



Government
Office for
Science

Engaging with academics: how to further strengthen open policy making

A guide for policy makers

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Overview

What's this all about?

This document is primarily aimed at policy makers working in science, technology or engineering related areas, but should be useful for any in government who work with evidence. It is a short guide and collection of case studies, designed to encourage and provide tips on constructive engagement with academia by government officials.

Why engage academics in policymaking?

The role of a policy professional is to bring together evidence, politics and delivery to support ministers in achieving real-world outcomes for government. This includes the development and use of a sound evidence base. Policy skills include the ability to build a network of experts, recognising and engaging expertise and being able to understand their contribution, as well as working across government to promote the use of robust and authoritative evidence. This is so that they can investigate, assess and advise on government policy with creativity and confidence.

As the Prime Minister's Council for Science & Technology set out in their 2008 [report](#), engagement by government with the UK's world class academic base represents a huge opportunity to inform government at all levels and drive forward evidence based policy.

Academics can be helpful in a number of ways. Crucially, they can help ensure policy decisions are based on the most up to date information. They help innovation in policy by bringing a range of valuable external viewpoints and fresh perspectives. They bring extra rigour to decisions, as they can ask and answer difficult questions and challenge and defend complex answers. Finally, they may also help bridge skills gaps in specialist analytical and data handling roles.

The Civil Service Reform Plan (June 2012) promotes open policymaking, asking civil servants to seek out greater challenge and collaboration in policy formation. So the time is right for renewed efforts to engage with our world class academic base.

What's in it for the academics?

As well as a trend within government to work with people outside Whitehall, there are new incentives for academics to engage proactively with government. The Research Excellence Framework (REF), a major assessment for the distribution of research funding, will take place in 2014. 80% of the assessment will be for excellence in past research, but 20% will be for the impact that research has had, which may include influence on policy.

What are the key issues to be aware of?

As the Institute for Government set out their recent report [Evidence and Evaluation in policy making](#), it isn't always easy. Researchers and government officials work in very different ways, and for constructive engagement there needs to be mutual understanding. But the rewards of robust and innovative policy making are huge, and you can now build on many years' experience. The key issues are covered in a list of Dos and Don'ts in engaging academics, below. The [Principles of Scientific Advice to Government](#) set out the rules of engagement between government and those who provide independent scientific and engineering advice, and are another important resource to help plan for some of the possible challenges.

So what are the main ways of engaging academics?

The three main categories of engagement are: through placements and secondments; through commissioned research; and by using advisory networks.

Secondments, placements, fellowships

The Research Councils, individual Higher Education Institutions, and other organisations such as the Centre for Science & Policy operate a number of policy placement schemes, which can often enable policy makers to access additional resource at low cost or even for free. Seconded academics can provide a useful complement to CSAs and more permanent scientists within Government, bringing up to date and in-depth knowledge and analytical skills. While rarer, placements and secondments from Government to academia also exist.

Commissioned research

Research can be commissioned at many stages of the policy cycle, to build the case for action, develop options and monitor impacts. Appropriate procurement guidelines need to be followed. Research can be commissioned directly by Departments, but also through specialist agencies. Types of research project can be in-depth or broad. They often feed into specific programmes or strategies to a deadline (e.g. for a white paper) and can have relatively high financial implications.

Strategic programmes of research offer in-depth engagement over a specific period of time, and are resourced so as to be able to respond rapidly to urgent issues arising mid-project. They may be led internally (or by an agency) or commissioned out. The Research Councils, who invest around £3 billion each year, fund a number of major cross-council research programmes with which government can engage. Read [more about Research Council programmes](#).

Outside of commissioned programmes, some departments and agencies maintain ongoing strategic relationships with key networks and institutions, providing input on issues of national importance (e.g. education, health, security, environment). Centres of Expertise in universities have also been set up for various thematic areas.

Networks

Networks of advisors can be ad hoc or ongoing. Some are simply convened when necessary, usually in response to a pressing issue or crisis. Continuing relationships with individuals may be informal, or structured via a panel, committee or similar arrangement. Such structures enable academics to develop a long term understanding of Government's needs and ways of working. Science Advisory Committees are examples.

Academics can also play important roles serving on or chairing reviews and Non-Departmental Public Bodies (NDBS). It is also common for known academics to be asked on an ad-hoc basis for input to briefing documents. Such academics have often taken part in the networks of the types described.

What do I do next?

The best first step as a policy maker will almost always be to speak to your in house experts to determine where opportunities may lie. The Government Office for Science (GO-Science) or its partners will also be able to offer advice. You can get in touch via the GO-Science contact [form](#).

Dos and don'ts

DO engage academics as early as you can.

DO consider all disciplines; lots of issues may obviously be natural science, but what could the social sciences offer?

DO find out who in your departments has the knowledge of the research landscape (e.g. make use of networks of advisors such as Science Advisory Councils).

DO contact analysts within your department for help and to make sure you are not repeating work that has already been done.

DO work closely with your academics to ensure the outputs are valuable and appropriate for a government audience (and follow all necessary procurement guidelines)

DO be upfront about issues like payment for services and the potential for conflict of interest.

DO explore opportunities to bring in placements to government, for instance from the Research Councils.

DO ensure your academic partners know they need to consult with you before communicating research findings.

DO try to keep up your links with academics you have worked with.

DON'T forget the different environments academics and officials work in. Academics are often used to producing large pieces of work over a long period, whereas Ministers often need to make decisions on a short deadline, using the best evidence available at the time.

DON'T forget to use your networks to see if there are collaborative opportunities with other government departments. For example by using the Government Science & Engineering community's LinkedIn page.

DON'T be tempted to go to the same academic again and again on similar issues; it is better on both sides to seek out a range of sources.

DON'T assume it is going to cost a lot. Engaging with academia can be free.

DON'T HESITATE to [contact GO-Science](#) if you think they might be able to help!

Ways of engaging

This section explores the main mechanisms for engagement with academics, ranging from individual placements from academia to government and vice versa to commissioned research projects, academic centres of excellence, and using networks of expert advice.

