THE FOUNDATION FOR SCIENCE AND TECHNOLOGY

DINNER/DISCUSSION SUMMARY

Science & innovation investment framework 2004-2014

Held at The Royal Society on Tuesday 20th July, 2004

Sponsor:
Research Councils UK (RCUK)

In the Chair: **The Rt Hon the Lord Jenkin of Roding**
Chairman, The Foundation for Science and Technology

Speakers: **John Kingman**
Director, Enterprise and Growth Unit, HM Treasury
Sir Keith O'Nions FRS
Director General Research Councils, Office of Science and Technology, DTI
Andrew Barker
Head of European Equity Strategy & Managing Director, UBS

MR JOHN KINGMAN[1] introduced the Government's ten year framework review for science and innovation[2]. He underlined that it was a framework rather than a plan, and did not represent a change in the Dual Support System (for funding universities by grants from Research Councils and Quality Research (QR) funding from the Higher Education Funding Councils). Through the Department for Trade and Industry and the Department for Education and Skills, there would be an average annual increase of 5.8% in real terms in investment in the public science base over the Spending Review period (2004-5 to 2007-8). This would be at least in line with the growth rate of the economy. To achieve a 2.5% increase in Research and Development (R & D) as a proportion of GNP would require a strong partnership between the public charities and private sectors. He also referred to the promised investment by the Wellcome Trust in British university research infrastructure, and the work of charities generally.

In summary the Government wanted greater responsiveness of public science research to the needs of the economy, increased business investment in R&D and innovation, a larger supply of scientists and engineers, more financially stable universities and public laboratories at true economic cost, improvement in the quality of science and mathematics teachers in schools and universities with greater flexibility over salaries, and stronger emphasis on medical research. All this carried a multiplicity of specific objectives including a new strategy for the Research Councils and Higher Educational Institutions, new regional policies of development, and promotion of new public/private cooperation in R&D across the whole spectrum.

SIR KEITH O'NIONS focused on the role of the Office of Science and Technology within the DTI in carrying forward the Government's programme. Excellence in research required improved knowledge transfer from the public to the private sector, and new emphasis on infrastructure, particularly in universities. Expenditure on knowledge transfer and innovation involved strategic coordination between the science budget, the DTI Innovation Group, the Higher Education Innovation Fund and other Government Departments and relevant institutions. It was vital to establish true economic cost.

[1] The presentations can be found on the Foundation's web site – www.foundation.org.uk.
[2] www.hm-treasury.gov.uk/documents/enterprise_and_productivity/enterprise_and_innovation/science_innov/ent_sciinnov_index.cfm

The public, in particular younger generations, had to understand what was happening and feel associated with what amounted to a transformation of the British economy. It should be able to attract others and become a world centre for competitive science and technology.

MR ANDREW BARKER looked at the issues from the point of view of shareholders and the City generally. The British equity market was larger and more liquid than any other in Europe and over time and depending on sector, valued science and innovation highly. Nonetheless markets worldwide were at present hostile to most kinds of R&D. In the long run US experience suggested that investors should, depending on sector, favour companies with high R&D. This was more true of large rather than small companies in the US. British financial services were highly productive and exported successfully, but drew heavily on British scientific and innovative talent. Here a careers balance had yet to be achieved.

In the discussion which followed before dinner, speakers welcomed the increased expenditure in the ten year review, but had detailed comments and questions on the practical implications. There was a need for more transparency in how grants were given. Not only were markets unsettled but shareholders were increasingly assertive and more interested in short term profit than long term R&D. So far as possible innovation should be market-led rather than directed from the top.

It was often hard to know exactly how and where business invested in creative thinking and innovation: some had contracts with outside suppliers, and others conducted their R&D in other countries (in which case they would not be able to take advantage of the new arrangements). It was easier to trace R&D in manufacturing industries than in services.

How to encourage R&D in small companies was a particular problem. In the past some had been dismayed at visits from analysts trying to identify R&D and to demonstrate linkages in knowledge transfer, and now feared the activities of regulators. But some measure of public accountability was essential. True economic costs were hard to establish. Was inflation properly accounted for? It was of course different in different sectors. In universities more flexibility over salaries to attract and reward was vital. The same was true of engineering. After dinner speakers reverted to the basic questions of how to encourage R&D and to deliver the results. R&D was of course subject to fashion like anything else. Current British and EU targets were very ambitious. In any analysis of R&D, research was often no more than 10% of development, but although difficult to measure development naturally followed research. The yield on R&D for big companies was not always very large. Wider use of tax credits should help. A key point for investors in both small and large enterprises was whether the new programme would survive any change of Chancellor of the Exchequer or Government.

As long ago as 1946 in the US, the national priorities for science and technology had been eloquently laid out. Somehow the message had to be got across to investors and the public generally. Some fundamentally unscientific campaigns, as over GMs, could do enormous harm. The answer was not to preach at the public but to engage with it. The increasing length and complexity of global supply chains, in which all major companies were involved, added to the difficulties. R&D was often driven by personal enthusiasm and charisma, but financial managers and shareholders still had to be convinced. Stability in the long term prospects for R&D was essential. So was the role of Government. We now seemed to be on an upward path.

Sir Crispin Tickell GCMG KCVO