Government Office for Science

GO-Science
Annual Report 2013-14

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Foreword

Professor Sir Mark Walport is the 11th Government Chief Scientific Adviser and reports directly to the Prime Minister and the Cabinet Secretary. It is his responsibility to ensure that the best science and engineering advice is brought to bear effectively on government policy and decision-making.

2014 marks 50 years since the appointment of the first GCSA, Sir Solly Zuckerman, in 1964.

Looking back on my first year as the Government's Chief Scientific adviser, undoubtedly one of the most interesting jobs around, I am impressed by the sheer breadth of the work conducted by the Government Office for Science (GO-Science). The role of the Government's Chief Scientific Adviser (GCSA) is to advise on all aspects of science, engineering, technology and social science in relation to all aspects of government policy. This initially looks like quite a mammoth undertaking. However, one can prioritise this great range of issues by considering 'What does government care about the most?'

First and foremost, the government cares about the health, wellbeing, resilience and security of the population. High-quality scientific advice is vital to enable us to mitigate risks, from plant disease to climate change, in the most effective way possible. The government has a robust network of scientific advice, enabling us to call upon a wide range of expertise quickly. Science can also help the government mitigate future risks and to this end, the Horizon Scanning team, co-hosted by GO-Science and Cabinet Office, uses its wealth of expertise to explore the issues that will shape our world.

To make sure that we maintain and improve on the use of science in policy making, we need to ensure that we have sufficient Science, Technology, Engineering and Mathematical (STEM) skills in government. In my role as the head of the science and engineering profession in government, I am keen to develop ways to make government an attractive career option for those with STEM skills.

GO-Science also utilises a wide range of expertise from outside government, such as the numerous experts who sit on our project lead expert groups and contribute to our reports. I am also the co-chair of the Council for Science and Technology (CST), alongside Professor Nancy Rothwell, Vice-Chancellor of Manchester University. This year the CST has used its considerable expertise to provide advice to the Prime Minister on a wide range of issues, from genetically modified organisms to steps the UK ought to take to secure our future at the cutting edge of advanced mathematics, computer science and algorithms.

The second key thing that the government is concerned with is the economy; it is clear that without a strong economy, all other aspects of a society are far more vulnerable. The 'eight great technologies' have highlighted the immense opportunities there are for technological innovation, and the leading role the UK can play in their development. It is important that we accurately assess the benefits and risks from emerging technologies, and respond appropriately. Failure to do this could mean we are overly cautious and needlessly miss out on valuable innovations. These issues will be investigated in my first annual themed report, to be published in autumn 2014, on the topics of risk and innovation.

Finally, an important role that GO-Science plays is in science for diplomacy. Science is not country-specific: we are facing global challenges for which science is central to our understanding - climate change, demographic shifts and food distribution, to name but three. Scientific collaboration on these issues creates relationships, helps countries develop their scientific capabilities, and opens doors to closer cooperation on a broad range of issues.

Science has a vital role to play in government, and it is right that it is embedded into the policy making process. I am proud of the achievements of GO-Science this year, and I look forward to continuing our work in 2014-15.

Professor Sir Mark Walport
Government Chief Scientific Adviser

What we do

GO-Science ensures that government policies and decisions are informed by the best scientific evidence and strategic long-term thinking.
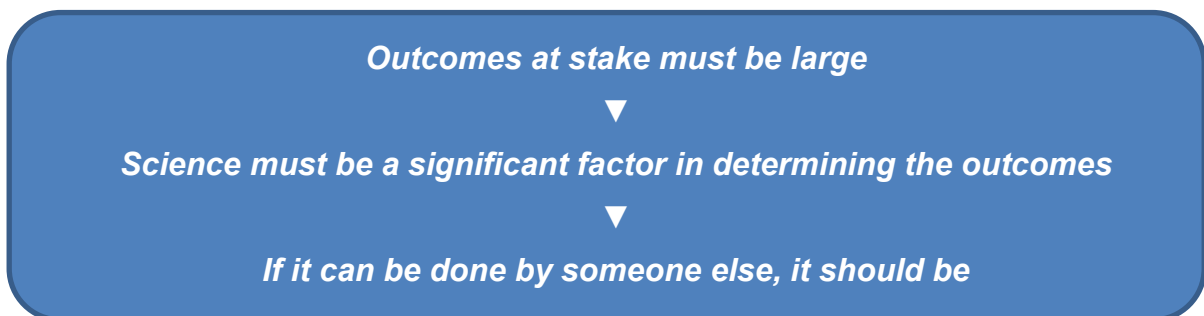
The role of the Government Chief Scientific Adviser is to advise the Prime Minister and Cabinet.