I. Secondments, placements and fellowships

Many departments are involved in interchange programmes between government and academia. These could be secondments, loans, placements, or fellowships. The criteria that generally vary are: how long are they for; how many days a week; and who pays. Such interchanges can be a valuable resource for government, as they may be part-funded by other bodies and thus be a low cost or free way of bringing in skilled staff.

To make placements work most effectively, it is important that the person and the tasks they are going to perform are well matched. The aim should be to integrate that person into a team, not to leave them isolated as the “resident academic”. There is therefore a process of managing expectations on both sides, which has to be carried out carefully, so that the department knows exactly what they are getting (a PhD student is not the same as a Professor), and the secondee understands they will be part of a large machine that is ultimately driven by Ministers and the political process. A good placement should nonetheless prove to be well worth that initial investment.

Case Study: [The Royal Society Pairing Scheme](#)

The Royal Society has run a pairing scheme between MPs and scientists since 2001. The aim of the scheme is to help build bridges between Parliamentarians and some of the best scientific researchers in the UK. Through a partnership with the Government Science & Engineering (GSE) community, in 2009 it expanded to pair civil servants with scientists.

"[the scientist] showed a genuine interest in wanting to understand our work and was able to explain her own work to our group... this has resulted in us asking [her] to provide us with further advice on an ad hoc basis."

-Civil servant from the Department of Transport.

"My day at the University's School of Chemistry was enormously useful, particularly in understanding some of the complex issues which affect the careers of research scientists and the funding of fundamental research."

-John Denham, labour MP for Southampton, Itchen paired with Dr Martin Bates, School of Chemistry, University of Southampton.

The scheme is a only a few days' commitment in each direction, keeping costs down while still opening eyes at senior levels of Government to the utility of scientific input to policymaking.

Case Study: [UCL Policy Secondments](#)

UCL run a policy secondment scheme for UCL researchers. So far they have been placed in the Government Office for Science (GO-Science) and the Department for Business Innovation and Skills (BIS), with in the scheme now expanding to the Department for Energy and Climate Change (DECC). These are funded via a range of UCL's funding sources, including Engineering and Physical Sciences Research Council (EPSRC) Pathways to Impact funding and Higher Education Innovation Fund (HEIF) funding. Feedback shows that the institution benefits from skilled academic expertise, while the individual learns how to present their research to policy audiences

"From a personal perspective, my secondment into BIS has been extremely beneficial. Before I started, I had a broad idea of the organisational structure of Whitehall, the relationship between ministers and civil servants, and the way in which government policy affects the academic community. However, my impression lacked the clarity gained through experience.

I now have a much better understanding of the policy-making process, as well as the fundamental relationship between BIS, the research councils, and academics themselves. The secondment was also an excellent opportunity to see how academics outside my own discipline interact with government, and how different sections of the academic community have a variety of needs that government must cater to. I feel much more aware of the work being done to fund academic research effectively, something which may not be appreciated by the community as a whole.

It is important to realise that I was not the only beneficiary of this secondment. From BIS' perspective, the involvement of early stage researchers in the policy-making process serves to give future members of the academic community the language and experience necessary to advise government effectively. By forging strong links with the community, BIS will help to foster a better working relationship with academia in the UK."

- Participant in the UCL policy secondment scheme, funded through UCL's award from EPSRC

Case Study: Ministry of Defence (MoD) & Defence Science and Technology Laboratory (Dstl) Global Uncertainties Partnership Fellow

A member of Dstl staff was awarded an [ESRC Global Uncertainties Partnership Fellowship](#), which pays 50% of his two days per week secondment at ESRC for 12 months.

'This link is helping to strengthen relationships with the UK Research Councils and to identify opportunities for sharing research funding in areas of mutual interest'

Civil Servant, Dstl

Case study: [BBSRC PhD policy placements](#)

These are 3-month placement opportunities for BBSRC-funded PhD students to gain experience of working in science policy. The Research Councils and other stakeholders run a number of different schemes along these lines.

"In 2012 the Government Office for Science took on two BBSRC placements for the first time. Bringing enthusiastic, motivated, and bright students in the working environment brought refreshing perspectives and a genuine boost to creativity and energy. The placements are ideal for a small project."

-Civil servant from the Government Office for Science.

Case study: [NERC policy placements](#)

NERC policy internships place PhD students in policy research offices, e.g. in the Parliamentary Office of Science and Technology. More details are available [here](#).

These help to fill a skills gap in the environment sector identified by a recent review: 'Translating research for policy makers, businesses and society'. Read more about the scheme through this [case study](#).

Secondments from Government to Academia

Schemes that place civil servants in academia are rarer, but can be a great way to ensure civil servants who engage with academics are up to date on specialist topics. If strategically organised, they can also be used as a way of preparing to move into a new area of policy.

Case study: [Centre for Science and Policy \(CSaP\) policy fellowships scheme](#)

The Centre for Science and Policy in Cambridge helps the sciences and technology to serve society by promoting engagement between researchers and policy professionals.

CSaP policy fellowships bring decision makers from both government and industry to Cambridge University to develop useful and lasting connections with researchers. Each policy fellow begins their fellowship with a tailored five-day programme of meetings with leading academics, who have been selected for the relevance of their research to the fellow's specific questions. The fellows then maintain active links with the centre throughout their two-year fellowship, and are able to convene further discussions and workshops to pursue their interests. Over 50 fellows have already benefited from the core scheme (aimed primarily at the senior civil service) and from the junior fellowship scheme that has recently been launched.

As one senior advisor in HMT commented, the discussions "opened up new perspectives and new ways of looking at the policy issues I am working on. Some of the knowledge I have gained has been immediately useful; other bits will kick in down the road, but I have no doubt they will be useful. And if I, or a colleague at HM Treasury, need help in any of these fields, I know I will be able to pick up the phone to one of the leading thinkers in the field."

