
  - Not selected as a priority by any group – other issues seen as more important. Plus, the challenges of dealing with congestion and office hours are seen as low-level pain for many, rather than acute pain for some (in contradiction to e.g. food shortage)
  - Participants saw many of these developments as happening already and did not necessarily see a role for government in having to promote them
- **Salient issues**
  - Many participants were positive about changing work patterns, believing that reduced commuting would contribute to better well-being
  - They saw a role for government in infrastructure development, such as promoting bicycle superhighways
  - Whilst some participants did recognise that such changes would reduce energy consumption the focus was more on social impacts than environmental
  - Others linked working from home to one recurring theme of the workshops -reduced human contact and its negative implications
- **Implications for dialogue**
  - This issue may need to be positioned as a question about who should invest in the infrastructure that makes these developments possible – business, government, or another group?
  - Environmental benefits may need to be more specifically emphasised

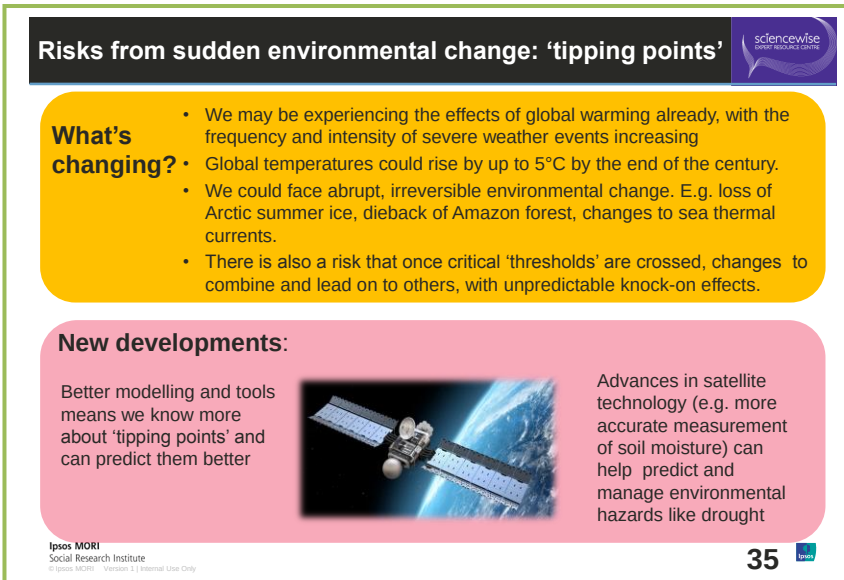
> *"I currently work from home two days a week:... I don't have a 2.5 hour commute every day and I get to feed my son at lunch."*
> –London

> *"People don't have to travel into an office. It helps with work life balance."*
> –London

> *"I am a sales rep, I do a lot of travelling I do use a phone, but I do a lot of face to face so it wouldn't really work."*
> –Manchester

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.



- **Why was this less important?**
  - A few participants were not concerned by this as they did not believe climate change was happening
  - Many participants found the idea of sudden, irreversible, environmental change difficult to imagine – judging the likelihood, potential impact and time horizon was difficult, making a risk assessment hard for them

> *"I have seen many winters and summers and I'm not sure it's [climate change] happening."*
> – Cambridge

- **Salient issues**
  - Several participants recognised the threat of flooding caused by ice sheets melting and rising sea levels
  - Some participants felt there needed to be more research to understand when we might reach a tipping point
  - Some participants did not believe either the UK public or government could affect this since it is a global issue, i.e. change needs to come from other countries

> *"It's global, nothing to do with the UK. Someone chopping trees down in the Brazilian forest is going to affect us but we can't do anything about it."*
> – Cambridge

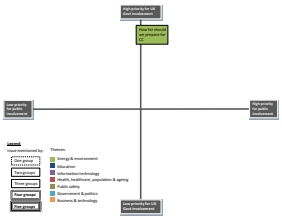
- **Implications for dialogue**
  - The focus will need to be less on whether humans have caused climate change, and more on the level of certainty we have that the climate is changing, the impacts we are experiencing already, and the level of certainty we have of future impacts
  - For discussion to be constructive, participants will need evidence of tipping points that have previously been reached and their consequences; plus, potentially, constructed scenarios of what might happen to the UK in the event of future irreversible changes.

> *"If a catastrophe were to happen, we can see water levels rising and ice sheets melting."*
> – Cambridge

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

How far should we prepare for, and adapt to, the effects of climate change?



What's changing?

- Climate continues to change, with extreme weather events likely to get more frequent in the UK with effects like flooding & drought
- We will need to plan for 'adaptation' to the new realities – (for instance flood defences) but without necessarily knowing exactly what impacts will happen and where
- Local areas may have different needs; we'll need to decide how we respond on a national level

New developments:

GM crops that are more resistant to disease and extremes of weather

Nanotechnology could create new kinds of insulation for buildings, to heat or cool them

Use of satellites and remote sensors to give greater warning of flooding

Ipsos MORI
Social Research Institute

36

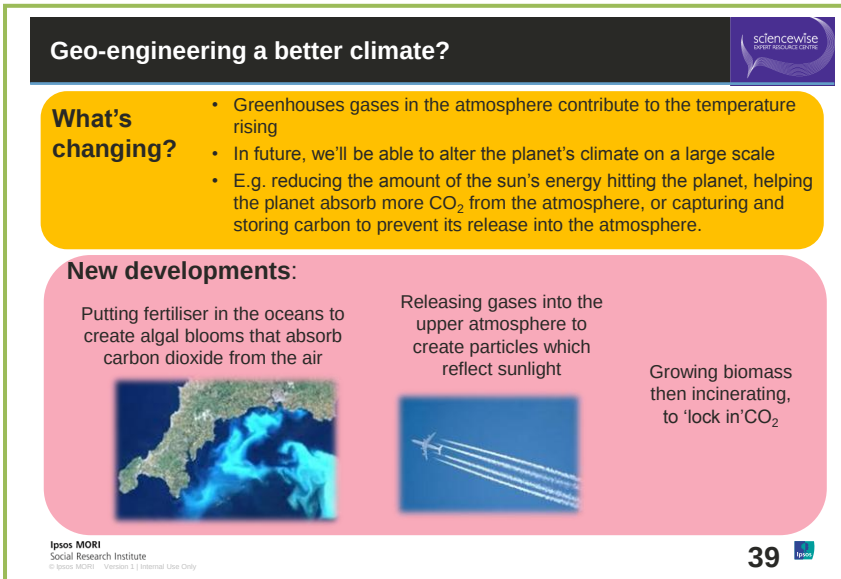
- **Why was this important?**
  - Although some participants did not believe climate change was happening, others were convinced by the extreme weather events the UK has experienced in recent years
  - Many participants thought flooding posed a real threat and supported preparing for it, though others were not confident about flooding predictions
  - Participants could imagine being impacted by the changing climate, and some said this was one of the big issues of the 21st century
- **Salient issues**
  - Several participants did not think the government should spend money on adaptation measures which may not be necessary if climate projections are wrong
  - Some participants believed that scientists should be able to provide more certainty about the nature and scale of impacts
  - Some participants were keen to point to other countries with much more extreme climates than that of the UK and seem to cope with these climates without undertaking expensive preparations (but ignored any sunk costs of preparations those countries have already invested)
  - Views were mixed on whether the use of GM crops should be increased – participants had little understanding of what it meant that a crop was 'genetically-modified' and what health risks, if any, were associated with consuming GM food
- **Implications for dialogue**
  - Some participants are likely to need convincing that the climate is changing
  - A constructive discussion will provide evidence of the changing climate, and inform participants of the benefits and risks of measures such as GM crops and nanotechnology
  - It may be useful to have a scientist explain why they cannot be more certain about the impacts of a changing climate

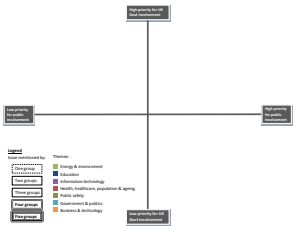
"If satellites can identify somewhere that's at risk of flooding, you can build defences."

"If you invest a lot of money in preventing what may never happen – could you have spent that on something else?"
–London

"The climate is always changing… people have to live in Canada in sub zero they find a way."
–London

© 2013 Ipsos MORI.





- **Why was this less important?**
  - As with climate change adaptation, several participants felt that the government should not spend large amounts of money on geo-engineering to avert climate change that may not happen, and would prefer to focus on current issues
- **Salient issues**
  - Some participants found the idea of geo-engineering "scary" or "frightening"
  - Participants expressed concern at the possible negative impacts or unintended consequences of geo-engineering projects and were therefore keen for there to be thorough research before implementing anything
  - One group linked this to the global nature of climate change; that is, they did not believe the UK would benefit from geo-engineering unless other countries participated in it as well
- **Implications for dialogue**
  - While dialogue on geoengineering has already taken place, this project reveals that it is seen to be less salient than other issues; perhaps indicating that high risk, high uncertainty global problems and solutions are unlikely to become salient for the public without specific communications on them
  - Participants will need quite a lot of information about the potential consequences of geo-engineering and how much certainty we have about the possible impacts

"I think maybe deal with the things that are happening now."
–London

"If enough research goes into it... so that it's not harmful to us, then I'm all for it."
–Cambridge

"Well you have continental barriers in the oceans, does that mean we do our bit, America does their bit? I don't think so!"
–Manchester

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

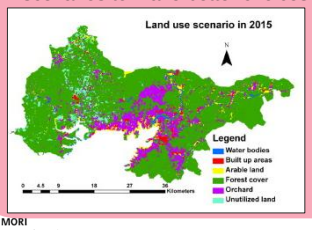
Homes vs. farms vs. countryside

What's changing?

- The UK's rising population is putting pressure on land – more is required for agriculture, homes, and relaxation
- Human activity is becoming more intrusive – more intensive agriculture and urbanisation means fewer woodlands; new techniques like fracking could contaminate water and air

New developments:

Advances in computer models means we can predict and model land use scenarios to make better choices.



