THE FOUNDATION FOR SCIENCE AND TECHNOLOGY

DINNER/DISCUSSION SUMMARY

How should governments support science and innovation in a growing economy?

Held at the W5 Odyssey Centre, Belfast, followed by dinner at the Parliament Building, Stormont, Belfast on Tuesday 19th March 2002

Sponsored by
Department for Employment and Learning
Engineering Employees Federation
Engineering Training Council

In the Chair: The Lord Alderdice
Speaker of the Northern Ireland Assembly

Speakers: Mr Leslie Morrison
Chief Executive, Invest Northern Ireland
Professor Gerry McKenna
Vice-Chancellor, University of Ulster
Mr Noel Treacy TD
Minister for Science, Technology & Commerce, Dublin

LESLIE MORRISON observed that fiscal measures and financial incentives, including the provision of some risk-capital, could exert a beneficial influence without leading to central control. In Northern Ireland it was already clear to him that scientific and technological innovation would be a main driver of industrial and economic progress. However, the presence of top-class research and development (R&D) would not of itself ensure success; the driver had to be entrepreneurship. He pointed to much relevant evidence of an economic and technological acceleration in Northern Ireland. The two universities had demonstrated, at the recent Research Assessment Exercise (RAE), the presence of significant areas of economically relevant research excellence. To build upon this potent base for further development, it would be necessary to develop still further the beneficial interactions between the universities and industry, to strengthen both internal and external collaboration, to recognise innovation as the key to progress, to fund the knowledge-based economic drivers, and to remember the dictum that "learners will inherit the earth". It had to be appreciated that Northern Ireland remained very much an SME economy. Nevertheless it could aspire to become a world-class regional economy with dynamic organisations which made innovation a habit.

PROFESSOR MCKENNA emphasised the need for a strong, vibrant and internationally-recognised research base in Northern Ireland. A report published in 1999 had shown that its universities accounted for over 34% of Northern Ireland's R&D. The region's research strategy should be highly selective and based on the potential to achieve not merely national but international strengths. It should be identified and support key wealth-creating sectors, exploit intellectual property for the benefit of the region, seek to develop facilities for innovation and growth, underpin and promote social and cultural development and learning and teaching strategies. In all of this the universities had a central role in ensuring development of human skills to make the region internationally competitive. The universities also had a vital role in supporting those many small firms which would be unable to sustain a substantial R&D effort for themselves. Leslie Morrison had already referred to the RAE performance; this had been secured in spite of substantial under-funding from

government compared with other UK jurisdictions. Nor, in a competitive environment for securing the best talent, could one ignore the very high level of resources now being committed in the Republic of Ireland.

NOEL TREACY underlined this point by emphasizing the importance attached in the Republic of Ireland to stimulating innovation. He identified many factors which had facilitated the progress made by his country, including a tax regime favourable to enterprise, the availability of European funding, the attention given to the development of future skills by relevant provision in third-level or other education, and in recent years the commitment of very substantial new public funding for the support of R&D related to industrial development. However, long-established indigenous industry still did not match incoming industry in terms of accepting the primary importance of innovation. There was a need to develop an indigenous enterprise culture. Technology Foresight and Science Foundation Ireland had been important stepping-stones towards the goal of a research environment in Ireland capable of competing with the best in the world in well-chosen areas. In a wide ranging discussion which followed, many of the issues raised by the speakers, with others, were explored.

It was emphasized that R&D must not be seen as an end in itself. Economic success had to begin and end with the marketplace. Moreover, R&D itself represented a wide spectrum, and there was a need for care and selectivity in deciding how and when to invest in it. While there was a need for a sound research infrastructure in the universities, the focus should be on the quality rather than the quantity of research. Moreover, the long-term character of investment in R&D should be acknowledged. It offered no immediate or guaranteed pay-off, and yet governments commonly looked for immediate and demonstrable benefits. Nevertheless the aim should be to raise standards and aspirations throughout the academic community.

It was argued that the processes by which innovations rooted in R&D were converted into marketable business propositions were still poorly understood. Leslie Morrison emphasized that the role of Invest Northern Ireland would not be either to invest in pure or basic research or to become an entrepreneur in its own right, but rather to encourage and advise in developing propositions which would be carried forward by venture capital or otherwise.

Concern was expressed about the absence of substantial venture capital players. Grants, once given, had normally gone for good. Of course, projects attracting venture capital involve risk of failure, but the community would have to learn that the acceptance of risk was a corollary of enterprise.

A number of speakers expressed concern about the implications of Northern Ireland's low per capita investment in R&D, and the relatively low level of core funding for university research, albeit boosted encouragingly in the short term by the £40 million SPUR project. It was strongly argued that only true centres of excellence could hope to attract the best people in an increasingly competitive world. Footloose talent would look for the best available in terms of buildings and equipment.

Several of those present focussed upon the ability of the Republic of Ireland to adopt radical fiscal, funding and policy measures. The Northern Ireland Assembly would face a real challenge in creating a business-friendly environment, and if necessary should bring pressure to bear upon the Chancellor of the Exchequer to obtain the necessary room to manoeuvre. There had been much talk of "re-engineering". Perhaps government also needed to re-engineer itself.

A participant from continental Europe, drawing upon relevant experience in his home country, underlined the message that a commitment to innovation had to be a sustained, long-term affair. The whole of society would need to appreciate that "knowledge is the future".

There was a strong plea that Northern Ireland should be sure it was developing its best human potential, regardless of gender. Professor McKenna pointed out that in his institution a majority of students in the biomedical sciences were female as were 36% of undergraduates in computer science. Nevertheless there remained fields such as engineering which were still predominantly male.

Sir Kenneth Bloomfield