

**UNIVERSITIES, BUSINESSES & CO.
TOGETHER WE CAN**

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PROCEEDING REPORT

UNIVERSITIES, BUSINESSES & Co: TOGETHER WE CAN.

**Strategic Inter-sectoral Partnerships for Economic and Social
Change and Growth**

Rome, 2-3 October 2014

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- Michele PELLIZZARI, Professor, Geneva School of Economics and Management, University of Geneva

We would like to acknowledge the important contributions of all **our conference participants** and in particular those who shared their personal insights.

The dedicated website for the conference has been updated to include speakers' presentations and is available to view at:

<http://www.ubcforum-italy.com/>

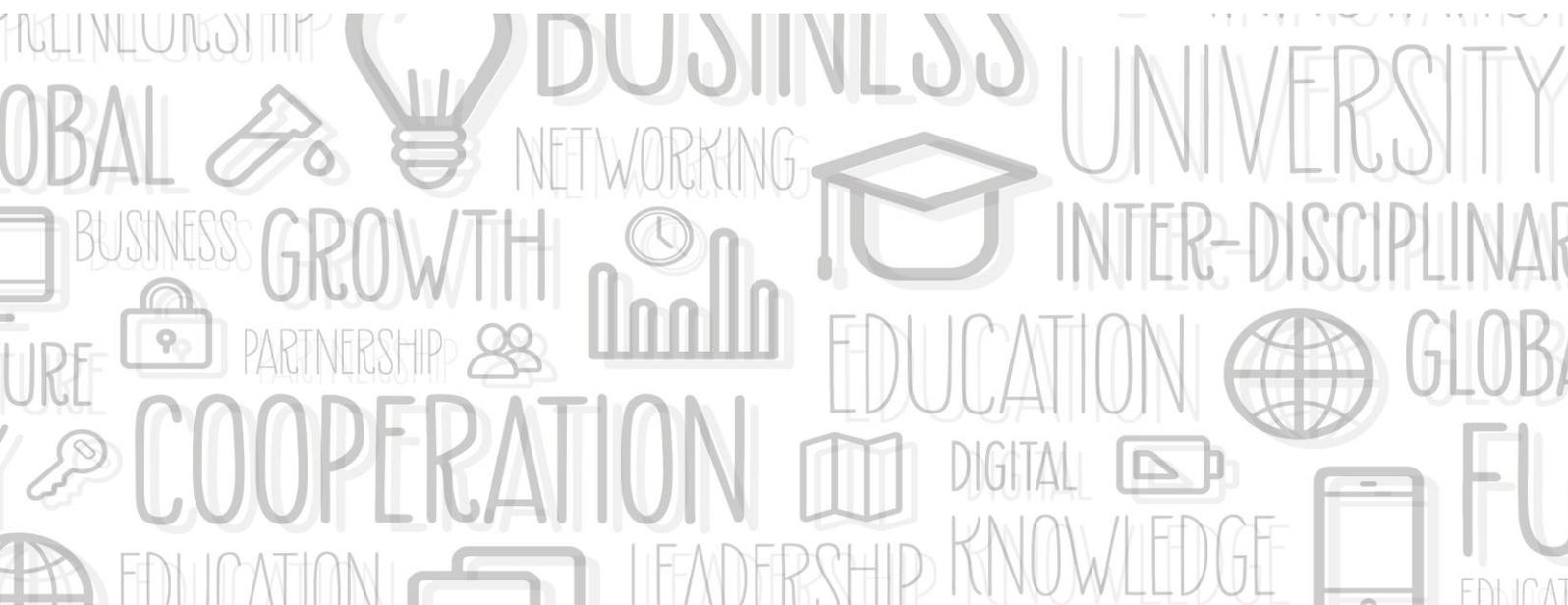


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List of abbreviations

EAC	Directorate General for Education and Culture
EIT	European Institute of Innovation and Technology
HEI	Higher Education Institution
IPR	Intellectual Property Rights
KICs	Knowledge and Innovation Communities
MOOCs	Massive Open Online Courses
CRUI	The Conference of Italian University Rectors
IPR	Intellectual Property Rights
STEM	Science, technology, engineering and mathematics
RIS3	Regional Research and Innovation Strategies for Smart Specialisation
LA	Learning Analytics
OER	Open Education Resources
CoR	The EU Committee of the Regions

Introduction

The first University-Business Forum was organised in 2008 in order to advance and facilitate interactions between the academic and the business world; it is held every two years in Brussels. Thematic University-Business Forums take place regularly in the EU Member States and aim at exploring issues, which are high both on national and European political agendas. Forums provide face-to-face opportunities for discussion, networking, mutual learning and the presentation of inspirational examples for cooperation between business and higher education.

The thematic Forum in Rome provided the opportunity to discuss the need for closer and diversified cooperation and exchange between academia and the business worlds. Moreover, it explored how universities and businesses together can stimulate entrepreneurship and help the creation of sustainable regional ecosystems that foster innovation and growth. It also addressed how can universities open up education to contribute to raising educational levels in the population and improve lifelong learning in companies.

Crossing disciplinary and sectorial boundaries has been proven to promote change and development. The involvement of external stakeholders in teaching and research as well as in the leadership and organisation of universities is known to be advantageous. It is beneficial for higher education institutions, industries and enterprises, students, local and national economies and society alike.

The prosperity of regional economies increasingly depends on the development of knowledge clusters, where a number of actors from different sectors and disciplines are connected together and continuously interact to advance knowledge and innovation. In each of these ecosystems, universities play a substantial role in creating new knowledge and disseminating it to other stakeholders and to society. They contribute to the sustainability of innovation particularly through their graduates as well as the flow of new knowledge generated by university-based research into society through public channels.

The Forum featured a mix of keynote speeches, panel discussions and presentations of inspirational examples, around the following topics:

- *Rethinking and opening up education:* New and innovative approaches for delivering education more suitable to prepare graduates for the job market and to continuing education, upgrading and requalification of employees.
- *Business creation and employability:* Quality education and entrepreneurial skills boost growth and competitiveness. Which transversal skills can be taught in cooperation with enterprises to strength employability, creativity and new professional paths.
- *Strategic alliances and the creation of ecosystems:* The role of the public sector, of enterprises and universities in the implementation of local smart specialization strategies for a greater impact on regional development.

Emerging themes

In the one and a half days of the Forum, several perspectives were covered and many different views on challenges and opportunities were heard. However, four themes emerged as particularly important and challenging in many interventions throughout the Forum:

From talk to action

There was a broad consensus on the urgency of the current situation. Whether universities and businesses should collaborate to create growth and sustainability was not under discussion. All speakers and the audience agreed, that there is a sufficient body of real-life cases and research showcasing the benefits of this collaboration. Stakeholders can enjoy access to different practices and diverse experiences that can be adopted and used as reference models. Finally, and most importantly, social and economic challenges in Europe, and not least in Italy, are of a severity and importance that calls for abandoning reservations and starting experimentation, accepting the risk of failure.

Universities are important players in regional or local ecosystems

The Forum heard testimonies from very different regions in Europe highlighting the very active and crucial role universities play in smart and sustainable regional specialisation, if they allow companies to enter their campuses and influence their curricula.

Universities must be seen – and see themselves – as part of a lifelong learning system

Several times during the Forum, speakers underlined that emerging skill gaps caused by technological change which presents companies with a need to update the skills of their staff. Universities should be more attentive to this need and ready to offer courses for employees in companies. Such courses need not be part of an academic qualification. In order to take on this role, universities should also increase their level of awareness of what is offered by other education and training providers in their region.

The current systems for ranking of universities are counterproductive to a RIS3-agenda

Incentives for universities to take an active role in innovation ecosystems should be made available. The current incentive structures, which are research based and rank universities and staff based on the volumes of their publications are counterproductive. The contributors called for political action to change these incentive structures in a way that universities are instead rewarded for employability of graduates and a positive contribution to regional and national development.

Day One - 2 October 2014

Welcome address

- **Prof. Stefania Giannini**, Minister of Education, University and Research

Welcome and introduction

- **Mr. Lucio Battistotti**, Head of the EU representation in Rome in replacement of **Mr. Xavier Prats Monné**, Director General, DG Education and Culture, European Commission
- **Prof. Stefano Paleari**, President of the Conference of Italian University Rectors
- **Thomas Osburg**, Director Strategic Innovation, INTEL

Welcome address

The Forum was officially opened with the welcoming address of **Professor Stefania Giannini**, the Italian Minister of Education, University and Research.

The Minister expressed her great pleasure to host a Forum on university and business cooperation in Italy for the first time. The topics of the Forum being of central importance for Italian development as well as for the European agenda. Education has always been crucial in the history of European integration, as Jean Monnet used to say: *'If I were to start a process of integration from scratch, I would start with education.'*



Universities are facing a make-it-or-break-it phase, as they must tackle decreasing public funding, a

declining number of applications, and increasingly different expectations regarding their role. Mass education has led to important changes in the role and mission of universities in Europe.

The Minister claimed that universities starting today will need to combine their mission to educate top-class scientific and academic talent with an active role in ensuring that people in Europe are better educated and skilled. This change requires a new format for universities and research meaning that they must enter into true connections with the workplaces, in particular within the manufacturing industry.

To this end, Italy has proposed the following initiatives during the Italian Presidency:

- *Development of guidelines for the introduction of new teaching methodologies in higher education, including MOOCs, but also with focus on integrating relations with industry into educational programmes, in particular by introducing industrial PhDs.*
 - *Measures aimed at changing the attitude of students and professors towards entrepreneurship.*
- The current ranking systems reward professors and universities for publication volume. The result is that many professors do not invest sufficient time

in collaboration with the business community. New incentive structures should be developed, taking into account indicators of university-business collaboration, such as the number of internships or the number of graduates starting new enterprises.

