



## **Centre for Science and Policy**

Networks of Expertise and Evidence for Public Policy



Annual Report December 2013

"Networks of evidence and expertise for public policy can make a real difference to how government meets the biggest challenges we face today."

To respond effectively to the ever more complex questions they face, civil servants need to be able to apply the best analytical approaches and the most robust evidence. More broadly, governments need to adapt their systems to be able to draw on relevant expertise when and where it is needed.

This is the opportunity which is now presented to our leading universities: to help improve the quality of the policy process, both through teaching and research, and by producing insights which address the needs of policy makers. The University of Cambridge, home to worldleading research across the whole spectrum of disciplines, is uniquely well placed to respond to these needs.

The Centre for Science and Policy is central to the University's mission to contribute to society. By building the networks of evidence and expertise for public policy, it can make a real difference to how government meets the biggest challenges we face today.



Lord Sainsbury of Turville, Chancellor, University of Cambridge and former UK Minister of State for Science and Innovation

We are all affected in our day-to-day lives by policies drafted in Whitehall, and these are often informed by research and advice from lecture halls and laboratories around the country.

Science and technology also have a vital role to play in helping to drive forward the recovery, contributing to the long-term economic plan. The Government's Science and Innovation Strategy, to be published in 2014, will consolidate our long-term commitment to research and innovation. Those of you working in this field should be in no doubt as to the immense value this Government places on your efforts.

I congratulate the Centre for Science and Policy for building on this work, with a UK-wide network of some of the brightest academics and scientists in the world. Better links between policy makers and leading researchers mean our approach will continue to be framed by expert knowledge and clear evidence.



David Willetts, UK Minister of State for Universities and Science

# Centre for Science and Policy

In the four and a half short years since it was founded as a catalyst for change in the University of Cambridge, the Centre for Science and Policy (CSaP) has spun out a remarkable new network of experts and decision makers in public policy. While the Centre continues to play a key role as convenor and facilitator – and increasingly, as a focus for leading researchers to meet and work together – it's the network that represents the real difference: a unique community of academics and policy makers collaborating in an innovative environment, building relationships based on understanding, respect and trust.

Given the Centre began at Cambridge, it was always going to start from the physical, engineering and life sciences in which the University leads the world. However, our reach quickly grew to cover all the disciplines – including the social sciences, humanities and the arts – which contribute to the production of policy-relevant evidence and expertise, and to a fuller understanding of society.

From the very beginning, we understood that the key word in our name was "and" – because what we uniquely do is to join up the worlds of government, academia, industry and civil society, making them available and accessible to one another. The result of these better links is better public policy making, informed both by the expertise of leading researchers, and also by their improved understanding of the needs and concerns of policy makers. Networks of Expertise and Evidence for Public Policy

## The Centre for Science and Policy in 2013

## 2013 Events in Numbers

### Number of attendees by event type, 2012 and 2013 (Figures in brackets represent number of events in 2013)

Events for Policy Fellows (12)

Policy Workshops (6)

Distinguished Lectures (4)

Policy Leaders Roundtables (3)

Research Workshops (3)

Professional Development Workshops (3)

Events for network members (3)

Policy Seminars (3)

Annual Conference (1)

Breakdown of event attendees, 2013

During 2013 the Centre for Science and Policy extended the range of its activities and the reach of its network yet again.

Highlights of the year included: launching the Policy Leaders Fellowship, publishing a collection of essays on future directions for scientific advice, and piloting our newest programme, the Policy Challenges.

Sir Mark Walport, the UK Government Chief Scientific Adviser, and Sir Bob Kerslake, Head of the UK Civil Service, gave the keynote addresses to our Annual Conference in April. As well as choosing this as the platform for his first major speech as GCSA, Sir Mark also used his CSaP Distinguished Lecture in October to make his first major statement about climate change. These events, and three other lectures, 14 workshops and 20 other events we ran in 2013, attracted over 2000 attendees.

We welcomed our 120th Policy Fellow, and saw the total number of one-to-one meetings convened by the Policy Fellowships Programme pass 3100. During 2013 CSaP was also engaged in eleven research projects, receiving funding from UK Research Councils and government departments and from the European Union.

This report illustrates the tangible benefits that CSaP's activities and its network are already

delivering. Policy Fellows report on how the insights they have gained and connections they have made are feeding directly into policies from free school meals to a future Defence Review. Academics are increasingly carrying out new research as a result of contacts they have made. This report also looks forward to the next big steps in the Centre's development, including the creation of a new Visiting Research Fellowship Programme.

We would like to thank all our supporters and partners during 2013. The list at the end of this report shows how many and varied they are. In particular we thank Lord Oxburgh and other members of the 2013 Development Board, whose advice has laid the foundations for our planned growth during 2014; Cambridge Judge Business School, for hosting the Centre; Pembroke College, for continuing to welcome our Policy Fellows; and the David and Claudia Harding Foundation and Isaac Newton Trust for their donations, which made possible the Centre's creation and continued work.



- **31%** Universities Cambridge
- 16% Universities other
- 26% Government
- 14% Industry
- 8% CSaP team
- 5% Learned societies, charities, NGOs and other

## **Policy Fellowships Programme**

We learned early on that the best way of opening up the channels of communication between policy makers and researchers is to get them face-to-face, engaging one-to-one on the guestions of concern to government, using the insights arising from relevant research.

Our flagship Policy Fellowships Programme has now brokered many more than 3100 such engagements. These connections, and the ongoing dialogues arising from them, provide a pathway to impact for evidence and expertise, and a platform for academics to explore the perspectives of the policy makers. Above all, they provide opportunities for relationships of trust, respect and mutual understanding to be developed. The seeds that are planted in these conversations produce many different outcomes, ranging from "direct hits" on policy, through the creation of collaborative research programmes, to career-changing professional development opportunities.

36 new Policy Fellows (including Junior Fellows) were elected in 2013, beginning their two-year Fellowships with intense programmes of meetings involving 460 researchers and other experts (as illustrated on pages 8 and 9).

In the case studies in this report (and many others on our website), the Policy Fellows speak for themselves about the impact of the programme. They set out in their own words how evidence

"An excellent initiative, acting as a bridge between the public sector and cutting edge research, and helping to translate scientific insights into the heart of the policy making process."

Sir Jeremy Heywood, UK Cabinet Secretary

and expertise have contributed to policy. and describe what they have gained from "time to think" and fresh perspectives on their key questions. Ultimately, they illustrate the benefits of being part of an active network bridging academic and policy worlds.

The Fellowship is a two-way process. Just as important as the challenges to thinking which it delivers to policy makers are the benefits for academia - the opportunities to learn first-hand about the needs of government; the insights into the role of evidence alongside other factors in policy making; and the chance to design and carry out research which will make a difference in decision making.

