



CIHE 
LEADERSHIP FOR BUSINESS AND HIGHER EDUCATION

uk-irc
UK-INNOVATION
RESEARCH CENTRE

Enhancing Value:

getting the most out of UK research

First Status Report: September 2011

the ISSUE

The UK spends close to £26bn a year on private and publicly-funded research and development (R&D). The private sector accounts for around £16bn of this, and the public sector around £10bn. This figure includes £1.7bn on basic research through the Higher Education Funding Council, a further £2.5bn through the research councils, and £1.6bn on public sector research establishments^{1,2}.

In a time of stringent government cost control, the Coalition ring-fenced the recurrent science and research budget, which includes the Research Council's grants and HEFCE's funding for Quality-Related research (QR) and Higher Education Innovation Funding (HEIF). This was on the understanding that enhancing social and economic welfare requires a first-rate research base in our university system, as well as close, strategic and systematic collaboration between universities and research activity elsewhere in the public, business and community sectors.

1. Department for Business Innovation and Skills, The Allocation of Science and Research Funding 2011/12 to 2014/15, P17, Crown copyright December 2010.
2. Andrew Davidson, Department for Business Innovation and Skills, Monitoring the Sustainability of Public Sector Research Establishments: Third Annual Return(2008), Quotec Ltd November 2008.

That we – business, government and universities – wish to get the most out of this research in terms of economic benefit in the widest sense - including broad well-being – should be axiomatic. The global economy is being transformed by a New Industrial Revolution, powered by the Internet and communications software, driven by the needs of sustainability and population growth, and supported by innovations in every industry from healthcare to entertainment, energy production to design. Economic growth delivers jobs and wealth for the people of this country, and contributes to broader economic and social development across the globe. High-value activity, which can



be developed through R&D and innovation more broadly, is particularly important as it generates more wealth, better quality jobs, higher living standards and a sustainable competitive edge. Research in business, public, civil society organisations, and universities also helps tackle major social challenges and promote a good society.

Rebalancing the UK economy to grow more high-value businesses will require solutions that cross disciplinary boundaries and transform traditional R&D practices. This leads to a fundamental policy question: *How can the UK innovation system be shaped to maximise the impact of public sector R&D and utilise to maximum effect the multiple*

pathways to commercial exploitation in the private sector, whilst enhancing the internationally-leading position of its universities in research and as teaching institutions?

The CIHE – UK~IRC Task Force was initiated in response to this policy challenge and will feed into the BIS Innovation and Research Strategy announced recently. It will explore the increasing complexity of the research landscape, with its multiple cultures, demands, and interfaces. It will also assess the crucial relationship between publicly-funded research, businesses which need access to the highest-quality knowledge to fire growth, and civil society organisations developing innovative solutions to social challenges. This Task Force also intends to explore ways of increasing investment into UK based research from private, public, charitable and other institutional sources (such as the EU).



the CHALLENGE



The aim of the Enhancing Value Task Force is to promote effective interactions between businesses and the UK research base, to impact positively on Government policy and, in particular, its innovation and research strategy.

It will:

1. Place UK public and private sector research in an EU and global context.
2. Explore the similarities and synergies between public and private sector research.
3. Identify and prioritise a small set of key actions for change that will enhance the value of publicly-funded research and collaboration with business.

the PEOPLE

THE ORGANISATION

The Task Force will be led by David Eyton, Global Head of Research and Technology at BP, and Professor Shirley Pearce, Vice Chancellor of Loughborough University. These will be advised by a senior-level Steering Group who will meet twice, and whose purpose will be to advise on the remit, scope and approach of the Task Force at the launch event, and then to receive, comment and help shape the final outputs in June 2012.



David Eyton



Prof. Shirley Pearce

STEERING GROUP (SG)

The Steering Group will receive short and punchy updates, have direct access to the Task Force wiki and social business software we are establishing, and the opportunity to feed in thoughts and questions as the work develops. Furthermore, they or their institutions may wish to take a lead on an aspect of the project.

STEERING GROUP MEMBERS

- James Baker, Director, BAE Systems
- Prof. Genevieve Berger, Chief R&D Officer, Unilever
- Prof. Sir Leszek Borysiewicz, Vice Chancellor, University of Cambridge
- Prof. David Delpy, Chief Executive, Champion for Impact, RCUK
- Prof. Peter Downes, Vice Chancellor, University of Dundee
- Prof. Malcolm Grant, President & Provost, University College London
- Iain Gray, Chief Executive, Technology Strategy Board
- Dr. Hermann Hauser, Partner, Amadeus Capital Partners
- Prof. Julia King, Vice Chancellor, Aston University
- Prof. Pat Loughrey, Warden, Goldsmiths
- Prof. Ric Parker, Director of Research & Technology, Rolls-Royce
- Lord Sainsbury of Turville, Peer, House of Lords
- Phil Smith, Chief Executive, Cisco UK and Ireland
- Dr. David Sweeney, Director, Research Innovation and Skills, HEFCE
- Mark Thompson, Director General, BBC
- Prof. Patrick Vallance, SVP Medicines Discovery & Development, Glaxo Smith Kline
- Prof. Sir Tim Wilson, Former Vice Chancellor, University of Hertfordshire

EXECUTIVE GROUP (EG)

The Task Force leaders will take overall responsibility for the process and the outputs, and will drive the overall project through four Executive Group Sessions with the Chairs of the Working Group, and the heads of the two sponsorship bodies – the CIHE and UK IRC. This group will receive reports from the Working Group, shape the priorities for further investigation, create the shape of the final outputs, and act as the final editorial filter before the second Steering Group Meeting.