Another director-level fellow described how his department had benefited from "the involvement of leading thinkers from the University – both high-profile engagement (on issues such as behaviour change), and invaluable ad hoc discussions which wouldn't otherwise have taken place (on wellbeing, the internet of things, and innovative sources of finance for civil society)." Sir Jeremy Heywood has called the programme "an excellent initiative, bringing together senior policy makers and academics to help generate new policy responses to complex social and economic challenges."

Making the most of Government-Academia interchanges

At present these placement schemes are heavily concentrated on certain areas of Government, in particular the Parliamentary Office for Science and Technology, the Government Office for Science, and the Knowledge and Innovation Group in BIS, who are responsible for national science policy. Although other departments are involved in such schemes, research suggests there is some lack of awareness as to what is available, as well as concern that placements would not prove to be cost or time effective. GO-Science is working to address these concerns and widen the net of placement destinations.

2. Commissioned research

Research can be commissioned at all of the key stages of the policy cycle to help deepen understanding; for instance to:

- explore the problem.
- formulate possible policy responses.
- monitor impacts.

Any commission of research must follow all relevant procurement guidelines. Procurement guidance can be obtained from individual departments.

When departments require a particular piece of research, usually calls of interest are published and bids received from academia, industry, and in some cases government laboratories. This can be done directly via departmental websites, or through Research Councils or Higher Education Institutions (HEIs). On occasion departments will make use of established links with trusted members of academia or industry, providing this does not fall foul of procurement rules.

Sometimes projects are co-funded with industry, or the private sector wins a contract but then sub-contracts it to an academic team. One problem with the commissioning process is that a few large companies have the resources to place bids quickly and impressively, while academics may not have the experience or time to do so. This may narrow the chances of getting the best academics involved. In some departments it has been addressed by couching projects in more broad terms, allowing applicants to show an “early expression of interest”. This is then followed by a second phase, in which bidders are given a more precise brief. This may help to achieve a balance of input between individual academics and larger organisations.

A multidisciplinary approach

Sophisticated understanding of policy problems often requires a multidisciplinary approach.

Case study: Foresight

In line with the Civil Service Reform Plan's recommendations to 'improve the ability to scan the horizon better for threats and opportunities ahead', the [Foresight](#) programme regularly assembles groups of experts to inform their work and identify challenges that will arise in the future. Recently published reports include [The Future of Computer Trading in Financial Markets](#), [Global food and farming futures](#) and [Migration and global environmental change](#).

The rigorous and multidisciplinary approach to Foresight reports mean they have lasting impact. [Tackling Obesity: Future Choices](#), published by Foresight in 2007, involved around 100 experts across a broad spectrum of specialisations. The report produced a vision of how the UK might respond sustainably to obesity over the next 40 years and has had a major, enduring impact. Most recently it informed the Department of Health's strategy *Healthy Lives, Healthy People: A call to action on obesity in England*. Launched in 2011, the strategy sets out a new approach to enable effective action on obesity and encourages involvement from a wide range of partners. It states that the prior Foresight report has been a 'driving force behind efforts to tackle obesity' and, although published almost four years ago, remains a 'robust foundation for future action'. In particular, *A call to action on obesity in England* draws on the report's [innovative system](#) for mapping how obesity impacts, and is impacted by, other factors.

Case Study: Sandpits - the Centre for the Protection of National Infrastructure (CPNI) and Engineering and Physical Sciences Research Council (EPSRC) Ideas Factories

One mechanism for formulating and commissioning projects reported as particularly successful is sandpits and ideas factories. A sandpit, such as run by EPSRC, is a residential interactive workshop lasting a number of days involving 20-30 participants, a director, a team of expert mentors and a number of independent stakeholders.

Participants from many different academic disciplines are involved, some being active researchers and some potential users of research outcomes. This drives lateral thinking and new approaches to addressing research challenges.

After the 7/7 bombings, CPNI recognised a need to find innovative ways of dealing with crowded environments. They initiated a Government-led ideas factory with EPSRC to consult on the issue and to develop appropriate programmes of work. They produced a call document setting out the scope of the workshop, which was published on the RCUK website with an invitation for eligible academics to apply.

Successful academics and other stakeholders were then invited to a sandpit, where stakeholders provided more detailed information relating to the scope of the workshop. This led to everyone involved gaining an understanding of the issues in their own terms. Free idea generation could take place over the remainder of the sandpit, leading to formal project proposals. These were peer reviewed by all the participants, and those acknowledged as useful were funded on the spot.

[More information on EPSRC ideas factories.](#)

Case Study: DCLG enquiry weeks

A number of departments run lower-cost versions of ideas factories. For example, the Department for Communities and Local Government (DCLG) holds Enquiry Weeks, which aim to bring fresh inputs into the department, help DCLG officials understand better how the department's policies impact on communities, and engender closer ties between the department and its partners, leaving them feeling empowered to contribute to the policymaking process. DCLG held its first Enquiry Week in March 2012, bringing over 100 external experts together with officials to discuss policy options. Speakers included academics, leading lights from think tanks, community groups, practitioners and local leaders. Evaluation showed that the event was highly regarded, with a large majority of participants from inside and outside government believing they had identified ideas that would help improve policy. Over four days, discussions drilled down to the practical policy issues the department faces.

A senior official commented that "the discussions have deepened our understanding of how policies are working, but, as importantly, we have made valuable new contacts for the future. My hope is that we will see more ideas and suggestions for improved policy being brought to us, and this is the sort of event we should run again to keep the dialogue going and build up our networks".

Strategic research programmes

Building long-term relationships with organisations to foster innovation and trust, while drawing on a wide range of views and expertise, is another challenge set out in the Civil Service Reform Plan. Such partnerships may be on a local, national or international basis. Several departments have developed strong links with universities that have highly developed expertise in relevant fields. These can provide deep, strategic input for issues of national importance (e.g. education, health, security, and environment), although they tend to be costly. They aim to build capacity and ability to respond with quick analysis on recurrent topics.