Policy Fellows have been at the heart of all our activities during the last twelve months. At our Annual Conference in April 2013, members

of the Fellowship led the seminars on working with academia which formed the core of the day. Policy Workshops have been convened at the request of Fellows on subjects as diverse as housing policy, departmental evidence strategy, ecosystems services, and competitiveness. Most recently, it is Policy Fellows that have been driving the development of the Policy Challenges (see pp. 18-21), each of which has a Fellow as "champion".

Fellows have also used the links they have developed to involve researchers in advisory committees and departmental "evidence days", and researchers have used CSaP's network in Whitehall for research projects and the delivery of executive education. Fellows now also regularly gather for informal lunchtime meetings every month in London.

As well as the core Policy Fellowship (aimed at Director and Deputy Director level in Whitehall and their peers elsewhere) and the Junior Policy Fellowship (aimed at early-career policy makers), 2013 saw the launch of the Policy Leaders Fellowship.

The PLF is designed for the most senior level of policy makers (in Whitehall terms, Permanent Secretaries and Directors General), and Chief Executives in NGOs and industry. It promotes the value of evidence and exercises "open minds" at the top of the policy making process. Fellows form the kernel for roundtable discussions (chaired by the Fellowship's President, Lord Wilson of Dinton), targeted at the questions of greatest and most immediate interest at this level. Activities are designed in the context

of the many demands on time which are typical of these senior roles; whereas Policy Fellows at Director and Deputy Director level are encouraged to devote an initial week to network-building, for the PLF this is compressed into one-day visits to Cambridge.

The programme also inspired a National Security Fellowship – in which officials with interests in cyber security and counter-terrorism visited Cambridge, Oxford, St Andrews and London to meet researchers from more than 12 different universities - and Cambridge Enterprise's new Innovation Fellowship, which builds links between senior corporate executives and Europe's leading innovation ecosystem, the "Cambridge Cluster".



Number of researchers meeting Policy Fellows

## **Policy Fellowships Programme 2013**

Meetings between new Policy Fellows and researchers during initial visits to Cambridge

### **Biological and Clinical Sciences** Health (61)

Neuroscience (38) Plant Sciences / Zoology (28) Other (8)

### **Physical Sciences and Technology**

Chemistry/Biotechnology (24) Computer Science (93) Engineering (212) Geography/Earth Sciences (43) Judge Business School (126) Maths/Physics (83) Other (20)

### Arts, Humanities and Social Sciences

Economics/Land Economy (50) Education (20) History/HPS (12) Politics/International Studies (33) Other (35)

### Other

Cambridge Enterprise (20) Centre for Business Research (28) Centre for Science and Policy (80) University Administration (19) Other (33)



Outside the University (211)

### **UK Government Departments**

(77) Business, Innovation and Skills/TSB

(142) Cabinet Office
(32) Communities and Local Govt
(11) Culture, Media and Sport
(12) Defence
(42) Defra
(29) Education
(43) Energy and Climate Change
(55) Foreign and Commonwealth Office
(33) Health
(62) Home Office
(40) International Development
(28) Transport
(107) Treasury and Finance
(41) Work & Pensions

### **Other Public Sector**

(37) HM Opposition (38) National Audit Office (34) Ofcom (95) Metropolitan and Devolved

### Europe

(100) European Commission (35) EBRD

### Industry

(35) Consumer Goods(12) Energy(38) Publishing(14) Telecoms

(85) Other

### Chris Pook, Policy Fellow

Deputy Director Green Economy, Department for Business, Innovation and Skills (BIS)

Climate and energy policy is never far from controversy, as I discovered on my return from Japan to take up a post leading the Green Economy Team in BIS.

One of the first issues I had to deal with was the cumulative impact of policy costs on industry, and energy-intensive industries in particular; at the same time we were seeking to identify how the UK could maximise the benefits of the transition to a greener economy.

There were some big questions that needed to be asked, and the Policy Fellowship provided a safe haven to ask them, away from the complex nitty gritty of government policy development. What is the green economy, and how can you measure it? What are the best options for decarbonising the economy? How can we manage the impact on our competitiveness, and deliver increased certainty to the market?

The range of academics and entrepreneurs that I met during my intensive visits to Cambridge gave me the chance to discuss all of these questions. The engineers talked about novel solutions to offshore wind, materials efficiency and cost reduction; the economists explained there were only two ways government could give greater certainty; and the entrepreneurs pointed to inspiring examples of low-cost solutions that had been developed in emerging economies. Chemists, biologists and others all gave their own perspectives – e.g. on batteries and biofuels – and insights into how research can engage more effectively with policy.

My Fellowship has left enduring benefits. The ability to seek an informal expert view from a range of experts has given me increased confidence in setting the overall policy direction for my team and advice to Ministers. It has also strengthened my dialogue with external stakeholders by providing a third point against which to triangulate different views.

One of the most notable outcomes was the chance to become directly involved in the UK InDemand Centre, looking at both energy and material flows through the economy, and ways to increase efficiency and reduce energy use. I was very pleased to be able to support the funding application for the Centre and subsequently to join the steering board. I look forward to its research output contributing directly to BIS and DECC's work to develop 2050 roadmaps for energy-intensive sectors.

The legacy left by the Fellowship will endure long beyond its formal end. I very much welcome the creation of an alumni group, and the "First Friday" lunches which enable Policy Fellows to get together across government to share challenges and ideas.



"My Fellowship has left enduring benefits... it has given me increased confidence in setting the overall policy direction for my team and advice to Ministers."

### **Clare Moriarty, Policy Leaders Fellow**

Director General Rail, Department for Transport

I am very fortunate to be one of the first group of Policy Leaders Fellows. Throughout my career I have enjoyed and benefited from interaction with academics and scientists, so I was delighted when I heard that CSaP were adapting their successful Policy Fellowships Programme to create a format suited to the over-active diaries of Director Generals and our counterparts in industry.

Twenty years ago I was responsible for policy on drug misuse, and had the good fortune to find myself working with the leading research centres in the UK and abroad. The benefits on both sides were huge. My research colleagues gained an understanding of how Government ticks, while we were able to ensure that decisions in a very sensitive area of policy were based on the best academic research available.

So my expectations of the Policy Leaders Fellowship were high, and it has lived up to them.

The core of the programme is a series of roundtables each involving a mix of Policy Leaders Fellows, academics and external experts. The subjects addressed emerge from the Fellows and, with the resources of Cambridge at its disposal, CSaP has been able to assemble a world-class line-up to debate them. A recent roundtable on the future of the internet generated rich insights into the impact of technology and innovation on individuals and business, as well as reflection on the need for global governance.

