

**Second European Forum on Cooperation between Higher  
Education and the Business Community**

**Forum report**

**5-6 February 2009**

## **Introduction**

The second European University – Business Forum, organised by the European Commission, took place on 5-6 February 2009 in Brussels. The Forum brought together around 4300 participants from higher education institutions and associations, enterprises and business associations, and from both national and EU-level authorities. Following the successful structure of the 2008 inaugural forum, this 2009 event comprised plenary sessions and workshops, addressing key issues of the University – Business partnership in higher education.

The European University-Business Forum aims to facilitate the exchange of good practice, to foster mutual learning and networking and to inspire further activities in the EU Member States. It is in line with the European Commission's initiative of May 2006 on modernising higher education in Europe, a key element of the Lisbon strategy, aimed at increasing knowledge and technology transfer as well as at expediting commercialisation of research results via increased university-business cooperation. The Forum represents the European Commission's response to calls from the academic and business communities for regular and sustainable dialogue, exchange, sharing and learning.

The second European Forum addressed the challenges facing the relationship between industry and higher education in an adverse economic climate, while workshops examined the following six key topics:

- Modernisation of governance structures within universities, with the help of business expertise
- Curriculum development as a domain to foster employability and a more entrepreneurial mindset among graduates
- Entrepreneurship, as an aspect of both, institutional activity and the curriculum, with the assistance and guidance of the business community
- Continuing education/Lifelong Learning and the promotion of university-business partnership in the field of provision of training/retraining programmes
- Knowledge Transfer, concerning methods and models of the translation of knowledge from the research mode to the enterprise mode as innovation
- Development of mobility, including student mobility, but also mobility of researchers and teaching staff, between academia and businesses, and vice versa

Under each theme, participants and speakers were brought together to discuss main issues and to exchange examples of good practice in these areas.

## The Opening Plenary Session

**Ms Odile Quintin**, Director General of Directorate General Education and Culture, opened the Forum, welcoming the participants and speakers.

Opening speeches were given by **Mr Ján Figel'**, the European Commissioner for Education, Training, Culture and Youth; **Mr Ondřej Liška**, the Czech Minister for Youth and Sport, and, by video recording, **Mrs Ana Patricia Botín** Executive Chair of the board at Banesto, a Spanish internet bank, part of the global Santander banking group and president of the Fundación Conocimiento y Desarrollo (CYD),.

Keynote speakers in the round table presentation and comment session following the opening interventions were: **Mr Jan-Eric Sundgren**, Senior Vice President Public and Environmental Affairs, Volvo Group and convenor of the European Round Table of Industrialists (ERT) initiative on business and education; **Professor Tadeusz Luty**, former rector of the Wroclaw University of Technology and a member of the board of the European University Association (EUA); **Mr Philippe de Buck**, Director General Business Europe; **Professor Anders Flodstrom**, member of the EIT Governing Board; **Mr Andrea Benassi**, secretary-general of the European Association of Craft, Small and Medium-sized Enterprises (UEAPME); and **Mr Enrique Cerezo Torres**, President of Club Atletico de Madrid and President of Enrique Cerezo Producciones Cinematograficas.

**Mr. Ján Figel'** noted with satisfaction the increased attendance at this Forum while the economic context of the meeting has changed beyond recognition. He outlined the anticipated growth of unemployment in the EU, saying it will be more difficult for young people to find a first job, leading to discontent already evident. Governments may be tempted to reduce spending on education and research, which would be a big mistake, as it would destroy capital and knowledge and compromise Europe's growth prospects in the medium and long term. Continued investment could help Europe out of recession more quickly and smoothly. It was always clear that Europe cannot compete on cost, and only a well trained workforce can compete in the future.

In the light of this, the Commission priorities are: Lifelong learning; learner mobility; improving the equity and efficiency of education and training – everyone should have access to the skills they need for the knowledge society; promoting equity and active citizenship; promoting innovation and creativity including entrepreneurship at all levels of education and training; modernising Europe's Universities – Europe is more attractive than it was 10 years ago thanks to the reform efforts.

Universities and businesses need to communicate to supply the relevant skills for the labour force. The forum has opened dialogue and communication for these two worlds to come together. The interest of the students will prevail – more relevant curricula, more common projects, and mobility with business, to help students and professors to become more enterprising, this can stimulate work in interdisciplinary teams, cooperation with companies can contribute to universities becoming actors in lifelong learning, companies can identify their needs and communicate them to universities, the challenge is to find the right balance. The next step is to decide what topics to work on in the future, and how to disseminate the findings of the forum.

**Mr Ondřej Liška** also referred to the economic crisis, noting the desirability of communication, cooperation and partnerships between education sector and business community for growth, employability, and social cohesion. This cooperation can turn Europe into a respected actor in the global scene. Discussion, like in this forum, at the European level is useful - it brings inspiration, and helps to share good practice. Cooperation between universities and businesses has a number of subsets, the most important of which are: key competences/skills of graduates, student entrepreneurship knowledge transfer, private investment in tertiary education, innovation development, utilisation of young people's knowledge. Novel approaches to problem solving can be essential to the business world. When brought together the worlds can bring benefits, but the question is how to achieve this. There is an important role for graduate skills – and bringing creativity and new views to business problems. This is already a reality in science and technology and includes all subject areas - the arts and humanities should not be neglected. The Czech presidency aims to be a catalyst for university business cooperation and foster this theme's development and implementation.

### **Mrs Ana Patricia Botin**

This video presentation was introduced by Mr. Arel Adar, who described Mrs. Botin's background and activity in the field of banking and educational think-tanks and foundations. In her video message Mrs.

Botin herself explained the provenance of her group Fundación Conocimiento Desarrollo, looking into how to encourage entrepreneurship and innovation, and discovering the depth of the connection between universities, knowledge and society. The foundation wants to help universities in their third mission – the transfer of knowledge, and to strengthen the ties between universities and businesses including SMEs. In the last 7 years the foundation has become recognised for its reports in raising awareness of this key issue in Spain.

The Lisbon strategy is about the challenge Europe faces – Innovation. Higher Education is a key element in the golden triangle. Mrs. Botin concluded with 3 comments regarding the role universities can play:

- They must consider the employability of their graduates, equip them with the skills for public and private sectors, and ensure that the unemployed can improve their skills for work
- Research - Universities are essential to creating, improving and refining, and sharing knowledge
- Employability and innovation require commitment; universities must foster and encourage entrepreneurship.

One way to achieve this is through cooperation with businesses. Universities must set up structures for life long learning. Companies must be proactive in the cooperation process, and one key to achieving this cooperation is mobility. For students themselves, mobility and business cooperation ensure that they develop a more entrepreneurial mindset.

## Round Table: University-Business Cooperation – Challenges and Opportunities

**Mr Jan-Eric Sundgren** described the Volvo group's innovation process as non-linear and involving customers from the start. He said business needs university cooperation to compete, and to do foresight analysis to help enterprises to see into the future. The benefits of university-business cooperation include:

- access to competence - influencing curricula, and stimulating interest in science and maths
- access to new knowledge – through research partnerships
- access to networks – giving diversity of knowledge, disciplines and cultures to drive innovation in an effective way

Innovation is extremely important for the automotive industry facing the current financial challenges. It is also extremely important for universities to absorb business knowledge and reshape universities – there is, for example, a major restructuring underway in Finland which is focusing on research to drive a modern system where universities are involved in research from basic research along the continuum to product development/demonstration phase. The ERT has been addressing for several years how to cope with a declining interest of students in maths and technology. ERT discussions suggest that the decline in interest arises from the poor quality of education and weakened competitiveness, so the organisation has now developed a systematic way of approaching this.