Responsibilities

The Government Office for Science is responsible for:

- giving scientific advice to the Prime Minister and members of the Cabinet, through a programme of projects that reflect the priorities of the government;

- ensuring and improving the quality and use of scientific evidence and advice in government (through advice and projects, and by creating and supporting connections between government and the scientific community);

- providing the best scientific advice in the case of emergencies, through the Scientific Advisory Group for Emergencies (SAGE); and

- helping the independent Council for Science and Technology provide high level advice to the Prime Minister.

How we prioritise

> *Outcomes at stake must be large*
>
> ▼
>
> *Science must be a significant factor in determining the outcomes*
>
> ▼
>
> *If it can be done by someone else, it should be*

In practice this means we prioritise issues that are:

- important

- novel

- present, urgent policy challenges

- have long-term implications for science in relation to policy.

Key functions

We manage a rolling programme of projects providing advice and support as needed.

Functions include:

- Scientific Advisory Group for Emergencies (SAGE);

- Foresight strategic futures projects

- Horizon Scanning Programme, jointly with the Cabinet Office;

- Science and Engineering professional network; and

- Council for Science and Technology (CST).

Building capacity for science in government

In order that science is efficiently embedded in all policy making, GO-Science is committed to ensuring that:

- Science and Engineering professionals in government work shoulder-to-shoulder with policy officials and analysts, supporting and complementing a strong network of Chief Scientific Advisers (CSAs), extending across government and outwards;

- the best scientists are engaged in informing policy, drawing on expertise from academia, industry and government;

- rich strategic conversations about R&D priorities are held across government departments, Research Councils and universities; and

- government has the scientific infrastructure it needs to support robust policy and governance.

Facilitating science advisory networks

Sir Mark Walport has continued to build upon the work of his predecessor, in establishing a highly effective network of Chief Scientific Advisers located in most government departments. These advisers offer expert advice and intelligence across the full range of science, technology, engineering and social science disciplines as needed. GO-Science has been involved in the process of appointments of new CSAs and in their performance management; their work is supported by guidance on the provision of science and engineering advice in government.

This cross-disciplinary network of CSAs meets weekly. Members contribute individually, and also work together where needed. Many departments now have deputy CSAs, who also meet regularly to discuss current issues and share expertise.

The network of over 70 Science Advisory Councils and Committees (SACs) continue to provide their expert independent advice to policy makers. The GCSA met SAC Chairs, together with CSAs, in July 2013, helping to build relationships between senior science advisers across government.

GO-Science is building closer working relationships with the Research Councils. Research Council Chief Executives now regularly join the CSA network to share ideas, build links, and discuss common interests. GO-Science has looked at how the Research Councils can contribute to the provision of speedy advice. GO-Science is also developing links with the Learned Academies.

The GCSA has also been working with the Higher Education Funding Council for England, to ensure that the provision of advice to government is considered an important part of evaluating impact under Research Excellence Framework assessments.

This work has facilitated stronger links between:

- the GCSA, CSAs and SACs;

- CSAs and Research Councils; and

- GO-Science and Learned Academies.

All of these feed into our knowledge and help us to develop an accurate picture of, and tap into, the research and expertise that exists in the UK.

Key work streams of 2013-14

Science, big data, analytics and the City - creating a new alignment

31 October 2013

The City and the UK science base are amongst the country's most valuable assets. The City depends on science, engineering and technology to deliver existing services, to innovate and remain competitive. For example, scientific advances in data capture and analytics are transforming business models, and how organisations model and manage risk.

The prosperity of both the City and the science base is important for securing the UK's position within the global economy. The government is focused on both, as key priorities for economic recovery and national prosperity.

As part of the GCSA's work on trade and finance, GO-Science and the Bank of England hosted a joint seminar that brought together over 50 senior figures from the City, policy and science communities, to look at how scientific expertise can support the core functions of City markets and institutions.

The seminar identified 5 key issues:

- The need for a common language for communicating financial information;

- More productive use of mathematics and big data;

- Collaboration on science across City institutions;

- Encouraging science-based innovation in finance; and

- Regulation based on robust systems, and an appreciation for the potential benefits of innovation.

Working with partners, GO-Science is taking these issues forward in a variety of ways.

Opening up scientific research data

The government's commitment to transparency extends across the whole spectrum of publicly-funded activity, including research. During 2013-14 GO-Science played a key role in working towards a more open science sector. GO-Science established and supported the Research Sector Transparency Board, which brought together senior research figures to develop a policy agenda for open data in science. GO-Science also supported the first G8 science ministers' meeting for a decade, held at the Royal Society in London.

In partnership with the Royal Society, GO-Science developed a set of high level principles for open research data, which was agreed amongst the G8 and European Commission. The G8 nations agree that "to the greatest extent and with the fewest constraints possible publicly funded scientific research data should be open, while at the same time respecting concerns in relation to privacy, safety, security and commercial interests, whilst acknowledging the legitimate concerns of private partners."

