



Interface

The knowledge connection for business

Annual Review 2019-2020



Introduction



Professor Andrea Nolan OBE

Chair of Interface Strategic Board,
Principal and Vice-Chancellor of
Edinburgh Napier University

2020 has been an exceptional year with a challenging and fast-moving environment for all of us as we responded to the impact of the COVID-19 pandemic. Amidst all the change and

churn, the manner in which our universities, colleges and businesses have stepped up has been both inspiring and humbling.

Scottish universities and businesses have given our nation a worldwide reputation for inventiveness. We have an outstanding research base, and Interface is in a unique position to accelerate its translation into business innovation and economic growth.

It has been so encouraging to see the hunger from businesses to make connections to Scottish universities and colleges via Interface, with a record number of collaborations in the past year.

Universities are absolutely committed to supporting Scotland's drive to a 'green' recovery and inclusive growth. As a significant catalyst in our innovation ecosystem, the role of Interface has never been more important.



Karen Watt

Chief Executive,
Scottish Funding Council

Interface has been funded by the Scottish Funding Council since its creation, and we are proud to have supported its impact on business innovation in the past 15 years.

As a national hub connecting businesses and academia, Interface plays to Scotland's strengths as a small, well-connected and progressive

country. It works because of our innovative colleges and universities, and the ambition of Scottish business to grow and develop. The fact that Interface has brokered more partnerships between businesses and academia this year than in its previous 14 years demonstrates the strength of its reputation and the demand for its services.

The Scottish Funding Council is leading a review of further and higher education. As we change and adapt to create a sustainable future for our learners, institutions and businesses, the work of Interface will be more important than ever.



Richard Lochhead MSP,
Minister for Further Education,
Higher Education and Science,
said:



Scotland's world-class research plays a key role

in addressing economic, societal and environmental challenges, both nationally and globally. Unlocking the further potential in Scotland's colleges and universities to support inclusive, sustainable economic growth, delivering highly skilled people to the labour market and supporting industry-led challenges is key to accelerating business confidence and ambition. This is especially important now, in these challenging times.

The team at Interface continues to play a significant role in establishing long-lasting collaborations between businesses and academia delivering a range of social, environmental and economic impacts.

What it has achieved in its first 15 years is impressive and has enabled many productive partnerships helping Scottish companies and organisations to flourish and scale up, and I look forward to seeing many more achievements from them in future."

Supporting the medical response to COVID-19

From March 2020, the impact of COVID-19 on our day-to-day activities had an immediate and long-lasting impact. The team at Interface quickly joined the “National Mission” in the medical response battle against coronavirus and the ongoing economic recovery, helping to “build back better”.

We matched businesses to our academic partners for vital research and development to fight COVID-19 in a variety of ways, from providing protective equipment to enabling effective testing.

This included our support for Stirling based specialist fabric engineering company, **tensARC**, who were able to quickly validate the efficacy of a pioneering prototype face mask with the help of the University of the West of Scotland (UWS), saving weeks of test time.

After being referred by Scottish Enterprise, Laura Goodfellow, Head of Business Engagement at Interface, was able to translate tensARC’s request, issue their expertise request to various universities within Scotland, match them to UWS, and secure a Scottish Funding Council Standard Innovation Voucher to fund the project - in just over a week.



Interface supported Alloa based life sciences business **Emblation Ltd**, specialists in manufacturing medical devices using microwave technology, with a successful bid to Innovate UK’s COVID-19 rapid response funding. Academic partners Edinburgh Napier University were introduced to the business by Dr Siobhán Jordan for testing and development following the adaptation of their medical device to effectively kill virus particles in their aerosol form.

Compliance LEV Ltd are specialists in dust and fume extraction, helping businesses meet compliance and legal obligations. With the assistance of Mari Findlay, Interface Business Engagement Executive for Ayrshire, Dumfries and Galloway, the Ayrshire business is collaborating with Robert Gordon University to develop a sophisticated system that provides filtered fresh air to prevent ingestion of harmful fumes and particles. The collaboration was awarded £24,071 Advanced Innovation Voucher funding through the Scottish Funding Council.

With our extensive networks and strong relationships with higher and further education institutions, we were able to find rapid solutions to the challenges presented by COVID-19 - the response by all was swift and impressive and we are proud of all our partners from the worlds of industry and academia for stepping up to the challenge.

Alongside the responsive Interface matchmaking service, we proactively reached out to hundreds of businesses to inspire and inform them of innovation challenges, funding opportunities and vital business survival support services. Our partnership approaches working with Business Gateway, Highlands and Islands Enterprise, Scottish Enterprise, South of Scotland Enterprise and Skills Development Scotland through the findbusinesssupport.gov.scot website helped provide businesses with information and support quickly.