Satellite technology can also help to control land use more accurately than ever before

Ipsos MORI
Social Research Institute

45

- **Why was this less important?**
  - Some participants believed that there is enough land, but it is poorly used at the moment, e.g. not regenerating brown field sites (much like the view that we have enough food, just not well distributed)
- **Salient issues**
  - Participants often link land-use issues to population growth in the UK, which they link in turn to immigration
  - Many participants believed the UK to be overpopulated which in turn leads to housing shortages
  - Some were concerned that as demand for land for residential, agricultural and commercial use increases, there will be less countryside and green space to enjoy which will negatively impact on well-being
- **Implications for dialogue**
  - To have an informed discussion, participants will need accurate projections of population growth, preferably broken down by growth caused by immigration vs. natural population expansion
  - They will also need current land use figures and an understanding of future land use patterns if human activity is unrestricted

"What about brown site building – perhaps that's what we should be doing."
–Manchester

"One of the problems is we're overpopulated as it is in the UK, we have problems."
–Manchester

"If we didn't have nice woods and countryside I wouldn't want to be in the UK."
–Cambridge

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

8. Public safety

Spontaneous views

Public safety was one of the themes that participants were most concerned about during the spontaneous discussions. Participants worried particularly about increased surveillance, which some felt infringed on their privacy and personal liberty, although some were more willing to accept it because they thought it made them safer.

> *"If you're an ordinary person with nothing to worry about, you just accept it. I think most people are happy about it 'cos it's there anyway, there's already CCTV at the railway station and it doesn't bother me."*
>
> –Manchester

Participants thought technological advances enabled crime and terrorism increasingly to be carried out online. They were very concerned about personal identity theft and fraud, and thought that legislation was unable to keep up with technological advances which enabled fraudsters to stay one step ahead of the law. However, some also thought that the same technological advances criminals and terrorists were using could assist governments in bringing them to justice.

Participants believed that warfare was becoming more automated and were wary of the consequences of this. They also thought that new technology could do more damage in war than previous generations of weapons and were concerned about this. Participants believed that countries that were unable to keep up with technological advances in weapons and defence would not, in future, win a war, even if they were fighting for a 'good cause'; which caused them to fear for global stability.

> *"It seems like we're always chasing their tails to be secure, when we try and get a way to stop it they're onto something else, we never get ahead of it."*
>
> –Manchester

Participants also raised the commercial use of data, with some feeling that it was not right for companies to benefit from their personal data, and others arguing that there were some benefits to it, such as personalised advertising and Google being free.

Topic cards

The three issues under the theme of public safety and national security were:

- (Personal) ePrivacy: The definition of digital privacy in the personal context (digital profiles) and the impact the understanding, regulation and communication of privacy concerns have on the individual
- Nature of Warfare: Changes in technology are redefining warfare and the ramifications thereof
- Resource Frontiers and Geopolitics: The interaction between resource demand, resource extraction, science and the geopolitical ramifications thereof

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

- **Why was this important?**
  - Participants were very conscious of the issue of resources becoming increasingly scarce. It was not spontaneously seen as a security issue, but when participants considered it as such, they tended to think that expert views were more important than public views
  - There was concern about the level of reliance the UK had on resources found in other countries
- **Salient issues**
  - Participants felt that the UK needed to be more self-reliant, and as part of this the government should focus on developing renewable energy sources in the UK rather than seeking additional non-renewable resources elsewhere in the world
  - Participants thought that the UK government had a role to play in educating citizens about how their actions impacted on resource use
  - Participants also raised the issues of fairness and equality, pointing out that the UK has taken resources from poorer countries and given little back in return
- **Implications for dialogue**
  - This issue was selected as a fairly high priority for the UK government, but was a very low priority for public involvement
  - One group felt that if the public were involved in this, it might lead to bad decisions, and most participants did not feel they needed to be involved in the UK government diversifying sources (they were happy to leave this to the experts)
  - However this does not necessarily mean there should not be dialogue; rather that careful framing would be needed to make the issues feel relevant to individuals, and to reassure them of the kind of input they can have without being experts on the subject

"I just want the government to get on with it."
–Manchester

"[We need to] focus more on finding more renewables rather than putting all this money into invading other countries."
– Cambridge

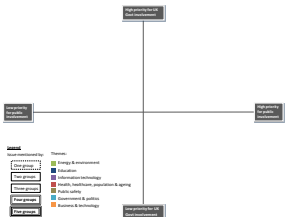
"[Government should educate us on our use. Do public campaigns."
– Cambridge

"A lot of the countries that they're taking resources from are poor... that gap between richer and poorer countries is just getting bigger."
– Cambridge

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Technology, robots and warfare



What's changing?

- Surveillance in warfare is increasingly conducted using technology such as thermal imaging and heartbeat detectors – exposing technical equipment to danger instead of humans
- "Cyberwarfare" has brought war online – computer viruses can target enemy communications – causing us to need to re-think the rules of international conflict

New developments:

New technology can help protect human life in conflict situations

Enhanced satellite imagery can be used to spy on enemy installations

Ipsos MORI Social Research Institute

126ii

- **Why was this less important?**
  - Participants felt more removed from public safety than they did from some of the other issues discussed; while serious, they did not see it as a part of their day-to-day lives
- **Salient issues**
  - Many participants reacted to the whole idea of discussing warfare with fear and distaste
  - However, it was important to participants to know that the UK was in a strong position and could defend itself in case of attack
  - Many participants also felt it was important to use available technology to protect human lives where possible
  - However, some worried about whether technologies such as drones could be programmed to make the right decisions or act in ethical ways, and the consequences of this not being the case
  - Some were also concerned that countries might take the decision to go to war more lightly because if it no longer involved heavy loss of life
  - One group thought the government should use technology to get a "democratic mandate" to go to war – i.e. use technology to prove there is a legitimate cause for going to war
- **Implications for dialogue**
  - Careful framing may be required to help participants immerse themselves in this unfamiliar and emotive policy area
  - Presenting facts and figures about human and machine error in conflict may be helpful

"This one for me is harder because it's not part of my everyday life like health and medicines… it's less familiar."
– Cambridge

"If you don't keep up, you might lose out, you might be invaded, spied upon, you might lose power in a certain region…"
– Cambridge

"If you're going to send soldiers in to do a job, you should give them the best means to do so."
– Cambridge

"How would a drone know if people are innocent in a building? A person would know."
– Cambridge

The use of drones in warfare is… turning warfare into a less humane thing, [making it] more clinical.
– London

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

- **Why was this important?**
  - Issues of privacy in general as well as online, surveillance, and other aspects of government control of the population featured strongly in the initial spontaneous discussions in all three workshops
  - Participants felt this issue was important, but other topics in this category were felt to be higher priority because "there's more life at stake" (Cambridge)
- **Salient issues**
  - Some participants raised the issue that people did not have a good understanding of privacy online
  - Most participants saw a role for government in regulating how companies present how they will use people's data, so that people can make informed choices – e.g. obliging companies to highlight the parts of the Terms & Conditions relating to the usage and sharing of personal data and making tick boxes related to data sharing more visible
  - A small number of participants thought companies should be forbidden from collecting data, while others pointed out that using certain websites from which data was collected was a personal choice
- **Implications for dialogue**
  - Participants are likely to have ideas for how to protect digital privacy, so should be given time to express these
  - It might be nice to have an expert on hand to give a quick assessment of how feasible some of the ideas might be, as discussion may be less fruitful if participants do not understand what is possible from a technical perspective

"I don't think people understand enough about internet privacy."
–Cambridge

"You should have the choice, whether you want your information [passed on]."
–Cambridge

"I think the box should be at the top, more visible, the first thing that you see rather than in the small print at the bottom."
–Manchester

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

9. Government & politics

Spontaneous views

Participants believed that technological developments would have an impact on the way government functioned and how citizens interacted with government, but differed in terms of whether they thought the changes would be positive or negative. Some thought that politicians and their ideas would become more accessible through websites and social networking sites, and that this might help boost the engagement of younger voters in politics. Others suggested that this would lead to politicians focusing more on image and 'spin' and not on the substance of policy. (For example, George Osborne tweeting that he was working on the budget, which some participants interpreted as a public relations exercise). They also worried that people would be less able to express their ideas freely if, for example, the government was monitoring social networks. Some, especially in London, pointed out that if government controls the means of access and discussion, for instance online, things might look very open, but there would be no way to check whether vital information was in fact getting through to citizens.

More practically, participants were sceptical of interacting with government online (especially vs. face-to-face), feeling that they could not be sure that anyone was listening. Some also mentioned that if government services are all consolidated to online portals, vulnerable groups may be excluded, or anyone with a grievance or need of specialist help might not get this so easily.

Topic cards

The six issues under the theme of government and politics were:

- In the context of civil service reform, how can government use what it hears through public engagement to improve decision making?
- Does the public sector have the capacity to be an intelligent customer and user of scientific advice and evidence, and therefore to promote evidence-based debates on politically contentious issues?
- Shift away from state government to governance and provision of public goods by multiple global actors. To what extent can and should global corporate entities intervene in managing responses to extreme events or collective failures?
- How should Government assess the state of the nation?
- What are the challenges and implications for the operation of democracy with the continuing development of the digital age?
- How can policy understand and manage system-level vulnerabilities due to increasing complexity and interdependencies?

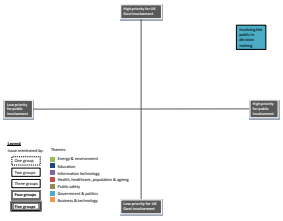
This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Involving the public in decision making

What's changing?