GO-Science added to the momentum that had been generated by the Research Data Alliance, the international body established to tackle standards and remove obstacles to a worldwide open data regime in science.

A roundtable that GO-Science organised between David Willetts MP and Molly Broad, Chair of the American Council on Education, enabled further discussion of this issue. This roundtable catalysed further international engagement by the research community, on both sides of the Atlantic.

The GCSA also provides leadership on open science through his public engagements. The first speech he gave as GCSA was at the Open Oxford conference at the University of Oxford, on "Rigour and openness in 21st century science".

Alan Turing Institute

The UK is at the centre of a global technological and economic revolution, with the emergence of new economic sectors centring on the application of data science to rapidly expanding quantities of data. The economic potential of the data revolution is already being realised in some areas, notably finance. It is growing in others, including retail, but in some its potential remains relatively untapped.

The Council for Science and Technology wrote to the Prime Minister in July 2013, recommending that action was needed to anchor the UK's research capabilities in the fundamentals of data science: mathematical sciences and algorithms. The establishment of a new centre (the Alan Turing Institute), will enable different research, industry and user groups to come together and develop ideas with applications right across the big data landscape. The Chancellor of the Exchequer

announced in the 2014 Autumn Budget Statement that the Alan Turing Institute for Data Science will receive a £42 million government investment over 5 years. The development will catalyse a major public-private partnership in an area with immense potential for growth and for public service provision.

Climate change: science and communication

Climate change is an issue never far from the media, and the publication in September 2013 of the first instalment of the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report, 2013-14, was no exception.

The IPCC Working Group 1 report on the Physical Science Basis of Climate Change summarised scientific understanding of how the climate is changing, and the instrumental role of humankind in this. This report took account of all relevant literature published since the IPCC's last Assessment Report in 2007 up to March 2013.

With levels of public belief in climate change declining in recent years, the publication of this report marked an opportunity to re-engage them on one of the defining scientific issues of our time.

Throughout the year the GCSA has attached considerable priority to doing just that, undertaking a wide programme of activities to communicate the IPCC report findings to different audiences, within government (including briefing the Cabinet directly) and beyond. The GCSA's activities included a programme of regional events, in collaboration with the Association of Science Discovery Centres, to engage public audiences around the country on the scientific evidence underpinning our understanding of climate change, and the options for responding to the risks it poses.

Government Chief Scientific Adviser's first annual themed report - Innovation, Risk and Regulation

Throughout 2013-14 - To report in autumn 2014

The UK has an excellent track record for research and innovation, and advances in science and technology can yield significant societal benefits and drive economic growth. However, innovation requires change, and any change has the potential for both benefit and harm. In this context, it is important to understand how the risks and benefits of new technologies are evaluated.

GO-Science has been working with scientists, policy-makers and business, to consider whether the regulatory environment in the EU sufficiently supports innovation and responds to the available scientific and expert evidence.

The challenge - for scientists, business or wider civil society - is to channel evidence about innovative technologies and their risks and benefits, in order to improve decision making by

government and regulators. To address this, the GCSA will publish his first Themed Annual Report, exploring issues of risk in a cross-cutting, multi-disciplinary report.

As a first step, the GCSA led a workshop on 7 March 2014, bringing together thinkers from academia and business to shape the scope, structure and potential content of the report.

The intention is to present a report in the autumn that contains the views of leading experts tackling risk and uncertainty from a wide range of perspectives, including social, psychological, industrial and financial. The GCSA will respond to that body of independent evidence by identifying key trends and issues arising. The report seeks to promote a frank and balanced discussion as to how risk, and regulators' response to it, affects innovation at the EU, national, and global level.

The GCSA's Annual Report aims to distil leading edge scientific thinking across Europe to:

- stimulate broader discussion on risk, hazard, uncertainty and vulnerability (within both Europe and the wider international community); and

- promote a regulatory culture surrounding risk in which robust scientific evidence is openly considered, alongside political and other non-scientific issues, in shaping policy.

Security team

The GCSA chairs the National Security Council (Officials) Science and Technology Committee. The committee was established following the 2010 Strategic Defence and Security Review, to advise the National Security Council on how it can best provide focus and overall strategic direction on the science and technology capability contributing to national security. In the past year, the Committee oversaw completion of a Blackett review[1] on wide area bio-detection. An unclassified version of that has been published, and is contributing to the development of a cross-government bio-security strategy.

With the support of the Prime Minister, the next Blackett review on the Internet of Things started in March 2014, and is due to report at the end of 2014.

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[1] A Blackett review is a short expert-led project that considers a focused question about science in policy, often with a security interest.

