

From the lab in Northern Ireland to the global marketplace



Northern Ireland's leading research institutions are playing a major role in the global market

Turning academic research into commercial reality has very much become a focus of universities and businesses. **Kathleen Hagan**, founder and president of Hagan and Company, an international marketing and management consultancy based in Boston looks at the partnerships Northern Ireland and the US have developed in this area.



commercialise new technology to protect both people and data security. Cyber Security is a critical global problem for governments and companies alike – as well as an opportunity for entrepreneurs and corporations developing state-of-the-art solutions for cyber security problems.

CSIT has developed a number of collaborative relationships including a vibrant research relationship with the University of California – Berkeley's Team for Research in Ubiquitous Secure Technology (TRUST). CSIT and TRUST are collaborating on the development of cyber security technology for securing next generation internet (cloud) and communication infrastructures.

In the area of environmental sciences Queen's University's Questor Centre has been a pioneer in international collaboration for more than 20 years. The Questor Centre

conducts industry-driven research in the areas of water and wastewater treatment, environmental monitoring, remediation of contaminated land, and energy from biomass. Questor has an active research collaboration with the Stevens Institute of Technology in New Jersey and is the only non-US research institution to be an invited member of the US National Science Foundation's Industry-University Cooperative Research Program.

In addition to university-to-university and university-to-industry relationships, the governments of the US, Ireland and Northern Ireland have been collaborating on a unique US-Ireland R&D Partnership Program designed to increase three-way collaboration amongst researchers across Ireland, Northern Ireland and the US in the areas of nanotechnology, sensor technology, diabetes and cystic fibrosis.

Declan Kelly, US secretary of state

Hillary Clinton's economic envoy to Northern Ireland, has been an energetic advocate for NI's R&D capability. Last month as part of the US- Northern Ireland Economic Conference hosted by secretary Clinton in Washington, DC (October 19th), envoy Kelly participated in a special event held in conjunction with the Economic Conference featuring the US-Ireland Tri-Lateral R&D Partnership Program.

It is a long and winding road from discovery to commercial viability for new technologies and many discoveries never make it successfully to the marketplace. NI government and research institutions' commitment to commercialising the region's substantial intellectual capital has already resulted in many NI innovations succeeding in the global marketplace...with more exciting successes to come in the new technology driven Northern Ireland economy.

"OPEN Innovation" describes the trend on the part of companies of all sizes – from early stage to market leaders – to work collaboratively with universities on the commercialisation of exciting research discoveries that have high potential for novel applications in the marketplace.

Northern Ireland's leading research institutions, Queen's University and the University of Ulster, are very much a part of this growing global trend.

University R&D in Northern Ireland is world class and a driver for the growing high technology sector in the Northern Ireland economy. In addition to the University of Ulster and Queen's University – Northern Ireland institutions with vibrant research programs such as the Department of Health and the Agri-Food & Business Institute (AFBI) also support technology transfer through licensing and spin-out activity.

Many Northern Ireland research spin-out companies are now competing successfully in the US marketplace.

Did you know that Northern Ireland has become a world leader in the development of emergency cardiac technology with defibrillators in service at the White House and on Air Force One that were developed in Northern Ireland by Heartsine, a University of Ulster spin-off company?

Did you know that George Lucas' Skywalker and Steven Spielberg's Dream Works Studios use sound compression hardware and software (for post-production editing) developed in Northern Ireland by APT (now CSR), a Queen's University spin-off?

Advances in technology and communications have also accelerated the growth of international collaborative R&D resulting in more multi-institutional research teams working across academic and geographic boundaries on solutions to complex interdisciplinary problems that have commercial potential.

An excellent example of this is Queen's new Center for Secure Information Technology (CSIT).

CIST is a major initiative developed by QUB's Electronic Communications and Information Centre (ECIT) with the support of a £30 million award from the UK government's research body, EPSRC. (This award includes £5m in matching funds from InvestNI) CSIT's mission is to develop and