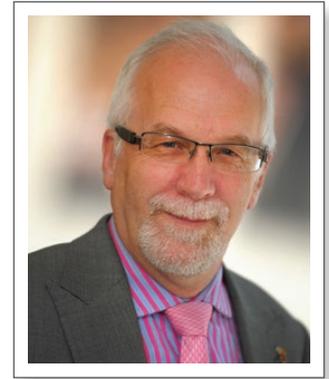




# UK universities welcome U.S. company partnerships



By **Douglas Robertson**, Chair of PraxisUnico

UK universities are open for business and PraxisUnico is the professional association which supports and develops the profession supporting our academic community. PraxisUnico has now trained around 3000 technology transfer and research office staff in how to develop effective partnerships with industry. This article provides a brief glimpse into these innovative partnerships for those considering working with universities or establishing a foothold in the United Kingdom.

Universities in the UK are truly world-class with over 50 in the world top 200. There are over 140 universities and specialist higher education establishments, and whatever your needs and areas of specialism there will be a UK institution with expertise which aligns with your needs - all tightly packed into a geography 600 by 300 miles with an extensive rail and air network. For example, the flying time from London to Aberdeen, in the north of Scotland, is under 90 minutes.

There are already many examples of successful collaborations between U.S. companies and UK universities and this article explores just a few with examples from bioengineering, software, pharmaceuticals, and many areas of science and engineering. Teri Willey, formerly President of the Association of University Technology Managers and now Vice President for Technology and Business Development at Mount Sinai School of Medicine, New York recently completed a five year appointment at Cambridge University. Reflecting on her time in the UK she "found the UK much stronger in technology and knowledge transfer than most gave themselves credit for. I especially appreciated the more holistic approach: looking beyond licenses and spin outs to new ways to engage with industry, finance new businesses and support faculty consultancy." Collaborations vary from strategic research partnerships right through to near-market problem solving.

David Doherty, the Chief Executive of the Council for Industry and Higher Education, comments that, "The UK is the most open innovation system in the world, and overall investment in UK R&D by foreign firms is very high by international standards. What attracts such investment is the quality of the science base."

## CO-LOCATION AND CO-DEVELOPMENT – UNIVERSITY AND BUSINESSES IN PARTNERSHIP

An example of how universities work with companies, supported by government agencies to tackle major technical challenges, is exemplified by the recently announced national center for subsea and offshore engineering as part of a major

drive to develop new materials and technologies to explore the world's oceans. The Neptune National Centre for Subsea and Offshore Engineering was unveiled at the end of March 2013 by Business Secretary Vince Cable as a key part of the government's oil and gas strategy. Building on the region's maritime heritage and Newcastle University's world-leading expertise in marine engineering, the Neptune Centre will be developed on the north bank of the River Tyne on the Neptune Energy Park, part of Shepherd Offshore. The Neptune Centre already has the backing of leading companies through the Subsea North-East Consortium including Shepherd Offshore, BEL Valves and SMD (which also has offices in Houston, Texas). Director of Shepherd Offshore, Charles Shepherd said: "This is a fantastic development for the new energy park. We welcome Newcastle University onto the site and look forward to working with them in this world-leading research and development facility."

Co-location of facilities for the benefit of university and companies is not new but it is growing as both parties recognize the benefits of close working around expensive technology facilities. For example, in a major announcement AstraZeneca (AZ) identified Cambridge as its new corporate headquarters by 2016. The Chief Executive of AZ described the city as a "world-renowned bioscience hotspot", which also offered "strong links with London-based research institutions". It is just over a year since Lloyds Register announced its decision to co-locate with maritime researchers at the University of Southampton.

In 2010, the University of Strathclyde, NHS Greater Glasgow and Clyde's Royal Infirmary and Florida-based MAKO Surgical Corporation announced the creation of a strategic alliance and a new multi-disciplinary Centre for Surgical Robotics. Since its inception, the center has engaged in randomized clinical trials using MAKO's RIO® Robotic Arm Interactive Orthopaedic System, which allows surgeons to perform a precise knee resurfacing procedure called MAKOplasty®. The relationship centered in Glasgow was initially brokered through Strathclyde's Principal Professor, Sir Jim McDonald via his personal networks to the entrepreneurial community on the East Coast of the U.S.