SAGE response to the winter flooding event 2014

December 2013 - March 2014

During the winter of 2013-14, the British Isles were in the direct path of several winter storms, which culminated in serious coastal damage and widespread persistent flooding. The GO-Science Resilience team provided rapid turnaround briefing on the issue of groundwater flooding, in response to a growing recognition that this was going to be a continuing and deepening issue as the flooding spread. The SAGE secretariat was then activated to provide reassurance that all that could be done was being done in response to the worsening flood conditions; to assess a range of worst case weather and flooding scenarios, and to provide guidance on landslides, sinkholes, and the impact of flooding on key infrastructure.

The SAGE secretariat performed well during this crisis, although lessons have been learned to improve mechanisms for future events. This crisis also highlighted the importance of the open data agenda for providing maps and layered data in COBR and SAGE. GO-Science has taken this issue forward as one of the opportunities for improvement.

Horizon Scanning Programme (formerly Horizon Scanning Centre)

In response to the recommendations from Jon Day's review of strategic thinking and horizon scanning across government, a new Horizon Scanning Programme (HSP) combining the Cabinet Office Horizon Scanning Secretariat and Government Office for Science Horizon Scanning Centre has been formed. The HSP helps deliver long-term futures analysis and capability in government. Its work with government departments and agencies of government improves the resilience of policy and decision making.

In government

The HSP joined up and enhanced horizon scanning across government, informing a new programme of work endorsed by the Cabinet Secretary's Advisory Group. The team contributed to a cross-government effort, led by the Defence Science and Technology Laboratory (DSTL), to run a Strategic Foresight Symposium in February this year. The Symposium included prominent support from Rt Hon Oliver Letwin MP, the GCSA, Jon Day and Chris Wormald, in recognising the importance of horizon scanning in government policy, science, national security, and the delivery of policy respectively.

Capability

The HSP increased efforts to build up the capability of officials to do and commission horizon scanning, and will shortly publish a new toolkit, an improved procurement framework, and a new training course.

Professional networks

HSP networks were busy ensuring input from every government department, sharing work and experience amongst analysts in government, and exploring some of the key issues facing the UK (e.g. working on the future of money before encrypted currencies emerged into public awareness). HSP networks are continuing to expand beyond government, enabling external organisations, academics and private sector contacts to share information, consult widely, and gain access to the networks.

Foresight projects

Foresight is the government's 'think tank' on science and technology issues. Foresight uses the latest scientific evidence and futures analysis to address complex issues and provide strategic options for policy.

The UK government's Foresight programme uses the best evidence from science and other areas to help government think systematically about the future. Foresight projects examine either an important public policy issue where science might be part of the solution, or a scientific topic where potential applications and technologies are yet to be realised.

Future of Manufacturing

December 2011 to October 2013

The Foresight Future of Manufacturing project analysed important long term changes, out to 2050, affecting the UK manufacturing sector, and advised on how policy needs to evolve to support the future growth and resilience of the sector.

The findings drew on 37 commissioned evidence papers, and input from more than 300 industry and academic experts from 25 countries. The report sets out how manufacturing matters, now and for the future, given the contributions the sector makes to the UK economy. It also sets out how manufacturing is entering a dynamic new phase, and changing considerably by becoming:

- *More than just making and selling a product:* Manufacturers will increasingly make use of a wider value chain to create new sources of revenue.

- *Faster, more responsive and closer to customers*: A convergence of technologies, including sensors, additive manufacturing and ICT, will support the personalisation of products, enhanced design freedom and greater diversity of locations at which production occurs.

- *Exposed to new market opportunities*: Changes in personal wealth, ageing populations, and growth in emerging economies will create new demand for products.

- *More sustainable*: Manufacturers will need to become more efficient, to counter potential volatility in the price and availability of resources.

- *Increasingly dependent on highly skilled workers*: There will be strong future demand for workers who possess a blend of technical and commercial skills, and an on-going need to accommodate older workers.
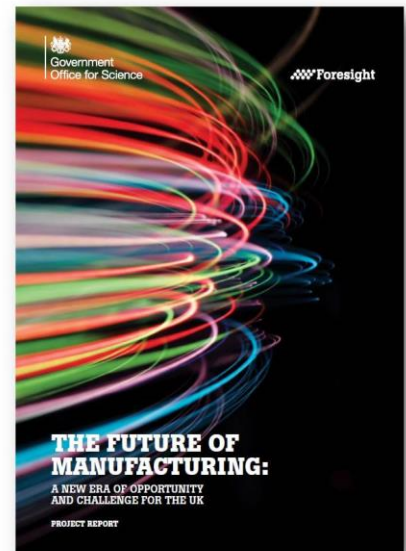
The report sets out advice for policy makers within each of these areas, and concludes with 3 future systemic challenges for government:

- Better intelligence: Policy needs to be informed by data that reflects how manufacturing is connected across the economy and how it is changing.

