Innovation In High Tech Small Firms

Summary

High-tech small firms (HTSFs) are the lifeblood of dynamic modern economies. Yet, while promoting the adoption of innovation by businesses has been an EU priority for decades, participation by HTSFs in R&D and funding programmes has remained worryingly low.

Impacts of this multidisciplinary research by Ulster University include methods for encouraging adoption of high-tech innovation across Europe; development of policy recommendations that feed into the European Parliament, Horizon 2020, national and European high-tech associations and innovation networks; and ultimately delivery of real economic benefit to HTSFs locally and across Europe.

Impact

Ulster University's research has made a significant impact and influenced decision-making across Europe in tangible ways, including new policy programmes affecting EC innovation funding for HTSFs in Horizon 2020 and EU member states, as well as contributing to the European-wide adoption of novel high-tech innovations.

The international reach of these European-wide HTSF policy recommendations has extended to the European Commission and European Parliament. Policy developments targeting HTSF innovation adoption now covers all EU member states.

In addition, Ulster University's policy findings were fed into the development of Horizon 2020 and the EC Green Paper – Common Strategic Framework. Key issues addressed included how to remove barriers for HTSFs when designing and implementing funding programmes, plus practical ways to help HTSFs commercialise and exploit their results after the project lifecycle has expired.

Public procurement has presented considerable entry barriers for HTSFs in the past. In its best practice reports the university identified exemplar SME-focused HTSF funding policy programmes, such as the SBIR programme in Holland and the UK, that offer policy-makers detailed guidance on how to replicate these programmes for widespread adoption. Ulster also addressed the procurement issue in a practical way, by developing bespoke methodologies to make the process less cumbersome.

The lowering of innovation barriers for HTSFs has greatly enhanced the international impact of this multidisciplinary research, leading to endorsement from the EC as a European exemplar of high-tech adoption. A spinout of Ulster University's work in this field has also involved its School of Computing and Mathematics and School of Health Sciences in the development of the Engage innovation eParticipation software tool. This was pivotal to ensuring adoption in the UK market. Engage was released on a free open-source licence on the EC's Joinup website, which has dramatically increased the reach and impact of the software.

The release of Engage has paved the way for wider adoption: it was used as the primary eParticipation technology in a winning tender by an Italian HTSF to conduct consultations for the Piedmont regional government.