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### **Contributors**

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House of Commons
Science and Technology
Committee

Government horizon scanning: Government Response to the Committee's Ninth Report of Session 2013–14

Second Special Report of Session 2014–15

Ordered by the House of Commons to be printed 16 July 2014

# Science and Technology Committee

The Science and Technology Committee is appointed by the House of Commons to examine the expenditure, administration and policy of the Government Office for Science and associated public bodies.

### Current membership

Andrew Miller (Labour, Ellesmere Port and Neston) (Chair) Jim Dowd (Labour, Lewisham West and Penge) Mr David Heath (Liberal Democrat, Somerton and Frome) Stephen Metcalfe (Conservative, South Basildon and East Thurrock David Morris (Conservative, Morecambe and Lunesdale) Stephen Mosley (Conservative, City of Chester) Pamela Nash (Labour, Airdrie and Shotts) Sarah Newton (Conservative, Truro and Falmouth) Graham Stringer (Labour, Blackley and Broughton) David Tredinnick (Conservative, Bosworth) Hywel Williams (Plaid Cymru, Arfon)

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The following members were also members of the committee during the parliament:

Gavin Barwell (Conservative, Croydon Central)

Caroline Dinenage (Conservative, Gosport)

Gareth Johnson (Conservative, Dartford)

Gregg McClymont (Labour, Cumbernauld, Kilsyth and Kirkintilloch East)

Stephen McPartland (Conservative, Stevenage)

Jonathan Reynolds (Labour/Co-operative, Stalybridge and Hyde)

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#### **Powers**

The Committee is one of the departmental Select Committees, the powers of which are set out in House of Commons Standing Orders, principally in SO No.152. These are available on the Internet via www.parliament.uk

### Publications

The Reports and evidence of the Committee are published by The Stationery Office by Order of the House. All publications of the Committee (including press notices) are on the Internet at http://www.parliament.uk/science. A list of reports from the Committee in this Parliament is included at the back of this volume.

The Reports of the Committee, the formal minutes relating to that report, oral evidence taken and some or all written evidence are available in printed volume(s). Additional written evidence may be published on the internet only.

#### Committee staff

The current staff of the Committee are: Dr Stephen McGinness (Clerk); Leoni Kurt (Second Clerk); Victoria Charlton (Committee Specialist); Dr Elizabeth Rough (Committee Specialist); Darren Hackett (Senior Committee Assistant); Julie Storey (Committee Assistant); and Nick Davies (Media Officer).

### Contacts

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# Second Special Report

On 4 May 2014 the Science and Technology Committee published its Ninth Report of Session 2013–14, *Government horizon scanning* [HC 703]. On 9 July 2014 the Committee received a memorandum from the Government which contained a response to the Report. The memorandum is published as Appendix 1 to the Report.

# Appendix 1: Government response

## INTRODUCTION

- 1. The Government is pleased that the Committee believes that "horizon scanning is a potentially valuable activity" that "can enhance both short-and long-term decision-making". That is why in the Civil Service Reform Plan (2012), the Government instigated a review into horizon scanning capability across government, and implemented the findings of the Day Review in early 2013. We agree with the Committee that we will not be able to predict the future with complete accuracy, but it is important that Government has space to investigate future trends in a systematic and rigorous way, and ask itself whether it is adequately prepared for potential opportunities and threats.
- 2. The Committee rightly looked closely at how the Horizon Scanning Programme engages with external experts and how it uses the outputs of its consultation. The Government does not hold have a monopoly of wisdom in this area and we recognise that external expertise is vital to the success of the Programme. The Government wishes to highlight to the Committee the considerable engagement with external expertise the Programme has undertaken from the start, specifically we have:
- a) held a two day cross-government 'Strategic Foresight Symposium' on 10-11 February 2014 which was attended by over 200 delegates from across government, industry, and academia. The outputs of this event have helped to inform the programme's Year 2 projects;
- b) formed an 'Emerging Technologies Community of Interest', which includes representatives from 29 Government organisations and external experts such as the Royal Society, Arup, BP, and NESTA. The Community has brought together a wideranging group of experts both internally and externally to help Government assess future implications of technologies on individual departments; and
- c) used an academic advisory group, as well as Ipsos MORI, NatCen Social Research and the University of Manchester, focus groups of young people and high potential Civil Servants from across government to establish a better understanding of the policy implications of the evolving social attitudes of young people.
- 3. While the Government acknowledges that we may not have been as quick to publish outputs from the Programme as the Committee would have liked, we believe it is important to carry out this work carefully, and we intend to publish a set of outputs later