- Pubic involvement in decision making is becoming more important and can reduce opposition in the future to difficult decisions
- The public are turning to social media to communicate their opinions
- We need to know how to interpret this information and when it can be considered reliable



New developments:

Using technology to monitor what the public think and how this might change over time (online opinion polls, internet forums, mobile phone apps to ask the public questions)

More people can be engaged in longer, more detailed discussions (like this one!) over the Internet

Ipsos MORI
Social Research Institute
© Ipsos MORI Version 1 | Internal Use Only

66+69

- **Why was this important?**
  - Participants did indeed want to be more involved in decision-making about certain issues
- **Salient issues**
  - Some participants were sceptical about the extent to which the government actually listened to the public's views, and if the government would take any decision which contradicted what the government had been planning to do
  - There was a preference among many participants for providing views in a face-to-face forum rather than online
    - → This was partly due to scepticism about whether or not anyone was listening, although some participants recognised that a greater number of people could be reached using online methods
    - → There was also some concern that people might express more radical views or become rude or aggressive in the anonymous environment of an online forum, although some participants argued that people feeling more free to express their views was a positive development
- **Implications for dialogue**
  - Government will need to balance reaching larger numbers with the perception among members of the public that the quality of engagement is better when it is face-to-face
  - Government will need to make clear how it has taken the public's views into account, and if it has not taken some views on board, explain why – this may involve engagement long after the initial contact with the public.

"I think if I do it via the internet how do I know someone is listening. If you do it in a meeting you have to listen."

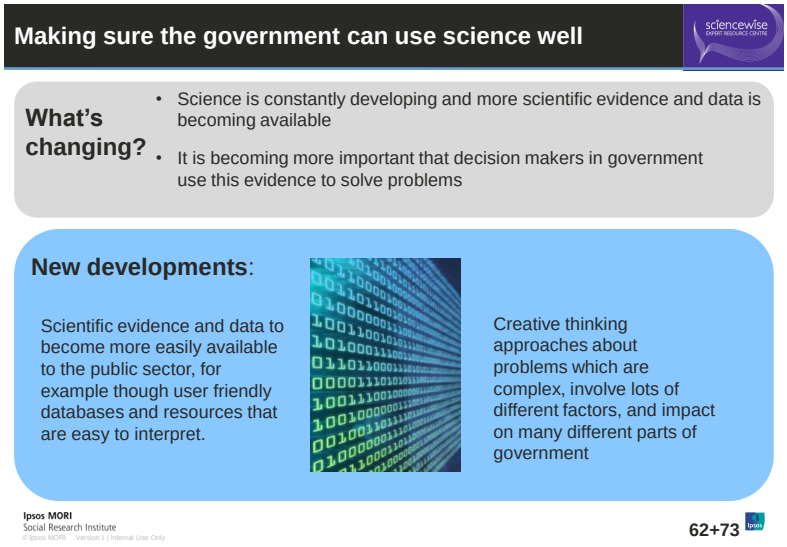
"I suppose that if you do it on the internet you are getting to the masses."
–Manchester

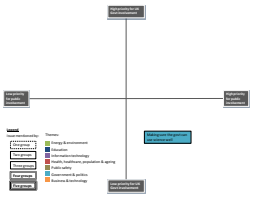
"People get rude on the internet too... More radical views and ridiculous opinions would be expressed."
–London

"But you'd find out what they really think! You might not be brave enough to say something within a group of people but online you might be."

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.





- **Why was this important?**
  - Participants believed that government using science well would lead to better policy
  - Participants were keen for government to base policy on evidence, rather than making decisions for political reasons
- **Salient issues**
  - Participants thought it was important that government be transparent about what data it was using and how, and believed that if this information were made available to them, the public could use this to hold the government to account
  - Some said they already assumed government would use scientific evidence well – so there would be no need for public discussion. This, to some extent, reflected that the nuances of the issue had not necessarily come across to participants.
- **Implications for dialogue**
  - A pre-requisite for a dialogue on this topic will be comprehensive information about how government has used scientific information and how it has decided which scientific information to use
  - Participants will also need clear nuanced examples of occasions where 'new' science or evidence makes decision making different, easier or more difficult, than it has been before

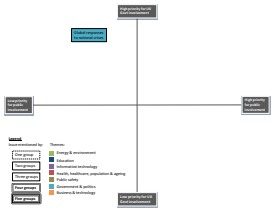
"It's really important that the government is using science in a way that's totally without agenda – David Nutt, his opinion didn't fit with the government agenda so he was fired."
–London

"They must use any tool they can but they must use it right."
–Manchester

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Global responses to national crises

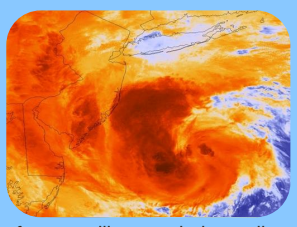


What's changing?

- Private organisations play a bigger and bigger role in our lives – some companies operate globally, while government only operates in one country.
- These global organisations are under pressure to behave responsibly – including helping out in emergencies

New developments:

Advanced infrastructure helps global organisations coordinate their work



Data from satellites can help predict when and where disasters will happen

Ipsos MORI
Social Research Institute

124

- **Why was this important?**
  - Participants generally thought that companies helping out in emergencies would be a good thing, but thought there were barriers to this happening
- **Salient issues**
  - Many participants were sceptical of organisations behaving responsibly of their own accord, and were unsure of governments' abilities to force them to do so
  - Some participants also worried that this would be an excuse for government to become less involved when disasters occurred
- **Implications for dialogue**
  - Would having representatives from private, global organisations and government be helpful?
  - Participants are likely to want a full discussion of the barriers to this happening, and may need some guidance to brainstorm how these could be overcome

"I think in a utopia we'd all work together and look after the smaller people but it doesn't work like that."
–Manchester

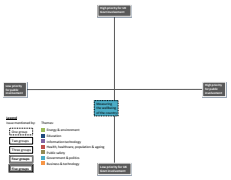
"I can't see any government controlling large private organisations, unless there's legislation how do we control a Chinese global company?"
–Manchester

"That sentence [about private organisations playing a bigger role in our lives] made me immediately feel that government is trying to absolve itself of any responsibility."
–London

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Measuring the wellbeing of the country



What's changing?

- The Government used to judge the success and strength of the nation by looking at economic growth.
- It now wants to use wider measures to assess the general wellbeing of the country and create targets for improvement (social mobility, freedom and democracy, environmental sustainability…)

New developments:

Better tools to evaluate the state of the nation, weighting different measures depending on their contribution to national wellbeing

Ipsos MORI
Social Research Institute
© Ipsos MORI Version 1 | Internal Use Only

56+57

- **Why was this less important?**
  - Similar to 'Using happiness', many participants had trouble understanding how well-being could be measured and how the government would use the information
- **Salient issues**
  - A small number of participants could see some benefit in diversifying the types of measures government uses to judge the country's success
  - Some participants were worried that the government would use the other measures to deflect attention from how poorly the economy was performing, and potentially give less attention to improving the economic situation as well
- **Implications for dialogue**
  - Participants will need information about how happiness can be measured – perhaps drawing on the Sarkozy commission findings and the ONS's work in this area

> *"They are [important] but I'm not sure how you measure this, and what would you get out of it?"*
> –London

> *"That makes sense – using a variety [of measures] would possibly give you a more true reflection."*
> –Manchester

> *"The government is grasping at straws – they are desperate to measure by anything that makes them look good."*
> –London

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

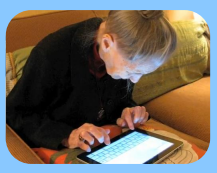
Digital democracy

What's changing?

- Most people use the internet more and more for communication – this includes participating in our democracy
- However some groups will always be offline and excluded – a new form of 'digital exclusion'

New developments:

Computers are becoming easier to use for all people – but services delivered only online will exclude some



Through complex code, the internet is becoming more personalised, making it more appealing to all

Ipsos MORI
Social Research Institute
© Ipsos MORI Version 1 | Internal Use Only

67

- **Why was this less important?**
  - Many participants did not think the UK government needed to invest more in this as they perceived it was already happening, though a handful thought the government needed to make its current online content more user-friendly
- **Salient issues**
  - Although some participants did think that technological developments could have a positive impact on the way citizens interact with government – for example by making it easier to organise protests – there was a high level of concern that the digital revolution left some groups excluded
  - Furthermore, some participants complained that government's efforts to put more information and services online had resulted in difficult-to-navigate website and an inability to access services in other ways, such as by phone – causing a great deal of frustration
- **Implications for dialogue**
  - It will be important for dialogues to be seen to be inclusive: of the elderly, of the disabled, and of those who are less confident online
  - Discussions should focus on the needs of vulnerable groups, and how government digital services could be improved

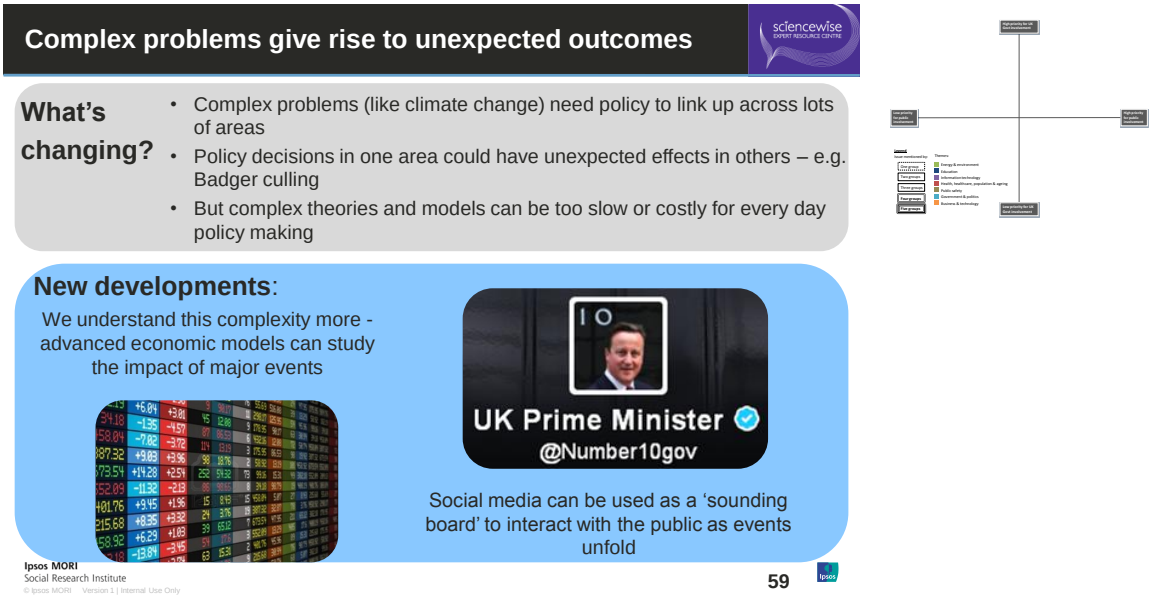
> *"There will always be barriers but the majority will embrace this sort of participation."*
> –London

> *"[The government] need to invest more money making it [their web pages] more accessible to the non technology-savvy."*
> –London

> *"I know with welfare reform, when the Universal Credit comes in that's all computerised so lots of people will be digitally excluded. Some people will have no access to it."*
> –Manchester

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.