**Professor Tadeusz Luty** explained that the EUA, which brings together more than 800 universities, wants to be one voice on essential European issues. The association has always been keen on supporting cooperation between university and businesses. The economic crisis can present an opportunity for better co-operation. In fact it is a must: the need is to respect and accommodate the values of both communities –higher education and business - to face global challenges. The EUA has produced a charter on Lifelong learning, which is relevant to the introduction of a culture of creativity into universities. It used to be thought that you were born with or without creativity, but creativity and entrepreneurship are now considered to be something which can be acquired. Universities must prepare highly qualified people, but curricula risk being too narrow. Now we have more highly specialised people who are less educated. The knowledge developed in universities should be available for people to learn throughout their lives. Sharing good practice through university-business cooperation is important and EUA is active in this. Furthermore, there needs to be recognition of the social aspect of cooperation between universities and businesses. Often we concentrate too much on science and technology, but the social and human dimensions are also very important. It is part of the objectives of the Commission and the EUA to bring this issue to the table for discussion. The priorities for the next decade can be expressed as:

- reaffirming the essential link between higher education and research
- providing more education to more people

**Philippe de Buck** referred to the economic crisis which has turned the issue on its head in comparison with the first meeting of the University Business Forum. One reaction is to shut down cooperation, but the Business Europe message is that in difficult times the long term view must be taken, and recovery from the crisis will come with a higher level perspective.

Joint efforts between businesses and universities will play a key role. It is crucial to identify the challenges facing universities, and innovation. The three key issues are:

- **Competences** – the main challenge of most businesses is the availability of skilled workers. It is the responsibility of companies, but also of the education system to deliver. Therefore the Commission Communication on “New Skills for New Jobs” is very welcome.
- **Competition for talent** – Europe needs to strive for excellence
- **Technology and development / Innovation.** This is where the brightest graduates are needed to push the research forward, research that contributes to society. The Barcelona goal of 3% GDP to innovation/R&D is still remote. BusinessEurope welcomes the European Year of Creativity and Innovation.

**Professor Anders Flodstrom** described himself as a former director of a high technology SME, and the only Swedish Vice Chancellor to have gone bankrupt. As a member of the board of EIT, he saw the institute as becoming the role model for worldwide universities in a few years, the way that MIT has been in recent years. The initial advantages of EIT are:

- It is pan-European – there could be future institutes for medicine/ humanities
- EIT will build on the knowledge triangle
- It will be built on multidimensional interaction between multiple stakeholders: entrepreneurship, venture capitalists, regional/national governments. All will contribute to and promote EIT

EIT will introduce a new level of interaction between universities and businesses, working through the people who come out of higher education.

The areas to be chosen for the EIT – Knowledge and Innovation Communities –will be problem oriented, the first 3 being:

- Future information and communication society
- Sustainable energy
- Adaptation and mitigation in climate change

The KICs will be formed as consortia with the flexibility of a network and the focus of a geographically located site for a centre of excellence. The first call for proposals starts this year with a proposed budget of €100 million per year to fund collocation centres

**Mr Andrea Benassi** drew attention to the major role of SMEs in the European economy, indicating some of the cooperation aspects that are significant for small companies – which make up 99% of enterprises in Europe. It is only these small companies that are creating employment, but now the crisis is also hitting the SME sector now, not just to mention credit, a problem which hasn't come to light yet, as demand is still positive. Two main points: UEAPME agrees with the outcome of the forum of the last year – University-Business cooperation is a given, we just need to see how it can be put into practice. Up until now the attention has been on larger structured companies, but it is more difficult for SMEs (23 million in Europe) which deserve significant attention (~83% of companies have 0-9 people) Two further comments:

- Contact. It is important to reach these companies to communicate with them. Universities don't teach people to be entrepreneurs, young people need information – before university – that they need to acquire these skills to take up entrepreneurship and greater risk, not just fixed posts. 6 million companies will change. Contact between university and business should involve information and getting the message across
- Innovation. 99% of companies are involved in innovation without research. Research funds are not available, and there is a lack of time/manpower as well as money to do it. Innovation is happening, but it is not developed via research.

**Mr Enrique Cerezo Torres** described the context in which football as a global business interacts with the higher education sector, particularly in respect of research in sports science and preventative and therapeutic medical practice. Football as a business sector – it is a social phenomenon with many people linked into the sector –it engages 200,000 people in Spain, which appears as the fifth country in the global rankings of importance in football terms. In Spain sports is part of the people's culture, and football raises passions. This produces emotional links between people, which have enabled the sport to spread peacefully across the world. Sports overall generates a cooperative spirit.

The football business generates billions of Euros a year. Tangible assets have lost value, and there is a need to create value in society, which lies in the reputation of a company, with intangible assets becoming increasingly important. Ethics, CSR, and transparency are becoming more important in the business world. Universities and sports need to work together – producing sports businesses. As Milton Friedman said, the business of business is business itself – making value for shareholders. Yet, as a social phenomenon sports has a great deal of responsibility. Universities should produce knowledge for businesses and society. Examples of beneficial projects supported by Atletico de Madrid include one on cell therapy which could contribute to sports medicine; a study on sudden death syndrome amongst young athletes; and studies to reduce recovery time from injury. For the future, sports medicine needs to build innovation communities and strategic alliances to help develop its knowledge.

The Plenary session was opened to the floor and a number of issues were highlighted in the debate, including:

- Businesses to be engaged in the recognition and acceptance of qualifications in engineering at the European level - such as the European Accredited Engineer qualification
- .
- The Knowledge Triangle to be labelled 'education, research and business': as innovation is the product of the triangle.

- . The business sector needing a clear communication of the value of participating in education.
- The issue of university autonomy being crucial – state-controlled institutions to have difficulties in opening up towards business
- Accreditation and ranking of universities said to increase competitive pressures in the sector, and competition for research grants.
- Universities need to understand the role of customers, and need to define who the customers are
- Student associations being essential for the effective management of universities: it is important to create the culture of creativity among students.

## Workshop 1a: Modernising governance structures

The workshop was chaired by **Professor Hervé Biauasser**, Director of the Ecole Centrale Paris, President of the Conference of European Schools for Advanced Engineering Education and Research (CESAER)). The objective of the workshop was to update and explore the modernisation of governance structures within universities in the light of cooperation with business. The panel speakers represented Higher Education Institutions, business and intermediary organisations.

**Professor Matti Pursula** (Rector, Helsinki University of Technology) described the Finnish developments in university-business cooperation, noting, for example, the variety of sources of external funding at Helsinki University of technology (e.g. 24.8% from domestic industry), Finland is at the top of Eurostat ranking of innovating companies (Eurostat, Community Innovation Survey (CIS4), 2007). The Finnish Government has started a reform, a merger of universities that will guarantee the autonomy of universities which are operating either as corporations under public law or as foundations under private law. Three Higher Education Institutions (HEIs) are being merged into a new one. Aside from being characterised by a new structure of management (e.g. board nominated by the government (5 members) and the private business (2 members), its funding will be a public-private mix. Certain principles, including academic independence, will be safeguarded in the reforms.

**Professor Ove Poulsen** (Rector, Engineering College of Aarhus) focused his presentation on the historical change European HEIs are facing in terms of governance, and the underestimation of that change by their 'leaders' (too much focused on traditions, real need in science culture, etc.) In order to cope with this challenge, universities must take stock of the real market; they have to go out, to either import or export research and knowledge better and more efficiently. Universities themselves are not strong enough to define the rules of the game: they need society today more than yesterday. Amongst the actions universities themselves can take are included: the spearheading of the necessary institutional changes; adaptation to the market culture without sacrificing the best of academic culture; accepting and clarifying their own roles, while seeking a better understanding of industrial needs and the introduction of transparent governance structures recognizable by other partners.