- *Creation of innovative ecosystems to integrate public investment with private investments.* Relevance of public investment and better coordination of research systems should be increased.

If these structural conditions will be put in place with the new Commission, we will be able to revitalise the Europe 2020 strategy and lay the groundwork for improved research, entrepreneurship and innovation.

Opening speeches

Mr Lucio Battistotti, Head of the EU representation in Rome, in replacement of **Mr. Xavier Prats Monné**, Director General of DG Education and Culture, welcomed speakers and participants and thanked the Rectors of Italian Universities' Conference for having accepted to jointly organise the Forum which has been included in the official agenda of the Italian Presidency of the Council of the European Union.

The European Commission has recognised the urgent need to reform education and training systems in Italy and across all European countries as a means to enable Europe to face and overcome the social and economic challenges which affect economic growth and competitiveness in the global world. The overall priority of the Italian Presidency (July / December 2014) has been the fight of youth unemployment, with the aim of improving European social and economic inclusiveness and competitiveness from the angle of youth employability, lifelong learning, competencies and skills. Unemployment, youth unemployment, under-employment, skills mismatch, lack of a skilled workforce are only some of the problems which highlight the weaknesses of the current education

and training systems in preparing graduates for the job market. At the same time, education and training systems are confronted with challenges such as the reduction of public funding, the global competition with new education providers and the need to design and deliver teaching addressing the changing needs of the students.

Consulting or involving employers, employers' organisations and business representatives in the development of higher education study programmes and curricula is crucial to understand the needs and requirements of industry and labour market and to increase the employability of graduates. Employers should be invited to participate in teaching as well as decision-making or consultative bodies at national, regional, sectoral or institutional levels.

However, improving the skills capacities of European graduates through a closer cooperation between universities and businesses is not sufficient. Europe also needs to create new businesses and jobs to give hope for a better future life prospective for the younger generations. The younger generation needs to be encouraged to be more entrepreneurial and enterprising; they are to be provided with entrepreneurial mindset and skills and be motivated to engage in entrepreneurial activities as entrepreneurs and intrapreneurs and become drivers of innovation and growth.

In 2012, almost 32% of the young people between 20 to 24 of age in Italy were classified as NEET (not in education, employment or training). Furthermore, drop-out rates (55% graduated after 9 years in 2012) and the number of new enrolments are respectively increasing and decreasing. There is a clear need to give hope and motivation to the younger generation with modern education and training systems which can provide high quality teaching and learning, foster entrepreneurship and deliver a university diploma with a value for employability.

An innovation climate should be established to support broad dialogue and coordination between individuals, universities and business, public and private institutions in order to create the best conditions possible to ensure economic and social growth in Italy as well as in all European countries and regions.

The EU Agenda for Modernising Higher Education in 2011 supported reforms by Member States and higher education institutions; investments in education, training, research, and innovation – are the main objectives of the Europe 2020 strategy to ensure prosperity in the long run and to stay competitive in our fast-changing world.

Europe must invest in people - their skills, their ability to adapt to change and to innovate, which, in particular, is key for growth, competitiveness and social well-being for Europe in the 21st century.

Good quality higher education in particular has the capacity to stimulate flexible, creative thinking and complex problem-solving - the skills needed on the future labour market and to foster innovation in a global competition. We must push ahead and innovate, embrace positive change and make difficult decisions to produce a competitive and dynamic workforce at a European level.

At the same time, higher education should contribute to addressing regional goals such as economic recovery, social inclusion, ecological reorientation, industry transformation and demographic challenges. Universities cannot do this all in isolation. They have to reinforce their cooperation and develop strategic alliances not only with other higher education institutions, but also with other sectors of education and the labour market i.e. the future employers of their graduates. The partnership approach is a key success factor and higher education institutions need to be part of a concerted effort together with other stakeholders to have a

greater impact on the local and national economies and societies.

To this end, different forms of partnerships have been promoted and incentivised at EU level. The European Commission is working closely with the Member States to support new forms of cross-border, cross-discipline and cross-sector cooperation that will help modernise and internationalise higher education institutions in Europe. In 2014, the European Commission launched a number of new instruments – in particular Horizon 2020 and Erasmus+ programmes – which will further promote these partnerships.

In conclusion, strategic co-operation is recognised to be fundamental in delivering greater interaction, engagement, entrepreneurship and innovation and getting the greatest impact so as to stay competitive in the global race for talent.

Professor Stefano Paleari, President of the Conference of Italian University Rectors (CRUI), shared his thoughts on the current financial situation. He observed that three factors in isolation or combination drive economic growth:

- An increase in population;
- A young population; and
- Innovation.

The European population is stagnating as well as ageing, and hence, we have to rely on innovation for growth. Innovation is not limited to technical or scientific inventions only, social innovation and adaptation of work practices are also necessary for increasing productivity. In 2013, 40% of the funding of Italian universities was allocated on a competitive basis in Italy, the highest percentage in Europe. For becoming more competitive, industrial PhDs should be increased. To this end, CRUI has set up an *Observatory on University and Business dialogue* in Italy with the aim of making cooperation between companies and universities more visible in Italy.

Professor Paleari addressed the audience by stating: *'We have a lot of events, we speak a lot, we are professors! But now we need to put into practice what we declare, to change radically.'* In this respect, he had strong hopes that the new European Parliament would support this change. *'Our generation,* he said, *is 'the Erasmus generation'.* Nevertheless, we are facing a diverging Europe where some countries are more able than others to take advantage of the new programmes. To change this he called for convergence and for the people of Europe to be proud of being European.

Mr Thomas Osburg, Director Strategic Innovation, INTEL, opened his speech by observing that Europe is currently facing many challenges. The biggest and most pressing of these is the nearly one million young unemployed people, while at the same time there are two million job openings that are not being filled, of which the majority are jobs related to IT. The bottom line is that Europe must embrace a radical reform to match education with job requirements. This is not only a task for European governments. He went on to explore the role of universities-businesses cooperation, and what such cooperation can bring to society. He recalled the children's' game of connecting the dots, where a picture emerges when a line is drawn between numbers. Looking at the European situation, we also need to see the big picture, but it is not as easy as for the children's game, and there are no numbers to guide us. When we discuss university-business collaboration, introducing new management systems, having more students in businesses, etc., we fail to see the full picture. These current discussions reflect the 'how' rather than the 'why', and tend to see university-business collaboration as an end in itself. Instead, we should focus more on what are our aims, our shared values, and common vision - what do we want to achieve for society? Innovation is a key topic. Open innovation appears to be simple, i.e. you invent in collaboration with others - but in real life, externalising internal knowledge is challenging.

Open research needs collaborative agreements, accepting that everything invented under such circumstances is available for free. For example, Intel founded 'Intel Labs Europe' which carries out research in open, IPR-free research environments. However, technological inventions do not move society forward – this happens only when you create something with the inventions – called innovations.

Universities face a number of barriers with respect to collaboration. One important barrier is the incentive structure. Regardless of good intentions and declarations, universities continue to do for what they are rewarded. University ranking systems continue to reward academic merits, instead of the results that are really needed in societies.

Another barrier is concerned with technology adaption. While it is obvious that technologies today cover all areas of life, universities are insufficiently equipped for integrating digital approaches in the syllabus i.e. the topic of big data analysis is rarely found in marketing courses. Coding is also extremely important, because homes and products are increasingly becoming 'smart' (equipped with sensors and able to communicate with each other), therefore a growing number of people need to know how to code. So far, coding has only been integrated into school curricula in the UK and Finland.

The skills of the ageing workforce call for concerted action, where universities can play a decisive role. There is a large segment of technicians above the age of 40 whose competences are out of date.

Overall, it is easy to point out the shared societal value that can be created by closer collaboration between universities and businesses. However, we also need to recognise that each party needs to overcome a culturally conditioned fear of failure. Europeans are generally afraid of failing, contrary to the US, where failure means an opportunity to try something new.

Finally, Mr Osburg reminded the audience, that solutions can be cheap or fast or good; but only two of the three at the same time, i.e. cheap and good (but slow), cheap and fast (but not so good), etc. For

this, universities and businesses should decide which of the three should define their cooperation, and Mr Osburg recommended to always opt for 'good'.



162 participants, 28 speakers took part to the thematic University-Business forum in Rome.



Round table: *How can national and European policies influence universities to recognise their role as economic growth drivers and support entrepreneurship education in any discipline to provide students, researchers, staff and teaching staff with the knowledge, skills and motivation to engage in entrepreneurial activities as entrepreneurs and intrapreneurs.*

Panelists:

Prof. Ellen Hazelkorn, Policy Advisor to the Higher Education Authority (Ireland); Director, Higher Education Policy Research Unit

Ivanhoe Lo Bello, Vice President for Education, Confindustria

Prof. Maria Helena Nazaré, President, European University Association

Erin Nordal, Vice-Chair, European Students Union

Moderator: Prof. Michele Pellizzari, Geneva School of Economics and Management

Ms Ellen Hazelkorn, Policy Advisor to the Higher Education Authority (Ireland) and Director, Higher Education Policy Research Unit (HEPRU) started by posing the question ‘What is public higher education for?’ She suggested the following three answers:

- Higher education is part of the overall ecosystem.
- Higher education is a public good.
- What higher education does is important.

Higher education plays a key role in the formation of nations. However, current global debates outline a new context for the role of universities as players in global economic competitiveness and economic recovery.

On the one hand, there is a general recognition of the importance of knowledge for social/economic development. On the other hand, widening participation leads to a broader and more diverse student population, and more complex and differentiated needs and demands from the labour market. These developments put pressure on the

demand for public accountability and transparency, including global rankings.