this year. The Government believes it is important to recognise that the primary goal of the first year of the Programme was to address the findings of the Day Review, and to break down the siloed nature of strategic horizon scanning in departments. Only by doing this, and by establishing a robust governance structure, could high-quality analysis be produced for consideration by the Cabinet Secretary's Advisory Group.

- 4. The Committee made recommendations relating to the role of the Government Office for Science in the Horizon Scanning Programme. In March this year, the Cabinet Secretary created the 'Horizon Scanning Programme Team' by merging the two cross-government horizon scanning-focused teams in the Cabinet Office (Horizon Scanning Secretariat) and Government Office for Science (Horizon Scanning Centre). This merger means that the Horizon Scanning Programme combines the former teams' respective strengths, expertise, and networks to enhance the Programme and its outputs.
- 5. The Horizon Scanning Programme has made good progress in its first year. Aside from the examples already mentioned, specific highlights include:
- a) identifying 'Big Data' as a specific area for further analysis. A new subset of work has been commissioned to analyse the common understanding of Big Data across government and the long term implications for departments. This work has helped Government to understand the role which this specific technology can and may play in future policy-making;
- b) strengthening the Government's approach to resource scarcity and security by identifying, through a horizon scanning exercise, the potential policy implications of resource nationalism on the UK. This work has resulted in the formation of a cross-Whitehall director-level group to take forward a number of recommendations, as well as to provide a strategic forum to consider future opportunities and threats; and
- c) working towards establishing a baseline understanding across Government of demographic data and associated assumptions, and beginning to explore their policy implications for individual departments and Government as a whole.
- 6. In Year 2 the Government will further increase its engagement with external experts and awareness-raising of the Horizon Scanning Programme, using a range of approaches (such as high-level roundtable discussions) as well as a dedicated web presence on GOV.UK and other online and offline engagement tools.
- Horizon scanning by the Devolved Administrations is a matter for them and their respective legislatures and is not covered by this response.

## RESPONSE TO THE COMMITTEE'S RECOMMENDATIONS

8. The structure of the Government's response below follows the headings and order set out in the Committee's report (pages 36–39).

### HORIZON SCANNING IN GOVERNMENT

Recommendation 2: Unlike the Minister, we consider it important that the term 'horizon scanning' is properly defined and applied by government. Inconsistent use of this term has

clearly caused confusion in the past. We remind the Government that the Day review cited it as a contributory factor in the Government's historic failure to properly embed horizon scanning into its decision-making.

9. There is no one-size-fits-all definition of horizon scanning. However the definition set out in the Day Review (January 2013) provides a level of common understanding across government. It is the Government's view that what is most important is for departments to focus on delivering best practice, sharing insight and thinking strategically based on the best and freshest evidence from a range of sources, inside and outside government.

Recommendation 3: In this report, we have had little choice but to adopt the Government's usage of the term 'horizon scanning'; however, this is by no means an endorsement. We consider the term 'futures analysis' to be a more accurate description of the suite of activities undertaken by Government under the banner of 'horizon scanning'. We are also unconvinced by the Government's argument that its branding of horizon scanning has been so successful as to make a correction impractical. We therefore recommend that the Government rename its horizon scanning programme the 'futures research programme' and clearly set out, both internally and in public, the techniques that it considers to be within the programme's remit.

10. The Government maintains that the Horizon Scanning Programme accurately reflects the aims and activities of this work, regardless of the intricacies of the definitions available. After a year of promoting the brand within government, industry, academia, and international stakeholders, the Government strongly believes that a change at this point would cause needless disruption and confusion.