One clear aim of the Fellowship is to enhance mutual understanding between academia, Government and industry. The first roundtable asked how we can ensure that policy better reflects science. The discussion provided a vivid reminder that the world of Government, which as civil servants we take for granted, can be hard to understand from outside. Knowing what will and won't land is a valuable tool in influencing, and an area where the Fellowship can provide benefit to the academic community.

The roundtables are complemented by meetings tailored to the interests of individual Fellows. In my case these have ranged from smart infrastructure to gender diversity. The meetings have provided the opportunity to understand future possibilities for rail and to make connections between industry leaders and academics that may provide creative solutions to practical problems. Through the Fellowship I look forward to building enduring relationships that enrich the development of public policy making.

"My expectations of the Policy Leaders Fellowship were high, and it has lived up to them... I look forward to building enduring relationships that enrich the development of public policy making."



### Lifecycle of a Policy Fellow

Every Policy Fellowship is unique, determined by the questions the Fellow asks and the opportunities he or she chooses to pursue.

Initially the Fellow spends five intense days (in one or more visits) in Cambridge, meeting as many as thirty researchers chosen for the relevance of their work to those questions. Over two years, alongside CSaP's scheduled events, Fellows have a wide range of further opportunities which can be tailored to their needs and interests – including Policy Challenges or joint research projects.

Initial programme of meetings with researchers (see pp. 8-9)

- five days over one or more visits
- college accommodation
- up to 30 one-to-one meetings
- addressing Fellow's unique questions
- across all academic disciplines and departments
- building personal networks
- space to think, challenge to thinking
- identifying opportunities for further engagement

### Ongoing opportunities over two years:

- access to the Policy Fellows Network
- "Day Six" meetings in Cambridge
- "First Friday" meetings
- champion Policy Challenges
- convene Policy Workshops
- lead Professional Development Workshops
- deliver lectures and seminars
- commission consulting or executive education
- design, propose and execute collaborative research projects



Annual programme (x2)

If you wish to apply for a Policy Fellowship, please email policyfellows@csap.cam.ac.uk, providing the reasons for the application; the questions you would wish to explore; and a brief biography. New Fellows are elected each term. Application deadlines are 31 January (for Fellowships starting in April-June); 15 July (for October-November); and 31 October (for January-March). We aim to inform applicants of the results of their applications within two weeks of the deadline. Please see the website for current charges.

Special Adviser to the Deputy Prime Minister

Governments and public bodies don't always come across to those who observe them as nimble organisations - but the everyday reality for ministers and those who advise them is that decisions often need to be taken guickly and to tight deadlines.

Much of my work responds to the daily news cycle, and I need to deliver quick-fire advice on issues as they break, while staying focussed on the government's broader objectives and policy development over the long term.

The value of the Policy Fellowship has therefore been the opportunity to step outside my daily routine and immerse fully into an academic conversation over a number of days, exploring new ideas and challenging existing ones.

Like any large organisation, government departments can develop a corporate view of a problem, and it is part of my role to ensure this is properly tested and scrutinised. Having access to the freshest and most up-to-date new thinking at Cambridge, alongside my day-to-day work with other academics, practitioners and stakeholder organisations, has been hugely valuable in approaching problems from an alternative perspective.

The intensive nature of the process - with a focus on a just a few key questions - means that discussions can be tightly drawn and specific,

narrowing in on the policy problem that we are seeking to solve. My Fellowship has focussed on social mobility within the UK education system, as we seek to eliminate socio-economic difference as the primary indicator of academic outcomes. This has involved thinking about the impact of formal structures, such as the interplay between early years and primary education and the design of new curricula and qualifications.

At CSaP's suggestion I also decided to look at critical external factors such as health, diet and physical activity, and my second visit to Cambridge followed the Deputy Prime Minister's announcement of free school meals for all infant school children. I was able to talk to a number of academics about the detailed design of that policy, and their insights have had a direct impact on my work.

No policy making exists in a vacuum - good public policy is the product of wide-ranging conversations with a huge variety of people. It has been an enormous privilege and opportunity to engage with some of the world's foremost thinkers - and to take their ideas back to government as we continue the conversation.

"The opportunity to step outside my daily routine and immerse fully into an academic conversation, exploring new ideas and challenging existing ones... insights have had a direct impact on my work."



"The challenges we face are significant and complex – from climate change to cyber security, poverty to pandemics, food technologies to fracking. Excellent advice on science, engineering, technology and social science is essential for the development and implementation of the best policy. We need to break down barriers and silos by strengthening the linkages between industry, academia and government and using science for the benefit of society."

Sir Mark Walport, Government Chief Scientific Adviser (speaking at the 2013 CSaP Annual Conference)

## **Policy Challenges Programme**

The latest addition to CSaP's portfolio is the Policy Challenges Programme. Launched in October and funded by the Economic and Social Research Council, this initiative builds on the success of our Policy Fellowships Programme. The ESRC chose CSaP as a partner for the initiative because of our record in accelerating the policy impact of research in creative ways.

The programme has been designed in direct response to Policy Fellows' suggestions for putting the network to work. It addresses high-priority public policy issues identified by the Fellows; brings policy makers and researchers together in a series of connected discussions and evidence sessions; and focuses on the production of an evidence briefing for senior decision makers.

Each Challenge begins with a consultation with Policy Fellows whose work is presenting them with difficult questions in a particular area. Each is championed throughout by one of the Fellows and by a leading academic. From these initial conversations, CSaP convenes a planning meeting with relevant Fellows and researchers. Subsequent workshops serve to identify the relevant evidence, and to build the relationships between policy and academia. The process is supported by a full-time Research Associate and PhD interns.

Two Policy Challenges are underway. The first - described by its champion, Liz Surkovic, on page 20 - seeks to bring behavioural insights to bear on government emergency response and planning.

For the second, we are partnering with the Cambridge Forum for Sustainability and the Environment to focus on climate resilience in the built environment. This Challenge brings together Policy Fellows from BRE, the Department for Communities and Local Government, the EBRD, and the Greater London Authority with academics from architecture, archaeology, engineering, mathematics, land economy and international development.

We expect to kick off three more Policy Challenges during 2014 – on the subjects of ageing, big data, and open innovation.

As well as developing these new ways of bringing evidence into policy, CSaP is also piloting innovative evaluation techniques. Using network analysis, we will investigate the extent to which policy makers' and researchers' professional networks change during the process.

### Liz Surkovic, Policy Challenge Champion

Behavioural insights into emergency planning & response

Effective emergency planning requires an understanding of how people are likely to behave in emergencies – and the factors that influence these behaviours – as well as what government can do to bring out the best in people in such difficult situations.