- **Why was this less important?**
  - Participants liked the idea of government using the public as a sounding board, but had trouble understanding the idea of complex issues spanning multiple policy areas and using models to help predict impacts
- **Salient issues**
  - Some participants thought using models to understand the long-term impacts of policies might help governments transcend the five-year political cycle and to develop more long-term policies required to tackle complex problems
- **Implications for dialogue**
  - It is unlikely participants will know much about the policy-making process, and will probably not understand very much about modelling either
  - This is probably not an easy topic on which to have a dialogue – it is high level and conceptual and would need to be made much more concrete

"Well there's Twitter and hash tags which are getting out there and in the news so it's more of a sounding board. So this allows them to measure and see how many people are annoyed. It is a good way of interacting if there is a problem."
–Manchester

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

10. Information technology

Spontaneous views

Participants recognised that information technology has had a major impact on people's lives, although some were concerned about the "digitally excluded" who are unable to access the benefits of information technology,

That more people around the world can access information was seen as a positive development, and participants felt it would help individuals get around local restrictive laws if governments try to control the information their citizens can see. Participants also believed that IT has brought about more global interaction: among businesses and school children in particular.

There were privacy concerns associated with information technology. Participants feared governments using chips embedded in citizens which could be used to monitor physical location at all times and may infringe on civil liberties. Already, many felt that the requirement to be online, registered with various services and a user of certain technologies (such as email) was a requirement for citizenship whilst recognising that on the other hand increased information might also enable us to better respond to policy challenges.

For a minority, the topic was hard to discuss as they pointed out that all the subject areas related to IT and this topic should not be an area on its own. They did not tend to assume that infrastructure and transport were IT issues – which in itself is interesting for policymakers attempting to communicate these issues.

Topic cards

The two issues under the theme of information, communication, infrastructure and transport were:

- Modernising motorised personal road transport infrastructure and managing demand of the use of roads.

- Autonomous systems and their widespread application: delegating decision making to machines, in particular for dynamic real-time data analysis.

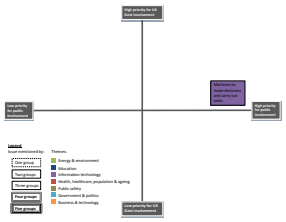
This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Machines to make decisions and carry out tasks

What's changing?

- £35m extra funding to go to autonomous machines that carry out tasks with little or distant human control (e.g. unmanned vehicles, robotic surgery)
- These machines could be used for dangerous, precise or mundane tasks, but further research is needed to explore trust in and trustworthiness of autonomous systems

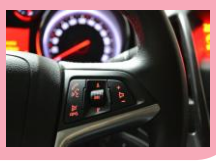


New developments:

"Drones" used instead of soldiers

Robotic surgery means smaller incisions, less pain, quicker healing times

Computer systems to control traffic, to avoid accidents, congestion and air pollution



Ipsos MORI
Social Research Institute
© Ipsos MORI Version 1 | Internal Use Only

106

- **Why was this important?**
  - It was linked with unemployment: Participants were often concerned that the increased use of machines for these tasks would contribute to unemployment as certain labourers are replaced by robots
  - As with several of the other topics, participants believed this would lead to a decrease in human contact
  - The military image was striking as it seemed the most extreme example of the potential power of a robot - to kill.

> *"There's no choice for people, you either get a job in technology, there's not a lot else to do."*
> –Manchester

- **Salient issues**
  - Some participants discussed the issue of unemployment further, recognising a need for people to be educated in technology as such knowledge will become more important in the labour market the more dependent industry is on robots
  - Participants were concerned about machines' lack of ethics and humanity. It was more acceptable for participants to have machines controlling traffic than the use of military drones, as it was often felt the ultimate decision to kill or not should be in human hands
  - Views on surgical robots were mixed- some participants believed they would be more accurate whilst others wanted the reassurance of human presence

> *"What if [surgery] goes wrong and the person is not there, it goes back to the teaching thing... I want reassurance."*
> – Cambridge

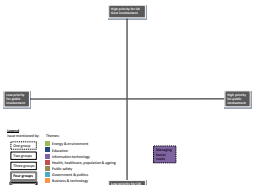
- **Implications for dialogue**
  - Dialogue will need to carefully draw out people's views about the use of machines in different sectors
  - It may be an idea to begin with areas that are less controversial, and set aside time later in the day to discuss the most controversial sectors, likely to be health and defence
  - Participants may need evidence of 'counterintuitive' developments, such as the ability of robot judgement to outstrip human judgement in some areas

> *"A soldier would be trained to kill or not kill, a drone is at the mercy of a little computer geek!"*
> –Manchester

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Managing busier roads



What's changing?

- Roads are becoming busier with higher potential for accidents and congestion. There was a 4.6% increase in mileage on major roads between 2001 – 2011.
- Most of the world's population now live in cities affecting urban mobility.

New developments:

Real-time information will be used to produce route guidance, lane departure warnings, blindspot warnings.

Computer systems to control vehicles' speed and distance to other vehicles.

The information could be combined with economic incentives to alter travel behaviour, such as road pricing schemes.

Ipsos MORI
Social Research Institute
© Ipsos MORI Version 1 | Internal Use Only

106

- **Why was this less important?**
  - This is not seen as a 'life or death' issue, and participants may have seen it as less important given some of the other topics discussed
- **Salient issues**
  - Several participants believed technology could be effective in easing traffic congestion, which was seen as a significant problem
  - Some participants opposed the use of computer systems to control speeds, feeling this would be an excessive intrusion into private decision making
- **Implications for dialogue**
  - Participants will need to be encouraged to see the potential wider implications of very heavy traffic and more road accidents, e.g. loss of economic productivity, more burden on health system, or they may find it difficult to engage with this topic

> *"I think a lot of people are obsessed with being safe, I prefer to have my own choice."*
> – Cambridge

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

11. Business & technology

Spontaneous views

Participants spontaneously identified mostly negative issues under this theme. They were worried that increased use of technology will lead to less social interaction, and also increased unemployment as people are replaced by technology. Both of these concerns were frequently reiterated during discussion of the topic cards throughout the workshops, not just under this theme.

Several were also concerned that there may be a demise of the high street as online takes over, and stores which survive are more likely to be chains. There was also some concern about commercial use of people's private information whilst recognising the positive side of there being potential for more personalised marketing and even products.

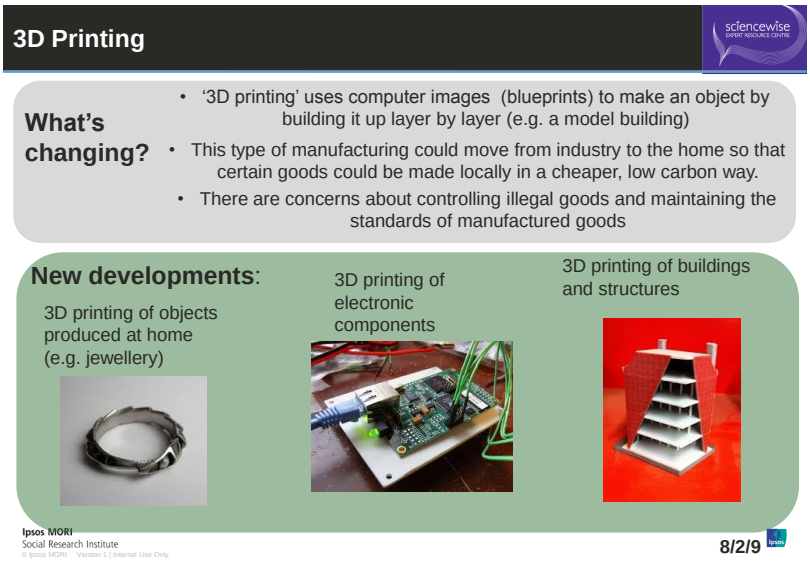
Topic cards

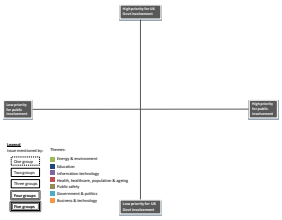
The two issues under the theme of business and technology were:

- Understanding the impact of new, more bespoke models of consumption and production
- The role of Government in stimulating, managing and communicating the benefits of innovation

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.