The Interface team also supported businesses within our networks to access the Scottish Business Resilience Centre’s one to one mentoring service (Scottish Business Cares), tapping into expertise in navigating an economic crisis, business growth and building success.



Dr Paul Baglin, Managing Director,
tensARC said:

The support from Laura Goodfellow was amazing. The Face Gaiter concept is quite radical and can be a little hard to grasp but she jumped on it straight away, worked on it through the Easter weekend, and found us the perfect partner at UWS. The Scottish Funding Council fast tracked the Innovation Voucher application in just 24hrs because it was COVID-19 related and it has allowed us to start the work while we wait for other funding to be approved. The grant will save us at least three weeks on the testing program. In 18 years of running a design-based SME, this is the easiest and most effective support I have received – exceptional!”

Building hope for the future economy

Unprecedented disruption to industrial sectors has highlighted urgent opportunities for innovation, collaboration and investment across vital supply chains. In helping the economy “build back better”, we have supported businesses from all industrial sectors of importance to Scotland build productive partnerships with Scottish academic teams, including many requests from companies in engineering and technology, tourism and hospitality, food and drink, and social enterprises/third sector.

We have fostered productive partnerships with many academic disciplines including engineering, chemistry, computing science (AI, machine learning), business schools and life sciences in high demand.

Inspiration from academic experts

Scottish universities and colleges are for people, productivity and connections – and Interface unlocks this potential for businesses locally, regionally and globally.

To support and inspire businesses to adopt practical steps to adapt and diversify, we began a series of informative webinars featuring leading academics. Themes included: balancing purpose with profit in a post COVID-19 world; adapting to COVID-19 – diversifying food and drink; and building value from collaborative partnerships.

The outcomes from the webinars have been many and varied, including showcasing expertise from many different academic disciplines, sharing essential business tips, highlighting technologies that can be adapted for new markets and providing a forum for enhanced partnership building. These have led to a number of business-academic collaborations as companies recognised new opportunities and markets and gained information to help with action plans to assist on the road to recovery.

Our programme of inspirational and thought-provoking topics will continue through 2020/21 – you can find out more at www.interface-online.org.uk/events or sign up to our newsletter from our website homepage.

Tailored Business support

Interface’s initiative to support the tourism and hospitality industry in Scotland, “**Adopt a Business**”, was launched in collaboration with VisitScotland and Scottish Tourism Alliance in May. More than 80 businesses were connected to 12 Scottish universities, with their staff and students as far afield as Dubai, Australia and Italy, working from home during lockdown on collaborative projects to help the companies diversify and develop.



Fergus Ewing MSP, Cabinet Secretary for Rural Economy and Tourism, said:

The Adopt a Business programme of support has demonstrated how Scottish Universities are playing their part in supporting tourism and hospitality businesses through diversification and innovation. The outcomes from the partnerships facilitated by the team at Interface will greatly help the businesses to implement practical action plans supporting future sustainability and growth.



International connections



Attracting international companies

Alongside supporting many Scottish businesses, we have also seen an increased interest from UK and globally based companies seeking world leading expertise from Scottish universities. In partnership with Scottish Development International our impartial brokerage has supported many international businesses to access the research, talent and specialist facilities in Scottish universities.

Sharing our knowledge to inform policy and practice

The impartial Interface service continues to provide a real model to many countries seeking to foster greater connectivity between industry and academia. Whilst all conversations now take place virtually the ongoing interest and opportunities to share best practice are welcome.

In December 2019 we participated in the visit of Guangdong and Chongqing High-Tech Incubation Centre from China hosted by Stirling University Innovation Park and the Forth Valley Chamber of Commerce.

Universities support of small and medium sized businesses and Scotland's energy and microfinance sectors were topics for round table discussions between the Irish Tánaiste, Minister for Foreign Affairs and Trade, Simon Coveney, and Interface in November 2019. The visit by the Tánaiste was the first step in taking forward the joint bilateral review of Ireland-Scotland relations.



Interface's director Dr Siobhán Jordan was invited to share some insights with the Irish Tánaiste, Minister for Foreign Affairs and Trade Simon Coveney about business-academic collaborations.

Throughout the year we also responded to a range of government consultations and reviews on topics including the impact of COVID-19 on business, workers and the economy; the impact of COVID-19 on Scotland's culture and tourism sectors; access to funding; life sciences; and artificial intelligence; arranged meetings between Ministers and companies to share the impacts and outcomes from our support; and provided a wide evidence base about the value of Scotland's universities and colleges to the economy and society.