EXECUTIVE GROUP MEMBERS

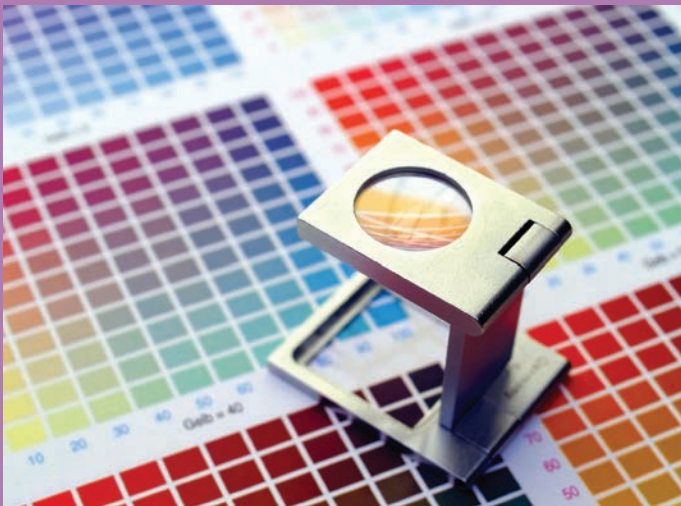
- David Eyton, Group Head of Research and Technology, BP (co-chair)
- Prof. Shirley Pearce, Vice Chancellor, Loughborough University (co-chair)
- Dr. Robert Sorrell, VP public Partnerships, BP (co-chair of Working Group)
- Prof. Mike Caine, Deputy Head (Enterprise), Loughborough University (co-chair of Working Group)
- Dr. David Docherty, Chief Executive, CIHE
- Prof. Alan Hughes, Director, CBR and UK~IRC

WORKING GROUP (WG)

The Working Group will meet at least six times over the twelve months from the initiation meeting on 7th July, and will take responsibility for delving deeper into issues and solutions, developing research questions, proposals, outputs, propositions, and insights that respond to the overall challenges and insights of the Steering Group. This is a deliberative and policy-focused group. The detailed work and report writing will be undertaken by CIHE consultants and staff and UK~IRC researchers.

WORKING GROUP

- Dr. Aileen Allsop, Former VP Science Policy R&D, AstraZeneca
- Dr. David Attwood, University Relationships Manager, BAE Systems
- Richard Biers, Programme Leader, S&T Futures and Innovation, Defence Science and Technology Laboratory
- Alice Frost, Head of Business and Community Policy, HEFCE
- Dr. Andy Leonard, Vice President, BP Cambridge
- Dr. Andrea Mina, Senior Research Fellow, CBR and UK~IRC, University of Cambridge
- Dr. Declan Mulkeen, Director Research Programmes, MRC
- Dr. Mene Pangalos, EVP Innovative Medicines, AstraZeneca
- Prof. Douglas Paul, Director of the James Watt Nanofabrication Centre, University of Glasgow
- Dr. Allyson Reed, Strategy and Communications Manager, Technology Strategy Board
- Dr. Douglas Robertson, Director of Research and Enterprise, Chair of PraxisUnico
- Dr. Malcolm Skingle, Director Academic Liaison, GlaxoSmithKline
- Philip Ternouth, Associate Director, CIHE
- Andy Wilson, Head, Centre of Technology, BBC
- Dr. Alison Wall, Associate Director, Impact, EPSRC



the APPROACH

The Task Force will also create a virtual team of experts who will be glued together by social business tools - including a Wiki which will be moderated and managed by CIHE staff for the duration of the Task Force and for a month after the report is released. The research and user community can continue to support the wiki after this time if they see ongoing value in it.

The Wiki will be a secure, password protected and managed environment for members to update/upload information from their inboxes, receive updates to action, and offer collaborative spaces for discussion online while enabling virtual conversations to happen in tandem with formal meetings.

This Expert Network, along with CIHE consultants and UK~IRC researchers, will be the main workhorse for the Task Force. It will provide the detailed insights required to understand the landscape and review policy options. In the second phase of fund-raising we will review the need for more consultancy support.

The Wiki

The Wiki will be an online space for dissemination and collaboration beyond the formal life of the Task Force. It should be one of the key project outcomes, providing an opportunity for further development of the Task Force's conclusions as new challenges emerge, and opening the debate to a global audience.