The CSaP Policy Challenge provides evidence about the ways in which the behavioural sciences can inform government planning and response to emergency scenarios, such as floods, pandemic flu, and the release of radiological materials.

The Government Office for Science is championing this Policy Challenge, which is also directly supported by the Cabinet Office, the Home Office, and the Defence Science and Technology Laboratory (DSTL). CSaP is bringing officials from these government departments together with academics from a range of disciplines, including architecture, behavioural psychology, economics, education, engineering, medicine, public health, security studies and social psychology.

CSaP convenes meetings for us with these experts in which evidence is brought closer to policy, at the same time as we are forging new connections – and deepening existing networks – between researchers and policy makers. The project will feed directly into government's planning and make a real difference in helping to save lives, as well as building the foundations for future exchanges between research and public policy.

"The project will feed directly into government's planning and make a real difference in helping to save lives, as well as building the foundations for future exchanges between research and public policy."

Liz Surkovic is Deputy Director for Science in Government at the Government Office for Science



## **Professional Development**

Patrick Wollner and James Dolan

Presidents (2012-13 and 2013-14), Cambridge University Science and Policy Exchange (CUSPE)

2013 has seen a significant increase in the number of young researchers benefiting from professional development opportunities at CSaP - including policy placement schemes, career workshops and projects with our Policy Fellows. Our reach beyond Cambridge has also increased, with 15 other universities around the UK now involved in these activities.

This year we partnered with the Royal Society of Chemistry and the EPSRC's Nano Doctoral Training Centre at Cambridge to run workshops for early-career researchers in the chemical sciences, physics, materials and engineering.

These workshops bring together experts in the sciences and engineering to present alongside policy makers (including CSaP Policy Fellows), offering practical advice to researchers on developing communication skills and engaging with the policy process. Assuming the role of "scientific adviser", participants tackle a policy question, and present their recommendations to a panel of policy professionals - getting a feel for the pressures policy makers are often under to respond to problems at short notice.

Through its network, CSaP continues to help identify placements for researchers who are keen to learn more about the role of evidence and science in policy making. One of them, Jat Singh, writes about his placement on page 24.

Close to 40 researchers have registered an interest in taking up a policy placement through this scheme in 2014.

CSaP is one of eight organisations that host BBSRC- and NERC-funded policy interns, and this year we welcomed three PhD students from the Universities of Sheffield, Bristol and Newcastle. Policy interns take a three-month break from their research to work on policy-related activities. As well as acquiring new skills, they gain first-hand experience of the policy development process, meeting face-to-face with both experts and policy makers.

We also continue to work closely with Cambridge University Science and Policy Exchange, a society for young researchers.

58 33 2012 2013

Average attendees per career workshop

Cambridge University Science and Policy Exchange (CUSPE) is a society run by and for early-career researchers, which aims to build stronger links between its members and policy makers.

Founded in 2012 with support from CSaP, CUSPE works with researchers from across the academic disciplines, all of whom have a desire to understand how their own research - or science and evidence more generally - fits within a broader policy context.

2013 has been a very rewarding year for CUSPE, with a unique programme of public lectures, debates, workshops, and publications. Our eight public lectures – attracting over 1000 attendees – encouraged communication between researchers, industry representatives and policy makers, and offered unrivalled networking and development opportunities for young researchers interested in policy.

The range of topics covered was highly diverse: from the censorship of science to the future of science funding, digital connectivity in cities to net neutrality, space exploration in a time of austerity to the impact of social sciences on policy formation.

Complementing these lectures and debates were smaller interactive workshops at which

early-career researchers engaged more directly with particular policy issues. Having last year piloted such a workshop on climate change mitigation, CUSPE recently held a workshop in collaboration with early-career civil servants at the Department for Environment, Food and Rural Affairs (Defra) and is looking forward to an upcoming workshop in partnership with the Department of Energy and Climate Change (DECC).

Finally, CUSPE is broadening its publication base and reach, both online and in print, with the goal of providing a platform for early-career researchers to communicate with the policymaking community and to inform their peers about current topics in science and policy.

It is great to see the success and dynamism of CUSPE's past year mirrored in the activities of its members: through numerous personal meetings with policy makers, members working on secondment within policy-making bodies, and the production of evidence-based publications. It is these opportunities, along with the activities listed above, which will allow CUSPE to help shape the next generation of academics and policy makers, combining scientific expertise with a true sensitivity for the challenges of policy making.

For more information see www.cuspe.org.

### Jat Singh, Government Secondee

Secretariat of the E-Infrastructure Leadership Council, Department for Business, Innovation and Skills (BIS)

As a computer scientist with some background in law, I have long been interested in issues of technology-related policy. Seeking to be more involved in the tech-policy discussion, I jumped at the opportunity offered by CSaP for a secondment with the Department for Business, Innovation and Skills.

I am currently working for the Secretariat of the E-Infrastructure Leadership Council, which is charged with formulating a national strategy for leveraging the developments in big data, computing architectures and evolving scientific models. The goal is to provide a rich "e-infrastructure ecosystem" that fosters innovation, and thus drives jobs and growth.

The work is both interesting and diverse. The Council's remit is wide, advising on all aspects of e-infrastructure, including high-end computing, networking and data infrastructures, software development and sustainability, cyber security, industrial engagement, and education, training and skills.

My tasks include authoring reports (both internal and public), preparing ministerial briefings, contributing to strategy meetings and consultations, and managing interactions between industry, government and academia. Every aspect involves working with interesting and impressive people, from a range of backgrounds and viewpoints. I was particularly surprised by how quickly things move; for instance, the Council has realised several "on-ramp centres" – to help industry exploit e-infrastructure – in only a matter of months.

I am thoroughly enjoying the secondment, and have gained much from experiencing the policy process first-hand. Indeed, I am also participating in this year's Royal Society Pairing Scheme, with Dr Julian Huppert MP, to experience the policy world from the parliamentary perspective.

"Every aspect involves working with interesting and impressive people, from a range of backgrounds and viewpoints. I was particularly surprised by how quickly things move."

Dr Jatinder Singh is a Senior Research Associate, Computer Laboratory, University of Cambridge



"Having strong evidence to underpin policy development is vitally important. The network CSaP has built up between government, industry and academia has proved to be a real benefit in supporting and informing policy making in the UK."

Sue Owen, Permanent Secretary, Department for Culture, Media and Sport

### 27 Science and Policy Research Programme

CSaP's research programme investigates the relationship between evidence, expertise and policy. We apply our understanding to our practical work of building networks to support public policy. Centred on the academic field of science and technology studies, the programme operates through collaboration with other disciplines and policy practitioners.

