

Hazel Gibson
Office of the Chief Scientific Adviser
Scottish Executive
Room 1 N01
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Dear Hazel

Re. **SCIENCE AND INNOVATION STRATEGY FOR SCOTLAND: Consultation paper**

I welcome the very interesting consultation paper which will support the revised strategy and framework for Science and Innovation in Scotland.

I offer the following comments in relation to two of the themes outlined in the report as well as some general overall comments.

Theme 3: Intensifying knowledge exchange between academia and business

I support the long term aspirations outlined in this theme and would suggest that '**business pull**' and not only 'knowledge push' through the pipeline of support for innovation and commercialisation of research is critical to successful knowledge exchange.

I would recommend that the long term aspirations also focus on support mechanisms to understand and indeed respond to business pull and the key drivers in adapting new and existing knowledge to generate new products, processes and services.

The key to a successful knowledge economy is to ensure there is sufficient funding for excellence in the academic Science base whilst having a sophisticated company base who can understand, interact with and benefit from the science base as a resource to drive innovation.

The role of **Interface – the knowledge connection for business** is pertinent to responding to this business pull.

Interface has been established by Scottish Universities is assisting businesses of all shapes and sizes from all sectors to engage more fully with the higher education institutions across Scotland. Further information is provided as an appendix but key statistics from the first 16 months of operation are:

- Interface has conducted 175 'expertise searches' to inform companies and commercial organisations of key capabilities within Scottish Universities with respect to R&D, access to facilities, knowledge or technology.
- Interface focused on 'business pull' rather than technology push and overcomes the challenge facing companies in understanding what is available or who to contact in Scottish Universities for R&D or expertise capabilities
- For 62% of all searches the organisations seeking expertise have not collaborated previously with a Scottish University
- 80% of the companies who have initiated discussions and/or projects have not previously collaborated with that University.
- The projects facilitated by Interface are the starting point to develop longer term relationships between specific academics and companies.

In considering the short to medium term actions points I would recommend that the group consider where current blockages are in the system in relation to

- (i) lack of business pull
- (ii) lack of resources within the science base to respond to company requirements for short to medium term collaboration eg. 3-6 month company - academic collaborative projects are difficult to complete due to the lack of available researchers
- (iii) balancing the multiple commitments of university researchers to allow them provide a timely response to company requirements within what are often tight timescales of time to market

The current plethora of initiatives and support mechanisms for facilitating and funding knowledge exchange between companies and academia should be examined to ensure that there is not confusion in an already crowded market place. Building on successful brands such as KTP, Score and Interface should be encouraged rather than introducing yet more initiatives which could create further confusion.

Theme 4: Expanding Business Innovation

Specific comments on the short to medium term action points include

- Case studies are critically important marketing materials in convincing SMEs to undertake R&D and to innovate (be it KTP, ScoRe or projects facilitated by other organisations including Interface)
- In developing new mechanisms for exchanging ideas and best practices and for disseminating innovative and successful thinking to businesses it would be important to ensure that these do not further complicate an already crowded landscape with multiple players and events (eg. overlapping programmes, initiatives, modes of advice through Scottish Enterprise, Connect, Nexxus, Chambers of Commerce, Business Forum etc)
- I would like to highlight the recent NESTA's report - The Innovation Gap – which suggests that the real innovation gap lies not between the UK and its competitors, but between the reality of innovation and how we measure it. This would seem to be key to ensuring that there is a clear evidence base and that innovation within Scottish companies is measured effectively.

Some General comments:

Overall there does not seem to be a balance between science and innovation within the consultation document with much more emphasis on science than innovation eg. only 1 theme directly mentions innovation in its title. I think that 7 themes is sufficient but perhaps a refocusing of these may create a better balance.

This document is heavily focused on the science base of universities and colleges. It is important that Scottish companies feel included and not alienated from the revised strategy and I would recommend that capturing their views is critical to the success of the future framework.

I look forward in due course to seeing the revised strategy and framework for Science and Innovation in Scotland. Please do not hesitate to contact me should you require additional information or clarification.

Yours sincerely

Dr. Siobhan Jordan

Director

INTERFACE - The knowledge connection for business



Interface – the knowledge connection for business has been established in August 2005 as a **central point of access** to enable companies and commercial organisations to gain easier access to Scotland’s world-class technology, skills and research within its universities.

Funding for the three year project has been provided by the Scottish Funding Council and in part from the Scottish Innovative Actions Programme.

Hosted by University of Edinburgh on behalf of all Scottish Universities, Interface works closely with its 20 higher education institutions funded by the Scottish Funding Council.

Interface bridges the gap that often exists between business and the academic world. The team provides information to companies regarding the specialist expertise that is available in the universities; including research and technology capabilities, consultancy, industrial placements and access to equipment and facilities. The team support companies to identify the most appropriate solution for them and provide a completely impartial service.