Generally speaking, attention is shifting from asking what is higher education good at, to asking what is higher education good for, i.e. what is the most relevant role for universities in the ecosystem, and how can their potential best be harnessed to underpin Europe’s future.

She then considered how to make the system ‘World Class’. Quoting Michael Porter, she observed that sustainable prosperity is based on knowledge and innovation-intensive regions. Therefore, universities need to leverage the benefits of diverse and life-long approaches to teaching and learning, discovery, engagement, and research and innovation. In addition they have to engage increasingly in collaboration and co-production of knowledge with their stakeholders/users. At this stage, universities are not the only institutions providing higher education qualifications – there is an increasingly diverse range of providers of qualifications at EQF levels 5-8 that need to collaborate and consider horizontal differentiation according to their distinctive missions or fields of specialisation.

Concerning higher education as a public good, she observed that continued public support for higher education institutions depends on their capability to educate and train citizens in general and share their knowledge in accordance with publicly articulated purposes. This gives yet another important clue to the roles and responsibilities of higher education institutions. They must rethink their role and responsibilities and engage in learning beyond the campus walls, discover what is useful beyond the academic community and provide direct benefits to the public. This is the role of the 'Civic University', which engages in mutually beneficial relationships with the community, region or the wider world.

Higher education institutions can support these objectives in multiple ways:

- As important players in developing and enhancing human capital at undergraduate, master's, doctoral, mid-career/executive and LLL levels;
- Creating/disseminating new knowledge, and contributing to 'world science' and public understanding;
- Increasing the capacity for problem-solving including contract research, consulting, technology licensing, providing incubators, specialised equipment or instruments, and fostering structural community improvement; and
- Providing public space and fora that bring enterprise/business, civil society, public organisations and academics together.

Higher education not only develops human capital; it also enhances the ability of individuals to make choices, have control over their lives and contribute to society. Therefore, an assessment of higher education institutions should consider how the institutions organise curriculum and other learning opportunities to get students to participate in activities linked to student learning. Ms Hazelkorn stressed the particular importance of learning

environments that involve practical knowledge, e.g. through group assignments, participation in research projects, internships, work placements, project/problem-based learning and oral presentations. Such environments foster creativity, a key skill that differentiates innovators from non-innovators.

Finally, higher education institutions should focus their attention on two fields of action:

- *Initiatives that position higher education within the overall post-secondary landscape:* it is no longer possible to be comprehensively excellent, institutions should go for 'smart specialisation' at the institutional level;
- *Higher education institutions should seek to open up to the region* and include all stakeholders in the research and knowledge creation process.

Higher education institutions should focus on *enhancing the quality of the total student experience*. This can be achieved through different institutional models, types of programmes and modes of teaching which respond to the diverse students/learners from across the learning lifecycle. This is based on the overall observation that learning which enhances student engagement will also foster innovation.

Mr Ivanhoe Lo Bello, Vice President for Education, Confindustria (the Italian confederation of industry), addressed the Italian situation with respect to higher education and entrepreneurship from a comparative perspective.

CONFINDUSTRIA is the main association representing manufacturing and service companies in Italy, with a voluntary membership of more than 150,000 companies of all sizes, employing a total of 5,445,111 people. The association's activities are aimed at guaranteeing the central importance of companies, the drivers of Italy's economic, social and civil development. By representing companies and their values at institutions of all levels,

Confindustria contributes to social well-being and progress, and from this standpoint guarantees increasingly diversified, efficient and modern services. Confindustria's added value stems from its network: headquarters in Rome, 254 local and trade associations and since 1958 a delegation in Brussels, which has seen its strategic importance grow over the years and it is now a benchmark for the entire Italian economic system at the European Union.

For further information:

[/www.industria.it/wps/portal/EN/siteEN](http://www.industria.it/wps/portal/EN/siteEN)

Education is a global issue, which is becoming even more crucial in a time of economic change. Showing figures on graduates in different parts of the world, he emphasised that Italy produces few graduates compared to its population size. In addition, the graduates tend to be within fields that do not immediately address occupations in the labour market. Furthermore, the number of graduates with higher vocational education is low. Only 3% of vocational graduates in Italy have a qualification at EQF Level 6 compared to 6% in Sweden; and only 1% of vocational graduates at level 5 have an apprenticeship-type education, compared to 29% in Germany or 35% in Switzerland.

In summary, Mr Lo Bello contended, there is a lack of technical/professional practices in higher education in general and universities in particular. In addition, Italy has a large share of NEETs. Concerning the impact of research, the amount of research published by Italian universities may seem extensive, but again, less than it could be expected based on the size of the population.

Looking at the business side, businesses will need a higher skilled workforce in the future, but there will also be a growth in the demand for medium qualifications. Looking across Europe, 16 million highly qualified persons will enter the workforce until 2020. However, looking at their skills, these persons

may not have the skills that will be required. The digitalisation of the economy calls for new skills. In Italy in particular, there is an increasing demand for skills for the manufacturing industries. Such skills include technical skills within IT, in addition, there is a growing demand for communication skills, problem-solving skills, skills related to teamwork, and more flexible attitudes. In this context, Italian higher education institutions face a number of challenges, including the fact that they only recognise formal competences; and they have limited internal flexibility. The Italian system is strictly based on academic disciplines that do not interact, and it is difficult for students to move between faculties to gain a multidisciplinary perspective.

How can universities change? Today, knowledge production is no longer in the exclusive domain of universities. However, the modern 'multiversity' is not a reality in Italy as yet. Stanford University in the US is an example of what can be achieved if universities open up to the community. Since 1998, Stanford University has generated five million new jobs. Consequently, universities need to adopt and adapt to new forms of teaching and learning driven by technological development. At the same time, they should be aware of the opportunities provided by new social interactions based on technology.

Following these considerations, Confindustria has developed the following recommendations for higher education institutions:

- *25% of courses should be taught in English;*
- *More attention should be paid to qualifications at bachelor level (3 year courses);*
- *Efforts to get more students into industrial PhDs should be intensified (Confindustria is currently engaged in a project with CRUI called 'PhDs ITalents');*
- *Experimentation with new forms of teaching and Learning should be adopted.*

Professor Maria Helena Nazaré, President of the European University Association (EUA) pointed out that European universities are challenged with growing expectations from businesses as well as governments, and universities are key players in the knowledge ecosystem. In order to live up to the requirements of such a role, universities must ensure academic integrity and make sure that the data and research they produce are sound.

STEM skills (science, technology engineering and mathematics related skills) are highly requested and very important for societal challenges. The lack of STEM skills is a problem, yet not the most relevant. To educate and train students to integrate different types of knowledge is crucial. Therefore, the challenges relate to changing the behaviour of universities to enable them to 'link hands' and integrate knowledge. In all collaboration, the basic Ms Nazaré pointed out that a clear strategy is different from regulation. Strategy creates commitment among the stakeholders in a different manner than legislation. As she jokingly observed, universities as well as businesses are experts in evading regulation.

Finally, she recounted two major events held in 2012 and 2013 by the EUA in partnership with the Joint Research Centre (JRC) bringing together for the first time at European level leaders of European universities, regional agencies and governments and the European Commission to identify key issues to support universities in implementing RIS3 (National/Regional Research and Innovation Strategies for Smart Specialisation) for innovation, growth and jobs.

Ms Erin Nordal, Vice-Chair of the European Students Union (ESU) focused on the diversity of higher education systems, using an analogy: Just as we need other cars than Ferraris, she said, we need different types of higher education institutions

word is *trust*, and it must be acknowledged by *all parties that collaboration needs time and patience*.

From the perspective of the universities, the following issues need to be addressed:

- *Universities need to devote resources to collaboration and be clear about what can be published and what not (IPR).*
- *Public support including, but not limited to financial support, is necessary. Currently, some universities have to deal with more than 100 different financial sources in their reporting system – more flexibility is needed.*
- *Trust is the basic word in the cooperation between universities and companies.*
- *A clear strategy for innovation is needed and policies supporting this strategy.*

The following issues were identified at these events as being crucial:

- *Support from governing bodies: local, national, European – adequate funding, policies, facilitate involvement, assist connection between education and economy sectors.*
- *Valuing universities for 'what they are' – long-term perspective, appropriate indicators to assess progress.*
- *Encouraging structural change to move forward – in consultation, technically and ethically.*
- *Supporting long-term, sustainable partnerships between universities and authorities.*

producing graduates not only for top-notch ground-breaking research, but also for using their insights in the work place. We also need, she continued, to distinguish between employment and employability. Being in employment does not guarantee that one

remains employable. Employability requires lifelong learning. Hence, students need to acquire skills that will enable them to learn throughout their entire working life.

EUROPEAN STUDENTS' UNION – ESU The European Students' Union (ESU) is the umbrella organisation of 47 National Unions of Students (NUS) from 39 countries (December 2012). The NUS are open to all students in their respective country regardless of political persuasion, religion, ethnic or cultural origin, sexual orientation or social standing. Members are also student-run, autonomous, representative and operate according to democratic principles. The aim of ESU is to represent and promote the educational, social, economic and cultural interests of students at the European level towards all relevant bodies and in particular the European Union, Bologna Follow Up Group, Council of Europe and UNESCO. Through its members, ESU represents over 11 million students in Europe.

For further information: <http://www.esu-online.org/>

According to the ESU, this requires student-centred learning – it is not about telling students about what and how, but about enabling them to adapt knowledge, being able to act autonomously and exercise accountability. Graduates should be trained for acquiring the following skills:

- Discipline-specific knowledge and understanding;
- Inter-disciplinarily;
- Lifelong learning - the ability to learn and understand;
- Problem-solving skills;
- Critical thinking and reflection;
- Communication skills;
- Flexibility - not necessarily employer-specific skills/training; and
- Creativity - to be able to create new things.