The programme grew significantly in 2013 with the appointment of Dr Elia Apostolopoulou, Dr Moira Faul, Ursa Mali and Dr Miles Parker to the research team. CSaP has participated in 11 projects in 2013, collectively worth over £11m, as part of which CSaP has secured £1.1m from funding bodies including UK Research Councils, the European Union, Joseph Rowntree Foundation (JRF) and the Isaac Newton Trust.

To mark the transition in April 2013 to Sir Mark organising public dialogue. Walport as the UK Chief Scientific Adviser, CSaP and the Alliance for Useful Evidence published CSaP is also working with three RCUK-funded a collection of essays charting future directions projects as a Pathways to Impact partner, two for the politics and practice of scientific advice. at Cambridge (both dealing with emerging See Doubleday and Wilsdon (eds), Future technologies) and one at the University of Directions for Scientific Advice in Whitehall (2013); Southampton (on privacy and consent in www.csap.cam.ac.uk/about/FDSW/. the digital economy). CSaP's contribution is valued because we combine a sophisticated CSaP is researching relations between policy understanding of relations between expertise and knowledge in two projects. The first, EU BON, and policy, with practical tools such as our is a 30-partner, €9m project to build a biodiversity tried-and-tested workshops, Policy Fellowships, data network for Europe. The second is for the and our unparalleled network of contacts.

NERC / ESRC / DFID funded research programme on Ecosystem Services for Poverty Alleviation. In both cases our research expertise and practical know-how are helping build better links between research and public policy. Working with Professor William Sutherland, CSaP also ran a workshop for the JRF to identify research priorities for poverty prevention and reduction. This led to the publication of a paper listing 100 important questions to be addressed by research on poverty.

We are also contributing to the BIS-funded public dialogue programme, Sciencewise. CSaP ran a horizon scanning process to identify 30 emerging policy issues with strong science and technology dimensions, which are likely to raise wider public guestions. The aim is to chart the full spectrum of issues on which governments should consider

## Visiting Research Fellowship Programme

## "We need a new research agenda..."

David Cleevely, Founding Director, Centre for Science and Policy

The next step in the development of a uniquely powerful network connecting academia with senior policy makers, the Visiting Research Fellowship will make a globally-significant contribution to understanding how evidence, expertise and public policy interact, and how research can contribute to better policy making.

Over the past four years, through our engagement and professional development programmes, we have used the immense convening power of Cambridge in the research, policy and business worlds to build relationships between key players. CSaP has already become a hub for researchers to come together on issues such as sustainable cities, ageing and wellbeing, and existential risk.

We are now seeking to further strengthen the research base to which we have access by creating a Visiting Research Fellowship, which will bring researchers from a range of disciplines worldwide to Cambridge to:

- expand the research expertise directly available to policy makers through our engagement activities, feeding directly into better public policy making
- increase the international reach of our work by engaging researchers from outside the UK in a residential format in Cambridge

harness the analytical power of the interdisciplinary field of network science to improve understanding of the relationship between evidence, expertise and public policy in a world increasingly dominated by the interaction of networked systems.

The guiding principle will be to enable the Fellows to undertake new research while simultaneously building their networks; they will therefore participate in seminars and workshops, and in our Policy Challenges, as well as one-to-one meetings with senior government figures.

We intend to elect our first Visiting Research Fellows in 2014, and to build towards a programme of up to twenty Fellows per year by academic year 2016/17. Home institutions will usually be expected to make a contribution, but the Centre is seeking the support of a major donor (for which, if appropriate, a naming opportunity may be available).

Our inaugural Visiting Research Fellow will be Professor Charles Kennel (University of California, San Diego).

It is obvious how scientific advice ought to get incorporated into policy. Scientists should be called on to set out the implications of the latest discoveries or technologies, while policy makers, frowning with concentration, listen attentively, ask astute and penetrating questions, and then put together a policy firmly rooted in evidence.

It is equally obvious that this is not what happens. The process is nonlinear, sometimes generating policies that have scant regard for evidence. Yet, oddly, instead of standing back and trying to explain what is observed in practice and using that understanding to create better processes, systems are created based on what ought to work.

It is ironic that an area of human endeavour that is based on positive analysis should find itself making normative proposals. Before suggesting how the system ought to work it would be worth applying the scientific method to understanding how scientific advice gets incorporated into policy.

We need a new research agenda, directed towards how scientific advice gets incorporated into policy, and how new technologies are changing our economic, governmental and social organisation. It would need to draw upon graph theory, social anthropology, behavioural economics and many other disciplines.

CSaP has helped to lay the groundwork for such an agenda. The design of our network of Policy Fellows is based on inferences drawn from the theory of networks, and practical observations of what works and what doesn't. Better understanding of what does work should enable us to move on from naive and linear views of what ought to work. We need to understand more about how scientific advice gets incorporated into policy, and use these insights to support better governance.

Abstracted from "Networks, Nodes and Nonlinearity: how scientific advice gets into policy", in Doubleday and Wilsdon (eds), Future Directions for Scientific Advice in Whitehall (2013).



David Cleevely, Founding Director, Centre for Science and Policy

### **Dr Alex Churchill, Policy Fellow**

Deputy Head of Science & Technology Strategy, Ministry of Defence

My Policy Fellowship at Cambridge has given me insights and perspectives on innovation and technology forecasting which were completely new – and which I would otherwise have never come across.

I decided to undertake a Policy Fellowship in part because of former colleagues and previous experience working at the University of Cambridge, but primarily I wanted to see how developing a special network of external advisers could be brought to policy making.

I started my Fellowship with a clear focus on how to take forward a recent White Paper on *National Security Through Technology*. Over the course of my initial week of networking and meeting people, it became apparent that my well-formed questions were not really the right ones, and the Centre enabled me to reshape my thoughts.

Furthermore, my simple model of innovation was too linear to be representative of the real world. In testing my ideas with a broad range of individuals – all experts within different disciplines – I was able to draw on a wide range of experience of research and different models to illustrate how innovation really occurs, particularly when disparate disciplines come together.

Key highlights were the Judge Business School, the Centre for Advanced Photonics and Electronics, and views from a former Cabinet Secretary, as well as external perspectives from RAND Europe, and visiting US Army students. I was also given the rare chance to explore the archives and go into the strongroom of the Churchill Archive, which allowed me to see government decision making from a completely different viewpoint.

I have pursued a number of the themes and contacts arising from my initial week. In particular, I have been able to establish further work with the Institute for Manufacturing, to develop new methods and approaches to identifying potential future technologies relevant to defence and security, including potential funding collaborations. This is being played directly into work underway in developing an evidence base to support decision making in the next Strategic Defence and Security Review.