Benny Higgins, Chair of the Advisory Group on Economic Recovery in Scotland concluded:

Our universities are the envy of many around the world. We must protect them but also leverage them to greater effect; we must transform acknowledged world-class research into comparable levels of development, and, in turn, large-scale commercialisation."

Case study

Based on the strength of the Scottish research base, Celestia UK, specialists in developing antenna systems used for tracking space satellites, was keen to build links to Scottish academia around access to specialist facilities and technologies such as microwave and antenna engineering, signal processing and communications. Through Interface brokerage, the team at Celestia have created a very productive partnership with Heriot-Watt University.

After a successful five-month residency at Heriot-Watt University's Global Research Innovation and Discovery (GRID) facility, brokered by Interface, Celestia UK, announced that the university's Research Park will be its permanent base in Scotland. A £2.5 million R&D award from Scottish Enterprise will enable the development of new electronic scanning antenna, creating 18 new jobs, and recruiting engineers across several different disciplines.



Fiona Hyslop, MSP, Cabinet Secretary for Economy, Fair Work and Culture, heard plans for Celestia UK to make a permanent base at Heriot-Watt University after Interface's brokerage.

A record-breaking year

Supporting businesses and organisations across Scotland, in 2019-2020 the Interface team:

Issued **509** project briefs outlining business-led challenges - to universities, colleges, research institutes and other partners, of which:

329 collaborative projects were undertaken between a business and a university or college - the highest recorded in any year since Interface was established, and a 22% increase on the previous year.

- **200 (61%)** projects were a first time collaboration between the business and university or college
- The collaborative projects represent all industry sectors – the top three being **Tourism and Leisure (29%)**, **Creative Industries (18%)** and **Food and Drink, Agritech and Aquaculture (14%)**
- **44%** of collaborative projects were led by a female business contact – an increase from 39% compared to last year

Interface is proud to support responsible businesses helping deliver the Scottish Government's ambitions of equality and diversity, social inclusion and environmental sustainability.

- **234 (71%)** of collaborative projects reported against at least one Responsible Business theme
- **55** Equality and Diversity (**16.7%**)
- **114** Social Inclusion (**34.7%**)
- **98** Environmental Sustainability (**29.8%**)



Delivering immediate impacts for our client companies:

100% Satisfied or extremely satisfied with Interface Service	94 New or improved products developed	48 New or improved processes implemented	44 New or improved services delivered
94% Satisfied or extremely satisfied with academic partner	40 New jobs created + 37 existing jobs safeguarded	42% Continuing collaboration with academic partner	28% Invested cash in continued R&D

Over the last year, we have tracked the scale up of businesses supported by Interface or Innovation Vouchers over the past few years and can report that 38 companies raised an incredible **£50m** for their growth and development from a variety of sources. As the saying goes, **success breeds success!**

Innovation Vouchers awarded 2019/20

98 Standard Innovation Vouchers 93 with universities - £459,544 5 with colleges - £24,985 £484,529	5 Workforce Innovation Vouchers 3 with universities - £14,834 2 with colleges - £10,000 £24,834	15 Advanced Innovation Vouchers 14 with universities – £205,539 1 with a college - £9,900 £215,439	4 Student Placement Vouchers with universities £20,000
A total of 122 vouchers awarded to 21 Universities and 5 colleges throughout Scotland			

Case studies

Aurora Sustainability Ltd with University of Aberdeen

Partnering with School of Natural Science at the University of Aberdeen, the Forres-based circular economy business consultancy, Aurora Sustainability Ltd, has explored a joint project in fungal biotechnology.

The aim was to investigate underutilised agriwaste resources for compost/substrates alternatives for fungi-based start-ups, in Scotland and around the world, for delivering foods, goods, biomaterials and biopackaging as sustainable alternatives for nutrients exploitation. More than that, the research looked into the fungal potential polystyrene and thus creating sustainable alternatives in a circular economy.

Polystyrene is a major threat to the environment and human health as well. Annually, around 2.3 billion kilograms of Styrofoam end up in our landfills and waterways. 90,000 workers are exposed to this harmful material every year, causing various health issues.

Using fungi packaging could help transform the environmental impact on various industries and large supply chains. US citizens throw away 25 trillion cups made from Styrofoam every year. The project, funded by a £5,000 Scottish Funding Council Innovation Voucher, has led onto a further collaboration with Rowett Institute, University of Aberdeen.



Articulate Cultural Trust with Abertay University, University of Edinburgh and University of Glasgow

With a £30,000 grant from the Social Innovation Fund, Articulate Cultural Trust began its journey to develop arts programmes for marginalised young people in Glasgow and beyond by collaborating with Abertay University.