- **Why was this less important?**
  - Some participants were unaware that this existed and struggled with the concept
  - Most then felt it was a commercial issue and could not envisage how the government might 'get involved'
- **Salient issues**
  - Some hoped this would lead to goods being available more cheaply to consumers, whilst others were concerned that it would contribute to unemployment
  - Some participants had heard of 3D printing in the context of printing guns (this had been in the press around the time of fieldwork), and so were concerned that printers would end up being used for malevolent purposes – some wanted the government to limit what could be printed whilst others believed this would be difficult to enforce and the government would struggle to keep up
  - No participants spontaneously linked issues of copyright and changes to the manufacturing chain to any wider implications for the UK's government or people.
- **Implications for dialogue**
  - This felt like a very specific issue compared to some of the other broader topics, so may be better suited to being part of a wider dialogue
  - Or, the issue will need to be brought to life by illustrating the potential ramifications of this technology being available –not just "printing components" but what that does to current systems, and potential regulatory or other government levers
  - Participants will need to be encouraged to brainstorm potential benefits as most were initially quite suspicious of this technology

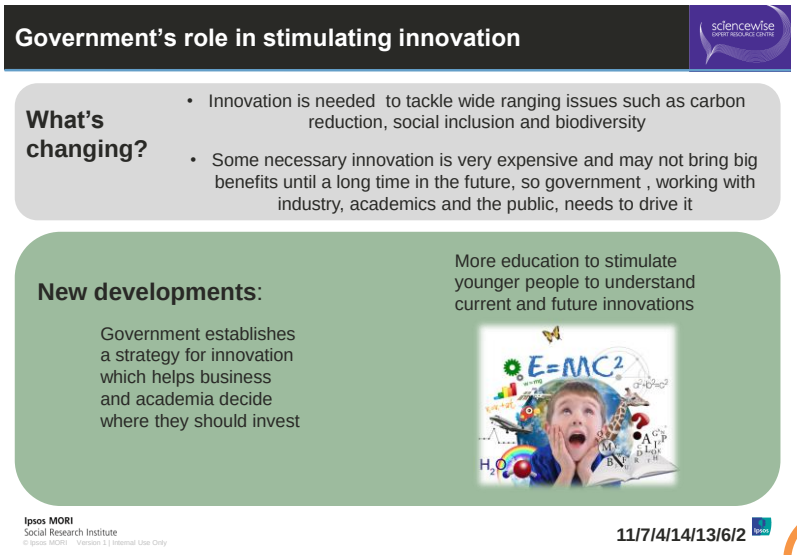
"Another skill set that's taken away. I'm an architect and our whole basement which used to be a model shop now has just six machines."
-London

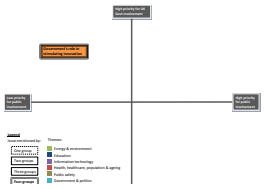
"Don't think the government can do anything. It's too fast for them."
– Cambridge

"It's like science fiction!"
–Manchester

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.





- **Why was this important?**
  - Participants thought there was a need for the UK to innovate in order to remain a major economic power
- **Salient issues**
  - As with several other topics, this was linked back to education; that is, the government needs to promote science to educate the next generation of innovators
  - There was some acceptance that money will be spent on innovations that ultimately fail
  - Some participants believed that it would be businesses that drive innovation, suggesting that the role for government is in providing strategic oversight and creating the necessary market conditions; however, opinions were divided over whether the government should directly fund this
- **Implications for dialogue**
  - Although some groups thought this was a priority for government, there was not deemed to be much need for public involvement
  - Participants might struggle to speak about innovation itself, but may feel better able to discuss how innovation should be funded
  - It may be beneficial to include representatives of businesses in dialogue

"Surely other countries are doing this so if we don't in the UK we'll get left behind."
–Manchester

"Yes I think big companies are going to invest their own money in innovation so government shouldn't spend money."
–Cambridge

"Who, financially is gonna immunise in developing countries where the diseases start, is it us as tax payers?"
–London

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

12. Other themes

To ensure that issues that were important to participants but had not been discussed by policy-makers and those working in science and technology at the CSaP workshop could also be raised, participants were asked if any major themes were missing. In each workshop, participants developed a new theme.

12.1 London - morality

In London, participants raised issues about **morality** and societal values. They argued that technology was making society more secular, and that this was having a negative impact on the moral fibre of society.

> *"If you reject technology will you be able to exist in society?"*
> – London

Participants also discussed issues of privacy and freedom in the context of technological developments. Participants were concerned about the extent to which details of information posted on social networking sites was able to be viewed by others or shared without their knowledge. They also queried whether people had a choice about whether or not they embraced technology, or if its pervasiveness in society would mean that one could not be a part of society unless they were willing to use technology.

12.2 Manchester - poverty

In Manchester, poverty and inequality came up as a theme. Participants were very concerned about the economy, the cost of living, and the increasing gap between the rich and the poor. They also thought that the UK government donated a significant amount of money to poorer countries that they believed should be spent helping those less fortunate in the UK.

> *"[There are] people earning money at the top who quite frankly don't deserve it... the whole structure of the capitalist system doesn't seem to merit paying less fortunate people a fair salary."*
> – Cambridge

> *"I think interaction – the way we interact is probably most important."*
> – Cambridge

12.3 Cambridge – human communication

In Cambridge, participants discussed the impact that technological developments were having on social interaction. They were concerned about the impact of social media on younger generations' abilities to communicate face-to-face. They also worried that society might be investing in technological advancements at the expense of areas they considered more important, such as health.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

13. What made the public choose these issues?

13.1 Defining priority issues

Participants used a number of ways to identify what 'priority' issues actually meant, and the assumptions they made about the nature of 'priority' conditioned their choices and judgements. Participants found it easiest to engage with those issues which they saw as

urgent
multifaceted
high likelihood of occurring
having concrete and specific effects on the UK and individuals
the job of government to address
including a moral or ethical dilemma.

It is already well known to dialogue practitioners that dialogue questions need to be framed in terms of these principles in order to engage the public. Indeed, it is axiomatic in the world of communications that statistics always need to be made personal, abstractions to be made concrete, and so forth, in order to engage audiences. It is still important to note these assumptions as they played out in this dialogue, because they reflect the principles which will be important to the public when considering any future issue in science and technology. There are implications here for both policymakers and communicators.

Below we describe how each principle worked in this dialogue, and how they intersected and combined with each other.

"Urgent" = high likelihood of occurring / effects already being felt now

Participants were more likely to select issues that they thought were already occurring, or were imminent and already of concern. For example, they thought that 'Feeding a larger and more wealthy global population' was more urgent than preparing for climate change, where they saw large uncertainties about whether the effects of climate change would be felt, (plus uncertainty over where impacts may be felt, and the frequency and severity of any impacts)[3]. This could be particularly significant where government or others need to prepare for uncertainties which lie in the future and to build support for preventative action. Indeed, there is potential for dialogue with the public on the subject of *risk* itself and how governments should engage the public on risk. How does the public conceive of risk? And how should policymakers discuss uncertain issues, which may lie far in the future, but which

> *"If you invest a lot of money in preventing what may never happen – could you have spent that on something else?"*
> –London

[3] Recent dialogue and quantitative work by Ipsos MORI for Defra explores how the public prioritise different adaptation ideas in the face of these uncertainties, and discusses the issue of the public's response to risk and uncertainty in more detail. See http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=18552 or http://randd.defra.gov.uk/Document.aspx?Document=11261_PREPARECA0513Publicclimateriskacceptability-Finalreport.pdf

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

could have considerable impact?

"Specific" = direct, concrete, considerable impacts on individuals or groups of people

Participants made judgements about the severity and immediacy of effects on individuals, and the concrete nature of that impact. This is one reason why 'Meeting the UK's long term skills requirement' was felt to be so important; irrespective of any scientific or technological advancement involved, participants could easily imagine the effects on people of fewer jobs, newer jobs, or different approaches to jobs and training.

In particular, participants were sensitive to issues that they thought could impact on **vulnerable** groups, and thought the government should prioritise these. Some participants explained that unless citizens were educated about emerging sectors and the skills they would need to work in them, people working in manufacturing and other sectors currently in decline would suffer. Another example was concern about people not comfortable online missing out in a new world of online technology; unless public services could be accessed through other modes.

Participants were also very concerned about issues related to service delivery, especially in the NHS, which is another reason why 'The rising cost of high quality health and medical care' was prioritised.

The top four issues identified overall were to do with health, food supply, maintaining the UK's energy supply, and keeping people in jobs. In all these concepts, the effect on people was directly related to the concept itself – they were seen as fundamental, "life or death", concrete issues.

> *"Food is more immediate… This [finding ways to produce more food] needs to be accelerated most at the moment."*
> –London

> *"They shouldn't be looking to cut health – money doesn't matter. They should find money for it elsewhere."*
> – Manchester

Other issues, such as 'Managing busier roads', might have potentially big effects, but the impacts were felt to be less specific. Participants felt risks and benefits would be diffused through the whole of society rather than felt strongly by anyone in particular, and this made the issue feel lower priority.

"Multifaceted" = in tackling this issue, we could resolve wider problems

Issues related to education were often seen as priorities because participants thought they underpinned solutions to problems in other policy areas. For example, participants were in favour of educating citizens about how to behave in less wasteful ways as a way of reducing energy consumption in the UK, a partial solution to resource shortages. It is worth noting, however, that across all the workshops (as in other dialogues we have conducted) the public tend to start from an appreciation of complexity in solving problems, but not an appreciation of scale nor an appreciation of global systemic interconnectedness. There are ingrained beliefs that, for example, the UK could easily grow all its own food and that individual actions, for example buying local or having an allotment, would help solve wider problems like climate change. However, few spontaneously appreciate the huge commercial, economic and

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

political infrastructure around food production in the UK and globally. This suggests that dialogue on complex issues certainly needs a lot of upfront discussion about the complexity of the way we live now, if it is to be effective.

"Is this the job of government?" = potential for government, citizens, or business to pull levers and affect the situation

Participants saw some issues as areas in which individuals should take personal responsibility. Such areas were seen as low priority for government action. For example, participants saw smartphone reminders to take medication as *"Big Brotherish"* and thought people should be trusted to do this on their own; government should not be involved.

On the other hand, some issues were seen as the preserve of government because participants felt that individuals would be unlikely to take constructive action without government support. Many of the issues in the upper left quadrant (important for government, but not so important to engage the public on) ended up there because people thought that the solution to the problem would involve government taking decisions *for the good of the many*, but which might not appeal to the individual. Therefore, asking small numbers of individuals about it in dialogue would not be helpful. 'Tackling new diseases and limiting the spread of them' was one such issue; the government might have to limit some freedoms for the good of all. Others included global issues like responding to national crises or negotiating over resources. The UK's government might have to take decisions without considering the views of individuals in order to benefit the country at large.