The Fellowship has opened a window on a very special place. Not only does the University of Cambridge have a collection of unique and very special thinkers across a broad range of disciplines, Cambridge itself offers insight into a successful innovation eco-model.

For details of Alex Churchill's project with the Institute for Manufacturing, see page 32.

"The Fellowship has opened a window on a very special place. Not only does the University have a collection of unique and very special thinkers across a broad range of disciplines, Cambridge itself offers insight into a successful innovation eco-model."



*The Defence and Security Technology Competency Report,* commissioned by Government from the University's Institute for Manufacturing.

After being introduced to Alex Churchill as part of his Policy Fellowship, the Institute for Manufacturing was commissioned to study the future landscape for defence and security technology in the UK, looking for opportunities for the Ministry of Defence to engage with other government partners in order to harness wider UK investment in technology strategy.

The result was *The Defence and Security Technology Competency Report: Collaboration and leverage towards the UK 2035 landscape.* Building on the framework developed for the Technology Strategy Board's High Value Manufacturing study (2012), the report identifies specific technology areas where collaboration with funding bodies across government can leverage wider resources.

A number of the strategic themes in the TSB HVM strategy were found to be particularly relevant – securing UK manufacturing technologies against scarcity of energy and other resources; increasing the global competitiveness of UK manufacturing technologies; creating innovative products; and developing new, agile, more cost-effective manufacturing processes.

This analysis suggested that technology "pull through" generated by TSB in general, and the HVM Catapult in particular, will offer opportunities of specific relevance to defence and security. For example, mapping of priorities across funding bodies suggested opportunities for joint exploitation and investment in power generation, energy management, and advanced storage. Similarly, in intelligent sensing and detection, opportunities for joint exploitation and investment may exist in data handling and intelligent processing, and short-range sensing and smart arrays.

This study was conducted by IfM Education and Consultancy Services Ltd, the knowledge transfer arm of the University of Cambridge Institute for Manufacturing, between January and October 2013. Among contributors taking part in cross-government/industry workshops and consultations were representatives from the Energy, ESP (Electronics, Sensors, Photonics), Automotive, Materials and Aerospace Knowledge Transfer Networks; BAE Systems; Thales; TSB; EPSRC; and BIS.

The report can be downloaded at http://goo.gl/sUgKCe.

## **Associate Fellows**

The Centre is fortunate to benefit from the guidance of its Associate Fellows – a title which recognises the role of a few distinguished members of our network who have made a significant contribution to the relationship between research and policy and to CSaP's objectives and development.

Professor Michelle Baddeley Professor of the Economics and Finance of the Built Environment, UCL

Sir Brian Bender KCB Chairman, London Metal Exchange, and former White Permanent Secretary

Professor Carol Brayne Director, Institute of Public Health, University of Cambrid

Professor Brian Collins CB Professor of Engineering Policy, UCL, and former CSA at and DfT

Dr Claire Craig Deputy Head, Government Office for Science (GO-Scier

Professor Jon Crowcroft Marconi Professor of Communications Systems, Univers of Cambridge

Professor Andrew Gamble Professor of Politics, University of Cambridge

Professor Sir Mike Gregory CBE Head of the Institute for Manufacturing, University of Cambridge

David Howarth MPP Course Director and Reader in Law, University of Cambridge

Professor Sheila Jasanoff Professor of Science & Technology Studies, Harvard Kennedy School

Sir Bob Kerslake Head of the UK Home Civil Service and Permanent Secretary, CLG

Professor David MacKay CSA at DECC, and Regius Professor of Engineering, University of Cambridge



	Professor Theresa Marteau Director of Behaviour and Health Research Unit, University of Cambridge
all	Professor Ben Martin Professor of Science and Technology Policy Studies, SPRU, University of Sussex
lge	Sir David Omand GCB Visiting Professor, KCL, and former Whitehall Permanent Secretary
BIS	Professor Susan Owens OBE Professor of Environment and Policy, University of Cambridge
ice)	Dr Miles Parker OBE former Deputy CSA at the Department for Environment, Food and Rural Affairs
sity	Professor Jaideep Prabhu Director of the Centre for India & Global Business, University of Cambridge
	Dr Graeme Reid Head of Research Funding, BIS
	<b>Dr Emily Shuckburgh</b> Head of the Open Oceans research group, British Antarctic Survey
	Professor David Spiegelhalter OBE Winton Professor of the Public Understanding of Risk, University of Cambridge
	Professor William Sutherland Miriam Rothschild Professor in Conservation Biology, University of Cambridge
	Professor Jeremy Watson CBE Director, Science & Technology, Arup, and former CSA at CLG
	Professor James Wilsdon Professor of Science and Democracy, SPRU, University of Sussex

### Dr Claire Craig, Associate Fellow

Deputy Head of the Government Office for Science

We all know networks are important in the abstract, but it's sometimes hard to pin down what makes them work well.

The role of the Government Office for Science (GO-Science) is to provide quality science advice across government, and to support government departments in doing so too. We rely wholly on access to the best science and scientists. One day we may be dealing with an emergency such as the disruptive effects of volcanic ash, the next looking 50 years into the future of cities. Good networks are therefore essential to us.

The Centre for Science and Policy's ability to create and energise contacts has helped me and my teams over the last few years in at least four ways.

Firstly, the Centre's Distinguished Lectures have included some memorable moments – I recall particularly Adair Turner talking about how he approaches the fundamental difficulty of combining precision with impact when communicating climate science, or Jaan Tallinn setting out what needs to happen to mitigate the risks from future artificial intelligences.

Secondly, several members of GO-Science have been Policy Fellows. I've been fascinated to see how policy officials with aptitude but without a science background have been personally inspired and stretched by the opportunity to explore an issue that matters to them, through being immersed in academic thinking. They've emerged with fresh thoughts, networks and greater confidence in engaging with senior academics.

Thirdly, CSaP colleagues have spotted some useful relationships that I hadn't realised I needed, and helped me broker contacts for others in government. And fourthly, GO-Science is now collaborating with CSaP on a pilot Policy Challenge project to explore new behavioural insights into dealing with emergencies. The valuable networks continue to grow.

"We rely wholly on access to the best science and scientists... good networks are therefore essential to us."



### Jo Dally, Policy Fellow

Head of the CBRN Security Team, Counter Proliferation Department, Foreign and Commonwealth Office

I started my Policy Fellowship at the same time I took up a new post where I would be working on issues with which I was relatively unfamiliar: Chemical, Biological, Radiological and Nuclear (CBRN) security.