This requires new modes of assessment (problem-based assessment, portfolio evaluations, etc.), reflexive approaches to teaching and learning processes, student involvement in curriculum design, research-based teaching and learning, and involvement of students in decision-making processes.

With respect to entrepreneurial education, ESU thinks that although it should not be mandatory, it should be available on request for all disciplines as an additional method to develop students' transversal skills. Finally, she quoted Galileo Galilei: 'You cannot teach a man anything. You can only help him discover it within himself'

Discussion: The Most Marketable Skills in 2020: Are Graduates Equipped to Succeed in the Global World of the Future?

With the contributions of

Andrea Cammelli, Director Alma Laurea

Prof. José Ginés Mora Ruiz, Director, Centre for the Study of Higher Education Management, Valencia University of Technology

Moderator: **Prof. Michele Pellizzari**, Geneva School of Economics and Management

►► *INPUT A number of studies claim that too many young graduates leave universities without the skills, attitudes, and understanding that are necessary to successfully enter the world of work. Employability skills are defined as skills required not only to gain employment, but also to progress within an enterprise to achieve one's potential and contribute successfully to the advancement of industry or business. Industry asks for a more flexible workforce with advanced technical skills coupled with well-developed generic skills such as creative thinking, problem solving and analytical skills in order to meet the current and future challenges.*

Therefore, it is important for educational institutions to have a working relationship with industry to understand the needs and requirements of industry and the labour market. Consulting or involving employers, employers' organisations and business representatives in various aspects of developing higher education study programmes, in curriculum development, teaching and participation in decision-making or consultative bodies at national, regional, sectoral or institutional level have become common features.

Students are very often neglected in this relationship. Students could create the channels for the provision of feedback from the business side to better align the university's educational offer in the future. In this sense, alliances between universities and enterprises have to include student groups to make the voice of future idea providers and leaders heard. The role of students has to be emphasised when considering university-business collaborations. Students might be the best placed to connect the academic world and the economy. They can transmit knowledge and innovative approaches to businesses through internships and as part of their future jobs. ◀◀

This session focused on skills in a future perspective, exploring what is needed to provide skills that will help businesses as well as society to move forward and increase the employability of graduates from higher education. **Professor Michele Pellizzari** from the Geneva School of Economics and Management moderated this session.

The first contribution came from **Professor José-Ginés Mora Ruiz**, visiting professor at Centre for Higher Education Studies, IOE and the University of London. His contribution addressed three questions:

1. Which competences do employers think the labour market needs?
2. To what extent do graduates, teachers and employers think that higher education institutions provide these competences?
3. What can higher education institutions do to provide these competences?

The employers' perspective was represented by the results of a study carried out on the employability of higher education graduates by the University of Maastricht. The method of this study was quite innovative. Instead of asking employers which skills they prioritise in recruitment, researchers gave them a number of CVs to scrutinise from graduate candidates who would potentially apply for a particular type of job.. Employers were asked who they would choose and why. It turned out that in

spite of all the rhetoric about the importance of transversal skills, in a simulated recruitment process employers prefer candidates with strong professional expertise (i.e. subject-specific knowledge and expert thinking relevant to the particular job) to those with weaker occupational skills but with very strong transversal skills. Leadership skills and innovation skills were not prioritised as much as would have been expected. Among the transversal skills, the most sought-after were interpersonal skills (communication, teamwork skills, etc.), and in this respect, the employers commented that universities do not equip graduates sufficiently with such skills. The companies acknowledged that the general academic skills of graduates were well developed but also that these types of skills was not particularly important.

Teachers' and graduates' perception of whether university education provides the right competences was illustrated by a survey of the two groups as well as of employers. Here, it was evident that when asked about knowledge, the teachers saw only very small deficits in the provision of skills, while employers saw much larger gaps between the required skills and graduates' actual skills. Likewise, the teachers were much more optimistic about their universities' provision of leadership skills than the employers were, while the graduates were in between. Interestingly, when asked about innovation skills, management skills and communication skills, the three groups differed much less in their

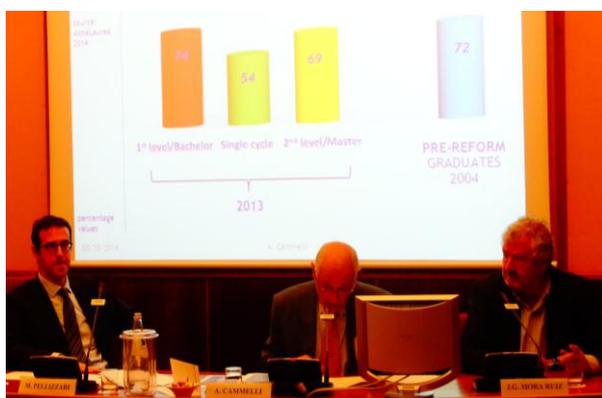
assessment of the skill deficit, although teachers and graduates were consistently more optimistic than the employers were. Nevertheless, the main observation is that there is basic agreement (employers, graduates and even teachers) that there is a mismatch between competences provided by higher education and the demands of labour market. In particular, skills gaps concern practical knowledge required in workplaces. Introducing new teaching and learning modes is therefore the key transformation needed at universities. This again requires collaboration with industry and other stakeholders and for universities to be willing to tear down the walls of the lecture rooms.

THE EMPLOYABILITY OF HIGHER EDUCATION GRADUATES/ THE EMPLOYERS' PERSPECTIVE

The study 'What makes the difference? A qualitative appraisal of higher education graduate employability in Europe: the employers' perspective' has been commissioned by the European Commission, Directorate-General for Education and Culture within the framework of the EU Strategy for the Modernisation of Higher Education (for more information, see <http://ec.europa.eu/education/calls/doc3014en.htm>).

The study is carried out by the Maastricht University, Research Centre for Education and the Labour Market (ROA), in cooperation with TNS NIPO. The study examines how employers see graduate employability and reflects upon what might be the combination of skills, competences and aptitudes most likely to secure that first job or early career and why.

Mr Andrea Cammelli, Director of Alma Laurea opened his presentation with quotes from Galilei, Keynes, and Luigi Einaudi¹, all of which highlighted



that knowledge is a necessary precondition for progress, however knowledge may be inconvenient for those in power.

Mr Cammelli offered a diagnosis of the challenges Italy is facing with respect to higher education. One of the main problems, he said, is that spending on higher education in Italy is way too low compared to other EU countries. For every €100 Italy spends, Spain and France spend €171, Germany spends €201 and Sweden €230. In addition, national culture does not put a premium on education. As a result, the share of the population who has a tertiary education is only a little more than 30% (compared to an EU21² average of 59%, an OECD average of 63% and more than 80% in the UK, the US and Japan). He summed up his thoughts by saying: '*Italy is a country that doesn't go to university*'.

At the same time, the share of the population in high-skilled professions, such as manager or professional, is very low compared to other

¹ Luigi Einaudi was an Italian politician and economist. He served as the second President of the Italian Republic between 1948 and 1955.

² All EU countries prior to the accession of the 10 candidate countries on 1 May 2004, plus the four eastern European member countries of the OECD, namely Czech Republic, Hungary, Poland, Slovak Republic. Source: <http://stats.oecd.org/glossary/detail.asp?ID=7020>

countries, and it has been dropping since the financial crisis. Furthermore, among managers, the percentage that holds a higher education degree is small (24% compared to 55% in Germany), while the share of managers with compulsory schooling as their highest qualification is significantly higher than the EU27 average (28% as against 11%).

Looking at employment, the unemployment rate for those with only lower secondary education has increased by 23 percentage points from 2007 to 2013, while that of higher education graduates has only increased by 6.5 percentage points.

So what should graduates focus on to improve their skills and maximise employability? According to Alma Laurea data, the most important areas for improvement are learning more foreign languages and achieving international experience by working or studying abroad.

ALMALAUREA is a platform for graduates, universities and the business world. It aims at delivering the curricula of Italian graduates to Italian and international enterprises and industries. AlmaLaurea was established in 1994 at the University of Bologna, following three great intuitions, remaining unique in the European and international context: to collect data on new graduates by degree course and year of graduation within four months after the end of the academic year with the support of universities and graduates; to collect data, by degree course, on the share of employed graduates after 1, 3 and 5 years after their graduation (with additional information on wage, relevance of their studies for the job, family education background, study experiences abroad, working experiences); To provide Italian and foreign employers with updated information on graduates searching for job. Today, AlmaLaurea represents almost 80% of Italian graduates (1,988,000 from 65 Italian Universities up to 04/11/2014) and has now grown to 57 expert employees. The model has been applied to high school graduates with AlmaDiploma and AlmaOriëntati. AlmaLaurea has taken a strong commitment to internationalise its services in the perspective of a European knowledge-based society, as it has been defined by the Lisbon strategy. The aim is to establish cooperation agreements in Europe and at extra-European level, with a special focus on the Mediterranean basin, as to ensure a capacity transfer for the build-up of universities networks and graduates databanks, contributing to enhance the potential of young people. For further information: <http://www.almalaurea.it/en>

Round table: Rethinking and opening up education: The university and business cooperation for modern learning achievements. New and innovative approaches for delivering education more suitable to prepare graduates for the job market and to continuing education, upgrading and requalification of employees.