The tension between freedoms of the individual and responsibilities of a member of society was often an unspoken undercurrent to these conversations, and individuals' political and other views conditioned how they related to the issues.

"Moral issue" = clearly apparent moral and ethical dilemma involving judgement

Some of the most concrete examples allowed participants to see a moral and ethical dilemma straight away, for example in 'Machines to make decisions and carry out tasks', or in some of the issues around land use and food distribution. However, many of the emergent scientific issues we showed actually reflect scientific areas where the interpretation of evidence varies within the scientific community, or where multiple different ways of valuing the evidence exist. These could also perhaps be framed in terms of the ethical judgements which would need to be made, but in some cases participants did not recognise them as such from the limited stimulus material we had. For example, when considering 'Using happiness as a way of helping us make decisions', some thought that this was really talking about the question *"What it is right to value and measure in society?"* For others, the issue was so abstract that any ethical consideration seemed hard to grasp.

As another example, when considering 'New and untested substances in the environment', or questions of food safety and nanotechnology, many participants found it hard to grasp that evidence around risk might be differently judged by different scientists at different times, so they did not see any issue of judgement, in which the public could be involved. Rather they saw these as cases where scientists should just use scientific evidence to make decisions and not engage the public further. This underlines the importance of framing in dialogue, and of informing people about the scientific uncertainties, to bring out ethical and values-driven dimensions.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

There was, however, an underlying philosophical theme playing out in the discussions about science and technology itself, which may come up in many different future dialogues. This could be described as 'fear of change' but is more nuanced than participants simply being Luddite. Instead, they were particularly concerned about issues and technologies that they perceived might **threaten the essential nature of what it means to be human**. They saw a role for government in regulating the use of technology in these areas. Some participants reacted against the concept of machines carrying out tasks because they did not like the idea of using robots in place of humans. For some there was a specific reason for this, such as not believing that machines could make decisions as well as humans, but for others the idea of the robot itself was problematic.

> *"Signal failures are a prime example of failure by things that are controlled by machines."*
> – London

> *"It's different [using machines/robots] in education because it is personal. They are giving you the benefit of their knowledge and experience, they can explain things in a different way. It seems so impersonal, not [reacting to] personality..."*
> – Cambridge

Even participants who accepted the use of technology in some areas often reacted against losing an element of personal interaction in services where they thought this was important, such as education. Others argued that using technology in itself always involved a tradeoff between its benefits and a loss of 'essential human' qualities, so its use should always be debated.

> *"I think the technology is fabulous and everything gets easier, but the government needs to realise that humans were optimal 40,000 years ago, when things were rough and hard. We become reliant on technology which weakens us and endangers us.*
> –Cambridge

It is likely that if any emergent issue can be framed in terms of the key principles described above, the public will be get involved and engaged with it, and feel that it is a live and relevant issue for their discussion.

In the events, the participants considered whether our 30 issues required further public involvement in decision-making. In the discussions here, other aspects of each issue emerged which affected how suitable for public involvement participants thought it would be. Listening to what participants say about the priority issues may help choose the issues for engagement; listening to participants' views on the types of issues suited to public involvement may help policymakers and dialogue practitioners design the *best kinds* of public engagement for each.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

13.2 Selecting priority issues for public involvement

Participants identified different forms of public involvement suited to different issues and areas. The highest priority issues tended to be those suited to the following forms of public involvement.

Informing the public to develop more workable policies and get public buy-in

First, participants thought that some policies could be improved if they drew on the knowledge of different publics[4]. For example, on the topic of 'Meeting the UK's long-term skills requirements', participants thought that by engaging businesses, the government could better understand the long-term requirements of different industries. Furthermore, if the requirements of industries were shared with young people, then young people would be better informed about the skills needed to work in emerging industries, people would be more likely to choose courses that would enable them to develop these skills, thus ensuring the success of the policy.

> *"When government comes up with a big idea, there's usually something wrong with it; these people, who run businesses, know about what kind of jobs they need. You would get it spot on by talking to businesses, people; rather than data analysis."*
> –Cambridge

In particular, participants thought this sort of engagement was suited to 'Keeping the lights on while reducing carbon emissions'. The need here is not to debate the value of 'keeping the lights on while reducing carbon emissions' but rather to get public support for interventions to do so.

> *"It should be them telling us what they want us to do, informing us about how to keep the lights on."*
> –London (reconvened)

Deliberating on an issue where the impacts are uncertain

Participants felt the public should be consulted on issues where there was a degree of uncertainty about the impact and therefore the level of investment required to mitigate the impact. For example, they thought that it was important to have a public debate about the potential effects of climate change and the level of preparations that government should invest in to adapt to the impacts.

Accessing the range of views on controversial issues

When participants at the workshops had very different strong opinions on issues, they often thought that they required public debate and involvement in policies related to them. For example, participants were divided about the benefits and risks involved in 'Machines making decisions and carrying out tasks', and the debate that ensued revealed strong emotions on the issue. Where the issue was seen as overtly ethical (for example fairness around paying for healthcare or drones in warfare) accessing the range of views was felt to be important.

[4] This provides spontaneous public support for Sciencewise's thinking on engaging multiple, dynamic publics, explained in Mohr, A., Sujutha Raman, Beverley Gibbs *Which publics? When?* (2013) http://www.sciencewise-erc.org.uk/cms/assets/Uploads/Which-publics-FINAL-VERSION.pdf

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

<u>Counteracting</u> other vested interests going against public good

Participants exhibited significant distrust of big business and the government, and thought that the public should certainly be involved in policy-making where vested interests might otherwise prevent policy being made in the best interests of the public. Their voices could counterbalance the voices of other vested interests. For example, participants queried whether pharmaceutical companies might take advantage of attempts to 'Tackle new diseases and limit the spread of them', or lobby government to adopt solutions that would be beneficial to the companies, unless there were public involvement to ensure this was not the case.

> *"Government strategy, it's all about vested interests."*
> – London

13.3 What was low priority, and why?

There were some issues that participants dismissed as less important and high priority than others, and less important for public engagement as well. These too bear examination. In our view, it does not mean dialogue is never relevant for such issues – rather it highlights that for some issues there are assumptions which must be challenged in the framing of any dialogue that goes ahead.

> *"Managing busier roads... experts should do that."*
> –Cambridge

> *"Conflicts over resources... leave that to the government so we don't do something stupid!"*
> – Cambridge

Issues requiring a long-term perspective

Certain issues required decision-makers to take a long-term view, and participants felt citizens might be unable to do this. For example, some participants thought that if the public were involved in decisions about how to 'Keep the lights on whilst reducing carbon emissions', they might make poor decisions based on a short-term outlook, such as choosing not to invest in renewable energy sources because they involve expensive start-up costs. It may be fruitful to engage the public

> *"We've gotten to this point by people just taking food... we should come to a midway without using justification from the public... a calculated action, which doesn't have much intervention from [citizens]."*
> – Cambridge

Non-controversial issues

Some issues were simply seen as non-controversial. For example, participants thought it was very important for the government to 'Stimulate innovation', but did not think there was anything controversial about it that would necessitate a public debate.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Issues requiring specialist knowledge/expertise

Finally, there were some issues about which participants did not feel sufficiently informed, and that they considered best left to experts. For example, most participants were happy for experts to figure out how best to 'Manage busier roads' or to manage 'Conflict over resources'.

13.4 Ways of engaging the public in policy-making

Participants discussed a variety of ways in which they would like to be involved in policy-making. Their preferences depended on, as discussed above, their underlying reason for wanting involvement, but also how they felt their input could improve policy.

Where the public desired input into the policy itself, this could take three forms:

- **whether** to implement a policy;
- **how** to implement a policy; and
- **where** to implement a policy.

For example, participants were wary of 'Machines making decisions and carrying out tasks', and wanted to have a say in whether or not the government introduced machines in different public services. On the other hand, participants thought it was very important to address 'The UK's long-term skills requirements', so they thought their involvement should be more in terms of helping the government figure out how to do this.

In general, participants expressed a preference for their involvement to be face-to-face, especially as opposed to online. Many participants felt dubious about whether or not anyone was listening when they participated in online discussions and surveys, although some thought that this would be alright for certain types of public involvement and cited being able to reach more people as a benefit. Having attended the public dialogue workshops for this study, many participants cited being able to interact with people holding views different from their own as a major advantage to that method, and in many cases, the aspect of the day they enjoyed the most. They expressed a sense that even though one could see other people's views in an online forum, the level of interaction was not the same.

> *"You can see it online, you can read it, but you're not hearing and you're not heard."*
> – London (reconvened)

> *"[I think the government only listens if they get] the answer they want."*
> – Participant, Manchester

> *"I'd add that it's one thing involving the public but it's another truly listening to them."*
> – Participant, London

Participants at the workshops were clear that being involved in policy-making, at least in some areas, was very important to them. They valued the opportunity to express their views in the workshops. Key to their agreement to get involved and give their views was the assurance that their views would be listened to, and that these views would be given realistic weight in the decision making process. Many participants were dubious as to whether government would really listen to them, and in some cases, thought that government would only listen if the responses corresponded with policy-makers' pre-existing plans. It is important that when the government does engage the public, expectations about how their

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

involvement will influence policy are managed, and that if policy does not reflect the views expressed by the public, explanations for this are provided.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

14. Conclusions

The paper produced from the CSaP workshop[5] identifies 30 issues as priorities which might warrant some form of public engagement. The findings from this dialogue are similarly positive about the public's appetite for public engagement in many of the 30 areas.

The way the public responded to the issues we showed them highlights some of the challenges for engaging the public with emergent science and technology issues. Sciencewise and others should now consider how to address these issues.