The research identified barriers for young people accessing the arts and creative industries, enabling the charity to draw up a road map of its future direction. Through continued support from Interface, the charity has established further collaborations with University of Edinburgh students to explore commercialising an art resource, and Scottish Graduate School for Arts and Humanities doctoral internship programme and University of Glasgow to research engagement with marginalised young people through programmes which build well-being, esteem, skills and opportunities for learning and for life.



Shock Innovations with Fife College and Robert Gordon University

Borders based Shock Innovations Ltd trading as ThermaFY, have developed a digital platform that determines how efficient a heating system is through thermal images. The business is a leader in real-time thermal analysis; their software ThermaFY Eco Solutions enables the collection and interpretation of thermal data from thermal images leading to the identification of inefficiencies of a heating system, saving money and reducing carbon emissions.

A collaboration with Fife College developed new training modules to standardise workplace skills, ensuring that engineers could adopt this software and develop new customer, IT and thermography based digital skills. The collaboration was funded by a Scottish Funding Council Workforce Innovation Voucher. More recently, Shock Innovations and Robert Gordon University are collaborating in response to COVID-19 via an Advanced Innovation Voucher to adapt their analysis software, to help identify elevated temperatures from a person's thermal images. A new solution ThermaFY Protect, provides a thermal analysis track and trace solution which has already received significant interest with pilot installations in two London hospitals.



Celebrating Success

The 2020 Scottish Knowledge Exchange Awards were hosted by Interface in February and proved to be a great celebration of business-academic partnerships.

The winners were:

- **Innovation of the Year**

Winner: HAS Technology Ltd, Greenock, collaborated with Edinburgh Napier University.

Highly Commended: ThermaFY Ltd, Kelso, collaborated with Fife College.

- **Making a Difference**

Winner: Baltic Street Adventure Playground (BSAP), a Glasgow charity, collaborated with the Adam Smith Business School, University of Glasgow.

- **Knowledge Exchange Champion of the Year**

Winner: Professor Marian Wiercigroch, School of Engineering, University of Aberdeen.

Winner: Professor David Flynn, School of Engineering and Physical Sciences, Heriot-Watt University.

Highly Commended: Professor Naeem Ramzan, School of Computing, Engineering and Physical Sciences, University of the West of Scotland.

- **Innovator of the Future**

Winner: Connor Blair, University of Glasgow.

- **Multiparty Collaboration**

Winner: The nEUROSTRESSPEP project, led by the University of Glasgow.

Highly Commended: The MIRAGE consortium, led by Stirling-based Cascade Technologies with partners Compound Semiconductor Technologies Global (CSTG), Gas Sensing Solutions Ltd (GSS), Amethyst Research Ltd and the University of Glasgow was supported by Scottish Enterprise and CENSIS, the Scottish Innovation Centre for Sensors and Imaging Systems.

- **Spotlight Award**

Enable Scotland, University of Strathclyde Business School, Scottish Power and Marriott Hotel, Glasgow, for Breaking Barriers.



All the winners of Scottish Knowledge Exchange Awards 2020

We will be sharing exciting plans for the 2021 Scottish Knowledge Exchange Awards through social media channels so please keep your eyes peeled for more information.

Unlocking world-leading expertise



Dr Siobhán Jordan

Director, Interface

This year Interface turned 15, a milestone we are proud to celebrate. We have been marking our 15th anniversary with a celebration of people - the 15 Faces of Interface – all of whom have supported us in one way or another and who represent different aspects of our work.

We have travelled far since 2005, and the impact we have been able to make on society and the economy by making clever connections between businesses and academics demonstrates how collaborations are making a real difference.

Working in partnership, we know universities and colleges can help make a real difference. This has never been more visible than in 2020 with the COVID-19 pandemic, and we are proud of the speed at which our team, businesses and academic institutes have come together to respond to the crisis.

The sheer diversity of the end products, processes and services resulting from the partnerships that we have helped along the way has been amazing and humbling; from enhanced software for adults and children with brain injuries and learning difficulties, to market leading thermal energy storage for homes, businesses and communities around the world. Many, many people have contributed to Interface's success – my heartfelt thanks to you all in whatever way you have helped in the past 15 years. And I do hope that there will be many more significant milestones ahead for Interface and knowledge exchange in Scotland.



Although we could not meet in person, the Interface team enjoyed socially distanced 15th birthday celebrations

Our values:

Ambitious



Inclusive



Exceptional



Genuine



Ethical



Interface #MATCHEDBYINTERFACE

The knowledge connection for business

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Our funders:

