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Building Bridges between Developing Entrepreneurial Ecosystems

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Innovation and Innovators change the world. And have done so since time began. We don't know who invented the wheel – and we can be sure it was not protected by patents all those centuries ago – but nothing better in principal has been invented to perform the functions of that great invention. We can cite many world changing inventions. The moving type printing press of Guttenberg and the World-Wide Web of Tim Berners Lee, one in 1440s and the other around 550 years later in 1991, were innovations in human mass communication which changed the world. And throughout history and day by day, innovations large and small, ideas and research turned into products and services, continue to bring new ways of doing things on a range of different scales.

The commercialisation of research and the creation of whole new families of technology based companies is seen in more recent times in a limited, but growing number of locations. Economies have been revitalised locally, with national and global repercussions through developments as seen in Silicon Valley Southern California, Cambridge in England, Leuven in Flanders, in and around centres of scientific and technical excellence in other parts of the western world and increasingly in the east – most notably in China. An example would be at Suzhou in Jiangsu Province were a joint venture more than thirty years ago, between Singapore and China, sought to create a new centre of innovation and business development. In Russia, vast sums are being poured into the project initiated by the government to “create a Silicon Valley in Moscow” at Skolkova. We might well question whether attempting to replicate a phenomenon of Southern California in Russia is rational. But the project is making progress. Where we see manifest success, such as in Silicon Valley, Cambridge, Leuven in Flanders and such locations it is not simply great technology and science that brings to pass a “phenomenon” – something very special. Upon examination we see clearly that over time (in some cases substantial time) there has developed an integrated Ecosystem, inclusive not only of the science and technology, but with joined up functionality involving education (especially research based universities) , professional services, entrepreneurs and entrepreneurial spirit, appropriate funds for investment, a good location regarding logistics and physical facilities / amenities and, the most important ingredient PEOPLE, with common purpose and working to maintain social inclusion.



Figure 1. King's College, University of Cambridge, Cambridge, U.K. (Photo by Tomasz Rakoczy, fizzlylens.com).

It is exciting indeed to be part of the vibrancy and development of an “**Entrepreneurial Ecosystem**”. I write from Cambridge, one of the great examples, now a city of 125,000 and a greater sub region of 750,000; home to 4,300 locally grown technology based companies employing 60,000 people and growing still. 15 companies with a valuation of more than \$1 billion have been created; two have surpassed \$10bn in value and one \$30bn. A phenomenon indeed. And it has happened over a period of only sixty years. Much has been written about it and it is not the purpose here to write more. Our interest now and for the future is to raise the question and explore how might we enhance and multiply experiences and success in innovation and the commercialisation of research on a broader basis and contribute thereby to international economic and social development by connecting this powerful ecosystem with others: already developing but at a different position on the journey. It has been a privilege to visit numbers of centres of technology and entrepreneurial excellence in my lifetime. It has brought lifelong learning and continuous reminders that so much can be achieved as “better together” than sticking to older attitudes of competitiveness. Open Innovation has made much more rapid progress possible in many fields; not at the cost to any of those sharing rather than simply protecting. Not to say that sensible protection of ownership is not possible, but a balance between ownership and openness may be struck to support the common good.



Figure 2. King's College, University of Cambridge, Cambridge, U.K. (Photo by Tomasz Rakoczy, fizzlylens.com).