Case Study: Met Office: [Met Office Academic Partnership](#)

The Met Office Partnership is a cluster of research excellence that formally brings together the Met Office with institutions who are amongst the leading UK Universities in weather and climate science (University of Exeter, University of Leeds and University of Reading). University departments that apply have demonstrated their capability in three core areas. For example, Leeds leads on African climate research. The Met Office has invested in jointly funded Chairs at the Universities.

The partnership aims to draw together world class expertise around a focused programme of joint research, in order to tackle key challenges and determine priorities for future funding. It sets in place formal arrangements for collaboration on key areas of science of common interest, and to identify research areas that will be governmental priorities in future.

Research staff are supported to move freely between the Met Office and their universities to deliver improved levels of knowledge exchange. The Partnership also aims to provide an exciting environment for the education, training and career development of young researchers. The Met Office sponsors undergraduate and PhD prizes, summer placements and internships, and will seek to focus its existing Collaborative Awards in Science and Engineering (CASE) studentship scheme on areas of strategic importance, as well as targeting the best candidates.

It is also increasingly common for departments to work through partnership with other research funding organisations, businesses and researchers. Academia-led initiatives, such as the Oxford Martin School or UCL Grand Challenges, do much to promote engagement between researchers and the end users.

Case Study: [University College London \(UCL\) Grand Challenges](#)

The UCL Grand Challenges include Global Health, Sustainable Cities, Intercultural Interaction and Human Wellbeing. They are a mechanism through which concentrations of specialist expertise across UCL and beyond can be brought together to address aspects of the world's key problems. They provide an environment in which researchers are encouraged to think about how their work can intersect with and impact upon global issues. The programme both responds to the needs of policy makers and provides robust evidence-based solutions to complex problems.

The Science of Happiness in May 2012 explored some of the evidence on what makes people happy, drawing on expertise from UCL Neuroscience, UCL Political Science and UCL Engineering Policy, as well as contributors from DEFRA and ONS. Held by UCL Public Policy and the UCL Grand Challenge of Human Wellbeing, the event sought to draw out the implications for policy and consider how policymakers can act to help to improve quality of life and deliver on their promises of happiness. [More information and a video of the event.](#)

UCL's Public Policy Strategy aims to strengthen links between researchers and policymakers through, for example, policy-oriented research and briefings, events and workshops, a regular e-newsletter, and a scheme through which researchers can be seconded to government departments and agencies. [Find out more.](#)

Case Study: The Oxford Martin School

The Oxford Martin School is a unique, interdisciplinary research community of over 300 scholars working to address the most pressing global challenges and opportunities of the 21st century. From the governance of geo-engineering and the possibilities of quantum physics, to the future of food and the implications of our ageing population, Oxford Martin supports over 30 individual research teams from across the University of Oxford to consider some of the biggest questions that concern our future. Impact beyond academia is one of the core criteria for funding, and the School supports a wide range of outreach initiatives, from dynamic events and seminars to partnerships with the World Economic Forum, government departments and other international agencies, as well as placing strong focus on digital media to communicate the outcomes of our research.

The School is starting a new initiative, the Oxford Martin Policy Papers, as part of its ambition to become a leading source of policy-relevant research. Through these papers, OMS are seeking to identify critical policy gaps where their interdisciplinary research might add best value, through providing timely and accessible policy advice. **OMS would welcome ideas and feedback from the policy community as to where the School might be best place to add value. Given OMS's focus on the challenges of the 21st century, what are the key policy gaps or opportunities where fresh ideas and thinking would be welcome?**

For more information on this, contact the Research Community Issues team (details on page 6).

[Find out more about Oxford Martin School.](#)

Centres of Excellence

Centres of excellence may be used as a first port of call by other departments who are looking to investigate an avenue of research. This could also help promote interdepartmental communication and collaboration. They represent a substantial resource commitment by the department and university, but bring substantial benefits.

Case Study: [The Centre for Workplace Health](#)

The Centre for Workplace Health (CWH) was launched in 2005. It is a national centre of excellence built on an existing agreement between the University of Sheffield, the Health and Safety Laboratory and the Sheffield Teaching Hospitals NHS Foundation Trust. The creation of the CWH allowed the participants to move their focus away from the academic discipline of Occupational Medicine to a partnership approach for Occupational Health delivery, to help achieve targets set by the Government. The Centre hosts the largest group of occupational health specialists in the UK and delivers high quality research, training and advice. It also offers cost effective occupational health services that deliver measurable health improvements in workplaces. The centre has ensured that doctors and nurses are exposed to policy work early in their careers, allowing them to interact with policy officials more efficiently.

Case study: Heilbronn Institute for Mathematical Research (HIMR)

HIMR is a partnership between GCHQ and the University of Bristol to bring academic mathematicians to work on challenging problems of long-term importance to GCHQ. Established academics are seconded, typically for a year, and a number of three-year post-doctoral positions are available. HIMR members work half-time on GCHQ's problems, which are classified, and half-time on their own personal research, which they are free to publish. GCHQ invests its own staff time and expertise in bringing appropriately formulated problems to HIMR and turning research outputs into operational capabilities. The ability to continue producing publishable research while working on national security is attractive to academics.

Research with Impact

The focus on impact in the Research Excellence Framework (the mechanism by which research funding is allocated), including policy impact, is leading to a growing appetite amongst university departments to engage with the policy world.

Case Study: [ESRC pathways to impact toolkit](#)

ESRC have developed a guide for ESRC researchers on how to engage with Government and other users through their work. It highlights the vital role that research has in public policymaking and gives academics advice on how best to present their case. It gives details of the support available from the ESRC, which includes training, publications, and help with organising events. It explains key aspects of the UK policymaking process and links to some vital information sources. It also gives advice on managing and maintaining a range of policymaking contacts and gives tips on using specialist public affairs agencies.

An ancillary effect of both the REF and Pathways to Impact statements is that academics are increasingly likely to start seeking evidence of the impact of their work on policy, so Government officials engaging with academics will be asked for testimonies about the relevance of academic input. The Government Economic and Social Research team (GESR) in HMT, in consultation with HEFCE, have prepared guidance on how officials should respond to these requests. [Contact GESR](#).