- Better targeting of support using the wider policy system: The government has an opportunity to take its industrial strategy to the next level, by developing targeted policies that support new ways of doing business.

- Better capability: Government needs to keep up with the pace of change in manufacturing, by enhancing its capability in drawing together intelligence on the sector and evaluating the impact of programmes.

The Secretary of State for Business, Innovation and Skills, Vince Cable MP, welcomed the report, calling it a "big contribution to long term strategic thinking". Policy officials are now using it to inform policy development, with particular focus on enhancing industrial metrics, supporting industrial sustainability as a route to future competitiveness, and strengthening cross-cutting manufacturing policy capability.

Findings from the report have also been publicly welcomed by industry leaders, including BAE Systems, GE, GKN, GSK, Nestle, Nissan, Rolls Royce and Siemens. The work is now well positioned as a comprehensive evidence base for policy makers to draw upon, to inform future policies which directly or indirectly affect the manufacturing sector.

Future of Cities

City seminar series

December 2013 through to 2014-15

The GCSA chaired a series of meetings, from Lancaster to Glasgow and Belfast to Cardiff, to hear about the future challenges facing those cities. The attendees, who included local and national experts, local authority decision makers and third and private sector leaders, explored a wide range of local issues and considered how they interact with the rest of the UK. The meetings also sought to understand how the Future of Cities project could be of use to local decision-makers, and where there might be opportunities for collaboration.

Following these meetings, several cities have initiated their own Foresighting activity (for example Newcastle and Liverpool). This work will also inform the final Foresight Future of Cities report, due in 2015.

Future of Demographic Change

April 2013 and continued through to 2014-15

Changes to domestic and international populations over the next few decades will fundamentally influence the future of the UK and the well-being of its people. The ability of decision-makers to recognise, anticipate and adapt to these changes will help determine the success of government policy decisions and their delivery. This project focuses on demographic trends and implications that might affect the UK in 2020, 2035 and 2050.

The project undertook a rapid evidence assessment to identify key trends and implications for both UK and international population change, using peer-reviewed academic material, published government reports and 'grey' literature from relevant lobby groups and charities. Expert advice on the evidence base and interpretation of the implications was provided by an Academic Advisory Group.

Policy advice, steer and oversight were provided by a Steering Group made up of Directors from relevant departments. Information on current government analysis and policy thinking on demographic change was provided by a Community of Interest group, consisting of working level officials from policy and analytical support backgrounds.

The final report for this work will be launched in autumn 2014.

The work has bought the implications of demographic change to the attention of senior figures within government, and representatives within many government departments. In particular, the work has highlighted areas where the use of current local area data and the availability of improved data (such as faster reporting time, local area projections and mapping of socio-economic characteristics) would be beneficial to planning and delivery of services at a national and local level.

GO-Science continues to work with ONS and departments to identify policy areas where localised data use can drive increased efficiency and effectiveness. The work highlighted key gaps in our understanding of the implications of an ageing society, which will be addressed in Foresight's new project on ageing.

Analysing the challenges of an ageing society

Work began in autumn 2013 and will continue into 2016.
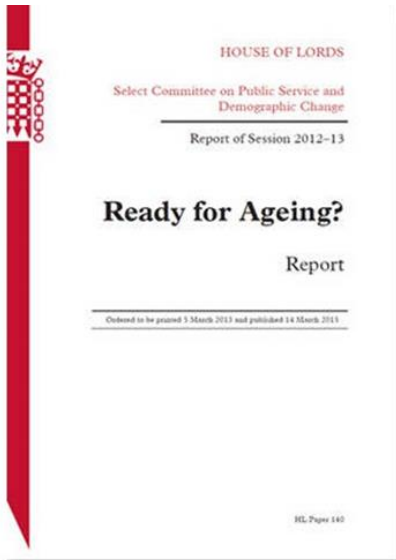
The impetus behind the ageing project originates from evidence gaps identified in the GO-Science project on the 'Future of Demographic Change', together with commitments made in the initial government response to the House of Lords' report 'Ready for Ageing?' in March 2013. The government's response included a commitment for the GCSA to undertake further work in this area.

The activity during 2013-14 consisted of scoping and setting up the project in consultation with key stakeholders and experts in the field.

The project is taking an overarching, evidence-based, cross-government and cross-societal approach to analysing the challenges and opportunities of an ageing society. The work will not only look at how the current policy portfolio supports an ageing population, but will address likely future needs and options to meet them.