Introduction: Prof. Allan Gibb, Emeritus Professor of Entrepreneurship and Small Business at Durham University

Panelists:

Christof Beutgen, Head of Employee Development Policies, Deutsche Bahn

Prof. Carlo Alberto Pratesi, Professor, Università di Roma Tre

Marina Ranga, Senior researcher, H-STAR Institute, Stanford University and scientific coordinator of the European study on Innovation in Higher Education

Ida Sirolli, Head of Research & Education, Telecom Italia Spa

Moderator: Prof. Patrizio Bianchi, Councilor for Professional Education, University, Research and Employment

The moderator of the 2nd Roundtable was **Professor Patrizio Bianchi**, Councillor for Professional Education, University, Research and Employment, professor of economics. The session was introduced by Professor Allan Gibb, Emeritus Professor of Entrepreneurship and Small Business at Durham University.

Professor Allan Gibb is currently involved in a programme for entrepreneurship universities run by Oxford University which is looking at the entrepreneurial model of universities. He warned against adopting a programmatic approach to cooperation and to entrepreneurial universities.

Before large-scale initiatives are launched, universities and their organisations should take time to reflect on what type of organisations universities are, and the challenges they are facing. We need to acknowledge that universities are pluralist societies, not unitary organisations. They tend not to be very proactive, but rather to respond to social demands in a piecemeal way (a little new technology there, some internationalisation there). The essence of universities is autonomy for departments as well as for teachers. Many problems stem from attempts at managing or interfering with this autonomy from the outside. These observations should not serve as an apology or be taken to mean that universities are running away from the word 'innovation' only that they want to be able to see the opportunities in order to change.

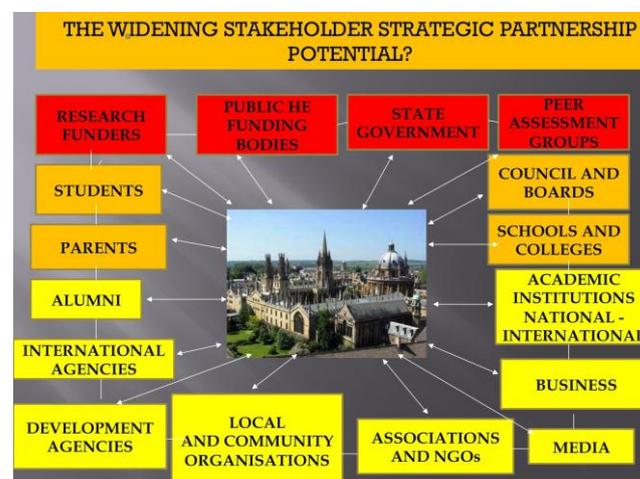
The universities are also challenged by a number of voices, each making specific demands on the universities: The public voice, the voice of competition, the community voice, the business voice, the technology voice, and the student voice. In this cacophony of claims, the challenge is to understand how to respond to the voices, which the universities usually do one at a time and in small ways.

Finally, it is important to recall that universities do not have the monopoly on knowledge, and private sector universities are burgeoning. In the developing world, there is a post-colonial move where the countries want universities that reflect their cultural and natural specificities.

What then can universities do to respond in a more coherent manner? What characterises the pedagogies that create innovation and creativity? According to Professor Gibb, universities need to understand new foci for '*Knowledge travel*'. This implies a fundamental rethinking of the ways that knowledge is created and delivered. Approaches include (but are not limited to):

- Flipped classrooms, where lectures are delivered online, while teachers' roles change to mentoring and coaching;
- Pedagogical innovations;
- Entrepreneurship education;
- Learning partnerships;
- Global curriculum;
- International locations;
- New institutional configurations.

Professor Gibb lined up how the stakeholder landscape is changing, as shown in the picture below.



In this world of increasing complexity, universities should become stakeholder organisations and learning organisations, porous to the outside world.

In becoming entrepreneurial universities, they could model themselves on an owner-manager who constantly needs to manage the interdependence with stakeholders and build trust-based relationships.

Discussion: The roundtable in this session addressed university and business cooperation for modern learning achievements. The speakers in this session presented and discussed new and innovative approaches for delivering education more suitable to prepare graduates for the job market and to continuing education, upgrading and requalification of employees.

►► *INPUT Renewing the modes for learning (collaborative learning, solving of real-life problems, teamwork, work-based learning, professional mentoring, etc.) requires highly professionalised teaching staff in universities, with openness and flexibility in adapting to new approaches as well as the recruitment of new teaching actors like teachers, tutors and trainers from industry (professors of practice). The availability of alternative learning pathways (e.g. internships, reverse mentoring, part-time studies, non-traditional BA-MA pathways, dual or double major study degrees) is leading to the university losing its centrality as a learning venue. This may also lead to completely new perspectives and notions of HEIs and often requires the breakdown of “traditional academic silos”. Students expect high personalisation, collaboration and improved links between formal, non-formal and informal education. The digital revolution - especially the development of Open Education Resources (OER) and Massive Open Online Courses (MOOCs) is leading to multiple learning venues: learning does not only take place at the university as a single learning environment, it takes place at home, in workplaces and – with new technology – literally everywhere.*

Many universities have established programmes for employees’ professional development and adult learners 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. Combining theoretical reflection in universities with practical in-company experience not only ensures that the business world will have skilled workers with real-life training, but also facilitates the young people’s transition into the labour market. It is often suggested that a dual training system, like the German model, would promote economic growth and help reducing the rate of (youth) unemployment. ◀◀

The first speaker in this session was **Professor Marina Ranga**, Senior Researcher, H-STAR Institute, Stanford University.

Reflecting on Professor Gibbs’ slide with university in the middle (pictured above), she emphasised that the complex systems’ perspective is very important when developing strategies for opening up universities more to the outside world.

Her presentation addressed two questions:

1. How can universities put new learning modes into action? What kind of teachers / professors are needed to support and incorporate new learning modes?
2. Is technological innovation (LA, MOOCs, OER) transforming the way in which education providers are approaching learners?

Digital technologies have dramatically changed the HE landscape over the last 5 years, she observed, giving a few examples. In 2009, the Khan Academy started offering free online education. In 2011, 160,000 students from 190 countries enrolled in the

Academy's "Introduction to AI" course, and of them 23,000 graduated. Since then, MOOCs have exploded, and major players like Coursera, Udacity and NovoEd have emerged. Currently, we witness attempts to tackle challenges associated with assessment and recognition, like Mozilla Open Badges, a new way of recognising qualifications. She likened the spread of new forms of learning to a tsunami, exemplified by the Minerva Project, which is a true multi-national university based on different campuses around the world; and Kepler (Generation Rwanda), a nonprofit university programme employing blended learning designed for the developing world providing American-accredited degrees for a tuition fee of \$1,000 per year.

Universities are changing, and the changes encompass:

- Education delivery modes: teaching and learning approaches, curricula, course design, assessment modes, and classrooms. The campus will not disappear but it will be dramatically transformed.
 - Education actors' roles: including students and teachers. A teacher will become more of a coach, guide, the person who helps students distinguishing between 'useful and rubbish'.
 - Education outcomes: new skills for students to meet workforce demands.
 - University business models: MOOC-based universities can operate with cost structures that are orders of magnitude less than traditional ones.
 - University role in the local ecosystem: enhanced cooperation with industry, government, other stakeholders (EU study Innovation in higher education).
 - Universities' global competitiveness: those who explore and test new technologies will be the new leaders, and many will go bankrupt.
- Online learning (synchronous, asynchronous) and blended learning.
 - "Flipped classrooms": pre-recorded video lectures (online) as pre-class homework; class time left for discussions, group work, and labs; students better engaged in class, instructor becomes guide (Cisco Lecture Vision).
 - Mobile learning models (e.g. 1:1 computing and BYOD): students access digital resources, course materials, lectures, videos, etc. from laptops, tablets, mobile phone provided by the school or of their own. Digitised textbooks, interactive quizzes in class, review of video lectures between classes, etc, digital curriculum.
 - Collaborative learning: students work on projects in groups through video and social collaboration technologies, design own learning experiences, personalised learning environments.
 - Hosted virtual desktops (HVD) stored in the cloud: students access specialised applications previously available only in labs.

New teaching and learning approaches include:

Quoting the Partnership for 21st Century Skills³, she identified the following core skills that students should learn to be prepared for the future. These encompass flexibility and adaptability, initiative and self-direction, social and cross-cultural skills, productivity and accountability, and leadership and responsibility; Learning and innovation skills: critical thinking, communication, collaboration, and creativity; Information, media and technology skills: information Literacy, media literacy, and ICT literacy. These are in addition to core subjects, which vary between professions and occupations life and career skills.

The method for teaching these skills encompass the following design principles: It should be tech-enabled, applied (enabling learning by doing), personalised, learner driven, and cost-effective. However, she also recognised that changing

³ <http://www.p21.org/about-us/p21-framework>

teaching according to these principles poses a number of challenges, among them insufficient digital media literacy in faculty training, and resistance to the introduction of new technologies. Most of the academics who teach in universities today are not themselves using new technologies for learning and teaching, or for organising their own research. In addition, new scholarly forms of authoring, publishing and researching are not yet well understood, so a cultural shift is needed. Finally, current technology and practices do not yet adequately support the demand for personalised learning.

Finally, Mrs. Ranga considered technological developments with a potential for transforming the way we approach teaching and learning showed an overview of the expected horizons for specific technological breakthroughs, see the figure above.

Near-term horizon (next 12 months)	<ul style="list-style-type: none"> • MOOCs • Tablet computing
Mid-term horizon (2-3 years)	<ul style="list-style-type: none"> • Games and gamification • Learning analytics
Far-term horizon (4-5 years)	<ul style="list-style-type: none"> • 3D printing • Wearable technology

Mr Christof Beutgen, Head of Employee Development Policies, Deutsche Bahn, presented the dual track study programme of Deutsche Bahn (DB).