**Mr Jose Luis Lopez de Silanes** (General Manager, Compañía de Hidrocarburos; President of the Social Board of Rioja University) underlined the changes (deriving from the new legislation adopted 3 years ago) that are being observed in Spanish universities as regards new governance mechanisms. He noted, however, that the election of representatives varies a lot according to the HEIs and that, despite the participation of varied stakeholders in boards (academic staff, students, etc.), the system lacks flexibility when it comes to the election of the rector. Often, elected representatives do not have any real skills in either management or leadership and Spanish universities tend to be much too self-centred. In the meantime, Social Boards are embedded in universities with the aim of fostering the cooperation between universities and the private sector. Their main task is to supervise the universities financially and economically (e.g. they approve the annual budget and the projects to be implemented in the long term). This is positive but not sufficient. Overall, it is crucial to strengthen the social role of the universities, while engaging genuine professionals/managers. Next, to reform current governance models (e.g. examine the American system and see whether and how it could be transferred to Spain). Finally, universities and business must find ways of sharing experience, common problems and their possible solutions.

**Mr Henri de Navacelle** (Union des Industries et Métiers de la Métallurgie, UIMM) spoke about UIMM's strong experience of cooperation with universities – notably as regards placements – and a national initiative (consisting of specific taxes) to finance and support placements. It is crucial to make employers meet the universities and their students and explain them what enterprises are, how diverse they are, and to specify their needs. The speaker noted the importance of counselling/guidance for students, and the need to devote more time to students to help them find answers why they are at university and what their projects/professional expectations are, etc. Amongst the areas for improvement are placements which might better be included earlier in the curriculum. There is also the need to promote knowledge transfer to SMEs. More attention needs to be paid to Lifelong Learning, from which pedagogical innovation will primarily derive. There is a need to improve the management of human resources, career progression (e.g. recruit associate professors having work experience in the private sector) and generally for universities to develop a results-oriented culture.



### Comments/issues raised in the debate

- Governments should really find means to convince academics to completely reconsider the ‘Governance culture’ – without which nothing will change: the issue of common governance structures should not be problematic and solutions to find transposable model(s) should be found.
- Students cannot be considered as ‘either/or’ but fully take part in the university system. However, as other university actors, they must be responsible (e.g. as it is well known that there is a very weak employability at the end of certain fields of studies, students must be responsible for their choices and not complain after having studied for several years in those fields). Students are the partners of university projects. They often provide innovative ideas and should be listened to.
- For academic staff there should be more incentives, more flexible ways to recruit them, and career progression should be discussed and even seen as a fundamental question of governance. Taking into account the evolution from elite to mass education, is it still relevant to have only one way to recruit teachers, to become professor, etc.?

### In conclusion

- Universities have to modify their governance structures in order to enable the organisation and its staff (professors, researchers, graduates, students) to face the challenges of a changing world;
- Leadership is key in order to implement relevant governance models; there is a need for instruments/support to develop leadership
- Particular effort is needed to improve the management of human resources, career progression, incentive systems
- Students are the main asset of a university and have to be treated accordingly (*“il faut avoir une démarche participative”*)

## Workshop 1b Curriculum Development

The workshop was chaired by Professor **Nigel Roome** of the European Academy of Business and Society. He outlined the three areas to focus on in the discussion: what practical experiences are there of Curriculum Development, what are the key obstacles to successful cooperation, and any solutions; from a EC point of view – what type of policies and actions might support Curriculum Development through partnership? Panel speakers represented HEIs, employers and professional bodies.

**Dr Lorna Maria Beretta** of the Catholic University of Milan, Postgraduate School of Business and Society, describing the school's attempt to address university-business (UB) cooperation. The point was not to wait for the university to change, but to start with new ideas that push the entire institution to change.

The school's mission statement is “entrepreneurship and management for sustainable development” – teaching students that social responsibility is not added to the programme, but should be embedded in the activities and goals of any organisation. The business school is divided in 6 divisions, each of which is involved in collaborations, with dialogue between the divisions. The emphasis has been to provide students with an international perspective so we have partnerships with universities all over the world. Dr Beretta described innovative Masters Degrees, including one addressing the differences between generations in SMEs, adding a quote from Peter Drucker - “every global and social issue of our day is a business opportunity in disguise”. Importantly, the School's curriculum includes: direct involvement with entrepreneurs; assessment of real market needs; practical research to understand the framework in which students will perform. The underlying principles include: identifying new business opportunities; introducing social responsibility into all the programmes; assuring a meaningful learning experience, give students the tools to learn how to learn from reality and non-academic situations

**Professor Gunnar Prause**, Vice Rector, University of Wismar described himself as a business school professor in a university of 5000 students.: With its disciplines in technology, business and design, Wismar adheres to the Model University 2020 – a cultural agreement with the German government, which includes a management structure similar to a Public Ltd. Company with supervisory board. One target is to adapt the university's services to the needs of the region, and to develop market oriented degree programmes, and generate 20% of budget independently. The university is not allowed, however, to take tuition fees for “public activity” courses. To generate funds, 3 limited companies have been established to commercialise research results. Through engineering and ship building and collaboration with companies in South America the university has developed a quality management programme from experience of teaching people from non-European academic background. Wismar has also devised dual degree programmes, e.g., a Bachelor in mechanical engineering and crafts. In the future the university aims to offer degrees for retired people, and proposes to introduce programmes for people with children, and for people who didn't originally go to university.

**Jim Birch**, Head of International Recognition at the UK Engineering Council, began by explaining the distinctive role of professional associations - they are not trade associations, and do not represent business or universities. They are not trade unions – though they represent members, but not regarding their conditions of service or remuneration etc. In fact, professional associations exist for the public good. Accreditation of engineering programmes started to ensure that people entering the profession had the knowledge etc., to adequately underpin professional registration. Today accreditation involves industrialists and academics and benchmarks are drawn up through debate between both types of representatives on review teams. In UK review panels talk to students and ask their opinion. Professional accreditation is not meant to be prescriptive and stifle innovation: standards are increasingly outcomes based (through evaluation). The main purpose of the standards is to guide what the profession consider to be core requirements of an engineering graduate. This is global for engineering – all accreditation is still on a national basis, and intends to remain national, but supranational meta frameworks have agreed overarching statements and modes of accreditation review, which national frameworks can fit inside, therefore grant mutual recognition of degrees across borders. Mr Birch gave examples of international cross-recognition. As regards Lifelong Learning, the engineering profession has been committed to this ever since professional institutions started. Business has always said it is keen on LLL, but there is a large part of business that won't pay for it, they have to accept that Continuing Professional Development (CPD) is an operating cost. Universities have to recognise they are an important providers and need to structure themselves accordingly. This approach has to be flexible, with distance, and work-based learning.

**Mr Jean-Patrick Farrugia**, Director of Training at the Assemblée Permanente des Chambres des Métiers (APCM), described how, in his field, public establishments are coming together gradually, to coordinate training in the craft industries. Craft SMEs all face ageing population, financial crisis, most of these companies have 3 employees (owner, wife and employee). The sector is trying to move to a system of structured companies, employing a critical mass of 15 people. Particularly in rural areas small companies play a very important role in the social economy. ACPM provides support, training, and information that people need to run a business. It has developed a qualification on managing businesses, and courses (on and off-the-job) can be tailor-made to individual needs according to the background. There is also a qualification for people already working in the field, enabling them to get a certificate. Mr Farugia said that this training is proving in demand and successful, bearing in mind that the courses and certification were demand-led. Through work on the ground ACPM ensured that the course content met expectations. Connections have also been made with other diplomas/certificates at national level, so students can make links into other disciplines without any difficulty.

#### **Comments/issues raised in the debate**

- In innovation management what is the role of champions of change, gatekeepers – to enable people to undertake change – bridging agents – enable people to introduce novel practices that initiate change?
- Change is difficult. Structures are rigid, knowledge is limited “easy to try and go in a certain direction, but the caravan has to follow”. Getting academics into the discussion on human resources, businesses, accounting etc., is not easy. No change comes without a champion, but often you find you have more than 1 champion with different opinions.
- How to bring the three strands - training, education and research –together, while they are still disparate in many institutions? There are perceptions from outside (e.g., UK engineering profession) which see the three as indivisible.

