



COUNCIL FOR  
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Rt Hon Gordon Brown MP  
Chancellor of the Exchequer  
HM Treasury, 1 Horse Guards Road  
London SW1A 2HQ

29 April 2004

Dear Chancellor

The Council for Science and Technology welcomes the government's plans to publish a ten-year investment framework for science. The UK must continue to be one of the world's most attractive destinations for science and technology; clear and unambiguous statements of the government's support for science, financial and otherwise, support this ambition.

We are keen to support the government in implementing a framework for investment in science that makes a real difference. With the Council's new remit and membership, we believe that we are in an excellent position to suggest that the Council should regularly review and assess progress and would be interested to hear from you how we could fulfil this role most usefully.

The government's consultation document *Science and Innovation: working towards a ten-year investment framework* asks important questions, many of which relate to complex areas of policy. We have written individually to Sir David King and Sir Keith O'Nions setting out our personal views for where the government's priorities should lie. In this letter we have restricted ourselves to commenting briefly on some of the broader issues; we will be returning to many of these areas in more depth as our work programme develops.

### **Identifying priority areas**

Identifying targets for government funding where the UK is, or has the potential to be, a world leader is an uncertain business. As too is identifying weaknesses where funding should be reduced. Government should be open about the fact that it is taking a calculated risk when making choices about where to invest its resources, and be clear about the basis for its assessment of risk. Factors that we would expect government to consider in making strategic choices include: the activity of our major competitors; the level of programme expenditure that would be required to make a significant impact; the optimal sequencing of activities and investment; and the lessons learned from government's previous initiatives.

In our letters to Sir David King and Sir Keith O'Nions we outline areas that we believe should be priorities for government funding. These span fundamental research, technologies that are approaching commercial potential and public policy priorities. We are particularly pleased that government has already decided to provide more funding for clinical research. As the recent reports from the Bioscience, Innovation

and Growth Team and the Academy of Medical Sciences make clear, this is an area in which the UK could be a world leader, to the benefit of both national health and national wealth.

### **Facilitating interdisciplinary research**

Many emerging areas of science are inherently interdisciplinary; technology developments in key areas such as nanotechnology and biomedicine will rely on interdisciplinary working. If the UK is to build and maintain internationally competitive expertise in these areas, institutional structures and funding mechanisms need to be examined to ensure that they encourage and enhance interdisciplinary working. The unique disciplinary span of some of our major academic centres offer ideal opportunities to pursue much needed interdisciplinary efforts, provided institutional structures and the RAE driver of behaviour can be adapted to encourage it.

There have been some encouraging developments in recent years: from central government, the new Foresight programmes and the establishment of RCUK; from the Research Councils, the integration of NERC's research institutes with academic centres; and from the learned societies, the launch of the Royal Society's *Interface* journal.

As these examples illustrate, interdisciplinary working can be facilitated at many levels; government needs to be clear where it can play a leading role (particularly in its use of funding), and where it can use its influence to encourage others. This is an area that deserves further attention; it is important that all those involved, including government, pursue the promotion of interdisciplinarity vigorously.

### **Supporting science at regional, national and international levels**

Science is primarily an international business: it is essential that the government recognises this and has a clear picture of how policies for UK science at the regional, national and international levels work together to generate and maintain a strong scientific culture in the UK.

The Regional Development Agencies in England, and their equivalents in the devolved administrations, have a central role in facilitating knowledge transfer between the science base in their regions and industry. We fully support this, although we want to emphasise that links with national and international industry, as well as with local industry, are important in the regional context.

Priorities for the science base should be set nationally. RDAs and their equivalents in the devolved administrations should be encouraged to exploit the regional component of the national science base and may wish to use this as leverage to win further national investment. However, national priorities should not be unduly influenced by special pleading from regional interests.

Approaching the issue from a different angle, Government at all levels needs to take advantage of the power available to it through the use of intelligent procurement; this has been used to great effect in the United States.

### **Knowledge transfer for public policy**

The use of research to inform the development of public policy is vital. To take just one example: considerable vision and foresight will be needed if the aspirations set out in the energy White Paper are to be met. There are significant technological, social and environmental challenges associated with every type of energy potentially available long term to the UK. There needs to be a much greater effort to integrate the resources of academia, industry and government in a comprehensive research and development programme that draws on both the hard and the social sciences.

Crucially, the data from research programmes must be fed continuously into, and inform, energy policy development.

### **Creating a skilled workforce**

The need to create and sustain a strong supply of scientists and engineers appears, now, to be recognised by government. We regard this as a pressing issue. From the content of the school science curriculum and the quality of science teaching in schools, to the generation of a clearer demand for skilled scientists from industry and the marketing of the UK as an attractive location for international scientists, there is a clear need for government action.

We will not attempt to address these significant and complex issues here. We are, however, pleased that the government is implementing the main recommendation from the Council's report on science teachers<sup>1</sup> and establishing a national network of science learning centres.

### **Science and society**

The interaction between science and society is of pivotal importance if the UK is to be a place where science and scientists thrive. One of the first questions that this new Council for Science and Technology has been asked to tackle is what the government should be aiming to achieve in science and society over the next five and ten years. We will be exploring this issue over the coming months and hope that our advice will be useful to government in developing its policies.

Without exception, the issues that we have highlighted above are large and complex areas. We will be engaging with Ministers across government to define how the Council could assist government in addressing these issues: we want to establish, before we start our work, that we are exploring questions to which the government wants answers. Ministers have already asked us to look at science and society and the use of research to inform policy. Other areas that we are exploring as possible priorities are: energy; the beneficial use of personal information stored in electronic databases; innovation and commercialisation of science; and interdisciplinary research. All will be relevant to the ten-year investment framework and, as mentioned earlier, we believe that we are well-placed to assist government in reviewing the implementation of this framework.

**It is fortuitous that the relaunch of the Council for Science and Technology coincides with a high profile, long-term commitment to science from government. We feel enthused and excited by the possibilities that this brings and look forward to working with government over the coming years.**

I am copying this letter to the Prime Minister, Jack McConnell MSP, Rt Hon Rhodri Morgan AM, Ian Pearson MP, Rt Hon Charles Clarke MP, Rt Hon Paul Boateng MP, Lord Sainsbury, Sir David King and Sir Keith O'Nions.

Yours sincerely



**Sir Keith Peters FRS PMedSci  
Co-Chair, Council for Science and Technology**

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<sup>1</sup> *Science teachers: supporting and developing the profession of science teaching in primary and secondary schools.* Council for Science and Technology. 2000.