The work, which will report over the next 2 years, will build a strong evidence base to inform policies that improve the quality of the ageing experience in the UK, enable older people to participate more fully in society, and improve our understanding of how to achieve a cost-effective balance of accountability for actions, which reflects an affordable position between individual responsibility and state support. This will be achieved by identifying options that will:

- increase healthy independent lifespans;

- increase quality of life and wellbeing;

- support people to maintain social engagement and productive activity later in life; and

- Ensure availability of equal access to and usage of the tools and facilities to achieve these aims.

Future of Computer Trading in Financial Markets

Impact Workshop held in September 2013

High-frequency and algorithmic trading is a growing phenomenon in stock exchanges across the world and the Foresight report: 'The Future of Computer Trading in Financial Markets', published in 2012, aimed to provide a comprehensive analysis to support policy making and regulation in this area. In September 2013, GO-Science hosted an international workshop to explore what might be done to catalyse the report's call for the standardisation of data and systems. This event considered the many benefits of standardisation, including reduced operational costs and risks, lower costs for investors through enhanced competition, and also greater transparency for both investors and regulators. This event led to the development of a working group, led by Loughborough University, which is considering how a range of issues might be addressed by industry and government.

Migration and Global Environmental Change

Impact activities

With the inexorable rise in environmental pressures on people and their livelihoods, in particular in developing and emerging economies, Foresight worked closely with leading international organisations, including the UN, the Department for International Development (DFID), and the International Organisation for Migration, to develop workshops in India and Tanzania to explore how the Foresight report could help policy makers in Africa and India develop policies to support internal migration, as a positive adaptive response to global environmental change.

The workshop in India was a collaborative event involving the Government Office for Science, DFID, and UNESCO. The 2-day Delhi workshop explored how the findings of the Foresight report on Migration and Global Environmental Change report could inform decision makers, academia and other stakeholders with a specific interest in this topic, and assess the potential implications for India and neighbouring countries. The event involved local representatives from key sectors, including planning, rural development, urban affairs, disaster management, science and technology, the environment, tribal affairs, labour, agriculture and water resources.

Council for Science and Technology

The CST operates at the very highest level in government, reporting to the Prime Minister directly. Building on the expertise from its membership, the CST meets with ministers across government and has offered advice to the government on a range of topics.

In May 2013 the CST wrote to the Prime Minister and Professor Sir John O'Reilly, making recommendations regarding expenditure on science and innovation in the Spending Review.

In July, they followed up on previous advice to the Prime Minister on Science, Technology, Engineering and Mathematics (STEM) education with a letter to the Secretary of State for Education on the handling of practical lessons within the curriculum. There was further correspondence with Ofqual on this issue in relation to the A-level curriculum later in the year.

CST provided advice to the government on a number of new topics.

Two of these followed from reports presented to CST by expert groups: on the electricity capacity margin (by the Royal Academy of Engineering) and on GM technologies (a team headed by Professor Sir David Baulcombe, Professor of Botany at the University of Cambridge).

Finally, their letter to the Prime Minister, 'The Age of Algorithms' recommended the creation of an Alan Turing Institute, a global centre of excellence in data science (*see page 9*).

CST members

Co-chairs

- Professor Sir Mark Walport, FRS, FMedSci - Government Chief Scientific Adviser

- Professor Dame Nancy Rothwell, FRS, FMedSci - President and Vice-Chancellor of Manchester University

Other members

- Professor Philip Bond, BSc, DEA, FIMA, FInstP - visiting fellow at the Oxford Centre for Industrial and Applied Mathematics and visiting professor at the University of Bristol

- Professor Sir Keith Burnett, CBE, FRS - Vice-Chancellor of Sheffield University

- Professor Steven Cowley - CEO of the UK Atomic Energy Authority

- Rowan Douglas - CEO of Willis Re Global Analytics and Chairman of Willis Research Network

- Anne Glover - Chief Executive of Amadeus Capital partners Ltd

- Dr Paul Golby, CBE, FREng - Chair of the Engineering and Physical Sciences Research Council

- Professor Dame Julia Goodfellow, FMedSci - Vice-Chancellor University of Kent

- Professor Sarah Harper - Professor of Gerontology at the University of Oxford

- Dr Michael Lynch, OBE, FREng - founder of Invoke Capital

- Dervilla Mitchell, BE, FIEI, FREng - Director of Arup

- Professor Fiona Murray - Professor of Entrepreneurship at MIT Sloan School of Management

- Sir Paul Nurse, FRS* - President of the Royal Society

- Sir John Parker, FREng* - President of the Royal Academy of Engineering

- Lord Stern of Brentford* - President of the British Academy

- Colin Smith, FREng - Director of Engineering and Technology at Rolls-Royce

- Professor Sir Christopher Snowden, FRS, FREng - Vice-Chancellor and CEO of Surrey University

- Dr Graham Spittle, CBE - Vice President, CPO, IBM

- Professor Sir John Tooke* - President of the Academy of Medical Sciences

* *Ex-officio* member

Annex A: Communications

As part of open policy making, GO-Science is exploring more ways to ensure that the public has access to the scientific facts that inform key issues and to increase public engagement in selected projects. Public communication is a key part of the GCSA's role. In addition, GO-Science uses Twitter, blogs on key work strands, and publishes all of its reports on the GOV.UK website.

Social media

The GCSA's twitter feed:

@uksciencechief - From 1 April 2013 to 31 March 2014 the GCSA account gained over 3,800 new followers (9,709 - 13,515) +40%.

Figure 1: Twitter followers for @uksciencechief account
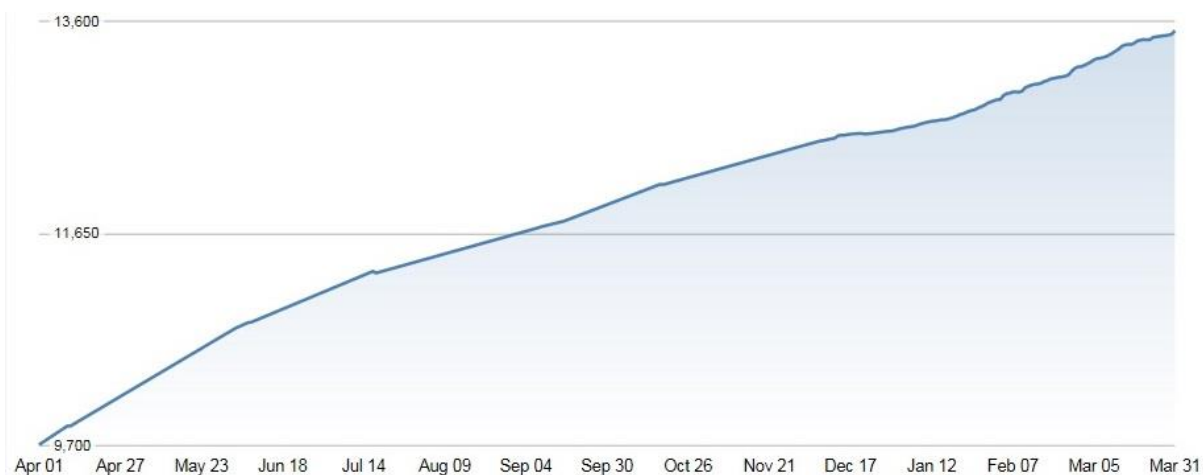
The Foresight programme's twitter feed:

@foresightgovuk - From 1 April 2013 to 31 March 2014 the Foresight account gained over 450 new followers (953 - 1,410) +47%.
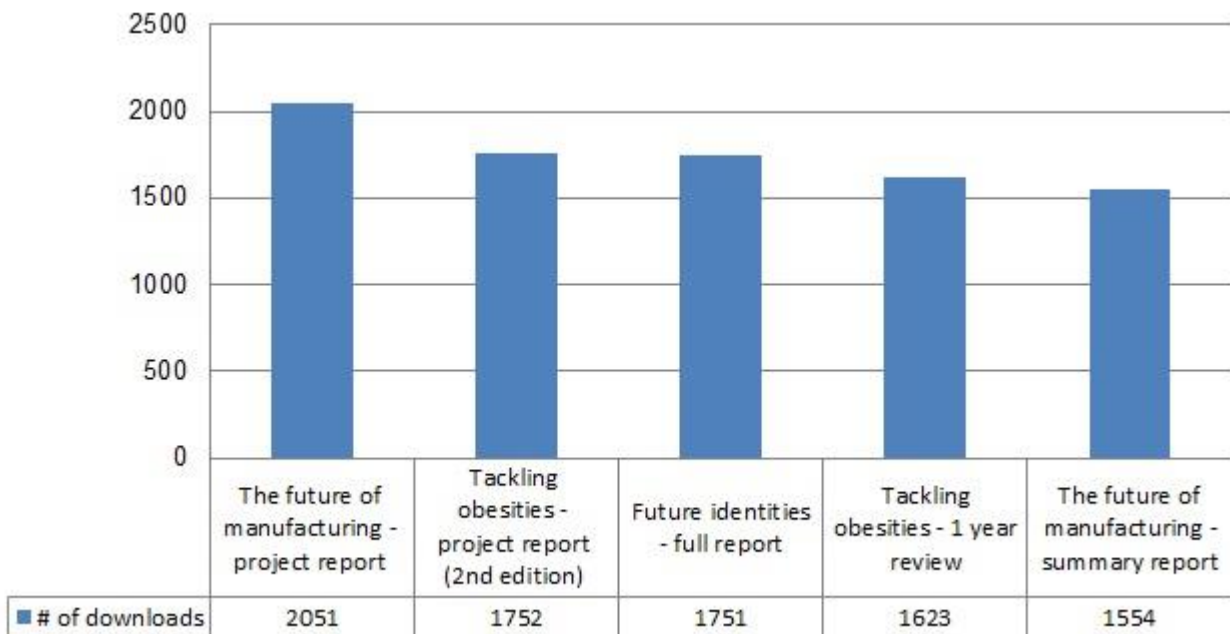
Website

Below are the statistics for the 5 most downloaded reports from both the GO-Science and the Foresight webpages.