The Fellowship provided not only a first-class induction into thinking outside of government on some of the policy challenges with which I would grapple, but also a fantastic opportunity to bounce ideas off some of the most wellinformed and challenging "sounding boards" I have met.

I went to Cambridge armed with a set of questions centred on potential future proliferative technologies, and the extent to which their being used to cause harm might be mitigated under current global governance systems. The range of academics I met during the week mirrored the breadth of my questions, including individuals whose research had the potential for "dual use", and those working on understanding the multilateral instruments and organisations that function to protect against weapons proliferation.

It's fair to say that my days in Cambridge were somewhat of a whirlwind, packed full of meetings and seminars that provided more food for thought than I could have imagined. Not every encounter resulted in conversations that would inform directly my "day job", but they were unfailingly interesting and often inspired me to think differently about how best to tackle a policy problem.

I have kept in touch with a number of the academics I met during my visit, drawing on their expertise to shape and deliver events for the international CBRN community. I have also put several of them in touch with colleagues keen for an academic perspective on their own policy portfolios.

Overall, my time as a Fellow to date has been both hugely informative and great fun. I couldn't recommend it highly enough.

"A first-class induction into thinking outside of government on some of the policy challenges ... provided more food for thought than I could have imagined."



## **Centre for Science and Policy Team**

The Centre for Science and Policy's network and programmes are supported by a small team based in Cambridge, which brings together all the necessary skills and expertise in event management, marketing, programme development, networking and research.

In the photo opposite, from left to right:

Not shown in photo:

Henry Rex Policy Assistant for RCUK's Global Uncertainties Programme

Michelle Rigozzi Policy Fellowships Programme

Nick Gray Policy Fellowships Programme

David Cleevely Founding Director

Jackie Ouchikh Head of Programmes

Rob Doubleday Executive Director

Ursa Mali Researcher

Moira Faul Policy Challenges Programme

Philip Guildford Director of Research, Department of Engineering and Special Adviser to the Centre Elia Apostolopoulou Research Associate for the EU BON Project

Louisa Gilhooly Events Manager

Miles Parker Senior Research Associate

Tristram Riley-Smith External Champion for RCUK's Global Uncertainties Programme

CSaP would like to thank Linden Smith (former Head of Development) for all her contributions to our success during 2013.



## **Executive Committee**

The work of the Centre for Science and Policy is guided by an Executive Committee comprising eminent Cambridge academics and senior representatives of the University from a range of disciplines, together with the Founding Director.

### Professor Ian White (Chair)

Van Eck Professor of Engineering, Department of Engineering, University of Cambridge, and Master of Jesus College

### Dr Jennifer Barnes

Pro-Vice-Chancellor for International Strategy. University of Cambridge

### Dr David Cleevely CBE

Founding Director, Centre for Science and Policy, University of Cambridge

### Professor Lord Eatwell President of Queens' College

### Professor Lynn Gladden CBE

Pro-Vice-Chancellor for Research and Shell Professor of Chemical Engineering, University of Cambridge

### Professor Alan Hughes

Margaret Thatcher Professor of Enterprise Studies, and Director of the Centre for Business Research, University of Cambridge

### Professor Lord Rees OM

Astronomer Royal, Past President of the Royal Society, and former Master of Trinity College

Professor Christoph Loch Director, Judge Business School, University of Cambridge

### Professor Frank Kelly CBE

Professor of the Mathematics of Systems, University of Cambridge, and Master of Christ's College

### Professor Sir David Wallace CBE

Former Director of the Isaac Newton Institute for Mathematical Studies, University of Cambridge, and Master of Churchill College

### Professor Sir Stephen O'Rahilly

Head of Department and Professor of Clinical Biochemistry and Medicine, Department of Clinical Biochemistry, University of Cambridge

## Financial Report – Year to 31 July 2013

The Centre for Science and Policy is grateful for the support of its principal funders – particularly the David and Claudia Harding Foundation, the Isaac Newton Trust and the University of Cambridge – without whose generous support none of our achievements to date would have been possible; and to the organisations who have sponsored or supported particular activities during 2013, including Afton Chemical, BAE Systems, BP International, Lloyd's, The Royal Society of Chemistry, Thomson Reuters and IChemE.

As the table below shows, during Financial Year 2012/13 (to 31 July), the Centre received £419k of income from all sources for its core activities in engagement and the delivery of events. This was lower than in previous years, which included £250k of income in each year from the David and Claudia Harding Foundation's founding donation. Other sources of income showed an increase of £181k.

### Income from founding donation

Other Income, including fees, sponsorship and University contributions

#### Expenditure

Net Income

Total Funds brought forward as at 1 Aug

Total Funds carried forward as at 31 Jul

The Centre's total expenditure was £566k in the same period.

The Centre has carried forward a balance of £540k into FY 2013/14, a decrease of £147k on the balance at the start of 2012/13.

In addition, the Centre's research activities attracted over £1.1 million of grant income, the majority of which is accounted for elsewhere in the University.

The continuing impact of our activities has underlined once more that there is a significant unfilled need for building relationships between researchers and policy makers. In order to sustain our activities in the longer term, we are actively seeking other sources of funding – from Trusts, Research Councils, the European Union, private philanthropy and other sources - to supplement our income from Fellowship fees, event sponsorship and the University itself.

	FY 2011 / 2012	FY 2012 / 2013	
	£250k	£0	
ט	£238k	£419k	
	£479k	£566k	
	£9k	£(147k)	
	£678k	£687k	
	£687k	£540k	

## A Note of Thanks

The creation of CSaP and its ongoing operations would not have been possible without the support of the David and Claudia Harding Foundation, the Isaac Newton Trust and the University of Cambridge. CSaP would also like to record its gratitude to all the members of the University and others who have given their time this year to support our programmes and events and to meet visiting Policy Fellows, including:

Dr Maria Abreu (Pembroke College); Prof Bill Adams (Dept of Geography); Suzy Adcock (POLIS); Dr Mike Aitken (Dept of Psychology); Stephen Aldridge (Dept for Communities and Local Government); Dr Anne Alexander (CRASSH); Prof Paul Alexander (Cavendish Laboratory); Dr Anna Alexandrova (Dept of History and Philosophy of Science); Tera Allas (BIS); Prof Phil Allmendinger (Dept of Land Economy); Dr Julian Allwood (Dept of Engineering); Rosamunde Almond (Cambridge Forum for Sustainability and the Environment); Prof Ash Amin (Dept of Geography); Fergus Anderson (DSTL); Mike Anderson (Home Office); Prof Ross Anderson (Computer Lab); Stephen Anderson (Academy of Social Sciences); Prof Victor Anderson (Global Sustainability Institute); Prof Christopher Andrew (Faculty of History); Dr Annela Anger-Kraavi (4CMR); Sir John Armitt (National Express Group); Dr Fiona Armstrong (ESRC); Harry Armstrong (Babraham Institute); Dr Christopher Arnot (Cambridge Enterprise); Dr Michael Arnott (Cambridge Enterprise); Alexis Artaud de La Ferriere (Faculty of Education); Lawrence Ashelford (Cambridge University Hospitals); Dr Stephen Ashley (Dept of Engineering); Andrew Asten (POLIS); Sophie Attwood (CEDAR); Dr Pooya Azadi (Dept of Chemical Engineering and Biotechnology); Prof Michelle Baddeley (UCL); Dr Britt Baillie (Dept of Archaeology & Anthropology); Prof Shankar Balasubramanian (Dept of Chemistry); Jonathan Baldwin (Institute of Continuing Education); Prof Andrew Balmford (Dept of Zoology); Nick Balon (CRFS): Ian Bamford (Institute for Manufacturing): Dr Shima Barakat (Centre for Entrepreneurial Learning); Dr Claire Barlow (Dept of Engineering); Dr Jennifer Barnes (International Strategy Office); Prof Michael Barrett (Judge Business School): Prof John Barrow (Dept of Applied Mathematics and Theoretical Physics); Nicolette Bartlett (CPSL); Dr Matt Bassford (RAND Europe); Dr Sam Beale (Dept of Engineering); Sir John Beddington (Imperial College London); Alice Bell (SPRU, University of Sussex): Dr Ian Bell (Afton Chemical): Dr Jim Bellingham (School of the Physical Sciences); Sir Brian Bender (London Metal Exchange): Dr Alastair Beresford (Computer Lab): James Beresford (CPSL); Dr Chris Bickerton (POLIS); Prof Michael Bickle (Dept of Earth Sciences); Prof Jane Binner (University of Birmingham); John Bird (The Big Issue); Prof Sheila Bird (MRC Biostatistics Unit); Dr Mike Bithell (Dept of Geography); Prof Dame Carol Black (Newnham College); Dr Alan Blackwell (Computer Lab); Jessica Bland (Nesta); Prof Sir Tom Blundell (Dept of Biochemistry): Christian Bluth (POLIS): Monique Boddington (Centre for Entrepreneurial Learning); Dr Adam Boies (Dept of Engineering Prof Sir Leszek Borysiewicz (Vice-Chancellor); Dr Dave Bosworth (Dept of Materials Science & Metallurgy); Nathan Boublil (Stat.io); Charles Boulton (Dept of Engineering); Briony Bowe (Dept of Energy and Climate Change); Dr Gary Bowman (Centre for Risk Studies); Prof Ian Boyd (Defra); Dr Billy Boyle (Owlstone Nanotech); Prof Paul Boyle (ESRC); Mike Bradley (Engineering Design Centre); Prof Carol Brayne (Institute for Public Health);

Jonathan Breckon (Nesta); Prof Ted Briscoe (Computer Lab); Lord Broers (House of Lords); Michelle Brook (Open Knowledge Foundation); Julie Brown (Judge Business School); Nicola Buckley (Office of External Affairs & Communications); Simon Burall (Involve); Dr Brendan Burchell (Dept of Sociology); Peter Burge (RAND Europe); Dr Gemma Burgess (Dept of Land Economy); Dr Thomas Burgoine (Centre for Diet and Activity Research); Dr Hilary Burton (PHG Foundation); Creon Butler (Cabinet Office); Georgina Cannon (Cambridge University Development Office); Prof David Cardwell (Dept of Engineering); Noelle Caulfield (Churchill College); Dr Jonathan Cave (RAND Europe); Prof David Cebon (Dept of Engineering); Dr Vivian Chan (Epistora); Prof Howard Chase (School of Technology); Prof Jo Chataway (RAND Europe); Rohini Chaturvedi (Dept of Geography); Dr Amir Chaudhry (Computer Lab); Harold Chee (Judge Business School): Namukale Chintu (Judge Business School): Apurva Chitnis (CUSPE); Anwar Choudhury (Foreign & Commonwealth Office); Dr Colin Church (Defra); Dr Alex Churchill (Ministry of Defence); Dr Luke Clark (Dept of Psychology); Martin Clark (Allia); Dr Stephen Clark (Computer Lab); Anna Clarke (Cambridge Centre for Housing and Planning Research); Prof John Clarkson (Dept of Engineering); Dr Richard Clayton (Computer Lab); Prof Christopher Colclough (Faculty of Education); Prof Nick Collings (Dept of Engineering); Prof Stefan Collini (Faculty of English); Prof Brian Collins (UCL); Charles Collis (Dyson); Ivan Collister (formerly Number 10 Policy Unit): Annaliin Conklin (MRC Epidemiology Unit): Dr David Connell (Centre for Business Research); Prof Cary Cooper (University of Lancaster); Prof Helen Cooper (Faculty of English); Dr Kirsten Corder (Centre for Diet and Activity Research): Dr Andy Cosh (Centre for Business Research); Lucia Costanzo (BIS); Keith Cotterill (Institute for Manufacturing): Ann Cotton (CamFed): Charles Cotton (Cambridge Phenomenon); James Cotton (OneSpaceMedia); Dr Roger Coulston (AQDOT); Dr Rory Coulter (Dept of Sociology); Polly Courtice (CPSL): Sherry Coutu (Cambridge Angels): Howard Covington (Science Museum): Dr Claire Craig (GO-Science): Dr Gemma Cranston (CPSL): Dr Douglas Crawford-Brown (4CMR); Dr Hilary Cremin (Faculty of Education); Dr Nathan Crilly (Dept of Engineering); Prof Jon Crowcroft (Computer Lab): Dr Heather Cruickshank (Centre for Sustainable Development); Dr Toby Cubitt (Dept of Applied Mathematics and Theoretical Physics); Dr Jonathan Cullen (Dept of Engineering); Sir Jon Cunliffe (Bank of England); Dr Liz Curmi (Dept of Engineering); Jo da Silva (Arup); Dr Joanna Dally (Foreign & Commonwealth Office); Prof Martin Daunton (Faculty of History); Sumi David (Research Strategy Office): Alex Davies (Dept of Engineering); Dr Craig Davies (EBRD); Steve Davison (Office of External Affairs & Communications); Prof Dame Sandra Dawson (Judge Business School); Natalie Day (Oxford Martin School); Prof Simon Deakin (Judge Business School); Sir Richard Dearlove (Pembroke College); Richard Dent (Dept of Sociology); Dr James Derbyshire (Anglia

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