#### **In conclusion:**

- There is great diversity across Europe, but we can learn from each other’s structures
- We have identified the importance of individuals – champions of change – e.g., people with business experience working in academia
- Importance of new concepts – necessary for innovation - “universities like the experimentation in their laboratory, not in their structures” “some people moving in the right direction is better than nobody moving in any direction”
- Building trust is a critical issue
- The connection that underpinned everything: problems and solutions; education, training and research. Some systems are much better at letting some lecturers do research or education
- There’s a need for content assessment, in delivery and education
- We talk about LLL, but we don’t offer it to people, we do it for ourselves

## Workshop 1c Entrepreneurship

This workshop was chaired by **Professor Paul Hannon**, director of Research and Education at the UK National Council for Graduate Entrepreneurship. Members of the expert panel were: Professor Norbert Kailer of the Johannes Kepler University, Linz; Mr Ivan Tyrsted, Regional Director IDEA South, DK, Mr Juan Bossicard Community Affairs EMEA Coordinator, Microsoft, and Dr Helmut Schönenberger of UnternehmerTUM GmbH. Professor Hannon referred to the previous thematic conference on Entrepreneurship Education which was held in Tenerife concluding with the question forming the objective for this workshop – ‘How can university-business co-operation enhance entrepreneurship?’

**Professor Norbert Kailer** began with the question ‘Can professors develop an entrepreneurial mindset amongst graduates?’ He then answered ‘Yes we can’. He continued by describing the characteristics and numbers involved in his enterprise programme at the Johannes Kepler University in Linz. As well as a major course for entrepreneurs there are interdisciplinary courses with elements of entrepreneurship. Prof Kailer said that 6 % of all students have entrepreneurial experience. He drew attention to some guiding principles: Graduates of the entrepreneurship programme should personally know relevant people from the support infrastructure (banks, incubators, consultants) and entrepreneurs and therefore already have a relevant business- and social network. They also should have developed extensive entrepreneurial competencies and should have practiced them, e.g. in business planning. He described the innovation laboratory and ‘Bizkick’ initiatives, concluding with several lessons learned in the programmes.

**Mr. Ivan Tyrsted** described the work of the International Danish Entrepreneurship Academy (IDEA) network of more than 75 institutions, organisations and companies promoting innovation and entrepreneurship in Denmark. By financially supporting projects, development activities and research, facilitating experience exchanges and developing courses, education and networks, IDEA increases innovation growth and builds bridges between higher education and business. IDEA is financed by state grants as well as donations from both Danfoss and municipalities/counties. Mr. Tyrsted emphasised the importance of trying ideas and failing, but with the principle of ‘failing forward’ – learning and benefiting from mistakes to inform future success. He introduced certain key competences required for entrepreneurs: the ability to identify and exploit (market) opportunities; to generate new ideas, and the capacity to act/manage innovatively. The project ‘Idea House’, now being rolled out over Denmark, offers a space for entrepreneurial experiment, including programmes (with mentoring and support) called ‘pilot’ ‘business pilot’ and ‘co-pilot’ which encourage the proliferation of business ideas.

**Mr Juan Bossicard** began by saying that the most important attribute for an entrepreneur is the right mindset. He introduced the Microsoft approach adopting a ‘Lifecycle Approach to SMEs’, fostering an environment where enterprise and innovation can flourish through the following stages: stimulating entrepreneurial mindsets; turning ideas into businesses; supporting SMEs with tools for competitiveness; enhancing the skills of the SME workforce; and enabling a high-growth competitive ecosystems. He said that technology was vital to entrepreneurship, but that it had to be the right technology at affordable prices. Mr Bossicard then described a number of Microsoft initiatives, including Bizspark – a global programme to accelerate start-ups; the Entrepreneurship Forum, involving 5000 students in 25 European countries; the Latvian Enterprise Forum and the Imagine Cup – the world’s premier student technology competition. There is, in addition, a Student Entrepreneurship Curriculum, piloted in 8 countries and now about to go global.

**Dr Helmut Schönenberger** described the "Unternehmer"- (entrepreneurial) activity of the Technical University of Munich.(TUM) The University promotes itself with the strap line ‘the entrepreneurial university’. It lives in the midst of an ecosystem of major global players, Siemens, BMW etc. The university is one of the foremost in Europe. The institution concentrates on Technology: Engineering, Mathematics, Informatics, Physics, Chemistry. There are 22.000 students enrolled, 4.400 academic staff, 400 professors and the total budget (incl. hospital) amounts to 800 Mio. Euro. It happens that the chair of the supervisory board is Susanne Klatten, one of the major shareholders of BMW. The overarching aim of the university co-operation is to change perception amongst young people and support their capacity to start and grow businesses of the future. Dr. Schonenberger underlined "we know that the university cannot do this alone", therefore the university engages a wide range of stakeholders. The university Centre for InnovationandBusinessCreation was established with the mission to encourage and enable entrepreneurship. - It was founded in 2002. Now it has 40 employees

and is an associated institute of the university. Each year the university supports 20 start-up teams, with the aim of the realisation of business concepts, 40 innovation teams, to pursue the systematic testing of business concepts, and 1000 students, academics, professionals and business promoters working in entrepreneurship education programmes.

#### **Comments/issues raised in the debate**

- While the TUM experience is interesting, it could not be replicated easily say in the University of Salamanca in Spain – similar size but very different circumstances. A different approach would be required.
- There is the issue of trust regarding new ventures: business angels and banks need to foresee a guaranteed return on capital.
- What about social enterprise? - Microsoft takes a very positive view of this.

#### **In conclusion**

- |  |
|--|
| <ul style="list-style-type: none"><li>• Examples, showcases and role models to give inspiration are needed</li><li>• We need to identify successful ways of doing things – models and methods of good practice</li><li>• We must recognise that we are no longer talking of the acquisition of knowledge, but of the application of knowledge</li><li>• Trust is key throughout the entrepreneurial ecosystem and networks</li></ul> |
|--|

## Workshop 2a Continuing Education and Lifelong Learning (LLL)

The objective of this workshop was to examine how to promote and improve cooperation between universities and companies in the provision of training/retraining programmes. The workshop was chaired by **Professor Michel Feutrie**, Professor at the Université des Sciences et Technologies de Lille, and President of EUCEN (European Universities Continuing Education Network). He introduced the panel of speakers: Mr Michael Hörig, Policy Officer, European University Association (EUA); Mr Kari Seppälä, President of the University Continuing Network in Finland (UCEF), University of Turku; Mrs Marie-Frédérique Do Couto, Secrétaire Générale, Chambre de Métiers et de l'Artisanat du Val de Marne; Mr Frank Stefan Becker, Senior Consultant, Siemens AG.

**Mr Michael Hörig** said that Lifelong Learning (LLL) was a response to the economic and social challenges of modern life and to the need for a greater diversity of learning. Lisbon, Bologna and ten years of university reforms has still not yet made LLL a reality. The EUA Charter on Lifelong Learning was a starting point in a new impetus aimed at governments to try to get LLL into the strategies and programmes of universities. Mr Hörig defined LLL as an often confusing amalgam of concepts requiring clarification: retraining and skills updating for those with prior training; reaching out to those who have missed out on initial education; cultural enrichment for ageing populations; continuing education for specific needs: personal fulfilment, tailor-made course for retraining, reaching out to primary students, etc. LLL is concerned with balancing economic productivity and self fulfilment. This means universities must reconsider their role and their approach, taking account of their specific missions and profiles. LLL means changing mindsets – creating a culture and communicating to society & individuals the overall goals of ongoing European reform processes. He concluded his presentation by listing the proposed commitments by HEIs and by governments in the EUA Charter, saying that there was a need to disseminate examples of good practice.