He started by reminding the audience that the dual system of vocational education at all levels in Germany has its roots in medieval times and the apprenticeship system for educating craftsmen.

INNOVATION IN HIGHER EDUCATION The study builds on four overarching research questions: -What are the main challenges facing higher education and driving innovation in this sector? -What are the key differences in terms of regional and institutional contexts for achieving successful innovation in higher education for different constituencies? -How does innovation in higher education involve key system components and how does it influence – directly and indirectly – the system functions? -What are the key processes and the roles of the key stakeholders in implementing innovation? -What are the major outcomes of innovation in higher education and what main bottlenecks and blockages exist in achieving them?

In order to gather the evidence base to answer these questions, and to shed light on selected processes of innovation in the higher education sector, desk research and seven case studies have been conducted, on 1) the changing landscape of teaching and learning in higher education; 2) technology and the student performance in higher education; 3) globalisation and multicampus universities.

Three main challenges that the higher education sector faces across the globe and that are also driving innovation in this sector have been identified: (i) pressures from globalisation; (ii) changing supply of and demand for higher education; and (iii) changes in higher education funding.

Brennan, John, Broek, Simon, Durazzi, Niccolo, Kamphuis, Bregtje, Ranga, Marina and Ryan, Steve (2014) Study on innovation in higher education: final report. European Commission Directorate for Education and Training Study on Innovation in Higher Education http://ec.europa.eu/education/tools/docs/study-innovation-he_en.pdf

DB has about 300,000 employees around the world, of which more than 190,000 are based in Germany and is one of the biggest companies in Germany. The company offers educational programmes for school leavers in vocational education, EQF levels 4-5 as well as dual academic programmes combining work-based learning in the company and campus-based education in the university. Study programmes are within Business Administration (e.g.

Service Management, Industrial Logistics and transportation, Accounting and controlling); Engineering (e.g. Electrical engineering, Mechanical engineering, Mechatronics, Business Administration, and Engineering); and IT (e.g. Computer science, Business information systems, and Digital media).

The programmes are offered in cooperation with universities all over Germany. The students' first contact is with the company, not with the university. The company offers a grant to the students (EUR 880 per month) while they are under contract to Deutsche Bahn.

Collaboration takes place through the apprenticeship. Companies have to invest time and money in the cooperation and the universities have to involve the companies in committees as well as engage them in curriculum development. The period

DUAL STUDY IN GERMANY Numerous Universities, Colleges and Professional Schools in Germany offer opportunities for dual studies in several ways: The programmes integrate professional training as well as studying (dual studies). The objective of this type of training is for the students to obtain the academic diploma whilst undertaking professional training. An exam is organised by the designated Professional School. The unified program of dual studies combines 50% study and 50% work. The objective is to gain the academic knowledge enhanced by the practical skills gained through work. The integrated professional programme of dual studies is designed for professionals who have a job, commonly determined the company the individuals are working for. The objective of this model of study is for students to reach another academic milestone.

The second company presentation was held by **Ms Ida Sirolli**, Head of Research & Education, Telecom Italia. She started her presentation by reflecting on how automation and digitalisation is increasingly taking over jobs that used to be performed by humans. Today machines are doing jobs that are cognitively complex and this will only accelerate in

of alternation (the period in which the student stays in the company or the university) is usually 3 months. This collaboration has several benefits for the company as well as for students. The company gets access to talented young persons and has the opportunity to develop them; it gets the chance to hand-pick students and introduce them to the corporate philosophy; and the students bring back valuable knowledge from universities to the company. Students can obtain a university degree with two learning venues, so academic learning is linked to real-life practice. They receive payment during the on-the-job-phases as well as in the university phases. The degrees are taught in small classes, so that university professors get to know their students well. Last, but not least, the students have a high chance of continuing into permanent employment upon graduation.

the near future. Therefore, we have to ask: what is left for the human workforce? Her answer was that interpersonal skills are increasingly important, as is creativity, understood as the skills enabling people to combine things in new ways. Also, she saw an increasing need for interdisciplinary approaches to complement specialised skills.



Telecom Italia operates in Italy and Brazil. The company has a long tradition for partnering with universities, and has recently started investing in talent through 'Joint Open Labs' located on the premises of five Italian universities (Torino, Milano, Trento, Pisa, and Catania). In cooperation with the universities, they have established more than 330 internships for graduates in engineering and economics. In addition, they fund PhDs and participate in Master programmes ('Smart cities' and 'Smart solutions').

In addition to the involvement in education, Telecom Italia fund young entrepreneurs through a programme (TIM#WCAP). The programme involves scouting of ideas, talents and start-ups within business areas of interest to Telecom Italia. The 40 most promising receive a grant of € 25.000 each and are offered participation in an acceleration programme, where they are supported through mentoring, networking and opportunities for co-working. There is a competition involved where winners get to be certified providers of goods or services to Telecom Italia, whose business units on their side are stimulated to buy from these providers. Further, a fund is created to invest in start-up capital for entrepreneurs within digital services, internet, mobile solutions, and green IT.

Professor Carlo Alberto Pratesi, Professor of Marketing, Università di Roma Tre, presented the

'InnovAction Lab', an education programme conceived by Roma Tre University, with the aim of drawing young talents closer to the world of innovative entrepreneurship, start-ups and the investor community. InnovAction Lab's mission is to create entrepreneurial talents (techno-preneurs) and put them in a position to develop innovative approaches to overcome the challenges faced by start-ups or companies, independent of whether they decide to become an entrepreneur or join a corporation.

Students in the programme are taught to deal with the typical problems faced by all start-ups, from building a multi-disciplinary team, to pitching to investors and venture capitalists. No indications or rules as such are given to students on how to solve the problems they face along the way. Each team is assigned a mentor, but they are otherwise left to their own devices.

In the process of designing the programme, university management and staff visited several universities worldwide to see how entrepreneurship is taught. The most interesting places were the Design Factory at Aalto University and the Stanford University Design School. Ideas from these two projects were taken into InnovAction Lab.

In the programme, students from different faculties are mixed to make up the multidisciplinary teams. In the InnovAction Lab, the most important rule is that a group should not have more than one member from the same faculty. The idea was to end the process after the first course, but a lot of start-ups came out of the course. This was not expected from the outset, as most students had declared before the course that they did not want to create a company, they wanted to go on studying. However, a few years after graduation it turned out that a sizable number of students had started their own business.

The programme involves 5 seminars and 4 webinars and 2 mock investor pitch presentations. The best

teams are selected for the final event where they are judged by a panel of investors and venture capitalists. The prizes are “scholarship trips” which aim to further develop their understanding of innovative entrepreneurship by visiting top ecosystems such as Silicon Valley, Silicon Alley (NY), Startup Nation (Israel), and Singapore.

The concept has grown rapidly, and in 2014, 25 universities participate. More than 2,000 applications

led to the selection of 780 participants (75% men, 25% women), who have been assigned more than 100 mentors.

The programme is sponsored by a number of large corporations and organisations. It is estimated that up until now, the programme has created more than 130 jobs.

Discussion



A forum participant raised the question what do the new modes of learning mean for teachers? She speculated that if teachers are to act more as counsellors, will that not mean that the teaching becomes more labour intensive? Ms Marina Ranga responded that in the US, most teachers are

under pressure to adopt blended learning and flipped classrooms. This means that a lot of the time of teachers is devoted to preparing lectures for tablets/net. Mentoring is often undertaken by ‘real-life entrepreneurs’ giving advice to 1-4 students (this was confirmed by Mr. Pratesi, who said that finding mentors is not that difficult). Further, counselling may be aided electronically: E-advisor, University of Arizona, follows students’ progress and assigns tutors if students do not follow the normal track. But there is a cultural resistance which must be recognised, and a need to change incentives for university teachers. At the end of the day, company initiatives are mainly recruitment initiatives, so universities need to be more proactive, also in addressing local and civic innovation. The latter observation was challenged by Ms Ida Sirolli: Telecom Italia’s investment in talent also contributes to the development of the country, she said. In addition, the company has had a hard time getting universities to believe in their projects. Most universities looked at the company with suspicion, and their luck was that they stumbled upon a ‘brave professor’. With regard to incentives, Professor Alan Gibb commented that heads of departments should be rewarded for innovation in organisation, fundraising and pedagogics instead of defending their department from cutbacks.

Professor Bianchi rounded off the session by reminding the audience that universities and companies are not identical throughout Europe. But he strongly believes that we can no longer restrict ourselves to discussing universities without considering the entire education system. He himself considers that what he is

doing now is 'tertiary vocational education'. We should remember that even if universities are one of the oldest institutions in the world and still hold privileges, the privilege to be autonomous involves a duty to innovate.

Round table: Business creation and employability: how to boost growth and competitiveness with quality education and entrepreneurial skills. Which transversal skills can be taught in cooperation with enterprises to strength employability, creativity and new professional paths?

Introduction: Elena Bou, Innovation Director, KIC InnoEnergy

Panelists:

Prof. Marco Cantamessa, President, PNI Cube

Prof. Alain Fayolle, Entrepreneurship Professor, EMLYON Business School

Miguél Garcia-Miranda, Founder, LiquidFloors, Beneficiary of YouthStart supported by Microsoft

Laura Rocchitelli, Managing Director, Rold Group S.p.A

Moderator: Prof. Moreno Muffatto, Team leader of the Global Entrepreneurship Monitor Italy, Professor at the University of Padua

►► *INPUT* Higher education institutions play a key role in knowledge generation and its translation into innovative products, public and private services. As global competition continues to grow, it is critical that HEIs improve their ability to support students for future innovation and business creation.