Visiting Krakow in the summer of last year, some of us were extremely excited to see how an entrepreneurial ecosystem is fast developing there and we were struck with how “at home” we from Cambridge felt exposed to the excellence, the enthusiasm, the excitement, the innovation and the feeling of “joined-upness”. The atmosphere of open innovation gave us many clues to where and how Krakow and Cambridge might find ways to collaborate and connect; to multiply talents and thereby exploit more opportunities. The city of Krakow is beautiful and rich in history; like Cambridge and with ancient roots. The Universities are wonderful and some very old. We had a most excellent one day conference hosted by AGH – University of Science and Technology, and visited Jagiellonian University and the bioscience laboratories there. We also met colleagues from the Krakow University of Technology and other institutions. As in Cambridge, much university activity is concentrated close together, making connectivity easy. For those unfamiliar; be informed that Krakow boasts, in addition to the universities already mentioned: The Krakow University of Economics, Academy of Music, Pedagogical University, Academy of Fine Arts, Ludwik Solski Academy of Dramatic Arts – a University School of Physical Education and the Agricultural University of Krakow. There are also the Colleges of Theology and Philosophy. A great centre of learning and as we saw; a fast-developing centre of successful commercialisation of research in science, engineering, with a focus in technology. The other elements needed for a successful entrepreneurial ecosystem, described earlier are either in place or increasingly becoming established. A growing cluster of successful and growing companies is developing on university campuses, science park and incubator spaces within or adjacent to the universities. A visit to the incubator at Jagiellonian University demonstrated how professional expertise is being increasingly applied to ensure aspiring entrepreneurs are supported and mentored. Entrepreneurial finance, through private investors and venture capital firms, is becoming more available; but there is a need for much more.



Figure 3. Wawel Royal Castle, Krakow, Poland (Photo by Tomasz Rakoczy, fizzlylens.com).

On a very specific note, it was an inspiring experience to visit the extensive laboratories of Selvita - the most successful and fastest growing Biotech and Drug Discovery company in Eastern Europe. Selvita's laboratory complex is right on the University campus and is an exemplar, very well equipped and with outstanding scientists and technicians working on Selvita's own research, providing services to numbers of other biotech and pharmaceutical companies. Earlier in this piece, reference was made to the concept of connectivity between entrepreneurial ecosystems. It is heartening therefore to see that Selvita, having established itself in the USA as part of international expansion, is now present with Selvita Ltd, at the heart of the Cambridge entrepreneurial ecosystem and working as part of the Cambridge Cluster. It is early days for Selvita Cambridge, but the company is already investing in collaborative activities and exploring ways of making a bigger contribution in Cambridge.



Figure 4. Krakow Main Square and St. Marys Church, Krakow, Poland (Photo by Tomasz Rakoczy, fizzlylens.com).

Globalisation to many of us means much more than growing monster companies that seek to dominate the world. The concepts of outreach, open innovation and building bridges between people and communities in the spirit of “better together” appears, if history is studied, to have been more successful than fighting each other or operating only in competition. Modern communications capability, artificial intelligence, machine learning and the development of robotics just will not allow “the old ways” to prevail. Connecting Entrepreneurial Ecosystems and extending and expanding knowledge and experience across frontiers clearly offers prospects of more success and fulfilment for all. The Krakow – Cambridge connection may only be at an early stage; but promises a great deal.

Professor Alan Barrell is a biologist with experience in NHS medical technology, turned salesman turned businessman, entrepreneur, venture capitalist fund manager, and labelled now “pracademic”, Alan is a champion of the next generation and the vision of A World Without Borders – through Education Without Borders and Open Innovation. Entrepreneur in Residence at the Centre for Entrepreneurial Learning Judge Business School University of Cambridge, Visiting Professor at University of Sunderland, Portsmouth in UK and International Executive Fellow University of Essex, and in China Guest Professor at Xiamen University, Shanghai University, Shanghai College of Science and Technology and University of International Business and Economics Beijing. International Research Fellow at Laurea University Helsinki and Lahti University in Finland, and at the Tohoku Fukushi University Sendai Japan, Alan is also engaged in support of NHS Healthcare Reforms after being Chair of NHS Health Enterprise East Ltd for eight years. His next generation work extends to Board Membership / shareholdings in four early stage health care companies and to having been Chairman of Trustees of NACUE – National Association of College and University Entrepreneurs and advisor to Start Up Generation International and Youth Business China. In his spare time raises money for the charitable causes he supports. Best selling book out July 2013, co-authored with David Gill and Martin Rigby, “Show Me The Money – how to raise the money needed to get your business off the ground” Knighted in Finland by the President there in 2012 for services to education – Knight First Class of the Order of the White Rose of Finland having earlier been one of the first ten recipients of The Queen’s Award for Enterprise Promotion. Very proud to be an Advisory Board Member to Innovation Forum and MedCity London. His article in Cambridgeshire Business “Sharing China’s Dream” displays his deep interest in China and its history and his love of the country and its people.