**Mr Kari Seppälä** also referred to the EUA Charter on Lifelong Learning, in this case taking the 10 HEI commitments point by point, and indicating the actions undertaken or underway at the University of Turku in respect of each of the points. For example, regarding the first commitment, "Embedding concepts of widening access and lifelong learning in the institutional strategies", Mr Seppälä noted the relevant policies and strategies, the UT Adult Education Policy 1996 ; New Strategy 2009; New University Law 2009: LLL as University mission; Report 2008: "LLL Strategies of Finnish Universities". On the second commitment, providing education and learning to a diversified student population he noted Continuing Professional Education; In-house training ,Regional Development, Open University ,University Of The Third Age and Children's University. In this way the speaker addressed each of the points, so illustrating the dynamic approach taken by his university to the LLL theme.

**Mrs Marie-Frédérique Do Couto** spoke of her organisation's role in the training of heads of craft businesses with less than fifteen employees. She explained that there are 900,000 such businesses in France, bakers, builders and so forth. Her organisation was now working with HE institutions on the development of professional and accredited qualifications for craft workers. The demographics of the sector mean that some 30% of the business heads will be retiring over the next 10-15 years. In a two-year period of consultation with the business heads themselves, the Chamber launched in autumn 2007 a training course culminating in a Craft Business Certificate. Mrs. Do Couto said that there are now thousands of business directors trained in this way every year, including young graduates from Parisian universities who undertake the Craft Business Certificate as a post-graduate professional qualification. Lifelong Learning is difficult to promote in this small business sector as it requires off-the-job time, which costs turnover. Also, there is a general lack of finance to pay for it. Partly as a response to this, the network of Chambers is planning to develop e-learning systems.

**Dr Frank Stefan Becker** began by asking two questions: first, why is Lifelong Learning necessary and second, why is it difficult to implement? To answer, first, the updating of skills is crucial in the fast moving business economies of today. Formalized learning will no longer be confined to the period before entering the labour market (< 30 years of age). In the future, professional life will last 4 decades (e.g. 27-67) Technical development will not slow down, rather the opposite; continuous organizational changes will be the norm. After 5-10 years, initial degrees are of minor importance. Updating one's qualifications should have a recognized value in the labour market. The number of freshmen will decrease, the number of part-time students will increase. Second, LLL is difficult to implement because we are not prepared for it: Universities are focused on "Monday-Friday 9am-5pm teaching"; employees

often do not consider continuing education as an investment; the state does not encourage continuing education (fees, tax breaks); “Doing a Master’s” is only seen as a career promotion tool for “High Potentials” In general, companies see that continuing education is necessary, but don’t generally have a proper career planning system. Dr Becker then continued by illustrating the actions referring to this theme at Siemens, saying that “best agers” has to become more than a buzzword for politicians. Even complete re-training at the age of 45+ will be quite normal. The necessary investment (time, money) has to be shared between company and employee, requiring a much better career-planning system

#### **Comments/issues raised in the debate**

- More countries should examine the French practice of accrediting and validating prior learning;
- Masters courses are not always best designed for the needs: there are examples of blended learning MAs for mid-career people;
- Who will pay? Probably the student if only in terms of their time, and the employer where there is a clear business gain;
- In terms of providing LLL it may be that universities of applied science are better placed than others in terms of networks and mentality.

#### **In conclusion**

- |  |
|--|
| <ul style="list-style-type: none"><li>• Retraining will become quite normal, in some sectors not adapting, but starting from the beginning</li><li>• We can’t provide LLL alone – it needs partnership, possibly within a regional development context</li><li>• We need to get an economic model and organisational architecture to allow movement between learning and work</li><li>• Only 15% of EU universities include LLL in their strategic objectives – more must include it</li></ul> |
|--|

## Workshop 2b - Knowledge Transfer

The workshop was chaired by **Professor Rafael Paya**, University of Granada with presentations by a panel comprising: Prof. Jan Vbrka – Rector Emeritus, Head of TTO, Brno University; Prof. Jan Cornelius from VUB, Belgium, Mr. José Syne, From ProTon Europe, The European Knowledge Transfer Organisation, Dr. Patrice Talaga – Chemistry outsourcing UCB Pharma, Ms Carmela Di Santo from the European Commission presenting the Marie Curie programme and two panellists from Madrid Atletico on the projects supporting sports health.

Professor Paya introduced the presenters and asked each one at the end of the presentation to sum up on one sentence one core message for the European Commission on this issue of knowledge transfer in university business cooperation.

**Prof Jan Vbrka** introduced the Brno University of Technology which is the second largest university in the Czech Republic. It covers almost all technical disciplines and also does an increasing amount of interdisciplinary work. The research funding for the university comes to around 24 million euro and is around 20% of the budget. It is a research oriented university and has an increasing amount of cooperation with industry. Introducing the Technology Transfer Office, Professor Vbrka highlighted the importance of new models of technology transfer, incorporating long and short term collaboration. Direct collaboration with industry on contracts. Collaborative projects with companies can be funded by public means (ministry of industry, etc.) or EC (7FP etc.). Examples of long term collaboration and strategic partnership with businesses include cooperation with Honeywell, Siemens, SKANSKA. Short solutions include consultation, analysis, measurement etc. The university has looked at TT models from elsewhere (Sweden and Cambridge for example) and although it is not possible to directly copy models, elements have been used that can be adapted to the Brno context. Overall, Prof Jan Vbrka stressed the importance of students working on applied science.

**Professor Jan Cornelius** from the Vrije Universiteit Brussel (VUB) presented on Knowledge Innovation and Technology Transfer. Prof Cornelius is the Director of the Research Group Iris and is currently responsible for knowledge transfer at VUB. VUB has developed different models for different partner types covering four areas: TT towards industry – creation of new economic partners; valorisation of special knowledge; science communication and policy preparation. Prof Cornelius went into more detail on the first two. In particular he highlighted **CROSSTALKS** (<http://crosstalks.vub.ac.be>), the university and industry network of the Vrije Universiteit Brussel. CROSSTALKS aims at creating an open and constructive exchange dynamic by hosting thematic encounters which go beyond the limitations of specific disciplines and which encourage active participation of key players from all levels of society. In concluding, Prof Cornelius's advice was to ensure that TT overcomes faculty boundaries. Universities are traditionally very conservative and need to encourage champions and bridge builders.

**Dr José Syne** introduced ProTon, the European Association of Technology Transfer Offices. It was created in 2003 by the European Commission and is the largest KTO network. It has over 220 KTO members and 10 National Partner Associations (comprising over 500 KTOs), ProTon Europe reaches out to almost 600 universities and public research organisations across Europe. It is self financing and one of the main objectives is to use expertise of the members to highlight issues to the European Commission. It also organises dedicated training sessions to TTO managers. It has already had a direct affect on European Commission work and the Commission Recommendation (2008) 1329 10.4.2008 defends the principle of KT and asks all Member States to develop KT as a strategic priority. He highlighted that benchmarking is very important. Since 2005 ProTon has organised an EU wide survey on TT and he presented some of the results. ProTon has also developed a responsible partnership model.

The presentation by **Dr Patrice Talaga** looked at the view from industry and intersectoral mobility between university and the business sector. UCB is a Biopharma focusing in developing new innovative medicines for the Central Nervous System and immunology. It has acquired a number of Biotechs and has a business model where it works in specific hubs. For example in Belgium the hub is concentrated on small molecules. In the Slough hub, they work on big and small molecules. There is a major problem in the Pharmaceutical sector at the moment in that the innovation gap is getting wider.



Although R&D investment is growing, the number of drugs being approved is decreasing and the time to market is increasing. In conclusion, from industries' perspective, universities need to have more standard operating procedures. Also there is a need to better discuss and define timeframes between university and industry as well as expected innovative outputs. Other suggestions included each dept having an academic liaison officer, more sabbaticals allowed on both sides and new funding models to allow shared risk.

**Mrs Carmela Di Santo** from the European Commission presented the Marie Curie programme, long been one of the most popular and appreciated features of the Community Framework Programmes. Under the Seventh Framework Programme, Marie Curie is part of the People programme. One of the Actions is 'Industry-academia pathways and partnerships' to stimulate intersectoral mobility and increase knowledge sharing through joint research partnerships in longer term co-operation programmes between organisations from academia and industry, in particular SMEs and including traditional manufacturing industries. Mrs Di Santo gave information on what is funded under this action and how it works.