"University entrepreneurship deals with the whole range of issues facing universities – policy, social needs, business demands, teaching innovation, technological applications, research and the quality of education."⁴ The European Commission set "Sense of initiative and entrepreneurship" as one of the key competences graduates should have.⁵ Entrepreneurial skills and competencies enable graduates to create business ideas either for their own or for their employers' benefit. They are capable of inventing, adopting and implementing innovative ideas and turning them into economically sustainable products and services.

Modern and knowledge-based economies require people with the ability to think critically, take initiative, solve problems and work collaboratively through transversal skills. In particular, entrepreneurial skills do not only contribute to new business creation but also to the employability of young people

Experiential or applied learning has been increasingly popular at European universities over the last few years. Such an educational mode changes the traditional classroom. Students become actively engaged in innovative and entrepreneurial activities for example in workshops, conferences and internships to gain work experience. Creating awareness, stimulating ideas through addressing real-life problems in teaching and learning, fostering collaborative problem solving and teamwork are key to developing entrepreneurial attitude and mindset. Risk taking has a positive connotation as well. These approaches facilitate the access to the labour market for fresh graduates. They not only provide the competence profiles demanded, but also create a business-oriented mindset. ◀◀

⁴ Jose Joaquin Brunner, Anthony Tillett, Universities: Conditions for changing organizational culture, Santiago the Chile, 2005.

⁵ European Commission, Recommendation of the European Parliament and of the Council of 18 December 2006

This session explored how growth and competitiveness can be boosted by quality education delivering entrepreneurial skills. Further, it looked into which transversal skills can be taught in cooperation with enterprises to strength employability, creativity and new professional paths.

Professor Moreno Muffatto, team leader of the Global Entrepreneurship Monitor Italy, Professor at the University of Padua moderated this session. He introduced the session by relating his personal experience of entrepreneurship to the audience. His university ranks first in a large number of disciplines, and professors are totally focused on research, which makes collaboration with industry difficult. If we want to change, we should therefore evaluate professors in a different way. Last year they presented the results of the Global Entrepreneurship monitor results and recently started an extracurricular course in entrepreneurship for engineers, which involves both university students and company employees.

The introductory speech was given by **Dr Elena Bou**, Innovation Director, KIC InnoEnergy, who 'confessed' to having one leg in academia by virtue of sitting in the boards of some universities. She then went on to present KIC InnoEnergy, which was founded by 27 shareholders with the objective of fostering innovation and entrepreneurship within sustainable energy. KIC InnoEnergy has three main objectives:

- Training (changing through courses);
- Launching new products; and
- Fostering cooperation and business creation and employability.

The founders wanted to create game changers: people ready to innovate and to improve. How do you do that? She answered this question by elaborating on the 'what', the 'who' and the 'how'.

'What': They started by a creating a conversation between universities and enterprises (mainly the HR function). This required mutual trust. When that was achieved, it became possible to co-develop a syllabus with technical and business content for an MSc in renewable energy, in which the students spend time in companies in internships and work on business cases.

'Who': The selection of students for the course combined a traditional process with consideration of personal behaviour and intent. In practical terms, a tool combining interview and simulations was used to evaluate applicants (interview + simulations).

'How': They use real cases and real challenges. Cases are transversal, multidisciplinary. Action learning in real innovation projects (e.g. Smart Cities students) is employed, and finally, the project used shared learning spaces (EGarage, Barcelona).

Ms. Bou went on to ask a provocative question: 'Are we ready?' According to her assessment, students are ready, they take up the challenges. But are universities ready? Up until now the roles were clear: Universities created knowledge, industry applied it. Now we are asking universities and industry to assume new roles. Applying knowledge brings university staff out of their comfort zone. Many technicians think that entrepreneurial skills can be achieved easily, so technical professors need to be made to understand the complexity of introducing entrepreneurial skills. This will enable entrepreneurial skills to be embedded in the technical content. As a reaction to a question from the audience, Ms Bou explained that entrepreneurial skills were defined using results of research on serial entrepreneurs in the energy sector. Finally, linking to practice cannot help in publishing, so university staff needs to be evaluated differently. Is industry ready? We need the action – the doing.

Ms. Bou finished with an appeal to the audience: 'Don't talk more – the room is full of rectors and ministers – So change it!'

KIC InnoEnergy is the European company dedicated to promoting innovation, entrepreneurship and education in the sustainable energy field by bringing together academics, businesses and research institutes. Their goal is to make a positive impact on sustainable energy in Europe. This is done by creating future game changers with a different mind-set, and bringing innovative products, services and successful companies to life. KIC InnoEnergy is one of the first Knowledge and Innovation Communities (KICs) fostered by the European Institute of Innovation and Technology (EIT). It is a commercial company with 27 shareholders that include top ranking industries, research centres and universities, all of which are key players in the energy field. More than 150 additional partners contribute to the KIC activities.

For more information: <http://www.kic-innoenergy.com/>

Professor Marco Cantamessa, President, PNICube, presented his organisation, PNICube, which is the Italian association of university incubators and business plan competitions.

The aim of PNICube is to stimulate entrepreneurship that arises out of cooperation between businesses and universities – including entrepreneurs who want to set up a technology-based business in university premises. PNICube currently has 38 members and 15 active Start Cup competitions.

The main annual events are 1. 'Premio Nazionale per l'Innovazione' (National prize for innovation), a leading business plan competition involving the regional Start Cup initiatives. In 2014, this competition involves 3,000 applicants, 1,300 business ideas, and 600 business plans. 2. 'Start Up dell'Anno' (start-up of the year), a prize that goes to the start-up that has recorded the best growth path during its first years since incorporation

Mr. Cantamessa summed up the pros and cons of the collaboration so far.

Positives

- Universities have had a pioneering role in start-ups in Italy.
- Universities can have a strong contribution to the start-up creation across a broad spectrum of sectors – Italy has good statistics on this.
- Italy has a good position in the international Ubiindex ranking of incubators close to universities - two of the best come from Italy.
- Growing student participation in entrepreneurship activities, e.g., 'hackathons'.
- Effective bridging role. It is very difficult to envisage a university speaking directly to a venture capitalist. Companies are starting to look to academia for Open Innovation initiatives. However, since they want to see things happen fast, they often prefer working with start-ups.

Not-so positives

- Fragmentation and slow convergence to best practices in the incubation ecosystem.
- Entrepreneurship ≠ entrepreneurship education ≠ entrepreneurship studies: Entrepreneurship is "doing their real thing", and it is not for everybody. Entrepreneurship education is for everybody, who can learn useful tricks of the trade. Entrepreneurship studies is academic research on mechanisms involved in entrepreneurship, lives of entrepreneurs etc. and as such, a totally different discipline.
- To a certain extent, entrepreneurship has been a domain of engineering schools. It must diffuse beyond this border.
- Academic mindset and skewed incentives (funding and promotion on the basis of publications and citations).

- Universities engage in “third mission” activities, but without a clear strategy with well-defined objectives.

PNI Cube is the Association of Italian university incubators and business plan competitions (aka Start Cups). PNICube has the aim of supporting the launch of high-tech startups in close connection to universities and research institutions, and supporting their growth. PNI currently has 38 associates and manages two main events. The Premio Nazionale per l'Innovazione, one of the leading Italian business plan competitions, and the Startup dell'Anno, that recognises the startup that has recorded the strongest growth.

PNICube has the following objectives. Supporting the establishment of new university incubators. Exchanging experience and stimulating cooperation in incubation practice. Supporting policy makers in the field of entrepreneurship, start-ups and incubation. Supporting its members in fundraising. Stimulating cooperation at international level. Supporting the launch of high-tech start-ups connected to research.

For further information: <http://www.pnicube.it/>

Speaking from the audience, Marina Ranga commented that Europe may take some lessons from the study of entrepreneurship at ten US universities who do very different things. But they are all involved in regional collaborations, they all prepare competitions, and they work together.

The next speaker was **Professor Alain Fayolle**, Entrepreneurship Professor, EMLYON Business School, France, who addressed the issue of entrepreneurial skills. He started by observing that talking about transversal skills, we are talking about learning outcomes – but transversal skills are not well defined.

In partial agreement with what was mentioned earlier by Ms. Bou, he indicated that entrepreneurial education should embrace the answers to three questions: The Why, the What and the How.

The ‘Why’ has to do with the student learning about his or her own aspirations, values, motivations, resources, competences and skills. This component is often missing from entrepreneurship education, in Mr. Fayolles experience.

The ‘What’ has to do with the problems and dilemmas faced by entrepreneurs in a wide range of situations and contexts and can be addressed through problem-based learning.

The ‘How’ involves learning the ways successful entrepreneurs think, their strategies and heuristics, the way they make decisions and act under uncertainty. This can be addressed by trial / error pedagogies and learning to learn from failure.

He concluded by emphasising that it is important to strengthen the entrepreneurial mindset which allows the students to take initiatives, and that they become fully aware of personal professional choices, and of the environment. To that end it is important to give them some insights in sociology, geography, economics to aid their understanding of the environment.

The following example was presented by **Mr Miguél Garcia-Miranda**, Founder, LiquidFloors, Beneficiary of YouthStart supported by Microsoft, who reflected on his own life story. This story started in the year of 2000, on the first day of term at a special school. The students went to school 2 days a week and worked (cleaned) in a company the remaining 3 days. They were tough kids, it was a tough school. As he remarked: ‘*A nifty programme to teach young people about entrepreneurial skills*’. He felt he was not fitting in, but knew he wanted to be very successful – just not how.

Students were taught by Eric, a retired businessman. Eric asked the students who wanted to get some money, and the young Miguél raised his hand. Eric handed him real money (a small sum), and Miguél was baffled. Eric’s point was that the early bird

catches the worm. Miguél's lesson was: You can spend decades at school without learning that lesson.