Recommendation 4: It is beyond this inquiry's remit to conduct a full review of horizon scanning across individual government departments. However, given the inconsistencies of practice and performance that have been highlighted in the past we consider it important that the mechanism for regular scrutiny is put in place. We recommend that the Government Office for Science incorporate a regular review of departmental horizon scanning into the next phase of its Science and Engineering Assurance programme.

11. The Government believes that engagement with specific departments when issues are identified is more efficient and effective than a systematic, all-encompassing review across departments. That is why the Government Office for Science has substantially revised its Science and Engineering Assurance Reviews programme. The Government Office for Science is currently piloting an in-depth review of the provision of science evidence in the Department for Environment, Food and Rural Affairs, whilst also working with other departments to build and enhance their capability by providing a range of support and advice as the situation requires.

### THE ROLE OF THE GOVERNMENT OFFICE FOR SCIENCE

Recommendation 6: We regard the work of the Foresight programme to be excellent and consider its relative lack of impact on policy to be a reflection of GO-Science's non-central location in Government rather than the quality of the Foresight programme's outputs.

Recommendation 7: We consider the Government's position regarding the location of GO-Science to be illogical, particularly in light of its recent decision to place horizon scanningquite rightly in our view—at the heart of government decision-making, in the Cabinet Office. Horizon scanning is a cross-cutting activity with widespread and potentially significant policy implications, which the Government has committed to embedding across the Civil Service. The same can be said for much of the work of GO-Science. We are therefore at a loss to understand why a recommendation accepted as good practice for one—namely strategic coordination of horizon scanning from the Cabinet Office—has been repeatedly rejected for the other. We again recommend that the Government Office for Science be relocated from the Department for Business, Innovation and Skills to the Cabinet Office, where it can more easily fulfil its remit of ensuring that the best scientific evidence is utilised across government.

- 12. The Government does not see a compelling reason for re-locating the Government Office for Science to the Cabinet Office. There are strong benefits to Government Office for Science's co-location with the Department for Business, Innovation and Skills, particularly the proximity to the science, universities, innovation, and industrial sector teams in Department for Business, Innovation and Skills, amongst others. But this does not prevent the Government Office for Science from having strong links with other government departments or a leadership role across the whole science and technology agenda. This is further reinforced by the fact that Sir Mark Walport reports directly to the Cabinet Secretary and the two remain in close touch.
- 13. The Government agrees that the Government Office for Science plays a valuable role in cross-government horizon scanning, and the Office has played an integral part in the Horizon Scanning Programme from the programme's inception. Sir Mark Walport has provided a scientific perspective to the discussions at the Cabinet Secretary Advisory Group, and officials in the Office have provided the same perspective at the director-level group, and where relevant, several of the communities of interest.
- 14. Recognising the important role the Government Office of Science has played in the Horizon Scanning Programme, the Cabinet Secretary approved the merger of the two respective cross-government horizon scanning teams in the Cabinet Office and Government Office for Science. The newly merged team means that the Horizon Scanning Programme combines the former teams' respective strengths, expertise, and networks to enhance the Programme and its outputs. The purpose of the new team is as follows:
- a) coordinate Horizon Scanning work across Whitehall and in line with crossgovernment strategic priorities;
- obtain new insights and challenge from a spectrum of expertise both within and outside of government;
- ensure that the best scientific evidence is utilised across government in Horizon Scanning activity;
- d) be a centre of expertise for horizon scanning analysis; and
- e) strengthen strategic thinking and use of horizon scanning across the Civil Service.