The final presentations of the Knowledge Transfer session were given by **Dr Lopez Farré** Head of the Research Unit of the Cardiovascular Institute at the Hospital Clinico San Carlos of Madrid and **Dr Pedro Guillén**; both working on research being undertaken for Atletico Madrid. The first presentation was research into Sudden Cardiac Death and how to look at ways of preventing this through testing in sports people. Sudden cardiac death is an extremely visible event that occurs more frequently than it should be despite of the expected excellent health of the amateur and professional athletes. In 2008 there was an agreement between Atletico de Madrid and Cardiovascular Research Unit (Hospital Clínico San Carlos) to perform the cardiac genetic analysis in the football players of Atletico de Madrid. The second presentation focused on cell therapy.

#### In conclusion

- Benchmarking to learn about knowledge transfer is very important
- Universities should overrule (conservative) Faculty behaviour and boundaries – mono disciplinary solutions are rare, certainly when relevant problems have to be solved or real world demands to be fulfilled.
- Universities should introduce “knowledge transfer scouts” into concerned departments;
- Students need to experience working in applied not just basic sciences
- Universities and business need to have more aligned ways of working to facilitate knowledge transfer through standard operating procedures and responsible partnering.

## Workshop 2c Mobility

The workshop was chaired by **Mrs Lidia Borrell-Damian**, Senior Programme Manager, European University Association (EUA), with the objective of exploring mobility, including student mobility, but also mobility of researchers and teaching staff, between academia and businesses, and vice versa.

**Mrs Marisol Pastor**, Directora del Gabinete Técnico, Fundacion Universidad-Empresa, described the role of the Spanish University-Business Foundations, a private non-profit entity set up in 1973, acting as a bridging agent between universities and business, governed by a board of trustees composed equally of universities and industry. The foundation has 4 areas of work: education, career development/job market, entrepreneurship and innovation. In 2008 they launched an online platform for universities and businesses to exchange information on areas of mutual interest. >220 HR managers/experts for wide variety of organisations, with special efforts to include SMEs. The main objective – to help universities and industry interact on important issues e.g. new degree design in Bologna process. The intention is for the “Ueconverge” web-2 platform to become the university/business market place for joint ventures. Important results have arisen from internships: 99% of participating businesses think practical professional training is important for students, 96% think students should have this during studies. Most thought this should be mandatory, and they should get credits, and stipends (which they would be willing to pay for). Plus 80% of interns stayed on in their host company. The Foundation has internship programmes for students, and also for graduates, some related to doctoral level. The internship programmes are open to students from Spain and abroad, and assist Spanish students to go to cities other than their own. Internships are done alongside taught programmes, and students get postgraduate degree on completing both.

**Professor Miroslav Vleck**, Vice Rector of the Czech Technical University in Prague, said that he perceived innovation as a part of mobility, and mobility as an engine running innovation. On the recurring question of brain-gain or brain-drain, if it is done properly it is a gain all-round. Mobility need not just exist between sectors and countries, but can be fruitful between all different stakeholders in university/business communities. Professor Vleck referred to Leonardo da Vinci – devoted to vocational training of graduates in an industrial set-up, in which the instruments are well established and available, but he noted that not all industrial partners are aware of them. Researchers are moving to different universities/industry under the aegis of, e.g. Marie Curie fellowships while a low level form of mobility is recruitment, ie the flow of graduates to companies. Universities don't know validation of results as well as businesses – the cultural exchange between the two was successful in getting results from the research centre to the provider – opposite to flow of knowledge/teaching from university to business. There is a new trend of industry experts becoming university professors e.g. Eltador (daughter company of Siemens). UK/Denmark/Germany already have a recognised form of industry professor/chair – this practice should be adopted in other countries  
“Mobile people are engines for innovation – my internal belief” said Professor Vleck.

**Mr Jan J.H van den Biesen**, Vice President Philips Research, Director of Public R&D programmes, explained that Philips have diversified into healthcare and wellbeing, lifestyle, lighting, which involves lots of R&D, need increasingly wide range of disciplines. Excellent research can also be done in industrial labs – number of patents and publications is high. Public research organisations act as a portal for R&T and provide resource for HR and career development. Philips receives students, PhDs and postdoctoral researchers working in their labs on a variety of contracts for patents. The company perceives universities as carriers of tacit knowledge as well as codified knowledge therefore exchanging people is *the* way to foster innovation There is a lot to be gained through mobility between academia/industry, both long and short term, and national/international level. Research is international, innovation is local, education is national, have to reconcile these 3 geographical dimensions. There are part-time Philips professors (mostly in Dutch universities). The speaker gave the example of benefits and drawbacks of the Van der Pol programme. In summary - mobility is very important for innovation as a bridging function, and Philips would like to extend it, working through Marie Curie and other programmes.

**Ms Laura Stratford**, Senior Business Engagement Manager, STEP Enterprise Ltd, described how her organisation arranged the mobility/placement of students into SMEs, in short term assignments during the summer break. Over 22 years there had been over 10.000 students placed through the scheme. Much care was taken to match the students to the business opportunities available. Promoting the scheme is challenging, as the SMEs themselves pay the placement costs; however promotion through

network organisations (business link, chambers of commerce) is effective. Then there is considerable media coverage of prizes for the most entrepreneurial students. The advantages for business include having fresh pair of eyes, time saving – student focuses on one project (where staff would have had as part of several areas), get skilled, motivated temporary member of the workforce. Projects include: marketing campaigns, business plans, research, engineering and so forth. STEP covers the administration/personnel aspects and organisation (payroll etc). At the end they evaluate the programme, with most participants responding positively, saying they would do it again. Students benefit – in having an opportunity to put theory into practice, to enhance the CV – gain industrial experience, get paid, get support and guidance from STEP, gain skills and ability to demonstrate this to future employers. Universities gain visibility and higher employability rates for their students

#### **Comments/issues raised in the debate**

- Programmes in Spain and the UK placing students in SMEs suggest it is difficult to persuade particularly smaller SMEs, which have a bad perception of students. This may be overcome by direct approaches to SMEs giving information about previous internships and the benefits to companies.
- In Madrid the regional government sponsored 60% of the internships, which was an incentive for SMEs who learned early on what the advantages were, and became regulars in the programme - they passed this on by word of mouth to other companies.
- It's not always easy to find internships for all types of students – it's traditionally harder, for example, for humanities. However, a UK Economic and Social Research Council programme to place social science students in SMEs, was piloted and proved hugely successful so has been expanded this year

#### **In conclusion**

- |   |
|---|
| <ul style="list-style-type: none"><li>- We value the human capital knowledge / tacit knowledge</li><li>- We recognise that there are differences between programmes oriented towards hard science/humanities/social sciences</li><li>- We are among the convinced of the value of mobility – we need to come up with suggestions to convince businesses and society about the value of mobility</li></ul> |
|---|

## Final Plenary Session – Conclusions of the Workshops

The final plenary session was chaired by **Mr. Gordon Clark**, Acting Director DG EAC, who introduced the panel of Professor Gillian Nicholls, pro-Vice Chancellor, University of Salford, Mr Peter Cheese, Managing Director responsible for Accenture's Talent and Organisation Performance globally, Ms Ligia Deca, Chair of the European Students' Union (ESU) Executive Committee, Mr. Armistead Sapp, Head of Global Education Practice SAS, and Professor Lars Lynge Nielsen, President of the European Association of Institutions in Higher Education (EURASHE)

Before inviting the panel interventions Mr Clark gave the floor to Mr Guy Haug, to present the summary conclusions of the previous day's workshops. Mr Haug began by stressing certain common conclusions arisen from the workshops:

- The need to access to examples of good practice.
- The need to better understand what is going on. It is important to be clear about these models and principles of success
- The need to recognise the particular value of the champions of change and how to support this.