## TECH CITY – AN ASTONISHING DEVELOPMENT BRINGING UNIVERSITIES AND ENTREPRENEURIAL FIRMS TOGETHER

Another astonishing development has been the growth in London of Tech City which is supported by the Tech City Investment Organisation (TCIO) now headed up by Joanna Shields, a former VP of Facebook. The cluster has grown to many hundreds of firms today. In March 2012 the *Financial Times* reported on research showing that Tech City had



become the fastest-growing technology cluster in the world; and recent research by Startup Genome and Telefonica ranked it as the only European start-up hub in the top ten worldwide. Start-ups rub shoulders with investors and large corporates including Google, Microsoft, Facebook, Cisco, Intel, IBM, Amazon, and Twitter. Co-working, incubator and accelerator spaces provide stimulating working environments. The companies benefit from excellent opportunities to interact with universities with examples ranging from London Metropolitan University's Accelerator supporting young digital media businesses to IDEALondon developed as a partnership between University College London, Cisco, and DC Thomson to 'hot-house' innovation around research, IT and the media and a Future Cities Centre involving University College London, Imperial College and Cisco with a focus on research in mobility, smart energy systems, business model innovation and the Internet of Things. Another intriguing development which demonstrates the vitality of the sector is the City Unrulyversity; this partnership between City University London and the digital creative agency Unruly is a free 'pop-up' university in the heart of Tech City with a mission to inform, inspire, and empower the next generation of Tech City entrepreneurs.

**"We have highly productive interactions with UK universities that have contributed to our innovation pipeline. We choose to work with UK universities because they have world-class researchers who are keen to work with us on our toughest technical challenges."**

David Jakubovic, Director Open Innovation Europe, Middle East, Africa, P&G

#### INTELLECTUAL PROPERTY AN ENABLER AND NOT A BARRIER – EASY ACCESS IP

Easy Access IP exemplifies the way in which universities and research institutes are changing the UK narrative with business and industry with the clear focus on valuing partnerships with business with a sophisticated treatment of intellectual property (IP) within those relationships.

It all started with a simple good idea. Why not offer certain Intellectual Property from universities for free, using quick and simple license agreements and actually get the knowledge out there for public use?

This radical new Easy Access IP approach to licensing was launched by the University of Glasgow in late 2010 and soon gained international interest and support from both the academic community and industry. Easy Access IP has now been adopted by many UK and international universities who are spearheading the concept in North America, Australasia, and Europe. The scheme reflects these universities' commitment to make it easier for industry to engage with them and build mutually rewarding and long-lasting partnerships with the business community.

Colorado-based Boulder Nonlinear Systems has recently made use of the Easy Access initiative by launching a Portable Optical Trapping System known as 'The Cube'. The Cube provides researchers with a stand-alone optical tweezers system which is designed around a custom inverted microscope. This compact instrument allows optical trapping and thus physical manipulation of hundreds of microscopic objects in three dimensions using an iPad control to set and move each optical trap independently.

The concept behind The Cube was developed by the Optics research group in the School of Physics and Astronomy at Glasgow in collaboration with the University of Bristol. The design rights and the software underpinning the optical trap were transferred from the University to Boulder Nonlinear Systems via a royalty-free license under the Easy Access IP scheme.

Professor Miles Padgett says "The University recognizes the benefits of the Easy Access IP initiative as a means of building long-term partnerships with industry. I have long realized the importance of getting research out of the lab and into public use and I look forward to continuing to work with Boulder Non-Linear Systems and making the product a success. Working with the team at Boulder has been a fantastic experience both for me and my team, we are learning from them all the time just what it takes to translate exciting research into a real product." Mark Tanner, Vice-President of Boulder Nonlinear Systems, is full of praise for Easy Access IP. He said, "The Easy Access IP Program that the University of Glasgow utilizes is a simple and straightforward approach that focuses on establishing and supporting a relationship to commercialize university-developed technology. Boulder Nonlinear Systems appreciates - and is honored to be a part of - this program as it truly establishes a cornerstone for us to build and be successful."

#### IT GOES BEYOND RESEARCH

It is not only in research where close working relationships are thriving. GSK, AZ and Pfizer co-funded a consortium to enhance *in vivo* skills in the UK university base. The three companies openly collaborated with government agencies and the research councils to co-fund this opportunity. Following peer review the companies supported two individual centers namely King's College London and Imperial College London and two joint centers, Strathclyde/Glasgow and Liverpool/Manchester. The centers shared best practice and developed the next generation of scientists in this specialism. The pragmatism and the can do attitude of the funding agencies in the UK allowed the consortium of pharma companies to engage with the parts of the UK research base to deliver this training in a timely and effective fashion.

April 2013 sees a further indication of the commitment of government, industry and universities to work together with the launch of the National Centre for Universities and Business. The new center's ambition is to stimulate world-class collaboration between universities and business, building on what is already a strong foundation.

#### For more information

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