How to deal with multi-stakeholder, multi-layered issues? We know the public are interested in learning about the more complex issues that do not sit with only one department or policy stream; government stakeholders should work beyond internal silos to engage the public in shared dialogue processes.

Issues in dialogue must be framed so they are relevant to the public but without oversimplifying. This project, like others, underlines the need for stimulus and framing materials which enhance specificity, urgency, relevance to individuals in the UK as well as educating participants about risk and uncertainty. It may be a challenge to deal with the issues which are high risk and far off – is there a role for more explicit horizon scanning and scenario planning exercises within public dialogue?

Dialogues about how to engage the public with risk and uncertainty. Can we find out more about how people want to engage with 'wicked' problems? Some issues contain a "lack of consensus on fundamental facts or judgements"[6] - what would a public, educated about this phenomenon, say about the issues?

Dialogues about how values are formed. We need to find out more about underlying tensions in dialogue, for example the range of views on individual rights vs collective responsibilities. A dialogue on the underlying issue of personal freedoms versus responsibilities, as this relates to science, taking in a *range* of different scientific or technological advances as stimulus, might be fruitful. Can we find out how the public feel these values should bear on decision making in science?

Different engagement for different times in the policy cycle. Do we need engagement on how policy is to be *implemented* ('Keeping the lights on')? Or on the *moral and ethical* level about the principles which should drive policy – ('Rising costs of healthcare')? Dialogue should take place at the point where participants can see it their input will have a certain effect.

Tackling cynicism. In this dialogue participants emphasised that their involvement was conditional on it making a difference to policy; but they did not really believe such difference would happen. The differences dialogue can make are subtle, nuanced and long-term but policymakers need to communicate what the dialogue achieved. Also, participants were keen to know that their view would not be 'outweighed' in the decision process by

[5] University of Cambridge Centre for Science and Policy, To be published.
[6] p3, Mohr, A., Sujatha Raman, Beverley Gibbs, (2013) *Which Publics? When?*

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

voices of vested interests. Those running dialogues should explain how the views of the public are balanced with the views of other stakeholders in decision making.

As described in Chapter 2, the format of this dialogue required participants to absorb a lot of issues quickly. It allowed participants to compare different sorts of issues and quickly get to the values underlying their choices. This helped them identify what dialogue itself involved. In this dialogue it was notable that participants appreciated gaining a new and richer understanding of the **range of views** across the group as well as information on each topic under discussion. It also gave us a lot of spontaneously-expressed information about public **start points** on all the issues.

Because of this, it could be valuable to conduct such exercises regularly, and across departments, to assess the public's spontaneous views when considering emergent science issues.

The public in this dialogue did not value **online** discussion and deliberation highly, but nevertheless it might be fruitful to use online tools to explore emergent science concepts in this spontaneous, first-look way. Showing an online group a large number of emergent issues and asking for prioritisation and feedback could be a useful way to

get a more quantitative read on the priority issues (always bearing in mind that the stimulus material will condition response, as it did in the dialogue).

compare the views of face to face dialogue with online, in an effort to understand the potential of online better.

> *"Everyone, the thing they've most enjoyed is hearing everyone else's opinion."*
> –London (reconvened)

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Appendix

Themes discussed at public dialogue workshops

London

Table 1	*Table 2*
Health, healthcare, population and ageing	Health, healthcare, population and ageing
Information technology	Information technology
Business and technology	Business and technology
Government and Politics	Government and Politics
Energy and environment (half)	Energy and environment
	Public safety and national security
	Education

Manchester

Table 1	*Table 2*
Energy and environment	Health, healthcare, population and ageing
Education	Government and Politics
Government and Politics	Information technology
Health, healthcare, population and ageing	Business and technology
Information technology	Public safety and national security

Cambridge

Table 1	*Table 2*
Education	Public safety and national security
Information technology	Business and technology
Energy and environment	Health, healthcare, population and ageing
Business and technology	Energy and environment
Public safety and national security	Education

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Discussion Guide for public dialogue workshops

Time	Process	Notes
10.00-10.20	**1. WELCOME AND INTRODUCTION** IN PLENARY: **Welcome from Ipsos MORI** – independent research company, introduce team, explain client/observers *(when appropriate) NB. At this stage we will not be introducing what public dialogue is, as may influence views on what should be consulted on.* *Using Plenary slides 1-9* Objectives for the day and how findings will be used. Today we are talking about societal change, and the different ways in which science and technology can deal with change (if it does happen). Explain challenge for Government is deciding which changes to prioritise and how dealt with. Participants' views are going to influence these decisions. Challenge for the day is to think about the most important issues for society as a whole as well as ourselves. Another challenge will be to look at a lot of different ideas in overview, but we won't need to go into all of them in detail. Reassure participants. Participation does not need to be based on your knowledge of science and technology, the aim of this discussion is to understand how you imagine society is changing, and what you think should happen based on the information presented. • How the session will run e.g. plenary, group discussion and exercises; Introduce observers /experts. All views valid; please speak up and respond/agree/disagree to other points of view; try not to talk over one another; may need to interrupt to move discussion on. Confidential with no direct attribution. • MRS Code of Conduct. Permission to record (and film if appropriate – ALL PARTICIPANTS MUST SIGN FORM IF FILMING). Breaks and end time. Housekeeping (turn phones off, any scheduled fire alarms, fire exits).	Welcome and introduction. Brief mention of topic and how findings used

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

	2. PARTICIPANT INTRODUCTION *IN TABLES* Introductions (one at a time**): First name, work, places where you come into contact with science in your life**.	
10.20-11.30	**3. Wall of issues activity – "Issues facing society in future"** *Plain posters with each of following themes will be posted around the room.* Themes for posters: • Health, Healthcare, Population & Ageing • Business & Technology • Public Safety & National Security • Government and Politics • Education • Energy & Environment • Information technology • What else? *(the facilitator will listen out for spontaneous mentions of things which don't sit under one of the themed posters and add to a blank poster. NB. do not instruct participants to gather around a blank poster as we do not want to force them into making suggestions on what could be missing which they do not have).* *Split participants into two smaller groups (one group per facilitator). One group takes four posters and other takes three. Once we have discussed the posters assigned to each group, we will share feedback across both groups, at this stage everyone will have the opportunity to comment on what has been discussed.* *THIS ENSURES WE CAPTURE SPONTANEOUS VIEWS WITHOUT HAVING TO SPEND TIME TAKING EACH GROUP THROUGH EVERY AREA.* *Group takes seat in front of first poster. For each poster the facilitator starts a discussion and writes each point on poster with a marker pen. Facilitator should first probe on a change and then ask them to explain the role for science and technology – to get a spontaneous view of whether and why/why not participants imagine a role for S&T in each area.*	

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

	Key question for each poster: ***What will change about life in the UK in 15 years?*** ***What science and technology developments have you heard about that will affect our lives in these areas?*** MODERATOR USES EXTRA PROMPTS AT EACH POSTER AS NEEDED, TO ENSURE EACH POSTER IS FULLY DISCUSSED • If people find it hard to think about life in general, ask about life for you, your family and friends, your community… • Why did you put that down? Where did you hear about that? *Invite others to share their views. Check for same/different opinion.* • How likely do you think this is? Why do you say that? • How do you feel about each of these changes? E.g. scared, concerned, worried, excited, fascinated, interested, want to know more. Why? MODERATOR USES QUESTIONS BELOW TO SUMMARISE COMMENTS ON EACH POSTER BEFORE MOVING ON. Which changes do you think are the <u>most likely</u> to happen? Which would have the <u>biggest impact</u> on us if they did happen? Which should be the <u>biggest priority for local government / national government / business / us as individuals?</u> *facilitator rings in red and adds whether it's gov, business, etc who should act – where relevant.* **IN PLENARY** TAKING EACH POSTER IN TURN THE FACILITATOR FEEDBACKS TO ALL THEN ASKS... **Are there any changes about life in the UK you think are missing on this poster?** **Are there any science and technology developments you'd like to add to what's already there?**	Find out what changes are top-of-mind for participants Ensure we capture what is important to them, and not just the themes that emerged from the CSaP workshop

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

About 11,15	MODERATOR NOTE ANY NEW ISSUES ON EXISTING FLIPCHARTS AND NEW FLIPCHART CALLED 'OTHER ISSUES' IF NECESSARY STILL IN PLENARY LEAD MODERATOR ASKS THE WHOLE GROUP ➢ **Across all the posters, which changes do you think are the <u>most likely</u> to happen?** ➢ **Which would have the <u>biggest impact</u> on us if they did happen?** ➢ **Which should be the <u>biggest priority for local government / national government / business / us as individuals?</u>** **Hand out coloured dots and instruct them to choose the top two changes which you think are the biggest priority to be addressed, and who should address them** **Ask them to stick their stickers on the relevant poster(s).** ***IF RELEVANT EXPLAIN WE WANT THEM TO CONSIDER THE SEVEN THEMED POSTERS PLUS THE "ANYTHING ELSE" ONE.*** ***Ask a few participants to explain their reasons for what they have chosen and invite others to share their views.*** **How did you choose which issues should be addressed?** What did others choose? Why? **How did you choose which new science ideas should be prioritised?** What did others choose? Why? MODERATOR USES PROMPTS BELOW, IF NECESSARY, TO UNDERSTAND HOW PARTICIPANTS DECIDE WHAT CHANGES IN SOCIETY ARE MORE/LESS IMPORTANT To what extent were you thinking about: **The area of the change** – e.g. is health just more important to you than energy? **Impacts for people –** were you thinking about the way people might be affected, the types of people, the size of the impact? **Certainty** – how far were you influenced by how likely you felt these things would be to happen or not? **Who do you think should address this?** – Does it make a difference if you think government should address this, vs. business, vs. individuals?	Get a sense of how they prioritise issues – later we will