### Conclusions from the workshops

#### Governance

- Universities have to modify their governance structures in order to enable the organisation and its staff (professors, researchers, graduates, students) to face the challenges of a changing world;
- Leadership is key in order to implement relevant governance models/need for instruments/support to develop leadership
- Particular effort is needed to improve the management of human resources, career progression, incentive systems
- Students are the main asset of a university and have to be treated accordingly

#### Curriculum Development

- Companies and universities have to better understand the value of cooperating in curriculum development
- Joint curriculum development greatly improves chances for companies to find students/graduates that have the knowledge, skills and competences that are needed on the labour market;
- New concepts required to ensure that curricula contribute to the development of innovation – how to make curricula « innovation-supportive »?

#### Entrepreneurship

- Move from knowledge economy to entrepreneurial economy (from knowledge to the application of knowledge)
- Develop entrepreneurial Eco-systems involving all types of stakeholders
- Will create trust and mutual understanding/ Basis for successful partnerships

#### Lifelong Learning

- LLL has to become a strategic objective of universities (only 15% today)
- Technological and other changes will make « complete retraining » of persons normal
- LLL has to be done in partnership – it cannot be done by universities alone
- Updating/upgrading of skills has to be valued/recognised on the labour market

#### Knowledge Transfer

- In order to enhance knowledge transfer, it is necessary to overcome faculty boundaries
- Universities and business have to better understand their respective needs.
- The use of standard industry management procedures in university knowledge transfer mechanisms – a possible approach?

- Change of mindset needed on both sides to facilitate open cooperation : business « in » university.

#### Mobility

- Value of mobility has to be recognised by university and business in its different modalities
- Targeted actions towards SMEs are necessary to convince them of the value of internships.
- Quantity is not sufficient; quality in all types of mobility makes the difference.
- Legal frameworks for researchers and students have to be flexible

**Professor Gillian Nicholls** described the “employer engagement” programme, government funded in England, developing the workforce, creating a platform for achieving higher level skills. Salford University sets out to be innovative working with companies regionally, and nationally. There has been an attempt to understand what businesses want and for them to understand what academia is about. This has led to questions about governance, modes of study, and students – what their place is in businesses and at university. With regard to governance issues within the university: Europe is working towards a qualifications framework with quality dimensions, while England has had its Quality Assurance Agency(QA) for more than 10 years. Having engaged with the QA agency from the beginning there is now a fast track approval process for engaging with business. This embraces two concepts: project approval is at a senior management level; and building curriculum together is essential.

Important issues remaining include:

- The notion of entrepreneurship has been seen as bolt-on activity instead of integrated
- The context of curriculum development and what this means for business partnerships – this should not be limited to modules in business schools
- There is still a differential between education, training and research

**Mr Peter Cheese** said that the challenge for education today is keeping up with business needs, the skills needed are changing rapidly – creating skills for jobs that do not yet exist. The lack of critical skills – science, technology, engineering and maths (STEM) - have been seen in every developed economy – in contrast with developing economies where more people are acquiring STEM skills. From a business perspective there are many challenges. Corporate learning activities are not well focussed, despite lots of money being spent on this. Regarding understanding the skills needs – businesses need to understand their workforce, but most understand their customers better than their own workforce. Especially in difficult financial times businesses have to understand what critical skills are needed. Businesses face talent management challenges: supply of requisite skills, more diversity, more job changes through career, all make it difficult for businesses to understand their workforce. Mr Cheeses then indicated some pertinent characteristics of the emerging global economies, noting the challenges facing Europe, particularly in respect of Lifelong Learning and how it is to be funded. Business cannot stand on the sideline and point the finger at education, it has to collaborate, there are good examples, but not enough. What gets measured gets done – if business is not measuring this stuff they need to measure it better. They need to look at what skills are being developed and identify what is needed

**Prof Lars Lynge Nielson** agreed with previous speakers that the major challenge in the long term will be the availability of skilled workers at the highest level. We need a type of education that combines university learning and includes education in the field of practice, with a symbiotic relationship between Universities and Business. This is well known model in Denmark. You cannot separate training/education, learning/research – it is all connected within education. Addressing the question of how to make change happen – we should not turn to the faculty, because they will be the most conservative in terms of supporting change – but we have to include them in the process otherwise it won’t work. Education is still a national issue in Europe, but the Commission has a role to help countries break through the changes they need. Entrepreneurship – the workshop gave a call to establish a greenhouse within universities where entrepreneurship could flourish. The talent is here, it cannot be created at university level, it starts much earlier in education. Small children learn early on. The education system destroys the attitude of young children to reach out through their schooling. In teacher training faculties in Denmark “please remember a child doesn’t grow faster because you measure him more often”

**Mr Armistead Sapp** described the company for which he works: SAS has a \$2.3bn turnover, with some 22% of revenue re-invested in R&D. It is the leader in business analytics software and services, and the largest independent vendor in the business intelligence market across the world. The company has some 45,000 customer sites and over 11,000 employees worldwide. SAS is itself a spin-off, having been born in a university and initially funded by public sources to engage in technology transfer. Mr Sapp's job is training, and liaison with universities in respect of research. He explained that there is a constant demand for high-level skills in his field: all their sites are looking for highly skilled staff. SA matches universities to local employers and then develops curricula so that those employers can get the skilled employees according to their specific requirements: then these businesses are hiring all the students that come out of the programmes. There are problems in meeting the demand, and the company has trouble, for example, in finding qualified people for the PhD places. In the broader picture, the baby boomers are about to reach retirement age, and it is difficult to replace their skills throughout the world. LLL universities should work with companies for 6 sigma (customer-oriented) measurement. Finally, SAS believes in a mobile workforce, as this will foster innovation.

**Ms Ligia Deca** reviewed the workshop conclusions which had been presented earlier, saying, in respect of governance, that from the student perception there appear to be more bad examples than good. When employers get involved, student involvement tends to decrease. The ESU does not believe in forcing matters from the side of government – to involve businesses – there needs to be true dialogue and let each institution find its own way. Business funding of HEIs, while broadly welcome, must not compromise academic integrity. On curriculum development, this should be done in a joint manner and should not be focused on immediate future. In technical education at present it appears that very few transferable skills are present in the entrepreneurship context and examination methods do not examine outcomes that are really wanted. On Lifelong Learning, institutions are not adapted to focus on LLL. It is going to take a while. It should not only be about further education but also about widening participation and human potential. There are also many in lower social economic backgrounds who do not reach higher education. On mobility, Ms Deca agreed with the assessment that what gets measured gets done. We should be able to insert mobility windows into the curricula, and into the professional career, and we should be looking at the mobile students and staff that we already have, and use their potential, and their open mindedness. It is very important to explore and benefit from diversity.

#### **Comments/issues raised in the debate**

- Flexibility - in HEIs and in businesses – is essential in moving between work and learning. For businesses it's hard to make the investment in staff which may not come back. Not all universities should work with all companies.
- Learning is a process throughout life - most retained knowledge is through experience, making mistakes. Education is about learning how to learn, encouraging curiosity.
- The value to business of the arts and humanities should not be underestimated
- Individual Learning Plans, as seen in some north European systems, can be useful in LLL.
- Training and higher education are not the same thing, though they are on a continuum.

## Closing Session

The closing session on Conclusions and Perspectives for the Future was chaired by **Mrs Odile Quintin**, Director General, DG Education and Culture, who introduced the speakers and concluded the session. Members of the panel were: Mr Lars Leijonborg, Minister for Higher Education and Research, Sweden; Mr Pierre Simon, President, EUROCHAMBRES; Professor Alexander Ulrich Von Gabain, microbiologist, co-founder Intercell AG, member of the EIT governing board; Mr Roberto Maglione, Executive VP HR Finmeccanica Group, President of CEEMET; Professor Frans van Vught, President ESMU, former president of Twente University. Ms Quintin invited the panellists to offer a view to the future.