This document provides an overview of the progress made by **Interface – the knowledge connection for business** to date:

Key facts and figures – Year One

- Interface was formally launched by the Deputy First Minister Nicol Stephen MSP at a high profile event on 8th March 2006. He endorsed the project saying: *“In Scotland, we have an internationally competitive university knowledge base. We produce 1 % of the world’s published research with only 0.1 % of the population. Despite this, business spend on R&D, particularly amongst small companies, is disappointingly low. It is vitally important that we find ways to improve this position. The Interface programme will tackle this issue head-on. It is a very exciting new development involving all of Scotland’s universities. Businesses will now find it easier to forge links with our world-class universities and tap into their outstanding pool of expertise. “Interface has links to thousands of experts in a wide range of industry sectors who can help give Scottish companies answers to their individual business challenges. This project has fantastic potential to bridge the gaps that too often still exist between business and the academic world.”*
- The core team of three have established operational mechanisms including a network of contacts within each of the 20 partner institutions. In addition links are in place with other University outreach programmes including those funded by the Scottish Executive SEEKIT project eg. the Highlands and Islands Hi-Links programme.

- The Interface website [www.interface-online.org.uk] provides a comprehensive guide to funding opportunities to support academic – company engagement, case studies and a calendar of networking events.
- The Advisory Board for Interface which includes representatives from companies, partner universities, Scottish Funding Council and Scottish Enterprise provides independent advice on the development and implementation of strategy in support of the mission for Interface, and on the operational activities.
- In the first sixteen months of operation Interface has received a total of 305 enquiries seeking information. From these 175 expertise searches on the capability and expertise within Scottish Universities were conducted for companies and commercial organisations. The information provided from these searches highlights the capability and capacity of specific academics to address the problems and issues posed by the company.
- Through introductions facilitated by Interface to date, thirteen company – university and two university-university collaborative projects have been initiated. In addition a pipeline of activity is in place with over 50 organisations in discussion regarding specific projects with university partners which will result in new collaborations and contracts. See case study in Appendix Two.
- Around 50% of the enquiries are from the Scottish SME sector with a further 18% from larger Scottish companies. There is a growing interest in the service that Interface provides from other UK and International based companies who are seeking to collaborate with Scottish Universities.
- The type of expertise sought ranges from life sciences to software, engineering, social sciences and energy.
- For 62% of all searches the organisations seeking expertise have not collaborated previously with a Scottish University
- 80% of the companies who have initiated discussions and/or projects have not previously collaborated with that University.

APPENDIX TWO: CASE STUDY

Emtelle is the global leader in ducted network solutions and air blown fibre solutions. It produces small, lightweight and robust underground cabling systems, pioneering the next generation of broadband network solutions for FttH (Fibre-To-The-Home)

Recent communications contracts have included cabling the communications infrastructure to 7600 homes in Nuenen, in The Netherlands and for the Olympic Village in Athens in 2004.

A particular problem of underground cable management is the presence of water and moisture in the tubing which houses the fibre optic cables and Emtelle's R&D team in Hawick has been looking to develop the next generation of polyethylene tubing with a greatly reduced water permeability rate. To do this, Emtelle required a recognised specialist working in the area of semi-permeable membrane technology.

"One of my colleagues had been sent a leaflet about Interface and the benefits for us were immediately apparent. We required a specific expertise and, based on our criteria, we contacted Interface – the knowledge connection for business who put us in touch with the School of Engineering at Glasgow Caledonian University,

Interface was the ideal catalyst in helping bring both parties together. Having previously worked with Heriot-Watt and Napier Universities on knowledge transfer partnership projects, we were aware that the external expertise we required probably existed within academia, but crucially, needed to find ways of uncovering the correct academic partner for this very distinct engineering project." commented Phil Clayton, technical manager of Emtelle

Interface identified that this area of expertise was available through The Glasgow Caledonian University's School of Engineering and more specifically the Centre for Research on Indoor Climate and Health.

The centre's Chris Sanders takes up the story.

"The contact that Interface made for us with Emtelle led to an interesting series of discussions and allowed us to develop a relationship with a new industry sector. This enabled us to bring our expertise on moisture transport into a novel field. Interface plays a very valuable role in establishing contacts between specialised University groups and industrial organisations working in areas outside their usual field."

A short-term consultancy project was agreed, enabling Emtelle to begin developing a superior product with ultra low water permeation rates. In short, Interface gave Emtelle access to knowledge outside the core expertise of its business that helped it onto the next stage of our product development cycle.

Phil Clayton added, "I believe that Interface is the perfect 'trouble-shooter'. I would urge more companies and businesses to look closely at Interface to help cement the bond between academic talent and companies looking to further their product development. It really is a great opportunity to have Interface at your disposal.

The relationship made between universities and organisations have an important role to play particularly where complex problems and issues have to be resolved."