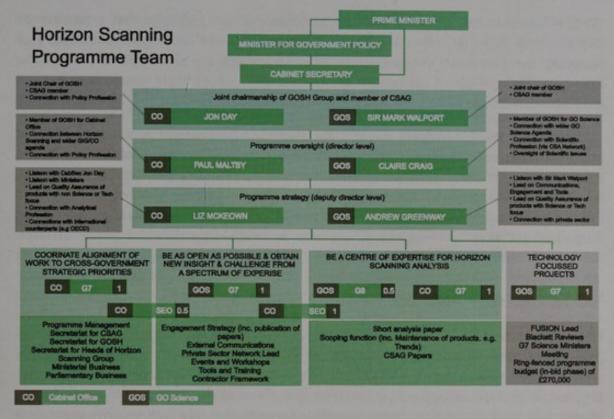


Figure 1: New structure of the Horizon Scanning Programme Team

Recommendation 8: From its new location, we hope that GO-Science would naturally become more fully integrated into the horizon scanning programme. However, we also think that this relationship would benefit from being formally strengthened. We recommend that the Government Chief Scientific Adviser sits permanently on both the Cabinet Secretary's Advisory Group (CSAG) and the Horizon Scanning Oversight Group and that GO-Science be represented in all communities of interest. We also encourage Departmental Chief Scientific Advisers (DCSAs) to engage more closely with the programme and suggest that DCSAs or their deputies offer themselves as representatives for any community of interest in which their department has an interest.

15. The Government fully agrees with the recommendation by the Committee and that is why the Government Chief Scientific Adviser, Sir Mark Walport is a permanent member of the Cabinet Secretary's Advisory Group. Although GO Science has been represented at the Government Oversight of Scanning the Horizon Group, one of the actions agreed in the merger of the respective horizon scanning teams, was for Sir Mark Walport to co-chair this director-level group with Jon Day. Furthermore, it was agreed that Sir Mark Walport would have a standing item on the agenda of every Cabinet Secretary Advisory Group meeting in which to provide an update on the Government Office for Science activities, including Foresight projects. This is also echoed in the Government Oversight of Scanning the Horizon Group to ensure maximum awareness at both critical governance points in the programme.

16. The Government Office for Science will provide advice to all new Communities of Interest either through consultation with the chair(s) of the respective Community of Interest or by formal representation on the group, as appropriate and where resources permit. The combined resource of the new Horizon Scanning Programme Team now possesses sufficient resource to improve support for the various Communities of Interest.

17. The Government fully agrees to this recommendation and note that a number of Departmental Chief Scientists are already represented at the Government Oversight of

Scanning the Horizon Group. Deputy Chief Scientists are also represented on the Emerging Technologies Community of Interest and, where their department has an

interest, will continue to do so in future communities of interests.

18. The recent merger to form the Horizon Scanning Programme Team has enabled a better coordinated level of engagement from the network of Departmental Chief Scientific Advisors. In April 2014, the Government Chief Scientific Adviser and Departmental Chief Scientific Advisors met to discuss the opportunity of engaging more closely with the Emerging Technologies Communities of Interest. This process is ongoing and will be formalised for new communities of interests in which Departmental Chief Scientific Advisors identify a departmental interest.

### TRANSPARENCY AND COMMUNICATION

Recommendation 9: We accept that it may sometimes be necessary for the findings of government horizon scanning to remain confidential, particularly when they relate to sensitive issues such as security and defence. However, such cases should be the exception, not the rule. With these exceptions, we propose that the outputs of all Government horizon scanning be made transparent (with exceptions for work that relates to sensitive issues such as defence and security). This recommendation applies both to centrally managed horizon scanning and that conducted at the departmental level, which we consider to be somewhat poorly communicated at present.

19. As Jon Day stated in the Government evidence session to the Science and Technology Committee on 4 December 2013, the default position of the programme is to publish the evidence. The first year of the Horizon Scanning Programme has focused on a establishing robust governance structure; developing a clear pipeline of projects, fostering strong links with external horizon scanning groups; and creating high-quality analyses for the programme. Now that the structures are in place and the Year 1 work is nearing completion, the Horizon Scanning Programme Team will publish a number of products, covering horizon scanning analysis, tools to build capability across the Civil Service, and more general updates to raise awareness of and promote programme activities later this year.

Recommendation 11: We also encourage all departments to increase the transparency of their own horizon scanning by providing links to key departmental outputs through this central page and by making supporting information available via a public hub such as data.gov.uk.

