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Draft input paper for the Thematic University-Business Forum

Universities. Business. Alliances for innovation.

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1 Introduction

Established by the European Commission as a platform to promote good practice exchange, mutual learning and networking and to inspire further activities across the Member States, the University-Business Forums (UBForums) serve as a catalyst for creating partnerships between higher education institutions (HEIs) and businesses. UBForums also contribute to the implementation of the Modernisation of Higher Education in Europe agenda[1] which reinforces the need for closer linkages within the knowledge triangle, i.e. across education, research and innovation.

The University-Business Forum was launched by DG Education and Culture (DG EAC) in 2008. Since then, 18 Forums have taken place. Six high level Forums in Brussels and 12 thematically focused events in different EU Member States. The previous UBForums have been highly successful and resulted in new ideas and policy initiatives. These include the Knowledge Alliances – strategic partnerships between universities and business with an emphasis on innovation and knowledge exchange, now funded through the Erasmus+ Programme – and HEInnovate. HEInnovate is an online self-assessment tool developed in cooperation with the OECD for entrepreneurial higher education institutions looking to bring about change and improvement.

The 2016 Vienna Thematic Forum will focus on university-business cooperation from the perspective of fostering innovation through collaborative effort and joint activities. Keynote speeches, round table sessions and presentations at the Forum will explore in particular the following topics:

- Cooperation between business and universities to drive innovation.
- How is an entrepreneurial mind-set among students, teachers and researchers encouraged? How is it supported by science, business and policy, that more start-ups are founded?
- How can a university act in an entrepreneurial manner? What responsibility can a university take - for lifelong learning, knowledge exchange and society?

The Thematic UBForum is organised by the European Commission in partnership with the Austrian Federal Economic Chamber (Wirtschaftskammer Österreich – WKÖ) and the Austrian Federal Ministry of Science, Research and Economy (Bundesministerium für Wissenschaft, Forschung und Wirtschaft – BMWFW).

[1] Supporting growth and jobs – an agenda for the modernisation of Europe's higher education systems: COM(2011) 567 final, available online at: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011DC0567&from=EN

1.1 The innovation ecosystem in Austria

Over the last few years Austria is positioned as an **Innovation Follower** in the Innovation Union Scoreboard.[2] Austria performs better than the EU average for most dimensions, except 'Economic effects' and 'Finance and support'. The former is due to the low relative performance in exports of knowledge intensive services, sales share of new innovations, and license and patent revenues from abroad. While the latter is caused by weak performance in venture capital investments. The country scores relatively high in terms of international scientific co-publications and community trademarks.

It is not surprising therefore that the overarching goal of Austria's Research, **Technology and Innovation Strategy** "Realising Potential, Increasing Dynamics, Creating the Future: Becoming an Innovation Leader"[3] is to catch up with the Innovation Leaders and become an Innovation Leader. The strategy was launched on the 8th March 2011 covering a ten-year period. It has the following objectives at the core of its measures: [4]

- Strengthening national research structures with a focus on excellence,
- Fostering the innovative capacity of companies,
- Enabling thematic priority setting,
- Increasing the efficiency of governance, and
- Linking research, technology and innovation to the education system.

Alongside the Austrian innovation agenda, there is a major emphasis on implementing sustainable reforms in the education system. The Austrian education system needs to perform better to deal with the shift towards a more skills-intensive economy and to mitigate demographic trends.[5] The general government expenditure on education expressed as percentage of the Gross Domestic Product (GDP) is stable at 5.0%, which is above the EU average level of 4.8%. There are however numerous studies and international benchmarks suggesting that the Austrian education system is not exploiting its full potential. Regarding the proportion of people with tertiary education qualification in the 30-34 year old resident population, Austria had a continuous increase in recent years and achieved 40% in 2014, surpassing the Europe 2020 national target of 38%. Austria's vocational education and training system is well adapted to the labour market, a factor that has contributed to having one of the lowest youth unemployment rates in the EU.