There are a number of initiatives, coordinated by Research Councils or universities, which are multi-disciplinary programmes of research that aim to address many of the big research challenges over the next 10 to 20 years. Current themes amongst the Research Council Cross-Council Programmes are in areas such as environmental change, lifelong health and wellbeing, energy, and dealing with global uncertainties in a changing world. RCUK coordinates the priority themes to accelerate the delivery of benefits and economic impact. An example is the Living With Environmental Change Partnership.

In addition the Research Councils, both individually and collectively as RCUK, are proactively working with government departments to put in place concordats. The concordats help facilitate joint working and co-design of research around joint objectives. A current Concordat exists with DCLG. There are others in development with the Home Office and MoD.

Case Study: [Living With Environmental Change \(LWEC\) partnership](#)

The LWEC partnership is a body of 21 public sector organisations that fund, carry out and use environmental research. Organisations include the UK Research Councils, government departments with environmental responsibilities, devolved administrations and agencies, and the private sector. The partnership engages in more than 70 accredited activities, including programmes, observations, centres of excellence and projects. Together they represent more than £800 million of LWEC Partner investment to ensure that decision makers in Government, business and society have the knowledge, tools and foresight to mitigate, adapt to and benefit from environmental change. The partnership provides a mechanism for communication, including guidelines on the knowledge exchange required to establish the two-way flow of knowledge needed between researchers and potential users of research, along with a clear understanding of each other's needs and priorities. The LWEC-accredited UK National Ecosystem Assessment (UK NEA) started in 2009, bringing together over 500 UK scientists and economists to carry out an independent and peer-reviewed assessment of the UK's natural environment, in terms of the benefits it provides to society and continuing economic prosperity. This played a key role in the development of the Government White Paper on the Natural Environment, providing the evidence for more joined-up action that takes account of the full value of ecosystem services in decision making.

Case Study: [NERC Living With Environmental Change guidelines](#)

LWEC is launching a set of knowledge exchange guidelines in November 2012. They provide good practice guidance on knowledge exchange for all LWEC programmes and activities, to help ensure that programmes are 'co-designed, co-managed and co-delivered', by policymakers (and other users) and researchers, that there is two-way knowledge exchange with ongoing engagement, and that outputs are more likely to be taken up and have impact. The guidelines contain links to many real-life good practice examples that have been used in other programmes. They are aimed at all funders of research, so are relevant to government bodies who commission research as well as Research Councils, and have been developed in consultation with them.

3. Networks

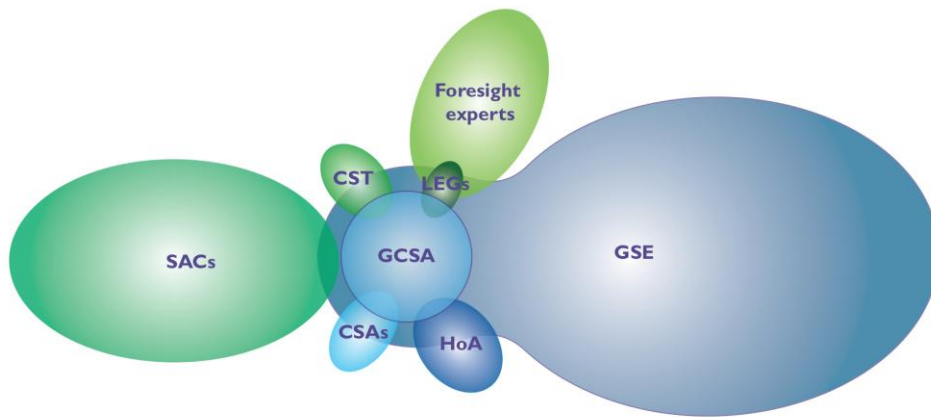
Networks with representation from academia can provide a highly useful tool to engage in the provision of advice for policy. They can be ad hoc or permanent, and meet regularly or whenever the need arises.

Government departments employ a variety of networks to engage academia. In the field of science and engineering, aside from the [Government Chief Scientific Advisor \(GCSA\)](#), there are around 20 departmental [Chief Scientific Advisers \(CSAs\)](#). The CSAs are generally from academia or industry, and often work part-time for government to allow them to maintain links with their home organisations. Additionally there are over 60 [Science Advisory Committees & Councils \(SACs\)](#) that provide expert independent advice to Government departments. Their members cover a range of disciplines from science and industry, and are often nominated by relevant professional bodies or through an open selection process. Beyond SACs, there are also lots of individual scientists who sit on other bodies contributing a science perspective.

GO-Science conservatively estimates that through the networks we alone support, departments engage with around 1500 academics per year. This figure is likely to be much higher if we consider wider Research Council interactions and the other analytical professions. Among others, [Heads of Analysis](#), [Council for Science and Technology](#) and [Foresight](#) experts also provide strong links to academia.

In addition, there are over 3000 civil servants with a background in science and engineering who are members of the [Government Science and Engineering \(GSE\) network](#), and many more in government who work in science or with scientists but have not self-nominated as members of the GSE network.

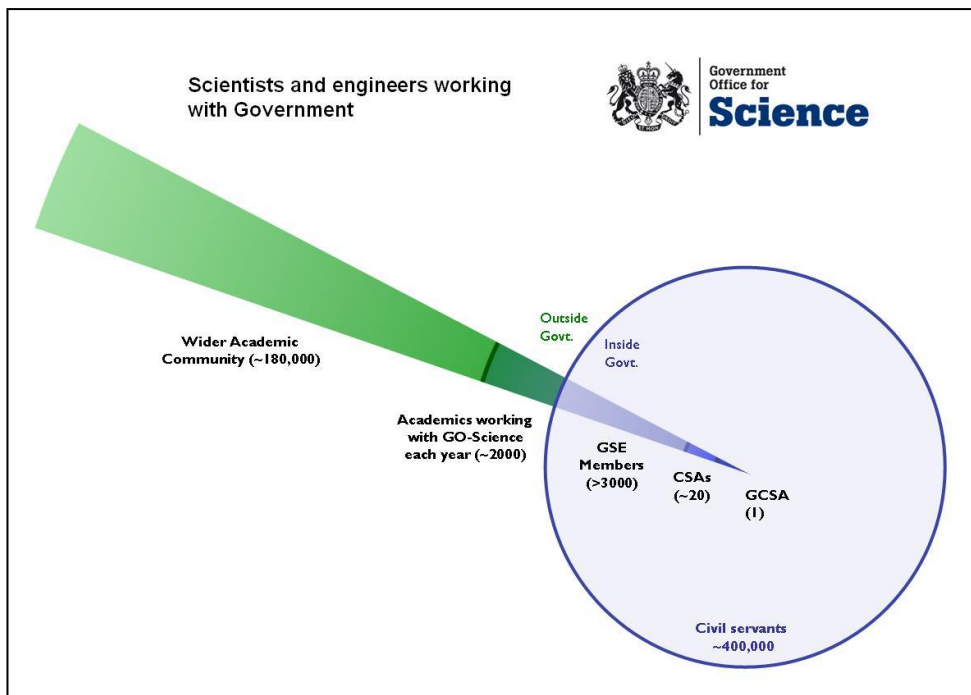
There is significant potential to make more of these networks, in delivering policy across government and finding someone with expert insight to add to your work.



An illustration of the science advisory networks used by the GCSA.

GCSA	Government Chief Scientific Advisor	(1)
CSAs	Departmental Chief Scientific Advisors	(~20)
CST	Council for Science and Technology	(19)
HoA	Heads of Analysis	(7)
SACs	Science Advisory Committees and Councils	(>70, ~1500 members in total)
GSE	Government Science and Engineering	(>3000)
Foresight experts		(~600, ~200 per project)

There are also many informal connections between Government officials and academics that provide great value. They allow rapid, timely input to specific policy questions, and the cost of their input is very low.



An illustration of the relative size of constituencies of those contributing scientific evidence via the Government Office for Science.

Ad-hoc networks of advice

Often academics are drafted in to form expert groups or input to briefing documents as the need arises. These networks may be temporary, or may lead on to continuing collaborations.

Case Study: [Blackett Reviews](#)

The Government Chief Scientific Advisor (GCSA), Sir John Beddington, has established a process for government to engage with academia and industry to answer scientific or technical questions primarily in the security domain. These so called 'Blackett Reviews' provide fresh, multi-disciplinary thinking in a specific area. In each review, a small panel of 10-12 internationally regarded experts from outside government is tasked with providing up-to-date, leading edge answers on a well defined question or set of questions of relevance to a challenging technical problem.

In autumn 2010, the GCSA convened a group to address the question "*How can we ensure that we minimise strategic surprises from high impact, low probability risks?*" The panel considered how government could best identify, assess, communicate and quantify the inherent uncertainty and strengthen UK government's approaches to addressing the numerous threats and hazards from within and outside the UK. The panel met three times over a nine month period, and provided an independent scientific review of the current risk management approach of a number of departments, primarily the MOD and the Cabinet Office.

Case study: [The Fukushima Scientific Advisory Group in Emergencies \(SAGE\)](#)

On 11 March 2011, Japan was hit by a magnitude 9.0 earthquake. The resulting tsunami devastated large areas of the North Eastern Coast of Japan, causing enormous loss of life and badly damaging The Fukushima No 1 nuclear power facility.

SAGE was activated to advise Cabinet on the UK response to the incident and to provide advice on the implications of a potential radioactive release from the Fukushima plant for British Nationals in Japan. GO-Science worked with key government departments, agencies (Health and Safety Executive Nuclear Directorate, Health Protection Agency, Met Office and others), external academics and international partners to understand the situation on the ground, to develop possible scenarios and to assess their impact.

SAGE based its advice on the likelihood and impact of the reasonable worst case scenario, which included core meltdowns in the damaged reactors. Its advice was that there was no significant radiation hazard in Tokyo that would lead to a need to evacuate.

The cooperation with the Japanese Government on this crisis, including the advice provided by SAGE and the GCSA's role in communicating this advice, has been extremely beneficial to UK-Japan relations.

The National Academies ([Royal Society](#), [Royal Academy of Engineering](#), [Academy of Medical Sciences](#) and the [British Academy](#)) also do a great deal of policy work, and have extensive networks of expertise. GO-Science has good links and can broker connections as required.

Continuing networks of advice

Some departments have assembled expert groups to monitor various issues over longer periods.

Case Study: [The DCLG Behavioural Research Network](#)

The field of behavioural science is now recognised as of great importance to policy making. A [behavioural unit in the Cabinet Office](#) feeds advice on human behaviour into a wide range of policy development across departments. The Department for Communities and Local Government (DCLG) has formed a behavioural research network of academics, who are connected via LinkedIn. The network comprises a group of professionals, from Higher Education Institutions and from the private and public sectors, who share an interest in behavioural research in the context of DCLG's policy agenda. Supported by Research Councils UK, the group deals with issues of interest to the department, such as improving energy performance.

Case Study: DECC/Defra social-science expert panel

This joint departmental partnership brings dividends for areas which (like most of Government) overlap in different departments. The expert panel consists of around twelve social science advisers, who provide evidence based advice and challenge to the departments' social research strategy, programme and priorities. They advise and critically assess how Defra and DECC gather and use social science evidence and advice, while providing independent critique/quality assurance and peer review of the design and output of social science research and evaluation studies, drawing on wider expertise where appropriate. It also keeps Defra and DECC connected to relevant social science in the UK and internationally.

Professional Networks

Analysts in government belong to a number of professional networks. For science & engineering, the Government Science & Engineering (GSE) community represents well over 3000 civil servants who have science and engineering backgrounds, many with connections to



academia. Why not [join the GSE and receive their monthly newsletter](#). GSE also has a LinkedIn community (see below).

The other analytical professions in Government maintain their own professional networks and are also important brokers of academic interaction. They are:

[Government Economics Service](#), [Government Operational Research Service](#),
[Government Social Research](#), [Government Statistical Service](#).

Social Networks

Pre-existing social networks can be an excellent, low-cost vehicle for interaction with a stakeholder community. Using social media such as communities or groups on [LinkedIn](#), or following key stakeholders on Twitter, can be a valuable way of mapping informal connections, helping policymakers go to the right place when they are seeking scientific input. A LinkedIn community has been established for GSE members, facilitating interaction across a steadily increasing membership.

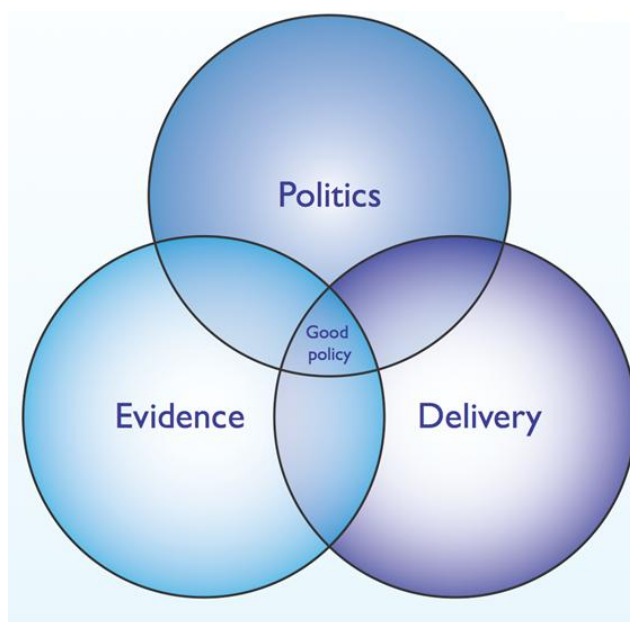
The London School of Economics [Impact from Social Science](#) project aims to demonstrate how academic research in the social sciences achieves public policy impacts. Its research has found social media is also increasingly an important platform to stay up to date with the latest research and thinking on an issue, as academics flock to the platform. By following particular experts and sources you are able to build up a Twitter feed that meets your personal range of interests. Used alongside other sources, social media is a great way of identifying issues, people and centres of expertise. Thousands of academics and researchers at all levels of experience and across all disciplines already use Twitter daily.

Hints for successful engagement

Although they bring incredibly valuable perspectives and a rigorous approach to evidence, academics who have not worked with government before may not initially be comfortable with some aspects of the policy environment. Some of the key issues to be aware of are explored here.

How to reconcile academic independence with Civil Service neutrality

There are a number of significant differences in working environment between academics and civil servants. Academics are subject to pressures such as peer acknowledgement, while civil servants must work to tight time frames. The notion of democratic decision making based on evidence is second nature to policy makers, but may not be intuitive for academic researchers.



Academics need to know that decisions are taken by Ministers on a balance of politics, delivery (How much will this option cost? What are the legal implications? How long will it take to implement? Will it require Parliamentary legislation?), and evidence (What does the evidence point to? Is it clear-cut, arguable or inconclusive?).

For more detail on the professional obligations and standards surrounding academic engagement with policy, please see the [Principles of Scientific Advice to Government](#).

In addition, the Campaign for Science and Engineering has a [useful list of top ten tips for academics on engaging with parliament](#). Many of the lessons apply to engaging with government too.

Project and risk management

The different working practices in academia and government mean that it is important to ensure that reports or other final outputs are relevant to their use.

There can be issues in ensuring academics write a report in an appropriate style for non-expert officials and ministers. To mitigate this, constructive project management is important, including the provision of the right guidance and examples of what is required. Engaging government communications experts at an appropriate point is one option.

Regular contact to ensure a project is running in the right direction is helpful, as it can prevent a project going down a side alley. But there is a delicate balance to be struck, in keeping academics to target without micromanaging them.

It is also important to ensure that academics are aware of the occasionally sensitive environment in which some policy is made, and the need for joined up and coherent communications. Academics' premature press releasing of government-commissioned research without consultation with the commissioning department can be highly deleterious to not only the policy but government –academia collaboration.

A potential pitfall of engaging an academic or group of academics initially on a pro bono basis is that it may, because of conflict of interest, exclude them from bidding from subsequent research opportunities arising. Ensuring this possibility is raised from the outset and that transparent and frank conversations are had about any payment for services is beneficial. Always check with procurement experts.

Getting the right experts at the right time

If academics are to be involved in a departmental project, there are the two questions of when and who. Just as the Civil Service Reform Plan commits the civil service to involving delivery experts early in the policy process, to ensure that the policy can

be implemented successfully; engaging academics from the very start of projects, initiatives, or early in discussion about topical briefing is often beneficial.

Officials, such as those in Chief Scientific Advisers' teams, are well placed to advise on lists of academic contacts, as are the other analytical groups in government. Academic secondees within a department should also be able to advise on the best people in their field to contact, and bodies like the Centre for Science & Policy and the Oxford Martin School have extensive networks of academic contacts.

Academics may have interests in a particular department, or see that department as a strong brand with which to be aligned. If a department does not appear to be recognised as a good place for academics to get involved, there may be a case for doing some extra outreach with the sector.

Improving corporate memory

A potential barrier to departments optimising their academic connections over the long term is regular staff turnover. A successful collaboration may be forgotten when the key contact moves on, leading to duplication of research effort and a lack of awareness as to what is going on in other teams.

To manage this, a number of departments have databases of stakeholders and academics and some have database of reports they have produced. The ideal would be to have these databases not only accessible between departments, but also easy to search, although this is probably some way off. Again, social media may have an increasing role to play here.