 Individual departments do publish their Horizon Scanning outputs and evidence packs where they can (within security constraints), although these are not always explicitly identified as 'horizon scanning' publications (e.g. The Department for Energy and Climate Change's '2050 Pathways Calculator' and HMG's 'Industrial Strategy'). The Department of Health's 'UK Five Antimicrobial Resistance Strategy, 2013-2018' which was published on the department's website in September 2013, while also not specifically branded as a 'horizon scanning' publication, has a global scope and looks over future horizons (e.g. scenarios analysis cover a 20 year period). The Horizon Scanning Programme plans to

improve its own transparency and engagement as well as those of departments by using innovative techniques, such as blog posts on gov.uk to highlight outputs from the programme as well as signpost to new publications by departments.

Recommendation 10: We were encouraged by the Minister's plans to "go beyond mere transparency into a positive programme of communication" as part of the new horizon scanning programme. However, several months in, we have not yet seen any evidence of this occurring. We have been disappointed by the lack of information shared about this programme—particularly in relation to its individual work strands—and do not feel that this lays a strong groundwork for the interactive approach which the Minister claims the programme will soon be taking. We recommend that the Government enhance the visibility and transparency of the new horizon scanning programme by promptly setting up a dedicated gov.uk webpage. The new webpage should: i) detail the background and objectives of the programme; ii) clearly set out the landscape for government horizon scanning, detailing the roles and responsibilities of all major centres of activity; iii) set-out the terms of reference and current membership of the Cabinet Secretary's Advisory Group (CSAG) and the Horizon Scanning Oversight Group (GOSH); iv) provide access to the minutes of meetings of both CSAG and GOSH; v) detail the objectives, scope and planned activities for each work strand, together with membership of the relevant community of interest; vi) provide links to all of the programme's outputs and supporting documentation, including a facility for comment and interactive engagement, and vii) provide information and contact details for organisations and individuals who wish to become involved with the programme. This webpage should be launched by July 2014 at the latest.

- 21. The Horizon Scanning Programme's Engagement Plan is currently being implemented and this includes the development of a web presence on 'GOV.UK' portal which will progressively include a number of channels for communication with the wider public, ranging from evidence papers and signposts to other relevant material in the form of blogs and tools for building horizon scanning capability. The aim of this page is to increase the transparency of the Horizon Scanning Programme and includes, wherever possible, the information recommended by the committee in points i), ii), iii) and v).
- 22. Clearly, there will be some items that will require greater consideration before release to the public. Discussions about future trends and events will necessarily be quite speculative and could consider a range of potential policy implications: these will not be fully formed policy decisions, but part of the early thinking, in many cases, that informs policy. It is important to allow these early discussions to happen freely; and for this reason minutes will not be published.

### EXTERNAL ENGAGEMENT

Recommendation 12: Government horizon scanning must be open to challenge if it is to be effective and this means that it must accommodate a range of external viewpoints. This was made clear in the Day review and we were therefore surprised and disappointed to discover that none of the bodies created in its aftermath currently include any external representation. While we acknowledge the need for government horizon scanning to be government-led, we see little value in a horizon scanning exercise which does not incorporate a broader perspective.

- 23. The Government agrees that external expertise and challenge are extremely important to ensure the Horizon Scanning Programme benefits from the latest and best thinking and insight from outside government. For this reason external engagement is a central objective of the programme and a number of communities of interest have drawn on external expertise to help shape and test key outputs. For example:
- a) a wide range of external groups were involved in the Social Attitudes of Young People project, including private sector organisations and think tanks. Significant contributors included: Ipsos MORI Social Research Institute, NatCen Social Research and University of Manchester Institute for Social Change;
- b) the Emerging Technologies Community of Interest (led by the Government Office for Science and the Ministry of Defence, and represented by 29 government organisations) engaged with and distilled work undertaken in departments and the Government Office for Science Foresight exercises, and consulted experts from the Royal Society, ARUP, BP, NESTA, the National Physical Laboratory, the Science and Technology Facilities Council, The Food Standards Agency, the Intellectual Property Office, the Research Councils, the wider defence and national security community, and the Technology Strategy Board, among others; and
- c) the Changing Supply and Demand of Resources Community of Interest drew on external expertise by contracting Cranfield University, via the existing DEFRA contract agreement with the university, to carry out the horizon scanning analysis as part of the evidence for consideration by the Cabinet Secretary's Advisory Group.
- 24. Since the written and oral evidence was submitted to the committee, the Horizon Scanning Programme Team has held several events to provide effective access to leadingedge thinking and evidence from outside of government. The main event was the Cross Government Strategic Foresight Symposium, held on 10th-11th February 2014 in London and facilitated by MoD's Defence Science and Technology Laboratory (Dstl). This was the first time such an event had been held for Futures practitioners and policy and strategy officials across government at such senior levels. The Symposium attracted over 250 delegates over two days (from departments and agencies, and external experts from industry and academia). The insights gleaned from this symposium have informed proposals for new work strands for the Horizon Scanning Programme, while departmentspecific findings are being shared with the relevant departments.
- 25. With the maturation of the programme and the formation of the Horizon Scanning Programme Team, even greater focus is now being given to improving current levels of external engagement. The Government will maximise "network effects" by utilising the Government Office for Science's valuable networks (private sector, Chief Scientists, Government Heads of Horizon Scanning, and so on) to test and refine new horizon scanning work throughout the project lifecycle. A range of external engagement events is planned to shape the new topics.

Recommendation 13: At its best, horizon scanning is underpinned by scientific techniques and can be enhanced by the involvement of scientific experts, whatever the topic. We therefore recommend that representatives of each of the UK national academies-the Royal Society, the British Academy and the Royal Academy of Engineering-be included as

observers on the Horizon Scanning Oversight Group (GOSH) and that membership of the communities of interest be immediately opened up to external organisations, including academic groups, learned societies and industry.

- 26. Several current Communities of Interest have active members from the learned societies, industry, academia, and think tanks. The Horizon Scanning Programme Team will formalise and expand these arrangements where appropriate.
- 27. The Government will invite external representatives to attend the Government Oversight of Scanning the Horizon group as the subject and situation requires but, for reasons outlined above, does not propose to create standing external membership of this group at this time.

Recommendation 14: We consider it vital that the horizon scanning conducted on behalf of Government informs and is informed by horizon scanning conducted on behalf of Parliament. We consider the Parliamentary Office of Science and Technology (POST) to be one possible conduit for this flow of information. We recommend that representatives from POST act as observers on all relevant communities of interest included within the new horizon scanning programme.

28. For the last 4 years, a representative from POST has sat on the Government Office for Science Heads of Horizon Scanning Committee and members of POST were invited to the Horizon Scanning Programme cross-Government strategic foresight symposium in February. However, the Government agrees that closer engagement would be beneficial and the Horizon Scanning Programme Team will discuss with POST the role it can play in the programme.

Recommendation 15: We also recommend that the Government establishes a method through which parliamentarians with an interest in horizon scanning-for example, Select Committee Chairs and Members—can engage with the new horizon scanning programme.

29. The Government plans to engage with parliamentarians after the summer recess by setting up, with POST if possible, an information session chaired by Sir Mark Walport or Jon Day. This session will provide an overview of the work going on within the programme and afford parliamentarians an opportunity to discuss and advise on the work of the Horizon Scanning Programme.

### CONCLUSION

Recommendation 16: We do not consider it satisfactory for proper Ministerial oversight to commence over six months after a new initiative has been launched. Indeed, we consider this to indicate a lack of careful thought in the planning of the new programme that is also apparent in several aspects of its design and implementation. We recommend that the Government take a more considered approach to such initiatives in the future and encourage it to seriously consider the recommendations made in this report to address the shortcomings of its new horizon scanning programme.

30. The Minister for the Cabinet Office, Francis Maude, and other Ministers were engaged in the Horizon Scanning Programme from the outset, with Francis Maude taking a particular interest in the structure and governance of the Horizon Scanning Secretariat function within the Cabinet Office. Now that the structure and governance of the Horizon Scanning programme is in place, it was appropriate to reassess the programme's ministerial oversight. The Horizon Scanning programme is now overseen by the Minister for Government Policy, Oliver Letwin, who takes a close interest in the programme and actively engages with it. Sir Jeremy Heywood and Sir Mark Walport regularly update the Minister on the progress of the Horizon Scanning Programme and the Minister will continue to support and steer the programme.