Another focal area of the strategy is on strengthened cooperation between science and business. In the 1990s, the low level of interaction between science and business was identified as one of the critical deficits in the Austrian innovation system. Since then, cooperation between universities and companies has fundamentally improved. Higher education institutions have come to be seen as players for regional development, and drivers for SME competiveness. Easier access to and better and more rapid use of the research base is key for Austrian businesses, if they are to become more knowledge and research intensive. This is therefore an important goal of the research, technology and innovation strategy.[6]

There is still room for improvement in the field of university-business cooperation in the area of education.[7] In Austria, UBC is mainly understood in terms of 1) 'Collaboration in R&D' and 2)

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[2] Innovation Scoreboard 2015, http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards/index_en.htm

[3] Republik Österreich, Realising potentials, increasing dynamics, creating the future. Becoming an Innovation Leader Strategy for research, technology and innovation of the Austrian Federal Government, March 2011

[4] Further information at http://era.gv.at/directory/158

[5] See also European Commission, Education and Training Monitor 2014, Austria, http://ec.europa.eu/education/tools/et-monitor_en.htm

[6] Republik Österreich, Realising potentials, increasing dynamics, creating the future. Becoming an Innovation Leader Strategy for research, technology and innovation of the Austrian Federal Government, March 2011

[7] Todd Davey, Andreas Altmann, Bernd Ebersberger, Arno Meerman and Victoria Galán-Muros, State of University-Business Cooperation in Austria, December 2013

'Commercialisation of R&D results'. Both activities are considered to be above the European average. However, other forms of cooperation are all below the EU average. This is true for both types of universities. Another area for improvement relates to mobility. Austrian HEI managers rate themselves lowest in Europe for development of 'Mobility of academics'[8] and 'Mobility of students'.[9]

An important pillar of the Austrian economy is **social partnership**. Austria enjoys a particularly well-developed system of cooperation between the major economic interest groups both among each other and with the government. This system of co-operation of the various interest groups on economic and social issues is commonly referred to as 'social partnership'. The social partnership in Austria engages different partners in a collaboration for which the framework conditions are set by law.[10] The partners work together in an informal way and their contributions are based on voluntary arrangements.

Austria's four large representative organisations[11] are not merely interest groups in the narrow sense, i.e. wage and price negotiators and lobbyists providing services for their members. The Austrian Federal Economic Chamber balances the interests of seven sectors: Crafts and Trades, Industry, Commerce, Banking and Insurance, Transport and Communications, Tourism and Leisure and Information and Consulting. What distinguishes the Austrian social partnership is that it extends to practically all areas of economic and social policy. It is anchored in Austria's political system in many ways.[12] Also, some social partners own and run HEIs. For example, the FH Wien University of Applied Sciences of WKW owned by the Vienna Economic Chamber while the University of Applied Sciences FH BFI Vienna is run by the Vocational Training Institute Vienna (Berufsförderungsinstitut Wien BFI), which belongs to the Chamber of Labour.

1.2 Higher education system in Austria

The Austrian higher education system consists of public and private universities on the one hand and universities of applied sciences i.e. **Fachhochschulen** in German on the other, boasting a comprehensive network of tertiary education institutions. This includes a total of 22 public universities, 12 private universities as well as 21 universities of applied sciences and 14 university colleges of teacher education.[13]

Public universities are the backbone of higher education in Austria. They are a heterogeneous group of organisations in many respects, in terms of history, size, and subject specialisation. There are:

- Five 'classical' universities, but without covering studies in medicine or the arts,
- Five technical universities with an exclusive or predominant specialisation in engineering sciences,
- One specialised university in economics and business administration,
- Three medical universities plus one faculty of medicine at the University of Linz,
- One university specialised in veterinary medicine,
- Six universities for arts and music,

[8] Temporary movement of professors, researchers from HEIs to business; and employees, managers and researchers from business to HEIs.

[9] Temporary movement of students from HEIs to businesses.

[10] http://www.ris.bka.gv.at/Dokument.wxe?Abfrage=Bundesnormen&Dokumentnummer=NOR40094632

[11] Austrian Federal Economic Chamber - Wirtschaftskammer Österreich (WKÖ), Chamber of Agriculture - Landwirtschaftskammer Österreich (LK), Federal Chamber of Labour - Bundesarbeitskammer (BAK) and Trade Union Federation - Österreichischer Gewerkschaftsbund (ÖGB)

[12] http://www.advantageaustria.org/international/zentral/business-guide-oesterreich/investieren-in-oesterreich/arbeit-und-beruf/sozialpartnerschaft.en.html

[13] http://www.advantageaustria.org/international/zentral/business-guide-oesterreich/investieren-in-oesterreich/arbeit-und-beruf/ausbildung.en.html

- One university for continuing education which offers exclusively post graduate education.

Among the five 'classical' universities is the University of Vienna, the oldest university in the German-speaking region, founded in 1365. With almost 93,000 students, it is one of the largest universities in Central Europe. Altogether, over 300,000 students (winter semester 2014) are enrolled at public universities in Austria. Compared with the universities of applied sciences (about 48,000 students) private universities (about 8,800 students) and university colleges of teacher education (about 15,400 students), public universities account for the major part of tertiary education in Austria.[14]

Public universities are steered by **performance agreements**. Among the key elements of this agreement and the respective funding the importance given to university-business cooperation or mobility between university and business is growing.[15] All performance agreements contain a sub-section on societal objectives. In the performance agreements for 2013-2015, societal objectives address priorities for example of:

- Gender mainstreaming and gender budgeting,
- Intellectual property rights (IPR) and
- Transfer of university services to society and the economy, including knowledge transfer, science communication and art-related activities, exhibitions.[16]

Therefore better handling the IPR of research results, professionalisation of staff at university knowledge transfer offices as well as simplifying and accelerating cooperation between university and businesses have been high on the HEIs' agenda.[17] In autumn 2015 new performance agreements were negotiated, in which the Federal Ministry of Science, Research and Economy also put a focus on topics like entrepreneurship, responsible university, third mission and sustainability. This concerns especially the strategic positioning of these goals in steering processes of the universities as well as concrete measures. The use of HEInnovate as a tool for self-evaluation has explicitly been recommended during the preparation period of the negotiations.
Starting in 1993, 21 **universities of applied sciences** (UAS)[18] have been established (status quo 2015) in order to diversify higher education in Austria, offering vocational and professional education at the tertiary level, and as a way to meet the demands of the labour market. Their main task is to deliver practice-oriented higher education. They receive institutional public funding for study places, but not for research and facilities.[19]

The graduates of universities of applied sciences have been very well received by the labour market, and the sector has expanded considerably since the mid-1990s when only ten study programmes were offered.[20] Nowadays the 21 universities of applied sciences offer 431 different courses of study. Universities of applied sciences also cooperate with universities in teaching. Student mobility between universities and universities of applied sciences has grown significantly for the transition from Bachelor's to Master's, but not for the transition from

[14] http://wissenschaft.bmwfw.gv.at/fileadmin/user_upload/wissenschaft/publikationen/Stat_TB_2014_web.pdf; http://wissenschaft.bmwfw.gv.at/fileadmin/user_upload/Universitaetsbericht_2014.pdf; http://wissenschaft.bmwfw.gv.at/home/science-higher-education/universities/

[15] Todd Davey, Andreas Altmann, Bernd Ebersberger, Arno Meerman and Victoria Galán-Muros, State of University-Business Cooperation in Austria, December 2013

[16] Wissenschaftsrat, Analyse der Leistungsvereinbarungen 2013 – 2015 und Stellungnahme, Vienna, December 2013

[17] BMWFW, Unversitätsbericht 2014

[18] http://wissenschaft.bmwfw.gv.at/home/science-higher-education/universities-of-applied-sciences/

[19] Nevertheless, some of them have established research and development (R&D) facilities and these efforts have been supported through competitive programmes (COIN, Josef Ressel Centres) financed by the Federal Ministry of Transport, Innovation and Technology (BMVIT) and Federal Ministry of Science, Research and Economy (BMWFW) respectively.

[20] http://www.studieren.at/fachhochschulen

Master's to PhD.[21] The universities of applied sciences cannot award PhDs, but they cooperate with universities in doctoral study programmes.

The universities of applied sciences focus on applied research and technology transfer, mainly addressing regional companies and complementing the activities of universities. They are particularly oriented to the requirements of the business community and maintain intensive contacts with the industrial sector.[22] This is also reflected in the fact that dual study courses are mainly offered by the universities of applied sciences. Although dual study courses are in their infancy in Austria, for example compared to Germany, there are still a number available at Bachelor's level. These include for example, a dual study programme in Production Technology and Organisation offered by the UAS Joanneum in Graz,[23] and another in electrical engineering offered by the UAS Vorarlberg.[24] The private medical university Paracelsus also offers a Bachelor's in nursing sciences as a dual study programme.[25]

In 2011 a national **Higher Education Plan**[26] was set up in order to develop the Austrian higher education area. Its focus is on better cooperation between HEIs and HE sectors, better use of resources in research and teaching, developing more distinctive profiles of HEIs and coordinating HEI profiles and priorities. University-business cooperation is mentioned in the Higher Education Plan and focuses on knowledge and technology transfer from HEIs to businesses. However, education hardly figures as the focus is mostly on IPR, spin-offs, and standardisation, the exception being mobility of students.

1.3 University-Business Cooperation in Europe – Key messages from the past University-Business Forums

Many interesting and important conclusions and messages have arisen from the presentations, discussions and debates of the University-Business Forums (UBForums) over recent years. One key message is the importance of Europe's innovation systems, of which higher education is a key player. Through their links with business, HEIs can drive innovation, promote new ideas and develop and support more entrepreneurial and innovative individuals. Amongst other important themes, with relevance to the topics of discussion at the Vienna Thematic Forum, are the following:[27]

- When it comes to cooperation, the discussions should not only be limited to university and business collaboration. There are many other stakeholder groups which contribute to the dynamic innovation systems from financial, education and business sectors to public, representative and governmental bodies and associations on the local, national and EU levels.
- Higher education institutions have many roles in an entrepreneurial and innovative ecosystem at local, regional and national levels. The roles it develops must be driven by the ultimate needs of the system rather than the institution.
- There is significant scope for more and better cooperation between universities and businesses. For this to work, each one has to be mindful to the other's needs. Recent years have seen a significant positive shift towards this gold standard moving from

[21] Wissenschaftsrat, Das Österreichische Hochschul- und Wissenschaftssystem - Ein Weißbuch und eine konkrete Utopie (Oktober 2015), http://www.wissenschaftsrat.ac.at/news/Weissbuch%20Endversion.pdf

[22] http://www.advantageaustria.org/international/zentral/business-guide-oesterreich/investieren-in-oesterreich/arbeit-und-beruf/ausbildung.en.html

[23] https://www.fh-joanneum.at/aw/home/Studienangebot_Uebersicht/department_engineering/~cyz/pto/?lan=en

[24] http://www.fhv.at/fhv-studies/technology/electrical-engineering?set_language=en

[25] http://www.pmu.ac.at/2in1.html

[26] BMWF (Federal Ministry of Science and Research), Österreichischer Hochschulplan. Der Gestaltungsprozess zur Weiterentwicklung des österreichischen Hochschulraums, December 2011

[27] Based on reports from the Thematic Forum in Lithuania (September 2015), the 6th UBF in Brussels (March 2015) and the Thematic UBF in Germany (November 2014). Reports from the previous UBForums are available online at: http://ec.europa.eu/education/tools/university-business_en.htm.

personal relationships to institutional. However, there remain challenges if universities are to collaborate with employers more effectively in education.

- There are many types of impacts of university-business cooperation including those related to curriculum relevance, employability, new ideas, long term strategic partnerships and networks. For companies as well as for higher education institutions, it is important to identify and understand the variety of benefits and the impacts of collaborating.
- Education has an important role in generating private and societal returns, fostering entrepreneurship, the entrepreneurial spirit and creativity. Education therefore has to be priority number one for any government to ensure efficient knowledge transfer and to foster the creation of an innovation ecosystem.
- There is no one size fits all approach to entrepreneurship teaching and learning at universities. Involving students and teachers in real-life situations where they can get in touch with the needs of industry can help them embrace entrepreneurship.
- Higher education institutions can support entrepreneurship throughout its leadership in a number of ways. Leadership does not always just have to come from the top, although the vision must be there to enable and support staff and students and create champions. It is not about individuals as such but the development of an ecosystem.
- Universities should create an environment that is supportive to business creation and stimulate activities, such as business incubators, start-ups or student companies. This will help students and teachers change their attitude towards entrepreneurship, get them in touch with companies, but at the same time not forcing them to abandon academic insight.

The Thematic Forum in Vienna provides a platform where these themes can be further discussed, coupled with presentations of good practice examples. It is the ambition of this UBForum to foster dialogue and create better mutual understanding between universities and business leading to fruitful future collaboration.

2 Key themes of the Thematic Forum

2.1 Session I: Cooperating for a common purpose: partnerships for value

Successful collaboration and cooperation between higher education institutions and companies is characterised by systemic, long-term two-way partnerships. University-business cooperation allows for mutual learning and creates benefits for both partners. Academics provide access to highly specialised knowledge, while businesses provide access to markets and development opportunities.

Higher education can cooperate with business in many ways. Different partnerships focus on various themes such as teaching and learning, research, commercialisation of research results, establishment of joint ventures, or joint curricula development just to name a few examples. Fruitful partnerships can lead to innovations and improved products, services or processes, up-skilling of the labour force, and talent development, delivering benefits to all partners involved.

Collaboration in research has traditionally been a strong area of university-business cooperation. There are many successful existing international and national cooperative research projects, as well as strategic long-terms structures, e.g. research centres established with the involvement of both HEIs and businesses. The Knowledge and Innovation Communities of the European Institution of Innovation and Technology,[28] are the best-known large-scale international examples. The Knowledge and Innovation Communities bring together a large number of stakeholders from business, research and higher education. They are aimed at

[28] http://eit.europa.eu

strengthening research collaboration and cooperation in the field of education, with the ultimate goal of fostering innovation.

Collaboration in education is also an important component of university-business cooperation and involvement of business in teaching-related activities takes many different shapes and forms. The level of business engagement varies from, for example, guest lectures to long-term strategic partnerships involving the joint development and delivery of curricula and study programmes. Business participation in the provision of work-based learning experiences for students (placements and internships) is also an important area of university-business collaboration that helps tailor skills development and boost employability.

A high profile example of university-business cooperation in teaching is the dual study programme. Dual study programmes combine learning at higher education institutions and learning at a workplace. While not implemented universally across the EU, dual study programmes have a long tradition in some Member States, such as Germany, and are increasing in prominence in Austria. The German vocational education system provides a stimulating environment for the development of dual study programmes, with a large number of students undertaking such programmes and a significant number of companies contributing to their delivery. Dual study programmes have a positive impact on graduate employability, as they are implemented in direct collaboration with employers. They offer a way to better match graduates' skills with the requirements of the workplace.

There are a number of nuanced models of dual study programmes. Depending on the mode of interaction between HEIs and companies they can be characterised by close and frequent collaboration based on mutual understanding and recognition, by one-way transfer of information - either from companies to HEIs or the other way round - or by formal standards, with interactions between the partners only when necessary.

This session will discuss and showcase a number of good practice examples on:

- Expanding Dual Studies across sectors and disciplines
- Thinking ahead: Responsible cooperation

The two parts of the session will highlight models employed by universities and businesses across Europe to explore how best to cooperate in teaching and learning. Examples presented will include dual study programmes from Germany and Austria. The views will represent both high education and businesses as well.

The second part of the session will discuss the role and importance of corporate social responsibility and ethics from the angle of how can these issues support university-business cooperation. A range of businesses will introduce their approaches and experiences gained over the past year which will be complemented by reflections from academic representatives.

Key questions for the Forum:

- There are many types of collaborative partnerships in operation between universities and companies which support skills development. Are there elements in these partnerships which are transferable?
- Are there are any particular barriers that prevent dual study programmes or their equivalents to be implemented more widely across the EU Member States?
- Dual study programmes are just one model of university-business cooperation in teaching and learning. What other models exist that help drive innovation? How do they differ? What can these models learn from each other?

2.2 Session II: Higher education institutions – a good place for future entrepreneurs?

Although the debate persists on whether entrepreneurs are born or made, there is little dispute that there is a set of skills, often referred to as entrepreneurial skills, which are central to success in the competitive marketplace. These skills are equally important for jobseekers in the public and private sector as for would-be entrepreneurs. The notion of the entrepreneurial mind-set covers a number of broad skills and attitudes which are important for an individual's future career path. The concept implies that every individual can be equipped to become an

entrepreneur or intrapreneur. In other words one might be equipped with the necessary skills and attitudes for independent and critical thought, creativity and flexibility, and an orientation to solutions rather than problems. Other key characteristics of an entrepreneurial mind-set are open-mindedness, perceiving failure as a building block for future success, and the ability to work in a team to address complex tasks, whether one chooses to be an entrepreneur or employee.

One of the reasons for the growing emphasis on the need for such skills in any job is the changing demands of the labour market. More than ever employees need to be open and receptive to new ideas in dealing with customers, working in teams, solving problems, communicating, and negotiating. Much of what employers demand can be perceived as the entrepreneurial mind-set.

There are many different ways of encouraging students and teachers to develop their entrepreneurial mind-set and supporting them in their entrepreneurial activities. There is a broad range of tools and methods available for HEIs to choose from, focusing on the provision of both formal and informal learning opportunities. Innovative approaches to teaching and learning include lectures given by business representatives, student-centred, cross-disciplinary and practice-based learning, the introduction of games, simulations and project-work in curricula. Longer-term practical experience can be gained through student internships or theses tutored by a business partners. However, universities can support students beyond traditional teaching though facilitating access to enterprise clubs, prizes and business incubators, and providing networking opportunities.

Knowledge Alliances are another initiative that responds to the call for developing talent for the future. Funded by the EU Erasmus+ Programme, Knowledge Alliances are partnerships between HEIs and businesses. They collaborate on projects aiming at enhancing innovations and entrepreneurship, in particular by improving teaching and learning. Knowledge Alliances help develop new curricula and further strengthen cooperation between universities and business.

There are a large number of Knowledge Alliance projects coordinated by and with participation from Austrian partners. These include – just to name a few - the e-nspiration[29] project, funded among the first three pilot projects in 2012, or the European Food Studies & Training Alliance (EuFooD-STA)[30] and the Competencies for A Sustainable Socio Economic Development (CASE) [31] project.

This session will discuss and showcase a number of good practice examples on:

- Promoting entrepreneurial thinking and activities
- Turning ideas into action: Support for business creation

Previous UBForums showcased different successful examples and approaches, for example the international DEMOLA network,[32] the “Dare to Venture” and “Tech Transfer” support schemes for business creation of the University of Ghent,[33] and the business incubator in the Sunrise Valley, Lithuania.[34] Continuing the list of successful examples, the first part of the session will introduce the Knowledge Alliance project CASE and the experiences of cooperation activity from the Austrian WTZ “ideengarten”.[35] In addition the session will highlight the services provided by INITS,[36] a business incubation facility in Vienna.

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[29] http://www.enspiration.eu

[30] https://www.food-sta.eu

[31] http://www.case-ka.eu

[32] http://www.demola.net/about

[33] http://www.ugent.be/eb/innovatie/en/research/research-domains/innovation-and-entrepreneurship.htm

[34] http://www.sunrisevalley.lt/en/about-us

[35] http://wtz-west.at/event/ideengarten-das-studipreneurship-camp/

[36] http://www.inits.at/en/about-2/about-inits-2/

Key questions for the Forum:

- An entrepreneurial mind-set should allow students and graduates to express their talent and creativity. To what extent should this be limited and shaped by real-life business needs?
- What types of incentives can universities offer to academics to embrace new and innovative teaching methods and support the development of graduates with an entrepreneurial mind-set?
- What is, and what should be, the role and input of the business partners in developing graduates with a more entrepreneurial mind-set?

2.3 Session III: Evolving roles for higher education institutions

The higher education landscape is changing fast and HEIs face a number of challenges. There are growing pressures relating to declining income and rising costs. There is globalisation and the digital revolution. There is increased competition on the student market and with this, increasing demands and expectations from students who are looking for guaranteed jobs at the end of their studies.

Adapting to these, and other changes and external pressures means that higher education institutions need to behave in new and innovative ways. They need to be more responsive to the needs of the society, working closely with companies to help to shape lifelong learning opportunities which are tailor made for the needs of a competitive economy. As a consequence, new models of delivery are emerging, with a focus on real problem solving, interdiscplinarity and sharing knowledge and facilities. One way of describing this, is to say that HEIs are becoming more entrepreneurial. Hence the term entrepreneurial university[37] has emerged as a way of defining higher education institutions who are adapting to these new pressures.

This is not an easy process and many higher education institutions lack the incentives to change. There is still, in most Member States, a tendency to equate academic excellence with research output measured through publications in high-impact peer-reviewed journals. This does not help HEIs change their offer and encourage staff and students to behave in an entrepreneurial way.

Universities can take a range of approaches to embrace entrepreneurship. Institutional changes can take place at various levels and parts of HEIs: management, governance, organisation, involvement of external stakeholders, international relations, teaching and learning activities, business creation support or knowledge exchange. To help HEIs in becoming more entrepreneurial, in response to recommendations from previous UBFs, the European Commission together with the OECD and an expert panel designed and developed a guiding framework for entrepreneurial universities. The HEInnovate[38] online self-assessment tool (https://heinnovate.eu) is open and free to all HEIs, who wish to explore their entrepreneurial potential. The tool is organised under seven dimensions of self-assessment; each is broken down to individual statements for universities to score. Since its launch two years ago, over 600 HEIs used the self-assessment worldwide.