Case study: Department for Environment and Rural Affairs (Defra)'s SCPinfont resource and Science and Research Projects Database

[SCPinfont](#) is a free, online resource for the research community, providing easy, centralised access to relevant and up to date information about sustainable consumption and production. Resources amounting to more than 3,000,000 pages of data and 15 or more databases are searched and indexed, and over 1400 subject specific internet links can be accessed from its pages. It provides access to relevant content through search and indexing software that is quick, effective, and easy to use, including content not visible to conventional internet searching.

At any one time, Defra is responsible for around 1000 research projects. These cover research in natural and social sciences, as well as projects on economic analysis, monitoring, testing and surveillance activities. Details of these Defra-funded projects are available through the [Science and Research Projects Database](#). The searchable system provides a range of information on completed and ongoing projects (e.g. title, cost, contractor, duration, description, reports, etc).

Case Study: BIS - RCUK Gateway to Research

In December 2011 BIS published the *Innovation & Research Strategy for Growth*, which specifically stated that "the Research Councils will develop a web based 'Gateway to Research', which will allow ready access to Research Council funded research information and related data".

Jimmy Wales, Chairman Emeritus of the Wikimedia Foundation, is a special adviser to the project.

The goal of the Gateway is to allow the public access to information on the research funded by the UK's Research Councils, including:

- Who, what and where the Research Councils fund
- The outcomes and outputs from Research Councils' funding, linking to already available open access repositories and/or data catalogues

The Gateway will be aimed at those who wish to access UK research information, with a particular focus on innovation intensive SMEs who wish to understand the UK research base. It will provide a mechanism for non-researchers to identify potential partners in universities, and make public all available research information in a consistent, usable format whilst adhering to common standards for open access.

A beta version of the [Gateway to Research is now available](#) and can now be accessed. There is also a [blog](#) for those interested in engaging with the technical side of the project, and the standards and formats that RCUK are using.

Maintaining academic connections

Developing long term connections is absolutely critical to academic engagement, because of the mismatch of academic vs. policy timescales. It also means that the initial investment of training an academic on ways of working in a policy environment, and undergoing security vetting if necessary, can be recouped over a longer period. But resources are limited, and research managers, while recognising the value of maintaining a long-term network of contacts, may not feel it is a top priority. This can bring research managers back to the ad hoc approach, where they have a handful of "go to" contacts in the academic world, which does not always help them access the best advice on a particular topic.

Departments might wish to look at how they can maintain dormant connections with academics. One way to maintain friendly relations is through mailing lists, whereby the academic receives regular updates as to what the department they worked with has on at the moment. Departments such as the Home Office and Ministry of Justice already maintain stakeholder mailing lists of this type.

Arranging and attending seminars between industry, government and academia is another way to build networks, stay informed and raise the profile of departments, although cost can be a barrier. Organisations such as RCUK [run seminars aimed increasingly at attracting policy makers](#), many of them free of charge.

Case study: Departmental stakeholder connect databases

Several departments, including BIS, Defra, MoJ and HMRC, each have a web based 'Connect' database. This allows them to store information on stakeholders, including notes and types of interaction with policy officials. Users can also send group communications to members, categorised by policy areas and interests. After communications are sent it is possible to track who has opened them.

As part of the civil service reform targets to share resources, databases of this kind can allow civil servants to quickly identify useful contacts in departments and academia, as well as identifying projects similar to their own work, which could provide useful scope for mutually beneficial collaborations. Publishing planned and completed research gives the wider scientific community the opportunity to test and challenge our approaches effectively.

Your own skills and knowledge

As well as improving policy outcomes, engaging with academics can help contribute to your skills, as set out in the new [civil service competence framework](#). Some examples are:

Collaborating and Partnering. People skilled in this area create and maintain positive, professional and trusting working relationships with a wide range of people within and outside the Civil Service to help get business done.

Making Effective Decisions. Effectiveness in this area is about being objective; using sound judgement, evidence and knowledge to provide accurate, expert and professional advice. For all staff, it means showing clarity of thought, setting priorities, analysing and using evidence to evaluate options before arriving at well reasoned, justifiable decisions. At senior levels, leaders will be creating evidence based strategies, evaluating options, impacts, risks and solutions. They will aim to maximise return while minimising risk, and balancing social, political, financial, economic and environmental considerations to provide sustainable outcomes.

Conclusions and further reading

Bringing academics into the policy making process can help policy be innovative, more robust, and based on the most up to date knowledge. It is an important part of open policy making. There are 3 broad ways to engage academics: secondments, networks, and commissioned research. Because of the different working environments in academia and policy, it is not always easy to get the relationship right. Yet once constructive relationships have been established with experts who know the system, their input is hugely valuable. We now have a lot of experience with excellent outcomes, so you can make working with academics work for you.

If you would like more information on the guidance or case studies presented in this document, the Government Office for Science would be happy to help. Contact the Research Community Issues team on 0207 215 1148 or via the GO-Science [enquiry form](#).

Further reading

The Government Chief Scientific Adviser's (GCSA) [Guidelines on the use of scientific and engineering advice in policy making](#).

The [Principles of Scientific Advice to Government](#) set out the rules of engagement between government and those who provide independent scientific and engineering advice.

For a more detailed discussion on the importance of good interaction of government engagement with academia see also the CST report of 2008 [How academia and government can work together](#).

A NERC Booklet on [Science into Policy](#) – first published in 2005 – provides Natural Environment Research Council staff and grant holders with an introduction to the world of policymaking

The Institute for Government run a research program on “[better policy making](#)” and have published a report on [Evidence and Evaluation in policy making](#), which discusses the role of academia.

[Test, learn, adapt](#) is a report produced by the Cabinet Office Behavioural Insights Team and Dr Ben Goldacre. It is an easy guide to randomised controlled trials in policy making.

A project funded by HEFCE that aims to demonstrate how academic research in the social sciences achieves public policy impacts has useful advice for academics of all persuasions; the [LSE Impact from Social Sciences project](#).

The Centre for Science and Policy’s [research programme](#) carries out comparative empirical research on the relationship between scientific expertise, policy and politics.

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