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Universities play an unquestionable key role in today’s society. In addition to educating students and performing research, universities are more and more engaged with their region and surrounding industry. However, how does a university turn from a traditional one to a more connected and entrepreneurial one? The transition is a complex long journey and the success factors are being discussed in the public arena. This issue of the University-Industry Innovation Magazine (UIIM) provides an insight into current trends and developments in entrepreneurial higher education institutions. The articles are a combination of good practice examples, research results and personal experiences, providing the reader with material for thought on the current status and the future developments of the entrepreneurial universities ecosystem.

The lead article features Huddersfield University in the United Kingdom, awarded “The Entrepreneurial University” in 2012 and “University of the Year” in 2013 by the Times Higher Education Awards. Prof. Bob Cryan (Vice-Chancellor) and Prof. Liz Towns-Andrews (Director of Research and Enterprise) describe the success factors of their institution in transforming from a traditional university to an institution where entrepreneurship and innovation have been organically integrated into the ecosystem.

Following this good practice example, Paul Benneworth (CHEPS) write about the main benefits of engagement with industry for the teaching and research activities of a university. After this, Zsuzsa Javorka and Rebecca Allinson (Technopolis Group) describe the new tool of the European Commission and the OECD to assess the entrepreneurial potential of universities, called ‘HEInnovate’. This is followed by an insight into one of the first workshops for senior managers of universities to train them how to become entrepreneurial university leaders. Paul Coyle (NCEE) describes the NCEE Entrepreneurial University Leader’s Programme and explains the programme’s success, history and current content.

The next article is based on UnternehmenTUM at the Technical University of Munich, as one of the leading European entrepreneurship and innovation centres. In this issue of UIIM, Dominik Böhler, Kristin Knipfer and Oliver Bücker (UnternehmenTUM) provide the readers an insight in their latest teaching methods in entrepreneurship education and business start-ups. Subsequently, Omar Castillo was interviewed to share his personal experience leading a successful student start-up in Costa Rica. In the last article, Marina Ranga (Stanford University H-Star institute) shares her thoughts on entrepreneurship in today’s society and the role of public policies.

We are truly pleased to see how the first two issues of UIIM have raised an exceptional interest amongst thousands of readers all over the world across a wide range of sectors, indicating the growing importance and awareness on university-industry interactions. Firstly, we would like to thank all authors for their contribution and we expect more interesting suggestions for future issues. Lastly, thank you to all our readers, we hope you enjoy reading this issue of UIIM and are looking forward to receiving your comments and feedback.
Here at the University of Huddersfield we have established an enterprise and innovation ecosystem that has been internationally recognised as an exemplar for Higher Education. Embedding entrepreneurship and innovation into our strategy creates enterprising graduates and the ability to contribute to economic, social and cultural development. These achievements have resulted in the University being awarded the Times Higher Education Entrepreneurial University of the Year Award in 2012 and the Queen’s Award for Enterprise Promotion in 2013, closely followed by the 2014 Times Higher Education University of the Year award.

By investing in high quality facilities, innovative approaches and employing academic staff at the head of their fields, we are able to create an environment that is both responsive and flexible to the needs of industry, making us the perfect partners to collaborate with in pioneering research that addresses the key questions facing society.

Providing a space for innovative entrepreneurs to flourish

The 3M Buckley Innovation Centre, supported by the European Regional Development Fund, is our flagship project for entrepreneurship and innovation activity. It was recognised in the Witty Review by the UK Government as an exemplar of how universities should be working with industry. It is not simply office space or an incubator for new business, but instead acts as a one stop shop for all aspects of business growth. This includes access to finance, markets, technology and skills all under one roof, providing a doorway to the capabilities that exist within the University.

The Centre has been named after Sir George Buckley, a graduate of the University and former CEO of the multi-national 3M Corporation. Through Sir George, the University has developed a 10 year partnership with 3M, who sponsor the 3M Chair of Innovation at
the University, currently held by 2013 Queen’s Award winner Professor Liz Towns-Andrews, current CEO of the 3M Buckley Innovation Centre. The President of 3M New Ventures, Mr Stefan Gabriel, is a Visiting Professor of Innovation at Huddersfield and is a mentor for Honeypot, an interdisciplinary enterprise opportunity exclusively for second year students on specific courses in the School of Art, Design and Architecture and the School of Computing and Engineering. Honeypot enables these students to share ideas and collaborate with students from other courses to help turn their business idea into a project, with the opportunity to take part in a boot camp, working with the University’s Enterprise team to further their project.

The Centre houses start-ups, SMEs, and large corporates and lends itself to dynamic interactions, promoting innovative developments. Businesses range from design agencies and computer games companies to bio-technology and pharmaceutical research. The co-location design of the Centre enables collaborations which lead to new research and development, promote innovation and technology transfer and create a dynamic, creative atmosphere for companies to work in.

In 2013 the Duke of York, now Patron to the University, opened the new Duke of York Young Entrepreneur Centre in the 3M Buckley Innovation Centre, providing a space which immerses our young entrepreneurs in a real business environment. The Duke also helped to celebrate the success of student entrepreneurship and innovation by presenting 10 Young Entrepreneur Awards as part of the opening event.

**Innovation in industry**

Paxman Coolers Ltd utilised initial funding from an Innovation Voucher to join us in a Knowledge Transfer Partnership with our Schools of Applied Sciences and of Art, Design and Architecture. The aim was to design an improved scalp cooling device to be used as a...
treatment against hair loss during chemotherapeutic cancer treatments. By using cutting-edge research, analysis and manufacturing techniques to develop prototypes, Paxman was able to make a stronger case for the efficacy of scalp cooling treatments and develop a new cooling cap that is more effective both medically and economically.

Creating a centre for Innovation in Rail

The Institute for Railway Research has, alongside the Rail Safety and Standards Board and private sector partners, been awarded funding by the UK Government as part of the Regional Growth Fund. The University was the only higher education institution to be lead partner in our section, and will be taking this opportunity to develop new tools and techniques and undertake knowledge transfer activity to contribute to UK railway industry development.

In 2013 the University formed a multi-million-pound research partnership with global technology giant BorgWarner. It will lead to the development of new, hyper-efficient and environmentally-friendly turbochargers for diesel engines and will help boost the Yorkshire regional economy by creating and securing jobs. The collaboration is one of 11 projects in the Yorkshire and Humber region which share £26 million between them in funding from the UK Government’s Regional Growth Fund, run by the Department for Business, Innovation and Skills.

Our commercial research group Innovative Physical Organic Solutions (IPOS) is an Agilent Centre for Analytical Excellence, helping Agilent to develop new applications, solve current customer problems and trial new instrumentation. In less than seven years, IPOS has grown from a four-man team into a unit of 14 scientists based in state-of-the-art labs, attracting hundreds of thousands’ of pounds of income. IPOS has worked with more than 100 companies, predominantly local and international SMEs, to provide research and analytical services in a wide range of fields including pharmaceuticals, energy production and polymers.

Student entrepreneurship

One of the current ways our Enterprise Team supports students is with the Activ8 Your Business programme, which combines six months of intensive strategic support from Business Advisors and the Enterprise Team, with a regular grant, plus invaluable mentoring and networking opportunities. For example, THAT Creative is an ambitious and successful new design company set up by six students in 2011 with the full support of our Activ8 Your Business programme. The advice and opportunities they received allowed them to develop into a fully functioning business that has received industry wide recognition for their innovative product design. The University also encourages collaborative working through leadership of the ERDF funded Graduate Entrepreneurship Project, which brings together 10 Universities across the region to help students and graduates start up their own businesses.

Entrepreneurship and innovation in our curriculum

We embed enterprise and innovation in our curriculum depending on the subject and needs of our students. As part of their courses Journalism students might have the chance to pitch a new magazine to a panel of industry professionals, or as part of the Events Management BA (Hons), take part in the Prince’s Trust Million Makers event to raise money for the charity.

Art, Design and Architecture students have the opportunity to take part in the ICE 24 hour Design Challenge where the School assembles groups of students from across the University and issues a design brief. They have just 24 hours to complete it and the contest is judged by leading figures from industry, which in 2013 included Stefan Gabriel, President of 3M Venture, and Rod Graham, Director of Design Engine Architects As well as running traditional placement opportunities working in high profile firms, some students can choose the Enterprise Placement Year, which provides them with support to start their own business. This has been a great success, with students starting innovative new businesses such as Hyper Sloth, a new 3D immersive games design company based in the 3M Buckley Innovation Centre. We have even launched specialist enterprise focused degrees, including the Entrepreneurship Development and Entrepreneurship and Business BA (Hons). Our Master of Enterprise (MEnt) and Doctor of Enterprise (EntD) are pure research degrees that generate new knowledge to underpin a business idea.

A carefully designed ecosystem

At the University of Huddersfield we offer a fertile environment for enterprise and entrepreneurship, and all our staff are committed to nurturing a wealth of innovative ideas. We have created a setting which brings together a wide range of successful innovation elements for success – from ideation programmes to start-up support, business advice and knowledge transfer for larger business. This has resulted in an exceptional ecosystem, providing the perfect environment for enterprise and innovation.
Liz Towns-Andrews | 3M Professor of Innovation & CEO of the 3M Buckley Innovation Centre | University of Huddersfield |
A trained chemist, Liz graduated with a PhD in X-ray crystallography before joining the Research Council system.

Prior to arriving at the University, her role was Director of Knowledge Exchange for the Science and Technology Facilities Council developing the organisation’s strategy for Knowledge Exchange and Economic Impact. She also led the development of the national science and innovation campuses at Harewell and Daresbury.

On joining the University of Huddersfield in September 2009, Liz became Director of Research and Enterprise and is also 3M Professor of Innovation. Liz has responsibility for centrally supporting and underpinning the University’s research and enterprise strategies, identifying opportunities for development of research activity, strategic partnerships and collaborative R&D activity. Liz established and is the CEO of the 3M Buckley Innovation Centre, a new model for higher education working with industry and in recognition of this she received a Queen’s Award for Enterprise Promotion in summer 2013.

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Bob Cryan | Vice-Chancellor | University of Huddersfield |
Professor Bob Cryan took up the post as Vice-Chancellor of the University of Huddersfield in January 2007, a University that now has over 22,000 students from over 120 countries. Bob holds two first class honours degrees (Engineering, Mathematics), an MBA and two doctorates (PhD, DSc) and he is a Chartered Engineer, a Fellow of the Institution of Engineering Technology and a Fellow of the Higher Education Academy. Bob is a Deputy Lieutenant for West Yorkshire and in 2013 he was awarded The Guardian Inspiring Leader Award. Bob is proud to be a graduate of the University and to have had first-hand experience of the life-changing potential and the tremendous support that Huddersfield offers its students.

Bob is delighted that the hard work of the University’s staff and students is being recognised through many awards including the Times Higher University of the Year 2013/14, the Queen’s Award for Enterprise 2013 and the Times Higher Entrepreneurial University of the Year 2012/13. Bob was also named the Guardian Inspiring Leader of the Year in 2013.

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Avid long-term observers of higher education policy cannot help but have noticed the increasing emphasis on university ‘societal engagement’. The OECD’s Centre for Educational Research and Innovation (CERI) kicked off the debate 30 years ago with their landmark report The university and the community. But it is really in the last 15 years that a consensus has emerged that engagement with business and the community could be a core mission for universities. Elizabeth Popp Berman made the case convincingly in Making the market university that higher education had succeeded persuading policy-makers that universities could be a strong source of innovation, and that policy-makers responded by massively increasing funding for universities. So how is this affecting the institution of university today, and what does it mean to be an “engaged university”? These changes are commonly referred to as the rise of the ‘Third Mission’ of universities, engaging with society, and in particular, stimulating innovation-based economic growth. And there’s a lot to play for. Policy-makers have bought universities’ arguments that they can kick-start growth, and now with the world sitting in the economic doldrums, are looking to universities to pull the economy back on its feet. So now more than ever, the pressure is on universities to respond to these new policy-makers’ demands for impressive results. So how can universities develop the ‘right’ strategy to balance those needs, and balance these competing external pressures for excellence and engagement?

Engagement remains a contentious issue for universities, who are also facing pressure to be excellent in teaching and research. Unlike these core university

HOW THE UNIVERSITY THIRD MISSION CAN ADD VALUE TO TEACHING AND RESEARCH
tasks, engagement is something that’s a nice add-on rather than part of the package. If universities fail to feature prominently in global rankings and league tables, then they risk – as in France – being bypassed entirely as governments seek to place themselves on the map of ‘World Class Universities’. And the higher status of research over engagement also plays a role. As Stefan Collini neatly argues in his recent essay What are universities for?, technical colleges often aspire to be ‘ivory towers’, but research-intensive universities rarely hunter to be more applied and less blue-skies. There’s been a proliferation of reports for university senior managers on how to respond to these pressures and develop the ‘right’ third mission strategy. In a recent book with colleagues, we have looked at these tensions, and in particular those that universities face in engaging with regional partners. Our central argument in Universities and regional development was that it’s too easy to overlook the fact that universities are not like other institutions, particularly not when it comes to their strategic management. Although universities trade in knowledge, the kinds of knowledge that they deal in differ so much between disciplines and approaches. They have always had to be flexible in finding management approaches that balance the needs of their different internal knowledge constituencies (departments, courses, centres) so that these different communities can do what they need do to with knowledge, whether creating (research), sharing (teaching) or transferring (the third task).

Forty years ago, it was commonplace across Europe that flexibility was absolute - some countries elected their senior managers and there was huge freedom for academics in interference in their scholarly decision-making. Academics were naturally reluctant to relinquish those freedoms and so in the last thirty years there has been an over-exaggerated drive for reform to create centralised management structures. The aim of those structures was never to create a military chain-of-command, but merely to overcome that resistance and allow a central structure that could oversee, co-ordinate, and provide efficiency in service delivery.

But all these efforts have created a myth of the manager, an idea that if universities are to achieve anything, then managers have to manage that process with a strategy, targets, performance indicators and contracts. The latest thinking – emerging from amongst others, the aforementioned CERI – stress the need for an entirely new kind of ‘smart management’, a kind of “university strategic management redux”. This approach blends the best of both worlds – autonomy and strategy – to get the best out of these different internal constituencies. This is particularly relevant for university business and community engagement, where ideal types of engagement vary hugely between disciplines, in terms of the kinds of users, the forms of engagement, the formality of engagement, the flow of resources and the visibility of the engagement.

The Center for Higher Education Policy Studies is a Research Centre within the Institute for Innovation and Governance Studies at the University of Twente, Enschede, the Netherlands. Founded in 1984, CHEPS’ focus is on understanding how higher education institutions function, to generate useful knowledge for policy-makers on getting the best out of their universities. CHEPS focus lies on understanding universities’ interactions, both within internal communities and with external stakeholders to better understand how purposive decision-making affects university performance, and how policy can positively influence this. CHEPS has recently overhauled its Research Strategy to place an idea of Public Value in its broadest sense at the heart of understanding the purposes of higher education. In 2014 CHEPS celebrates its 30th Anniversary with a one-day conference on the future of higher education policy on 25th June 2014.

Understanding university engagement with society (and particularly with business) has become an increasingly important part of CHEPS’ portfolio. Partly this is driven by an increasing desire to include engagement in comprehensive studies of universities, for example in the development of benchmarks, performance indicators and ranking tools for universities.
Research is also being undertaken into the specificities of university engagement with external actors: recent research projects have focussed territorial innovation strategies and policies (in Slovakia and the Netherlands), with high-growth spin-off businesses (for the Norwegian Research Council), and the development of strategies for engagement in entrepreneurial universities. Recent and forthcoming books focus on universities and regional development (Routledge, 2012), university engagement with excluded communities (Springer, 2013) and technopoles/science parks (Routledge, 2015).

So how can universities manage engagement smartly to account for these differences in internal needs? What all kinds of university engagement have in common – whether with business, policy-makers and the community – is that it is about the constructive exchange of knowledge. This exchange has always taken place: even when universities have tried to ban it entirely, as Johns Hopkins Medical School famously did in the 1930s, enterprising staff will find workarounds. What needs managing making it more attractive for more staff, and ultimately, ensuring that the university is able to benefit from it. And that benefit need not necessarily always be financial: the benefit comes in supporting universities core processes – the knowledge creation and sharing tasks at the heart of teaching and research.

Engagement can make new kinds of knowledge accessible to university communities – outside partners may bring in interesting problems and their technical know-how to research, may contribute to teaching as adjunct lecturers, or supervise student projects, mentor student entrepreneurs or even engage with student societies. Each of these kinds of activities brings in additional knowledge resources and helps improve and enrich the core university processes. Effective engagement adds value to these core processes: university strategies need to focus directly on maximising “Core Process Value Added”.

Every university ultimately has different core processes delivered by different internal learning communities. Smart strategies for engagement need to reflect real internal capacities and real opportunities to exploit greater added value rather than follow ‘ideal types’ or ‘best practice’ models of Third Mission strategies. Ultimately, university engagement – with business, government or society is about people co-operating for mutual benefit not structures or systems. So the challenge for building the engaged university is putting the real people in universities’ own communities back into the heart of engagement strategies.

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**Paul Benneworth** | Center for Higher Education Policy Studies | University of Twente

Paul Benneworth is a Senior Research Associate at the Center for Higher Education Policy Studies (CHEPS), University of Twente, the Netherlands. Paul’s research focuses on the way that university knowledge creates socio-economic impacts. Paul is author of more than seventy journal articles and book chapters, as well as the OECD 2007 report Higher Education and Regions: globally competitive, regionally engaged. His recent and forthcoming books include University engagement with socially excluded communities (Springer, 2013), Universities and Regional Development (with Pinheiro & Jones, Routledge, 2012), the Social Dynamics of Innovation Networks (with Rutten, Irawati, Boekema, Routledge, 2014, in press) and Technopoles of the World Revisited (with Miao & Phelps, Routledge, 2015, forthcoming).

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UIIN Gateway helps you to increase your chances of funding by providing a sound dissemination, exploitation and sustainability strategy for your research project.

The UIIN Gateway concept and service portfolio has been developed based on many years of experience and also integrates latest management concepts. We take into account the very specific characteristics of publicly funded research projects whilst also adding a business management perspective which ensures the successful transformation of science into innovation.

Learning from experience
UIIN Gateway has been developed based on the experiences and needs of the members of the University Industry Innovation Network and has also been shaped by the knowledge and experiences of the Science-to-Business Marketing Research Centre (S2BMRC) in Germany which researches university-industry relationships and innovation for more than 10 years.

Integrating latest management concepts
Besides the knowledge and experiences made in the field of innovation-driven research projects, the UIIN Gateway concept has also been influenced by latest management concepts. For example, the concept has been designed similar to the Business Model Canvas of Osterwalder & Pigneur - the most used tool for developing, evaluating and communication business models around the world.

If you are interested in adding a professional strategy for dissemination, exploitation and sustainability to your funding proposal, please get in contact!

www.gateway.uiin.org
2013 saw the launch of a new self-assessment tool for exploring the entrepreneurial potential of Higher Education Institutions in Europe - HEInnovate. HEInnovate is an initiative of the European Commission and the OECD and is aimed at Higher Education Institutions interested in opening up discussion and debate associated with the entrepreneurial nature of their institutions. The self-assessment tool is publicly available for all. This article explores some of the underlying literature on the entrepreneurial university, introduces HEInnovate and highlights some of the good examples of change which are being implementing in Higher Education Institutions.

Why should HEIs be “entrepreneurial”? 

The role of HEIs has taken a dramatic shift over the last few decades, expanding on their traditional roles in education and research (Etzkowitz, 1998). According to Gibb, Haskins, Hannon and Robertson (2012), HEIs are facing more complex and less certain funding structures as well as a globalised market place. Their role is changing, focusing to a greater extent on the need to contribute to society in a more meaningful way through knowledge and technology creation and transfer/exchange, the so-called ‘third mission’ of the HEI. Entrepreneurship is increasingly prominent in HEI teaching and learning as it has been recognised as crucial for creating jobs and growth within an economy as well as a means of increasing the competitiveness of a region, state or country. Europe needs more people who are highly skilled, knowledgeable and innovative in order to become a smart, sustainable and inclusive economy. Europe 2020, the EU’s growth strategy for the coming decade, highlights higher education as a key policy area where collaboration between the EU and Member States can deliver positive results for jobs and economic development. Higher Education Institutions are focusing on how their missions, strategies and behaviours need to be adapted to address these challenges with a particular emphasis on the “entrepreneurial university”.

The ultimate entrepreneurship role for HEIs is the notion of the “entrepreneurial university”

The notion of the entrepreneurial university is built upon this premise of establishing an ideal ecosystem where entrepreneurship can prosper. Ecosystems are often used to describe elements that exist, and have an influence on, the environment and the relationship between these elements. There is a significant body of literature which looks at the concepts of the entrepreneurial university and the definitions and models of the entrepreneurial university vary greatly and are found across a number of discipline areas, covering the technology transfer literature as well as research policy, innovation policy, economics and even HR and management policy.
The famous Burton Clark model describes the entrepreneurial university based on a structure consisting of five key factors: ‘a strengthened core management, the search for development, diversified sources of financing, constant academic stimulation and an integrated business culture.’ Another important publication is “Leading the Entrepreneurial University: Meeting the entrepreneurial development needs of higher education institutions”, Gibbs, Haskins and Robertson (2009). It focuses on the leadership of the institution and the challenges which face staff. The report states that “what appears to have been largely missing in the debate … has been deeper basic exploration of the two key relevant concepts of entrepreneurial organisation and entrepreneurial leadership and their effective interface within the dynamic change environment facing the Higher Education sector.”

Etzkowitz’s ‘Triple Helix’ model highlights the importance of partnership between government, industry and higher education. It is necessary for these three actors to enter into a partnership for innovation to happen. Etzkowitz’s initial model is now being further enhanced to include society as part of a Quadruple Helix model. Professor Allan Gibb and Professor Paul Hannon also draw a parallel between the ‘entrepreneurial university’ in Europe and the model of state universities in the US, which are often used as a source of inspiration.

Despite growing interest in the notion of the entrepreneurial university, the concepts are still in the early stages of development from an operational perspective.

One of the problems is that the work until now has been mostly theoretical combined with some case study production, particularly of elite universities, neither of which is designed for implementation either at a policy or operational level. However, there is still a large gap in knowledge is how to operationalise the entrepreneurial university concepts (top-down) and how to create curriculum and pedagogies for the in-curricular and extracurricular development of entrepreneurial characteristics, activities and capabilities. Case studies can certainly highlight transferable elements for entrepreneurship education, but to do so, it is essential that the cases are approached in a structured way, with a strong methodological framework, in order to deliver operational outcomes. They need to be analysed from an operational perspective to allow key transferable elements to emerge.
A self-assessment tool for entrepreneurial Higher Education Institutions - HEInnovate

It is against this backdrop that the European Commission, DG Education and Culture, in cooperation with the OECD Local Economic and Employment Programme (LEED) designed HEInnovate. The idea for HEInnovate was first discussed at the March 2011 University Business Forum; a European Forum which brings together higher education institutions and businesses to look at mechanisms for cooperation and encourage knowledge sharing. A group of participants at the forum formulated a recommendation to take a closer look at the underlying concepts and characteristics of an “entrepreneurial Higher Education Institution” and to develop a ‘Guiding Framework’ that would be made available as a tool for learning and inspiration. Working in cooperation with six European experts in entrepreneurship and the entrepreneurial ecosystem, the existing literature on the entrepreneurial university was assessed in order to derive a practical tool which could be of use to Higher Education Institutions in Europe seeking to improve their entrepreneurial potential.

HEInnovate covers seven areas of self-reflection:

- Leadership and Governance
- Organisational Capacity, People and Incentives
- Entrepreneurship development in teaching and learning
- Pathways for entrepreneurs
- University – business/external relationships for knowledge exchange
- The Entrepreneurial University as an internationalised institution
- Measuring the impact

Under each area, there are a number of statements which Higher Education Institutions can consider and score. The self-assessment tool facilitates group work so that different types of stakeholders can come together across an institution (and from outside) and the results can be compared and discussed through a group function. HEInnovate is not a ranking or benchmarking tool, it does not allow comparison across different higher education institutions... The results are subjective, based on the opinion of the individual users and therefore should be used for the purposes of exploring strengths and weaknesses as well as differences of opinion across and institution.

Case studies and guidance notes for Higher Education Institutions

The results of the self-assessment are only part of the offer of HEInnovate. Case studies and guidance notes on the seven areas of self-assessment are also made available through HEInnovate. The case studies and guidance notes are being developed by experts in cooperation with the OECD. The case studies link to specific areas of HEInnovate and give insight into how particular Higher Education Institutions have responded to the challenges. For example, the Copenhagen Innovation and Entrepreneurship Lab (CIEL) case study illustrates the many ways of fostering the entrepreneurial mindset and skills among students and staff. It provides practical examples and information on how different measures can support the development of entrepreneurial attributes in an effective, collaborative and sustainable manner. A case study on UnternehmerTUM in Germany highlights how the organisation supports pathways for entrepreneurs through three phases (pre-start-up, start-up and growth) and across all faculties, levels of education, and curricula.

HEInnovate workshops in EU Member States

Over 2014 – 2015, there are plans for workshops on HEInnovate in a number of Member States across Europe. The main objective is to help Higher Education Institutions to understand the potential of HEInnovate as a tool for self improvement. A taster workshop also took place at the UIIN Conference in Barcelona 23rd April 2014.
A main goal of Aalborg University (AAU) is to expose all students to the possibilities of starting new ventures. This involves exposure to, and stimulating the full range of enterprising behaviours, not only in the form of commercial activities or for-profit ventures, but also in terms of activities and achievements that create value. AAU’s entrepreneurship, innovation, and knowledge exchange activities are coordinated by AAU Innovation across its three campuses. The main unit working on entrepreneurship promotion is called SEA (Supporting Entrepreneurship at Aalborg University). It was established in 2002 and has 6 non-academic staff. SEA’s budget is financed one-third from the AAU main budget and two-thirds from external sources.

SEA offers a range of different activities, including awareness creation events, learning activities about, for and in entrepreneurship, provision of incubator facilities, and intensive collaboration and networking with external partner organisations. A highlight is WOFIE (http://www.wofie.aau.dk/), an annually recurring interdisciplinary workshop, lasting four days, for all AAU master students on idea development, creativity, business development and risk taking. Events are organised simultaneously and streamed between the three campuses. The theme of WOFIE in 2013 was Entertainment & Leisure, with a focus on the Creating Shared Value concept.

All of SEA’s activities have been developed in close collaboration with AAU researchers, external stakeholders, and students. An important and successfully met objective of AAU’s entrepreneurship activities has been to mobilise students to get engaged in the design of SEA activities; with a particular emphasis on PhD students. Instrumental to this has been Kickstart AAU, a student-driven organisation for student entrepreneurs at AAU, founded in 2010 from the initiative of some students employed by SEA. Today, the suite of SEA activities reflects students’ needs. Kickstart was also crucial for the steady increase in the number of participating students.

Extract from a case study on AAU prepared by Jakob Stolt from AAU in collaboration with the OECD Secretariat.
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Over 2014 – 2015, there are plans for workshops on HEInnovate in a number of Member States across Europe. The main objective is to help Higher Education Institutions to understand the potential of HEInnovate as a tool for self improvement. A taster workshop is also planned to take place at the UIIN Conference in Barcelona on 23rd April 2014.

About Technopolis

Technopolis is an international innovation, research and education policy consultancy. The common thread in our activities is that we work with the creation of knowledge and its practical application in society. We support the entire policy development and implementation cycle, from concepts through policy and strategy development and programme design, management and evaluation, as well as the development of governance and institutions. Technopolis has studied HEIs in almost all European Member States, looking at issues of governance, funding, knowledge transfer, business engagement and other third stream activities.

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IMPRESSIONS

UNIVERSITY-INDUSTRY INTERACTION 04/2014
BARCELONA, SPAIN
THE ENTREPRENEURIAL UNIVERSITY LEADER’S PROGRAMME

A PIONEERING EXECUTIVE DEVELOPMENT PROGRAMME FOR SENIOR UNIVERSITY LEADERS DELIVERED BY NCEE AND UNIVERSITIES UK

The Entrepreneurial University Leader’s Programme (EULP) is an executive development programme which has been delivered annually in the United Kingdom since 2010. The EULP is run by the UK’s National Centre for Entrepreneurship in Education (NCEE) in partnership with Universities UK, an organisation whose members are the 133 executive heads of all the UK universities. The programme is delivered with the support of the Saïd Business School at the University of Oxford.

The EULP explores the concept of the entrepreneurial university and the practical application of that concept by universities in Europe, the Far East, the United Kingdom and the USA. Over 100 participants on the programme to date have represented universities in Belgium, Canada, Denmark, Dubai, England, Finland, Luxembourg, the Republic of Ireland, Poland, Portugal, Scotland and Wales.

Background

The idea of the EULP was conceived by Professor Allan Gibb, Emeritus Professor, at the University of Durham. In 2009, Professor Gibb and Gay Haskins, Dean of Executive Education at Saïd Business School, arranged a meeting of over twenty vice-chancellors from around the UK and received an enthusiastic response to the proposal for creating a new executive development programme on the topic of the entrepreneurial university. In 2010, the Entrepreneurial University Leaders Programme was launched by the Saïd Business School with NCEE and the first cohort of participants was recruited. Since then, the programme has gone from strength to strength, receiving excellent feedback from participants and securing the support of Universities UK. In 2014, the programme, co-directed by Gay Haskins and Paul Coyle, recruited its fourth and largest cohort with participants from Denmark, England, Finland, the Republic of Ireland, Scotland and Wales. Applications for EULP 2015 will open in spring 2014 via the NCEE website www.ncee.org.uk.

Content

The EULP is comprised of three modules delivered over a period of 7 months. It is highly interactive, building from the experience of participants, faculty and practitioners. It explores the ambitions and achievements of a range of entrepreneurial universities in the UK, Europe, the US and the Far East. Inputs are made by eminent vice chancellors, experts in the field of university education, policy makers and visionaries. The programme is based upon a strong research, development and practice foundation. The curriculum is constantly updated to ensure that the latest research, experience and debate are included in the programme.

All participants receive copies of the NCEE report, “Leading the Entrepreneurial University: Meeting the Entrepreneurial Development Needs of Higher Education Institutions”. This and other NCEE publications are available via the NCEE website http://ncee.org.uk/publications.
Over the three modules, participants develop visions for the future of universities, appraise the entrepreneurial capacity of their own organisation, identify areas for potential development and create strategies for change. Peer group learning is emphasised. Each participant is a member of a tutor group, led by a tutor team of pro-vice-chancellors and senior faculty who have attended previous programmes. This facilitates the opportunity to openly discuss personal challenges with a group of colleagues and in complete confidence with a tutor.

The second module is always held at the university which has most recently been awarded Entrepreneurial University of the Year. This award is given annually by the Times Higher Education, a weekly publication and the UK’s leading magazine in the field of Higher Education. The award of Entrepreneurial University of the Year is sponsored and judged by NCEE. The winners to date have been Queen’s University Belfast (2009), University of Hertfordshire (2010), Coventry University (2011), University of Huddersfield (2012) and Strathclyde University (2013). The hosting of the second module of EULP by the award winner gives participants the opportunity to explore the practical and innovative application of the entrepreneurial university concept.

Following completion of the EULP, participants continue to meet and actively support each other through the meetings of the Alumni Network. Each meeting is hosted by a university from the alumni network and takes place over two days. On the first day, people gather for lunch and then spend the afternoon interacting with speakers selected by the host university. In the evening, there is a group dinner. The next morning consists of short, informal presentations by members of the alumni network to each other, representing an opportunity to continue to share and test out ideas in a challenging but constructive dialogue.

**The Wider Role of NCEE**

In addition to working at executive-level with the EULP and at institutional-level with the Entrepreneurial University Award, NCEE also supports the level of staff in universities who have responsibility for the content and delivery of the enterprise and entrepreneurship curriculum. To support these staff, NCEE runs both the International Enterprise Educators Programme (IEEP) and the annual International Enterprise Educators Conference (IEEC). The IEEP is specifically designed to support, inform and enable individuals tasked with promoting, facilitating and leading enterprise education in their organisations; enterprise educators who create entrepreneurial outcomes for others. IEEC is a leading international conference on enterprise and entrepreneurship, run in partnership between Enterprise Educators UK (EEUK) and NCEE. It brings together 300 enterprise educators a year to share experiences and engage others in enterprise education and to enrich the experiences of educators and students, through hands on workshops, open exchanges and forums. IEEC 2014 will be held at Newcastle University from 3rd to 5th September and registration is via the IEEC website www.ieec.co.uk

**Paul Coyle | Entrepreneurial University Leaders Programme**

Paul Coyle is an independent leadership and change management consultant. He supports strategic change projects in Higher Education through his personal consultancy and as an Associate of the UK’s Leadership Foundation for Higher Education. He is the co-director of the Entrepreneurial University Leaders Programme on behalf of the UK’s National Centre for Entrepreneurship in Education.

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Entrepreneurs operate in a dynamic context that is characterized by rapidly changing circumstances, high competition, and a high need for innovation due to a lack of standard procedures or routines. Entrepreneurship is thus considered an ill-structured task that requires high levels of creativity and out-of-the-box-thinking. Furthermore, entrepreneurship must be considered a multilevel phenomenon where both individual and team activities add to entrepreneurial success. Based on these considerations, entrepreneurship education is facing the challenge to provide effective training for both individuals and teams to foster the development of various complex entrepreneurial skills. This requires an approach that goes far beyond providing theoretical input on how to develop a sound business model or to acquire financial resources. Rather there is a need for the integration of playful exploration and professional, ‘real’ project work.

In the following, we will introduce UnternehmerTUM’s hands-on approach to entrepreneurship education which has been developed and continuously improved over the last ten years. We will further present promising results from the assessment of learning progress of both individuals and teams.

About UnternehmerTUM

Founded in 2002 as an affiliated institute and strategic component of “TUM – the Entrepreneurial University” UnternehmerTUM is now one of the leading university-based centers for innovation and business creation in Europe with more than 60 employees, over 1,000 participants attending lectures, seminars and programs every year, as well as 20 growth-oriented start-ups. UnternehmerTUM uniquely develops and connects talents, technologies, capital and customers. It promotes entrepreneurship for students, academics and professionals, generates new start-ups and creates new business with a special focus on Medtech, CleanTech and ICT. All activities of UnternehmerTUM are guided by “Business Design”, an approach which emphasizes iterative, hands-on and real-world development of new venture ideas and technologies. UnternehmerTUM has been successfully driving innovation with 1,000 participants annually attending lectures, seminars and programs and by doing 50 innovation and start-up projects every year. Activities of UnternehmerTUM cover all of the three phases pre-start-up, start-up and growth. In each of the phases activities are conducted across all faculties, levels of education, and curricula. The audience
targeted becomes more focused and advanced progressing through the phases. The main focus for lectures and seminars is the pre-start-up phase.

UnternehmerTUM’s Lectures & Seminars in the Pre-Start-Up Phase at TU Munich

In UnternehmerTUM’s lectures and seminars, students and researchers are equipped with a good idea of what being an entrepreneur means, on how to judge the possibilities of their ideas, and on how to design and communicate business ideas in front of various audiences. The ideal end result of this phase is a team of founders ready to “start up”. Each year 1,000 participants are qualified, which sums up to more than 25% of TUM’s graduates. Therefore, in the pre-start-up phase individuals and teams need to be qualified for entrepreneurial activities. For them, UnternehmerTUM offers introductory, basic and advanced lectures and seminars delivering knowledge on entrepreneurial tools and their application.

In introductory formats individual students learn how innovative ideas are generated and realized by either successful managers of established companies or young entrepreneurs. In basic formats individual students, researchers, and practitioners receive coaching by experienced lecturers and entrepreneurs in order to develop their business model. In advanced formats teams of students, researchers, and practitioners receive in-depth coaching by experienced entrepreneurs and domain experts in order to further improve their business models. The results of UnternehmerTUM’s educational formats are astonishing: In 2013, more than 30 companies emerged, counting only basic and advanced formats in the pre-start-up phase.

Hands-on Entrepreneurship Education with Interdisciplinary teams

We think that the figures above are very promising and indicate that UnternehmerTUM is successful in educating entrepreneurs. However, actually implementing the practice of entrepreneurship in a classroom setting needs careful design of this environment. The fruitful mix of participants and adequate teaching methods are key in this setting. Therefore, a focus on hands-on learning, lean startup and interdisciplinary teamwork characterizes UnternehmerTUM’s lectures and seminars.

Hands-on learning

Hands-on learning relies much more on individuals’ active participation and, thus, needs a special organization of the classroom and experienced teachers who can guide project work. Therefore, we employ a flipped classroom (also known as blended-learning) strategy in our courses, while teachers are experienced entrepreneurs themselves. What UnternehmerTUM labels as hands-on entrepreneurship education is a mix of different teaching methods all formats employ. It can best be described as activity-based-learning or project-based learning in a flipped classroom setting. This emphasizes doing before listening, where doing almost exclusively happens within the frame of a self-selected project. Lectures are only part of the introductory courses, but even here a class project asks for own input and ideas. This is emphasized even more by the need for every team to present a prototype early on in the course. This requirement facilitates both the development of a shared understanding of all team members but also encourages early feedback from other course participants who are not part of the team. Prototypes can be functional or only very rough stabs made out of sketches or paper.

Lean Start-up

Since we know that entrepreneurial teams highly benefit from team diversity (e.g. with regard to professional background and expertise), we aim at acquiring participants from all faculties and to encourage the building of diverse teams in our teaching. In order to assess the team projects, UnternehmerTUM follows lean startup principles. Next to being a very simple and structured method for assessing the potential for future success of an idea, it also moves the realm of giving feedback to the people whose feedback really matters: potential users/customers of a product/service or domain experts. Still, experienced coaches are important to accompany young founders along the way. They are an integral component of teaching at UnternehmerTUM and help individuals and teams not to lose focus.

Hands-on learning

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Interdisciplinary teams in UnternehmerTUM’s formats

In UnternehmerTUM’s formats interdisciplinary teams find themselves through idea marketplaces. Such a marketplace is characterized by being open to all registered members of a course. Everyone can freely introduce his or her idea on flip-boards in a large entrance hall at TUM. Already at this stage, idea providers, get a projection on the chances of their idea to stand a focused test with potential customers or, at a very much later stage, a wider test in the market. If it fails in this setting, consequences are not too hard yet, they need to take a breath and join another team of fellow students as a team member.

Assessing the effects of UnternehmerTUM’s hands-on approach interdisciplinary teams

UnternehmerTUM’s formats are regularly assessed and evaluated. In the following, we will exemplarily report on evaluation results from the UnternehmerTUM Business Plan Seminar in the winter term 2012. In collaboration with the Chair for Research and Science Management of TUM School of Management, a survey was distributed before and after 10 weeks of hands-on teamwork to assess individual and team learning progress. Altogether, 139 individuals took part in this survey. The results show that UnternehmerTUM fosters both individual and team learning.

Hands-on teamwork fosters entrepreneurial self-efficacy

First, the results indicate that hands-on learning at UnternehmerTUM fosters the development of entrepreneurial self-efficacy, i.e. an individual’s belief in his/her ability to master entrepreneurial tasks. Figure 1 shows the significant increase of entrepreneurial self-efficacy before/after participation. When we consider that an individual’s confidence to successfully master entrepreneurial activities heavily impacts the likelihood of implementation of the business model later, this learning outcome is a very promising one.
**Hands-on teamwork fosters team reflexivity**

Our results also indicate that team performance - as assessed by an expert jury based on the submitted business model - is highly influenced by team reflexivity, i.e. the extent to which groups regularly evaluate their progress, discuss goals and strategies, and derive lesson learned from project work. This result is consistent with other studies that have linked reflexivity to better team performance. To provide more space for guided team reflection, we will increase the emphasis on a flipped classroom even further by placing elements of theory-based knowledge communication outside of the classroom.

Overall, the results indicate that the UnternehmerTUM entrepreneurship education approach is already successful in stimulating individual as well as team learning processes. To provide a solid measure of success in the future, we will continuously monitor individuals and teams from this evaluation in the future.

**Conclusions and future prospects**

During the past 20 years TUM and UnternehmerTUM were involved in establishing around 600 companies employing around 12,000 people. Since the foundation of UnternehmerTUM in 2002, hands-on Entrepreneurship Education is a main pillar in this success story. The effects of hands-on entrepreneurship education on individual and team learning are already very promising. For the future we are planning to support teams even more by providing web-based tools supporting hands-on entrepreneurship education in terms of idea development, team exchange, and idea evaluation. This is supposed to further improve individual and team learning in a fully flipped classroom. Consequently, we will report about the effects of this measure on individual and team learning in future publications.

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Omar Castillo is a young Costa Rican entrepreneur from the Universidad de Costa Rica (UCR). As a world traveller, he identified the need of an alternative way of travelling and with the moto “don’t be a tourist, be a traveller”, he started the social-technological start up Unique Personal Experiences (UPE) which allows people to spend some time with Costa Rican indigenous communities. UPE is currently incubated in the UCR business incubator and has large expectations of future growth. They were the winners of Startup Weekend Costa Rica in 2012 powered by the Kauffman Foundation and in October 2013 and they were selected by the Inter-American Development Bank from 400 companies to be part of its acceleration programme.

Which are the origins of your company?

All started when I was traveling by myself for a month along Peru, and I went to a small city in the north whose “official” accommodation was completely sold out, so I didn’t have any place to stay. At that point, I had two options: sleep on the street, or going to a nearby rural community to ask locals to stay in their home, and that’s what I did.

I knocked at the door of a family, told them my story, asked them for homestay, and incredibly they accepted. By far, that night sharing dinner and talking with this rural family, was the highest point of my trip (more than Machu Picchu), because I just stopped being a tourist, and became a traveller. In that moment I knew that I was in front of a huge business opportunity.

From that experience we created UPE (www.upeplaces.com), an online marketplace to book accommodation with local activities, in houses of people in rural communities, this way we can create income for this families (80% of the income), and at the same time generate amazing local travel experiences for travellers from around the world. Until now, we’ve had around 4000 travellers from around the world that visited the communities we have in Costa Rica.

What was the role of your university on that?

At the beginning, I was all passion but not very structured and methodical, so I joined AUGE, the UCR incubator, to receive training of lean start-up and other methodologies. After a period of time, while further developing my company, I was hired part-time to teach these methodologies to other entrepreneurs. The UCR incubator contributed to my business idea in two main aspects: making my concept self-sustainable and scalable and providing the appropriate space and time to interact with other entrepreneurs. Eventually, this made me understand the importance of systematic execution and the key concepts of collaboration. The UCR incubator was also the one with the best information about organisations and events in which I could get funding to further develop UPE and helped preparing our applications.

Which were the main barriers that you faced and how you did it?

At the beginning, the main barrier was the lack of focus. We were working for a few months in so many concepts and problems that travellers had, that we couldn’t focus our efforts in one important thing at a time, and made us lost time and money. Later on, and thanks to the incubator, we understand that it we had built a specific solution for a specific target market. We learnt from that and start to iterate and make experiments for other markets.
The second barrier was the lack of investment. At the beginning you don’t need lots of money to start to iterate and develop your company, but when you start to get traction of clients, and everything starts to grow, you need investment. Then we applied to funds all over the world, from Australia to Mexico. Later on, the Costa Rican government created a seed capital fund for which we also applied and won, giving us around 150,000 USD to take UPE to the next stage.

Which are the entrepreneurial skills and behaviours that someone would need to follow your path?

1. Focus, focus, focus.
2. Do something that makes you feel passionate about. At the end, you are doing this because you want to, not because you have to.
3. Fail often. Most of the people doesn’t understand that in entrepreneurship if you fail often, you learn faster.
4. It’s always about the team, so, build an AWESOME ONE.
5. Stop making excuses. Start now...

Most of the people think that entrepreneurship it’s all about the ideas you have, but you have to understand that ideas worth nothing and execution is everything. So, take the next idea that comes into your mind, no matter how stupid it looks, and execute it in less than 24 hours, don’t seek for perfection, seek for iteration and fast learning, and tomorrow, when you have fail for the first time, you will be closer to become a successful entrepreneur that you were today, and all that because you failed fast. So to sum up, start now, wherever you are, with whatever you have, but start now.

How can HEIs motivate their students to be entrepreneurs?

First of all, HEIs should understand that entrepreneurship is not a one person or one organization’s effort. Entrepreneurship is an ecosystem, a community of trust where there are entrepreneurs, lawyers, researchers, business men, mentors, regular people willing to try new things etc., so HEI have to understand what is their role on it. The most common mistake is that HEIs want to be everything and they don’t focus. For example, in the Incubator of the University of Costa Rica, we focus on being the most important point of connection for entrepreneurship of Costa Rica, and we do that by creating common spaces, and connections to collaborate. We understood that the trust that everybody has in the university, can be used to help to articulate and create links in the ecosystem, so we focus only on that.

Omar Castillo | Entrepreneur | Unique Personal Experiences

Omar Castillo is a graduate in Industrial Engineering from the University of Costa Rica and currently co-founder and director of the social-technological start-up Unique Personal Experiences (UPE), a web platform to book stays and local activities in rural communities. Previously, Omar had an active participation in the NGO “Un Techo para mi País” in Costa Rica and Chile. Moreover, he is a consultant in traceability and in 2011 he also founded the company Niwid, which implement traceability systems for SME’s. He usually offers workshops, conferences and mentoring for entrepreneurs and start-ups in Latin America.

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Why is entrepreneurship important in today’s policy-making and practice?

We are living in a time when we need not only new forms of producing and diffusing knowledge, but also new mechanisms to transform knowledge into new products, services, jobs, and new forms of social organization that could better meet our needs. Entrepreneurship is a way to achieve that objective, by mobilising creative energies and synergies and providing new opportunities for talented, visionary and dedicated people who work hard to see their ideas come to life. In recent years, especially after the economic crisis, governments all over the world have been called upon to step up their support to entrepreneurship to boost the economy, especially in the countries that are still struggling with the consequences of the crisis.

What can governments do to support entrepreneurship?

Perhaps the most important thing to start with is the realization that entrepreneurship is a complex concept, which must be addressed in a holistic view, encompassing many public policy areas. From education and training to research and innovation, labour and employment policies, tax and intellectual property regimes, market regulations, especially for the small and medium-sized enterprises (SMES), which include the innovative start-ups and spinoffs resulted from an entrepreneurial process - all these areas need to be included in the equation. In other words, we need not only to educate and train entrepreneurs, but also create favourable conditions for their ventures to come to life and grow in a business-friendly environment. That includes better access to finance, better business support services, less administrative burden, more opportunities for taking advantage of the digital economy, a more positive social perception of the entrepreneur, etc. The correlation and synergies between these policies are also very important across the entire “entrepreneurship value chain”. If we invest in the earlier stages of this value chain, i.e. educating and training new generations of entrepreneurs, but the later stages of the chain, i.e. the business environments where they would operate are fraught with high taxes, burdensome administration and conflicting regulations, limited social acceptance of the entrepreneur or very strong failure stigma, much of the positive impact of that investment will be lost. The policy-making effort needs to be concentrated ad concerted across all these stages for optimum results. However, this is easier said than done. This is generally difficult to achieve, because all these policy areas are coordinated by different ministries or government agencies, which often have poor communication and horizontal coordination. It is very important to strive for good policy coordination among all these areas.

Can you give a few examples of entrepreneurship policy in the world?

A few examples come to mind, of how entrepreneurship policy is addressed by the European Commission for the European Union and its Member States, and how it is addressed in the US, especially at the federal government level. In the European Commission, the most important entrepreneurship policies are coordinated by three Directorates General (DGs): DG Research and Innovation deals with entrepreneurship as part of research and innovation policies, DG Education and Culture looks at entrepreneurship in education, and DG En-
terprise and Industry promotes entrepreneurship as part of SME policy and ICT policy (Digital entrepreneurship). Each of these DGs has its own specific programmes that incorporate entrepreneurship policies. For example, entrepreneurship is a key dimension of DG Research and Innovation’s new Innovation Union Programme for 2014-2020, and a major promoter of this dimension is the European Institute of Technology (EIT). The EIT is a young institution (it became operational in 2010), but has managed to be recognized in a very short time as a model of innovation governance in Europe by successfully integrating all three sides of the ‘knowledge triangle’, i.e. higher education, research and business, in the so-called Knowledge and Innovation Communities (KICs). The activities of the three KICs currently in operation (Climate-KIC, ICT Labs, and KIC InnoEnergy) span the entire innovation chain, from training and education programmes to research-to-market, innovation projects and business incubators. I find very interesting the way the EIT has managed to place entrepreneurship at the centre of the Master and PhD education programmes it provides, and also the way it has embedded entrepreneurship in the KICs’ research-to-market activities within, e.g. the ICT Labs’ business development accelerator and entrepreneurial community, KIC InnoEnergy’s Highway and the Climate KIC’s acceleration programme and a start-up network. Also, the EIT Awards, as well as the Roundtable of Entrepreneurs are a great way to encourage entrepreneurship.