The Interviews

Most Steering Group members will be filmed in structured interviews, which will be made available to the Working Group, and give a deeper insight into their thinking. These will be made available to the Working Group initially, and then with Steering Group members' permission released onto the Wiki. These interviews will be followed up ahead of the launch meeting next June.



the QUESTIONS

Top level Questions

1. **Global Competition.** How does the UK foster a globally-competitive innovation system that enhances excellence in university research, maximises the strategic use of departmental public sector R&D, and drives complementarities with private sector research and development?
2. **Differentiating Sectors.** How do we differentiate between the characteristics of different sectors and encourage appropriate sectoral systems of innovation?
 - a) **Achieve focus, scale and excellence**

Which areas in the UK have the current or potential ability to sustain global excellence in research, and how should they be exploited? How does the UK innovation system achieve scale and focus for global success in these areas?
 - b) **Be part of global innovation**

What are the best ways of ensuring the UK is part of global innovation systems in those industries where the UK is or can be excellent?
3. **UK Impact.** How does the UK innovation system build capability that ensures optimal and effective responses to the exploitation opportunities that arise from research in the UK and elsewhere, and which captures the value of those opportunities for businesses, charities and public sector institutions in the UK?

Underlying Research Questions

1. **Global Context.** How does the UK research landscape compare with major and emerging competitors in terms of the scale, quality, distribution and impact of public sector and private sector research activity?
2. **Government.** What does the evidence show to be the most effective methods of enhancing the scale and effectiveness of private sector R&D and university-industry links? What is the role of public sector activity in stimulating innovation?
3. **Corporate.** Why do companies choose to invest in R&D in the UK?
 - What are the key factors that influence whether industry increases or decreases their R&D investment in the UK?
 - How can the UK ensure that the current investors in UK R&D remain here?
 - How can other parts of the value chain be attracted or retained in the UK?
 - What could the UK Government do to encourage UK and overseas industry to increase its investment in R&D in the UK?
 - Why do companies choose to do their research outside the UK?
4. **Universities.** How can universities better engage with industry (including SMEs and others) to further enhance the degree to which the research base is exploited efficiently and effectively to the benefit of the UK economy? What is the role of IP in this process?

the THREE PHASES

Phase 1: Mapping the current landscape

- Agreeing questions and priorities. (All)
- Reviewing literature and reports. (UK~IRC)
- Interviews with global research directors and high value SMEs to answer the research questions agreed by Steering Group. (CIHE)
- What metrics do we use to evaluate the benefit of research? (UK~IRC)
- Reviews of first cut research on Wiki. (Expert Network)
- Short report back to Steering Group for review.

Phase 2: Enhancing Value

- Policy directions and levers for change. (CIHE/UK~IRC)
- Review by Working Group/Expert Network.
- Task Force seminars with Working Group and invited economists, users and organisational theorists.
- Position papers, provocations and insights around emerging themes and issues. (All who wish to be involved)
- Short report back to Steering Group for review.

Phase 3: March-June 2012

- Firm up propositions and priorities.
- First draft of report. (David Docherty)
- First cut review. (Working Group)
- Second cut review. (Executive Group)
- Third cut review. (Steering Group)
- Publication.



the FUNDING



First Round Cash Sponsors

- HEFCE - £40k
- EPSRC - £30k
- TSB - £20k

Second Round Sponsors

The project is highly ambitious and we will be looking for second round sponsors to take us through 2012.

About Us



The Council for Industry and Higher Education (CIHE) is a strategic leadership network of blue-chip companies working with Vice Chancellors and universities to develop the UK's knowledge-based economy.

The CIHE Task Force on Creative, Digital and Information Technology produced a widely-received and influential report, *The Fuse*. This resulted in the development of the Brighton Fuse, which brings together researchers, universities and SMEs with the aim of driving innovation and growth within the digital and creative industries around Brighton and Hove. Brighton Fuse is funded by the Arts & Humanities Research Council and involves the Universities of Brighton and Sussex as well as Wired Sussex.

The CIHE Engineering and Manufacturing Task Force recently published *Powering Up*, which called on the Government to give greater incentives to universities and industry to work closer together. Phase two focuses on the talent 2030 pipeline and will be launched in October 2012.



The UK Innovation Research Centre (UK~ IRC) is a joint venture between the Centre for Business Research at the University of Cambridge and Imperial College Business School to further research and knowledge exchange on innovation policy and practice. The UK~IRC is global in scope and involves a large-scale, multi-year research programme and a Knowledge Hub to engage with and inform policy-makers and practitioners about innovation research. The research programme explores open innovation, service innovation, online communities and innovation policy-making. A further stream of research focuses on the nature of university-industry links and role of higher education in innovation systems. Through the Hub, our aim is to maximise the effect of the research on policy and practice, so as to help the UK face its social, environmental and economic challenges.

The Centre is co-funded by Department for Business, Innovation and Skills (BIS), the Economic and Social Research Council (ESRC), the National Endowment for Science, Technology and the Arts (NESTA) and the Technology Strategy Board (TSB). This support is gratefully acknowledged.

- Ensure that new research on innovation in both the public and private sectors has the greatest effect on policy and practice.
- Explore the relationship between innovation and business performance and how this affects the national economy and the individual organisation.
- Actively disseminating its work through a 'Knowledge Exchange Hub', this will include activities ranging from seminars to innovation podcasts.



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