Figure 2: Top 5 downloaded reports - GO-Science 2013-14

	Engaging with academics: how to further strengthen open policy making - a guide for policy makers	A Perfect Storm	Government Office for Science annual review: 2012 to 2013	Science and Engineering in Government: The Government Approach	The Government Chief Scientific Adviser's guidelines on the use of scientific and engineering advice in policy making
# of downloads	357	344	306	191	153

Figure 3: Top 5 downloaded reports - Foresight 2013-14

	The future of manufacturing - project report	Tackling obesities - project report (2nd edition)	Future identities - full report	Tackling obesities - 1 year review	The future of manufacturing - summary report
# of downloads	2051	1752	1751	1623	1554

Annex B: Financial information

The Government Office for Science is hosted by the Department for Business, Innovation and Skills.

GO-Science total spend in 2013-14 is projected to have been £5.7 million. Of this £4m is admin and £1.7m is programme spend.

Figure 4: GO-Science spend 2013-14
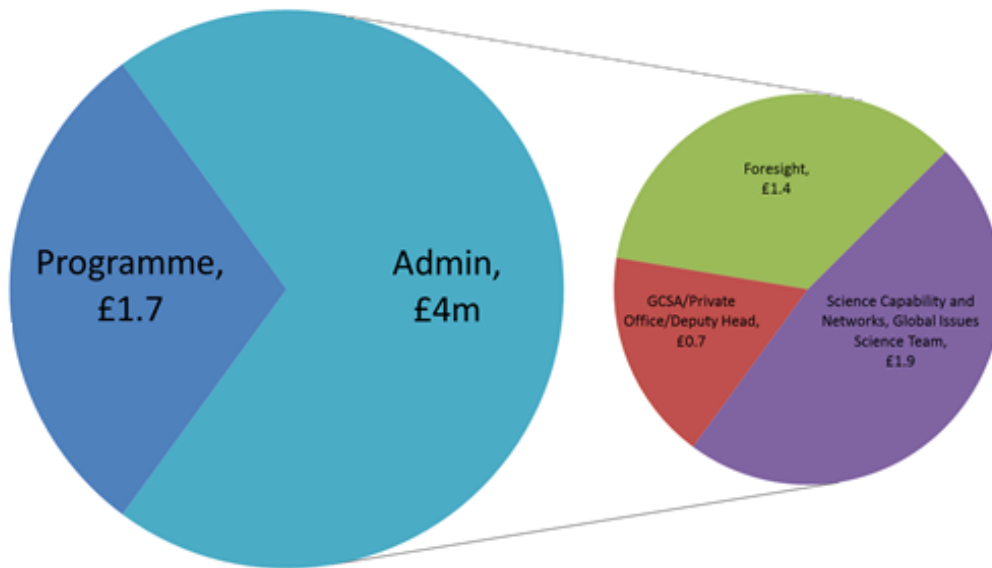
The table below shows outturns for 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14. Figures are quoted in £m.

Table 1: GO-Science spend 2009-10 to 2013-14

	2009-10	2010-11	2011-12	2012-13	2013-14
Programme					
	2.9	**2.3**	**2.3**	**2.6**	**1.7**
Admin					
GCSA/Private Office/Deputy Head	*0.9*	*0.9*	*0.7*	*0.8*	*0.7*
Foresight	*1.7*	*1.4*	*1.3*	*1.4*	*1.4*
Science in Government	*3.0*	*2.1*	*2.0*	*-*	*-*
Science Capability and Networks, Global Issues Science Team	*-*	*-*	*-*	*2.0*	*1.9*
Total Admin	**5.6**	**4.4**	**4.0**	**4.2**	**4.0**
Overall Total	**8.5**	**6.7**	**6.3**	**6.8**	**5.7**

What was previously called Science in Government was split into *SCAN* and *GIST* from 2012. In October 2013 GO-Science was restructured, and the budgets for these areas have been consolidated for this table.

The reduced programme spend in 2013-14 was as a result of a project being deferred to reflect the new priorities of the incoming GCSA. Additionally, savings were made on the original forecast of expenditure through negotiation and concentrating on value for money.

Any enquiries regarding this publication should be sent to:

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