DG Education and Culture’s new Erasmus+ Programme has two important initiatives that support entrepreneurship in higher education as a key component of University-Industry cooperation, i.e. the Knowledge Alliances and the Strategic Partnerships. Both these initiatives see entrepreneurship as a tool to enhance links between education, research and business and foster innovation in higher education, develop new curricula, introduce innovative practices in teaching, training, learning and youth work, and bring about institutional modernisation and societal innovation.

DG Enterprise and Industry’s SME policy has four main areas where specific policies are adopted to improve the life of SMEs: entrepreneurship policy-making, promotion of entrepreneurship, improving the business environment, and access to markets. In the first area - entrepreneurship policy-making, the two key policy documents in guiding entrepreneurship in the EU: the 2008 “Think Small First: A Small Business Act for Europe, and the 2012 “Entrepreneurship 2020 Action Plan: Re-igniting the entrepreneurial spirit in Europe” brought very relevant developments for Europe in the entrepreneurship domain. For example, the 2008 “Think Small First” was the first comprehensive SME policy framework for the EU and its Member States and introduced a set of ten principles and four legislative proposals to guide the conception and implementation of policies both at EU and at Member State-level. The Entrepreneurship 2020 Action Plan, as the latest entrepreneurship policy framework or the EU, stands on three pillars: (i) Entrepreneurial education and training, (ii) Creation of an environment where entrepreneurs can flourish and grow, and (iii) Role models and reaching out to specific groups. Each of these pillars introduces very important policies, including boosting entrepreneurial learning at all education levels, both for students and educators, better access to finance, support for the growth of new businesses, creating digital business opportunities, removing the failure stigma, simplifying the administrative burden, improving the public perception of entrepreneurs by promoting entrepreneurship on TV and audio-visual media and advertising them as role models, and reaching out to social categories that are less favoured or ignored as entrepreneurs, such as women, seniors, migrants, the unemployed and young people.

Now, moving to the US, we will see a different picture, but with a similar spread of entrepreneurship policies over a broad range of federal government agencies. I would first mention here the Office for Innovation and Entrepreneurship (OIE), which operates under the Economic Development Agency of the US Department of Commerce. OIE has a broad range of strategic priorities, which include encouraging entrepreneurship education, training and mentoring, expanding access to capital, accelerating the commercialization of federally-funded research and promoting policy incentives to support entrepreneurship and innovation. OIE coordinates several initiatives and programmes, such as the I6 Challenge, Regional Innovation Clusters, the National Entrepreneurship Day and the National Advisory Council on Innovation and Entrepreneurship (NACIE). I would also bring to your attention here a very interesting report issued by OIE in October 2013, called “The Innovative and Entrepreneurial University: Higher Education, Innovation and Entrepreneurship in Focus”, which describes innovation and entrepreneurship approaches at 131 universities across the US aimed to strengthen the regional economy, create jobs and maintain national competitiveness.

Secondly, I would mention the US Small Business Administration (SBA), which provides assistance to small businesses in four ways: (i) access to capital (business financing), (ii) entrepreneurial development (education, information, technical assistance & training); (iii) government contracting (federal procurement); and (iv) advocacy (voice for small business). SBA coordinates a variety of initiatives, including the world-famous SBIR/STTR Programme (Small Business Innovation Research /Small Business Technology Transfer) and the Startup America Programme. SBIR is a highly competitive programme that encourages R&D- and technology-intensive small businesses (including academic start-ups and spin-offs) to engage
in federally-funded R&D and bring their products and technologies to market. This is a 3-step programme that provides the critical start-up and development funding and encourages the commercialization of the technology, product or service, which, in turn, stimulates the US economy. STTR is also a 3-step programme that expands the federal funding opportunities in innovation and R&D to non-profit research institutions. Startup America is the White House initiative to accelerate high-growth entrepreneurship across the US, by bringing together the country’s most innovative entrepreneurs, corporations, universities, foundations and other leaders, with a wide range of federal agencies. The programme aims to expand access to capital for high-growth start-ups throughout the country, expand entrepreneurship education and mentorship to create jobs, strengthen commercialization of federally-funded R&D, remove barriers to high-growth start-ups and expand the collaborations between large companies and start-ups. Thirdly, one could also mention here the Economic Development Agency of the US Department of Commerce, which supports science parks, business incubators in universities and university centres, as part of its economic development policy. These are just a few examples, which I think illustrate well the point I made earlier that entrepreneurship is a complex notion that spans multiple public policy areas and needs to be addressed from a variety of policy perspectives.

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Dr. Marina Ranga is Senior Researcher at Stanford University’s Human Sciences and Technology Advanced Research (H-STAR) Institute, where she leads the Triple Helix Research Group. She is also Visiting Professor at University of Warsaw, School of Management. She holds a PhD and a MSc in Science and Technology Policy from SPRU, Sussex University and a BA/MSc in Chemical Engineering from the Polytechnic University of Bucharest. Dr. Ranga’s research interests include Triple Helix interactions and the entrepreneurial university, academic entrepreneurship, Triple Helix Systems and national/regional innovation systems, new technologies and innovation in higher education, as well as the gender dimension in innovation and entrepreneurship. In the Triple Helix research area, she is the originator of the ‘Triple Helix Systems’ concept that bridges key features of Triple Helix model with the innovation systems theory.

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The most important event in 2014 for all those willing to become more engaged, innovation-oriented and entrepreneurial.

Universities and research institutions play a key role in today’s society. In addition to educating students and performing research, universities are more and more engaged with their region and business. However, the transition from a traditional university to a more engaged and entrepreneurial one is a complex and long journey.

The 2014 Entrepreneurial Universities Event will bring together around 150 academics and professionals driving this change – in their university, research institution, or in government or intermediaries.

Already before the event, you have access to different tools to analyse your individual situation. During the event, you will connect to other participants having similar challenges, goals and interests. Our online networking tool, UIIN Connect, will facilitate this networking already before the conference by helping you to find the right networking partners.

In Madrid you will get to know 20 good practice cases, each being extensively presented & discussed in 45 minutes. Furthermore, more than 25 concepts and ideas for further developing the entrepreneurial university will be showcased. After the event, having brought home new ideas and concepts, we provide you with material supporting you in the implementation of the approaches learned.

However, the key element bringing all this together is a welcoming and encouraging environment. Which place could be better than an actual good practice example? Therefore we would like to welcome you to the Campus of Excellence of the Technical University of Madrid (UPM).

September 29th - October 1st