**Mr Lars Leijonborg** began by saying the basic question is – Why innovation? Why innovative Europe? Because we need innovation to meet the challenges of our time (climate, poverty, security etc) Also, it is simply more fun to live in an innovative society than in a stagnant one. Life where you have reason to believe that tomorrow will be better than today. An anti-innovative society would be much worse. If we want good economy with welfare and so on we have to be at the top of the chain. Yet, if we only do applied research we will soon find ourselves with no research to apply. A university must never be the development department of a private company. A free academia must have funds and resources to ask impolite and uncomfortable questions that challenge others and society. Academic integrity is an indispensable asset. With the Swedish presidency forthcoming the economic crisis has underlined the need for a more competitive Europe. We need to raise our level of ambition. Not having reached Lisbon goals is a disappointment. My vision of ERA should be review of budget priorities: for future R&D subsidies give more added value than agriculture subsidies. Our intention is to give high priority to the knowledge triangle during the Swedish presidency, and we will introduce a set of guidelines for adoption by ministers in November. We need more cooperation, better ways to commercialise scientific breakthroughs in Europe. The governance of ERA will be a key issue for Swedish presidency. ERA–new era for Europe, of knowledge driven growth, and of seized opportunities through globalisation.

**Mr Pierre Simon** suggested that it would be beneficial if the Commission's proposed new European ranking of HE institutes could include criteria that would assess the type and scope of cooperation between businesses and universities. The Shanghai ranking doesn't take account of university-business criterion. On the issue of governance – the situation varies between countries and institutions, but the most important thing is to ask if the student is able to find a job quickly on leaving university. Also, business people need to know how professions and curricula are changing: governance could introduce observatories on education development and training. Universities want to develop partnerships with businesses. We need to be professional about it i.e. we can't talk about relations with business unless there is a genuine department in the university dealing with business relations. If we want to develop financing, research exchanges, this involves investment by universities.

It is important that former students are motivated, this is a good way of bringing business and universities together at all levels. Chambers of commerce and other intermediary bodies bring together businesses of all shapes and sizes and all sectors, and they can provide added value by bringing together divergent points of view. The commission should help us to continue to develop entrepreneurship, e.g. introducing Erasmus for entrepreneurs.

**Professor Alexander Ulrich Von Gabain** offered a vision of the combination of education, science and research using the example of research capitalisation in the clinical research/pharma domain. Pharma development is very expensive, and worldwide investment is producing fewer and fewer new products in the face of the increasing demands of an ageing population. Most phase 1 and 2 trials are conducted by SMEs so biotech industry is major part of the chain. Good research from academia is important – the speaker gave the example of the vaccine company he had himself set up. But entrepreneurship also requires money, venture capital for investment and recruitment in the company. If it is well done jobs are created, connecting research with businesses. The largest market values ranking are coming from the US –Europe is just establishing itself as a continental player in global terms. How and where to gain support? From 2004 Intercell AG got more support from US grant agencies than from Europe. The message is that Europe should support good research despite of where it is, as the hundreds of jobs which have been created by Intercell are in the US! Also required are knowledge competences – to recognise own weaknesses, and competencies and those of others. Europe has a sound basis – a high level of HE education, well reputed institutions, and fantastic scientific

output. What is needed now is to support entrepreneurship in high schools, and there is a need to support biotech in early stages up to stage 1 and 2 trials.

**Mr Roberto Maglione** emphasised that communication between education and industry is essential, adding that in all member states his company Finmeccanica has difficulty recruiting qualified scientists/engineers. The company employs over 3000 engineers, with a network of partner universities all of which are in the process of incorporating learning outcomes, so at the end of the courses 90% of students are hired in Finmeccanica companies. The aim is to hire the best people in the best place. The pace of job cuts with the current crisis does not mean future employers will be free from the problem of lack of skills. Companies will move to countries where it is easier to find qualified staff. Business – university cooperation can help solve this problem by linking the labour market and education system. There is no contradiction between quality of HE and its relevance to the labour market: HE and industry need continuous two-way communication to have effective cooperation. This applies to all education from primary school upwards. It would be desirable for curricula to be regularly updated according to the skills need of the labour market, with programmes allowing for LLL. Educational institutions should incorporate mixed faculties which include industry. Involving all stakeholders is necessary to achieve innovation in education, and updating education to provide the skills needed tomorrow.

**Professor Frans Van Vught** viewed the future prospect of further globalisation as inevitable with an increasing geo-regionalisation. Regional trade volumes have increased, and this will continue. The EU is by far the largest trade volume in the world, which is both a challenge and an opportunity. The percentage of internal trade is very high in the EU – this is achieved by working together. The Literature on globalisation says we are now in the third phase since the 1980s, which has seen enormous rise in world trade. The GDP of China has increased 7 times in the last 15 years, at the same time as the integration of the former eastern bloc and the rise of EU. Then there is the deepening of globalisation – segmentation of business resources - outsourcing/off-shoring. Nation states try to use their competitive advantages especially the OECD countries, and this can include human capital. Europe can't compete on cost. However, competing in other things comes with adaptation costs including the need to upgrade qualifications and skills – a cost of globalisation. People are not always happy with this – especially the ones who lose their jobs. Increasing focus on innovation is our only option to compete in the world. In Europe we are trying to do this through: technology platforms, joint initiatives, major financial mechanisms to encourage innovation, European research council, and institute of technology. In future probably joint programmes of European research funding with national research funding. We are on the right track, but need to do more.

#### **Comments/issues raised in the debate**

- There are two different cultures here. If you express yourself from business side (to solve their recruiting problems) you will get strong resistance from academia (old tradition, and strong deep role in society).
- We must encourage universities to learn from the US (e.g. Harvard) giving CEOs professorships. The dilemma in Europe is that good education is not itself sufficient to move education into businesses and vice versa.
- While promoting mobility of students within Europe, we should be promoting mobility of European students outside of Europe, and external students into Europe. Also we need to have mobility within Europe of entrepreneurial people, and we need perhaps a Marie Curie type programme for educators.
- The British government is creating 4 education platforms: STEM, innovation, nuclear, advanced manufacturing -as a basis for universities and government to deal with this issue. How do we make sure we don't keep reinventing wheels and instead learn from good practice across Europe?
- For universities and businesses it is important to know what each other are doing. We can't have people in education all their lives, they need to spend some time in industry and be productive. Regions should offer courses according to their needs. A "stakeholder" university can work to match the need with the planning.



In bringing the event to a close, **Mrs Odile Quintin** thanked speakers and participants, and offered some closing observations on the proceedings:

- Cooperation between universities and businesses is a must. The Commission can't determine this but they can support. Question is not why but how?
- Cooperation is key to the success of the knowledge triangle
- Cooperation is not something that should only be done in good times, but should be prioritised in hard times
- Many speakers demonstrated the added value of cooperation. Learning from best practice benefits everyone.
- The worlds of universities and business don't have the same objectives but they can share and learn from each other
- We can bring education closer to what society needs through public investment. Closer links between university and business applies to all disciplines
- University-enterprise collaboration is a strategy for institutions, but few have done this at institutional level

#### **Proposed actions**

- We recognise the need for a University/Business platform – within the European mission of coordination
- We should continue to explore the things we are addressing (creativity and innovation), and the specific role of SMEs, and specific sectors – a more sectoral approach could deepen the cooperation
- We should improve accreditation mechanisms, to assess the creativeness/entrepreneurship at universities
- We should extend this platform to schools, vocational training etc.
- We should set up a network of existing regional and national structures that focus on UB cooperation

#### **Next steps**

- Disseminate examples of good practice
- Establish a virtual platform for discussion/interchange
- Ranking universities initiative – expect first results by 2010
- Mobility issues were strongly highlighted – we will have a Green Paper on mobility of young people summer 2009
- European year of innovation and creativity – will continue to discuss issues highlighted today
- Erasmus 2 is a good example of further cooperation (extended to PhDs), and agreements with countries outside of Europe
- Commission Communication on U-B Partnership to be adopted in spring 2009

----- end of document -----