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

	Science and technology – did you think about the new science developments first, or other aspects of the changes in society?	see if this impacts on the issues they would like to be involved in
11.30 – 11.45	**4. MORNING COFFEE BREAK**	
11.45 – 1.00	**5. DETAILED DISCUSSION OF WHAT'S CHANGING IN SOCIETY AND SCIENCE AND TECHNOLOGY DEVELOPMENTS: PART I** **IN PLENARY** **Now we're going to go back to our tables and we will present you with information about some of the key changes in society and some of the new science and technology developments which are coming up, and could help deal with these. Some might be what we have discussed already, some might be new to you.** Explain that the ideas we will now look at have come from a wide group of policy people and scientists – the information is correct, but we haven't necessarily mentioned every new development that is possible, so feel free to add your own ideas and thoughts. Examples of science and technology developments are just that – examples – and are not exhaustive and some or all may not actually happen. Big challenge will be to stay 'on the surface' and not to have the debate right here, right now! We are identifying areas we think it will be important to discuss more in future, we don't have to resolve everything now. SLIDE 10 AND 11: Explain how the government can get involved in these issues. Explain that by 'priority' they can mean government getting involved in any of these ways. Might be something they are nervous about that they would like government to prioritise for regulation; might be something they think could be a real benefit and would like government to invest in funding research. *Stress nothing has been decided therefore we would like you to think about the information put before you but also anything else you think is relevant.* ***IN TABLES – THERE WILL BE TWO TABLES WITH C.6-7 PARTICIPANTS ON EACH ONE. THESE GROUPS WILL BE DIFFERENT FROM THE MORNING GROUPS.***	

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

	There are 7 themes. Table 1 will have time to go through 4 themes before break for lunch and 3 after, Table 2 will do them in reverse and will do 3 before lunch and 4 after. **Here are 5 areas where things in society might change in future. We've identified several cards which sit within each area and these give examples of some of the changes. Your task is to discuss each card and decide how important these changes might be to society, and if anything about them interests or concerns you in particular.** *Re-iterate the cards contain information about some of the key changes in society and some of the new science and technology developments which are coming up, and could deal with these. Explain each theme has a number of issues and associated S&T developments underneath the theme. Hand out stimulus which shows issues under first theme (e.g. "Health" has 4 cards in this theme, "Government and Politics" has 6).* *Give out all cards to pairs on the table. Pairs take a few minutes thinking through and absorbing and then we take one card at a time and discuss it in the group as a whole.* *NB: Refer to matrix to see which themes are being covered by each table in each group.* • Health, Healthcare, Population & Ageing (4) • Information technology (2) • Business & Technology (2) • Government and Politics (6) • Energy & Environment (8) • Public Safety & National Security (3) • Education (2) Test for comprehension and group to discuss. Facilitators use questions below on each theme, where relevant, plus some of the questions contained within the notes section within the stimulus. ➢ What are your initial reactions to the information you have just seen? Do you have any questions about this, or is any of the information unclear? ➢ How does the information make you feel? Which bits in particular? Why do you say that? PROBE: does it make you feel scared, angry, optimistic, pessimistic, interested to find out more? ➢ What piece of information stands out to you most for this area? ➢ Are there any pieces of information about this area that you are less interested in or less	Understand how far they are interested with/engaged with different topics Learn what information they feel they need and the level of their desire for involvement. Give participants an opportunity to voice their thoughts on other S&T developments which are not here.

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

	concerned about? ➢ What do you think about the likely changes for society? Are there any changes you don't believe will happen, or think are too far in future to worry about now? ➢ Thinking about the most important changes related to these issues, are there any changes you think are missing? *Moderator to probe on anything that came up in the morning that they have not referred to.* ➢ Which changes did you think would have the biggest impacts and how did you decide this? (i.e. what criteria using) ➢ Are there any controversial issues? IF YES: which ones? Why do you say that? ➢ Overall, how large or small an impact do you think this S&T development is going to have for this area? For who / what in particular? ➢ Are there other science and technology developments you think could happen in this issue area that we haven't thought about? *facilitator makes another handout if relevant, to add to the pile.* ➢ USE SPECIFIC PROBES FOR EACH ONE WHERE RELEVANT **We've just discussed some of the changes in society in the area of [THEME]. However, it might not be possible (due to finite resources for example) to deal with everything at the same time.** **As a group as a whole I would now like you to think about which <u>two issues</u> here you would prioritise to take action on – that could be action to help reduce the negative impacts, action to help make the most of the opportunities. Facilitator puts the top issues to one side to revisit in section 10. If participants cannot agree on the top 2 issues then allow them to choose a top three.** **You can choose the ideas here on the handouts – or add your own from earlier / from the discussion just now** *Facilitator to have blank cards to hand to capture additional issues / S&T developments not contained in the by stimulus*. ➢ Discuss their choices and probe who they think should be taking action (e.g. the Government, business, general public) ➢ Identify areas of divergent opinion or consensus.	
1.00 – 1.45	**6. LUNCH**	
1.45– 2.50	**7. DETAILED DISCUSSION OF WHAT'S CHANGING IN SOCIETY AND SCIENCE AND TECHNOLOGY DEVELOPMENTS: PART II**	

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

	Using questions above, discussions of remaining three themes	
2.50 – 3.00	**8. AFTERNOON COFFEE BREAK**	
3.00 – 3.25 About 15 mins About 10 mins	**9. Ranking importance and priority themes for our society as a whole– washing line** *In the two subgroups, give each team a matrix on the wall* *Stick up the top issues which you chose from the 7 overarching areas. Could be the ones we gave you, could be new ones you identified in the discussion.* **1. Vertical axis: Highest to lowest priority for Government and Scientists to consider. #** **Horizontal axis: topics that the Government and scientists should ensure that the public have opportunity to be involved with in future – vs those which it's not important that the public have the opportunity to be involved with** Why did you put them in that order? Are there any different priorities for scientists to consider vs govt vs other stakeholders? Why did you choose these and not others? Drawing out – is it the <u>science</u> itself?? (i.e. "robots are interesting") is it the <u>policy</u> area ("The environment is most important") ?? is it how <u>controversial</u> you think the issue is (i.e. "our privacy is really important") *Compare the 2 matrices, especially the top right hand and left hand side - Difference between the groups / areas of consensus / individuals who take a different view from their group, and why* *If time, ask about the issues that they put dots against on the posters in the morning. Where would these sit?*	See how they view priority across all the themes. Understand how they decide on priority. Get spontaneous sense of whether they think the issues that the public need to be involved with are the same as the top priority issues for society.
3.25 – 3.50	**10. DETAILED DISCUSSION OF THE TOPICS THAT GOVERNMENT AND SCIENTISTS SHOULD ENSURE THE PUBLIC CAN BE INVOLVED WITH IN FUTURE** **IN PLENARY** *SLIDE 12: Representative from Sciencewise reiterates the aims of Sciencewise* Explains that Sciencewise-ERC needs to identify what issues the public think are priorities for engagement.	

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

	Examples of projects where Sciencewise has involved the public – ideally also showing their impact Re-cap on objectives: 1) what and why do public think are priorities for science and technology and 2) what think things should be public consulted on in future. You have already started to look at the issues you think it's most important to engage the public with Of course, the public can be engaged through voting in the government! But beyond this, what issues do we think are important? NB consultation can take many forms and wouldn't necessarily be a survey, or an event like this… for the next exercise, please assume that the way you would be consulted would be interesting (to avoid people saying "I don't want to do a boring consultation, whatever the subject") **ON TABLES** **Going back to the matrices we created, talking about the issues chosen to be in the top right hand quadrant** And finally, you've said it's important for people to get involved – would these be the areas you <u>personally</u> would want to get involved with? Why? Why not? IF TIME : What would be the best way to involve yo*u? Check out how far different issues seem to suggest different types, levels, nature of public involvement, if this is mentioned.* - survey - event like this - online discussions - Panel (reconvened several times throughout the year) - referendum **IN PLENARY** - if time, feedback from each table.	Identifying which issues are most important to get involved with

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

3.50 – 4.00	**11. DETAILED FINAL THOUGHTS AND WIND DOWN** **IN PLENARY** ➢ Final advice for Sciencewise-ERC on involving the public in discussion of this sort of thing? *Thank respondents for taking part which will be valuable in understanding in greater depth views towards the priorities for dealing with changes in society and the role of science and technology in these. Reiterate reconvened session and explain can't invite back everyone as only need a small number of specific type of people. If you don't hear from us about the follow-up session we will still be in touch at a later date to inform you when report being published so you can see what you and others said.* *Give out consent form* *Give out end of event questionnaire* *Give out incentives and sign form*	Give participants an opportunity to say anything they have not yet said

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.

Meeting agenda for reconvened workshop

Agenda Topics

1. **Welcome back and introductions (in plenary) – 11-11.15am**
    a. Objectives for the day
    b. Housekeeping
    c. Introductions

2. **Experience of the process (in two groups) – 11.15-11.35am**
    a. What was it like?
    b. How was the group dynamic – consensus, disagreement?
    c. Any suggestions for improvements?

3. **Combined matrix presentation (in plenary) – 11.35am-12.20pm**
    a. Moderator to present matrix developed from all groups
    b. How is this similar to / different from what your group said?
    c. Why do you think these issues were seen as important for the public to have a voice in?

    BREAK: 12.20-12.35pm

4. **Sense check against topics not in matrix (in two groups, each group does 3-4 themes) – 12.35-1pm**
    a. Why do you think these were seen as less important?
    b. What about your spontaneous thoughts from the morning of your workshop (present combined most important issues from the mornings)

5. **Develop underlying principles for where public would like to have a voice (in two groups for first 30 mins, then plenary to compare) – 1-1.40pm**
    a. What do you see as the common themes linking the issues that you've said you would like a voice in
    b. Moderator to use list we have developed to probe

6. **Wrap up, next steps and vox pops (plenary) – 1.40-2pm**
    a. Any final thoughts on public input into policy-making?
    b. Sciencewise to present on how they will take the findings forward
    c. Vox pops with Rachel

This work was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252:2006.

© 2013 Ipsos MORI.