This session will discuss and showcase a number of good practice examples on:

- Triggering institutional change in higher education institutions
- Working for society and regional innovation

The first part of the session will showcase the role and importance of university leadership and governance in driving the process of institutional change. The examples will highlight how can HEInnovate help in driving such change and the different approaches used to secure buy-in within an institution to make the necessary changes. The second part of the session will put the topic of entrepreneurial institutions in a broader context, by discussing the HEIs' role in

[37] Gibb, A.A. (2013) "Developing the Entrepreneurial University of the Future. Key Challenges, Opportunities and Responses", OECD, Paris.

[38] The official website of HEInnovate is www.heinnovate.eu.

regional engagement. Examples will include the presentation of the University of Applied Arts, Vienna on social design and urban innovation for example.

Key questions for the Forum:

- Becoming entrepreneurial requires that HEIs to undertake institutional changes that might be seen as sensitive in some cases. How can institutional leaders ensure the necessary buy-in from academics, researchers, students and administrative staff?
- Who should be the main driver of entrepreneurial activities at an HEI? Is there a need to have a top-down or bottom-up approach or both?
- Entrepreneurial universities engage systematically with external stakeholders. How can business and other external stakeholders best be involved and support HEIs in their effort to become more entrepreneurial?

2.4 Session IV: Lifelong learners ready to tackle societal challenges

Lifelong learning has been a reoccurring topic at the UBForums due to the high relevance to all stakeholders present. Lifelong learning is a way for universities to engage with businesses either as collaborative partners or as an important source providing support to up-skilling the labour force. In particular SMEs are an important target group when lifelong learning is considered. HEIs have a crucial role in understanding the skills requirements of SMEs and the regional economies more broadly. The massification of higher education and the increasingly diversified student population require higher education institutions to offer more flexible learning pathways.

Lifelong learning-related activities offer these more flexible, individualised learning opportunities for students. They make a broader range of course content available, which is more tailored to the needs of the businesses, and flexibility in terms of delivery and course structure. If lifelong learning is to become a reality, creating more flexible pathways to education will increase the relevance to the labour market and improve the efficiency of resources.

The provision of lifelong learning at the higher education level also a number of issues and challenges, such as the financing of the activities undertaken, the recognition of prior learning, the accreditation of the educational offer or the role and responsibility of businesses.

Although lifelong learning is being provided to a greater extent through higher education, and is supported and promoted at the policy level, there remains room for improvement. There are examples of national programmes promoting the take-up of lifelong learning in higher education and pockets of excellence exist across Europe. Many universities have programmes established to advance the professional development of employees. Adult learners are seeking new funding possibilities in an environment of limited public funding. Large companies engage in continuing education activities for their employees and offer in-house master and doctoral courses for their prospective employees. However, highlighting the benefits that closer collaboration in lifelong learning-related activities between universities and businesses, particularly SMEs can deliver and showcasing success stories are still very much needed to increase the further take up of lifelong learning in higher education.

This session will discuss and showcase a number of good practice examples on:

- Discovering new pathways for lifelong learning
- Academic upskilling – a permanent need

The presentations during the session involve representatives of both businesses and higher education institutions to offer a balanced perspective on the topic. Examples brought forward will include the Austrian WKO-Project entitled Berufsakademie, or the experiences of SPAR Austria. In addition, further presentations will provide the opportunity to gain insight and learn about the practices of large companies and HEIs from different Member States, such as Finland, France and the United Kingdom.

Key questions for the Forum:

- How can higher education institutions promote the adoption of new teaching methods among the staff, which are needed to the efficient delivery of lifelong learning for an institution?
- How can universities cooperate with companies, especially with SME to better understand the skills needs of the labour market both short and long-term? To what extent should industry determine the content of continuing education?
- What are the lessons learnt by the institutions who have been offering individualised learning pathways? Are their models transferable and/or adoptable by others?
- Funding the diversification of educational offer and providing individual learning pathways has related costs. Where will the investment come from to create and formulate new courses tailor made to specific continuing education needs (who should bear the costs of continuing education for employees)?