Much later, when the young man started making money on his own, he was not very cautious: "I burnt a lot (of money), got hustled and learnt – but so did my entrepreneur friends with higher education background".

Now he is settled, leading the fastest growing start-up in Belgian construction and has begun reflecting on his journey and asking questions like: What will help his daughter moving forward in life?

His own conclusion is that the most valuable skills needed to succeed are soft skills, in particular the ability to deal with people, and to lead by understanding others. Entrepreneurship is about how to build your own way, if you cannot find an existing one. He concluded by stating that: "A child only educated at school is an uneducated child".

Next, **Ms Laura Rocchitelli**, Managing Director, Rold Group S.p.A, presented the cooperation between her company and universities. Rold is a worldwide player in electromechanical and electronic components (doorlocks, switches & micro switches, push button units, electric control systems). It is a typical family-owned company with 200 employees. Production is entirely in Italy.

Together with two other SMEs, Rold has invested in the creation of a centre that gathers researchers from the Polytechnico of Milano as well people from other companies. The centre is multi-disciplinary – the relationship is with the whole Polytechnico, not just with one department. What Rold is looking for in employees



This picture illustrates what the company looks for when recruiting and developing employees. Both universities and companies need to leave their comfort zones and work together.

She concluded the brief intervention by emphasising that companies need to shift their 'lens' from a short vision to a long vision; that academia needs to become more open towards the companies; and that teachers have to be closer to companies so they understand business processes.

Closing session of Day one: Presentation of the outcomes of the CRUI Foundation Observatory on University-Business Cooperation in Italy

Professor Angelo Riccaboni, President, CRUI Foundation (Foundation of the Conference of Italian University Rectors) gave the final presentation of Day one. The initiative to create an observatory, he said, was sparked by an observation that in spite of many initiatives within university-business collaboration, there is still a lack of evidence and impact at a system level. Also, a growing engagement of universities in 'Third Mission' activities could be observed, however there is a lack of sharing of content, evaluation of impact, sharing of good practices or even a common terminology. Finally, interesting solutions seemed to emerge such as high-level apprenticeship contracts, and industrial doctorates, but also evidence of some critical issues in their application. In addition, universities need legitimacy - tax payers want to know what universities are good for.

Consequently, the objectives of the observatory are to:

- Promote stronger partnerships among universities and enterprises/business sector;
- Facilitate exchange of good practices;
- Advise policy makers on the basis of practical experience.

The Observatory has set up six working groups each with a well-defined remit. The working groups are:

- Students' career and employment opportunities of Italian graduates;
- Skills and competences needed in the labour market and new approaches in the U-B dialogue;
- Start-up/spin-off/patents;
- 'Third Mission' assessment;

- National and regional policies;
- Case studies and good practices.

The first report is to be published shortly, but Prof. Riccaboni offered some preliminary observations from some of the groups.

Working group 2 has concluded that the *skills taught in universities are too narrowly targeted at specific fields of research*: 'We teach how to climb a tree – we should teach how to jump from one tree to another.' The advice from the group is to simplify legislation.

Working group 3 recommends that the *number of incubators should be reduced*, and that resources are instead invested in initiatives to raise the social esteem of entrepreneurs, which is at a low point in Italy.

Working group 6 has found that case studies and good practices attract much interest from businesses and institutions. They are currently working on identifying such cases and practices and describe them in a form that is attractive to potential investors, e.g. as videos.

The proposals from the Observatory are:

- To survey, rather than rank, university-business collaboration practices;
- To use institutions already involved in the collection of information;
- To take into consideration social and economic heterogeneities;
- To support third mission activities through dedicated resources and incentives to staff

Day Two - 3 October 2014

Round table: *Strategic alliances and the creation of ecosystems: The role of the public sector, of enterprises and universities at a local, regional, national and European level for the creation of a knowledge economy*

Introduction: **Markku Markkula**, Member of the EU Committee of the Regions, Advisor to the Aalto Presidents, Aalto University

Panelists:

Carlo Calenda, Vice-Minister, Ministry for Economic Development (MISE)

Lorenzo Bacci, Responsible for students financial support and research development, Regione Toscana

Prof. Antonio Cunha, Rector, Minho University

Prof. Donato Iacobucci, Università Politecnica delle Marche

Hank Kune, Director, EDUCORE bv

Moderator: **Valeria Bandini**, senior Manager, Climate-KIC's Regional Innovation Centre in Emilia-Romagna

►► INPUT Creating alliances between universities, businesses and public actors may seem like an experimental step in developing ecosystems. "Smart Specialisation" is still a rather new innovation policy concept. It is aimed at promoting the efficient and effective use of public investment in research with the goal of boosting regional innovation. How strategic university-business collaborations and partnerships with local and regional governments contribute to the regional development (e.g. through smart specialisation and strategy development) depends on institutional and organisational choices for certain types of cooperation and interaction.

University-business collaborative activities take different forms, and vary from formally institutionalised partnerships to short-term collaborations between the different stakeholders.

The role of students has to be emphasised when considering university-business collaborations. Students might be the best placed to connect the academic world and the economy. They can transmit knowledge and innovative approaches to businesses through internships and as part of their future jobs.

Universities involved in co-operation with businesses primarily focus their interest on larger companies. Although 99% of companies in the EU can be classified as SMEs with 92% micro companies, they are neither properly involved in this co-operation nor benefiting from it. In addition, significant expectations concerning development of rural areas have been placed on the success of the small and micro businesses sector.⁶

Public bodies in university-business partnerships can play an important role in catalysing and securing the sustainability of the co-operations and partnerships. Depending on their chosen role, they might provide a framework for implementation and supervision to ensure the continuation and long-term existence of the collaboration or they can become partners in a strategic collaboration.

Local authorities have an important role to play in describing the local specificities and issues to be addressed. They carry important knowledge on local / regional providers of higher education as well as on economies and their wider societal embeddedness. They can also act as mediators, if conflicts arise. The organisation of trust building, mediation and conflict resolution in the university-business partnerships can be important tasks for public authorities. ◀◀

⁶ European Commission, Are EU SMEs recovering? Annual Report on EU SMEs 2010/2011, 2011.

The second day of the Forum opened with a session exploring the roles of universities and businesses in creating and sustaining regional innovative and sustainable knowledge ecosystems. The session was moderated by **Ms Valeria Bandini**, senior Manager, Climate-KIC's Regional Innovation Centre in Emilia-Romagna. She introduced the session by emphasising that the time calls for speediness, if we want to change the situation for the better.

The introductory presentation in this session was given by **Mr Markku Markkula**, Member of the EU Committee of the Regions, Advisor to the Aalto Presidents, Aalto University. He offered three main messages:

- The future is invented within the innovation ecosystems;
- Instead of plans: experimenting, piloting and rapid prototyping;
- Co-create platforms for real-life entrepreneurship.

He supported the first message with a quote from an opinion given by the EU Committee of the Regions:

'The laboratories for innovation are no longer traditional university facilities, but regional innovation ecosystems operating as test-beds for rapid prototyping of many types of user-driven innovations: new products, services, processes, structures and systems, which need to be of a transformative and scalable nature.'

Mr Markkula observed that the most important changes needed would be to make more renewal capital available and that instruments should be developed to change the general European mindset concerning entrepreneurship and innovation.

He went on to share a number of observations concerning ecosystems to set the scene for the discussions in the session. He recalled that each ecosystem has its own specificities and assets. We

need to know the parameters of the specific ecosystem that we are dealing with.

During the last years, university campuses across the world have opened considerably, and in many of them, companies have established innovation operations. What is required is that the stakeholders possess a co-creation mentality - mindset matters a lot, and there is a need for more pioneers.

Regional research and innovation strategies for Smart Specialisation Strategies (RIS3) should not become one-off documents. RIS3 should be an ongoing process creating and following a transformative agenda. That also calls for changes, he said, in the EU2020 strategy.

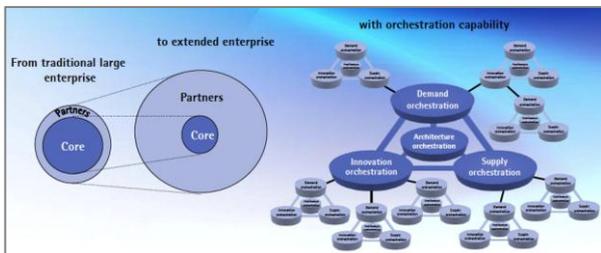
CoR has defined the following guidelines:

1. Europe needs pioneering regions to be forerunners in implementing the EU2020 and through that to invent the desired future.
2. Lifelong learning and the full use of ICT are cornerstones for this change of mindset towards entrepreneurship and innovation.
3. We need the dynamic understanding of regional innovation ecosystems where public, private and third sector learn to operate together. Modernise the Triple Helix.
4. We need methodologies to mobilise public private partnerships and encourage especially people participation: user-driven open innovation & living labs.
5. We need to speed up the change by scalability & implementation. European partnerships with universities at the core need to be used as the drivers.

He then went on to consider the role of the digital agenda. Here, he said, the Italian EU Presidency has enormous opportunities, and he stressed the following three key messages:

6. Digitally-driven transformation is unstoppable. Let us speed up the economic recovery by removing the barriers of the European Digital Single Market.
7. The Digital Agenda for Europe needs to focus strongly on human aspects to encourage the full use of ICT. The local and regional levels need to take the lead: bottom-up experimenting, rapid prototyping, widening participation, and increasing focus on joint co-creation cultures.
8. Investments in competence capacity need to be prioritised. This means synergy between R&D&I, renaissance of the industrial base, network culture, apps/clouds, open data, and e-skills.

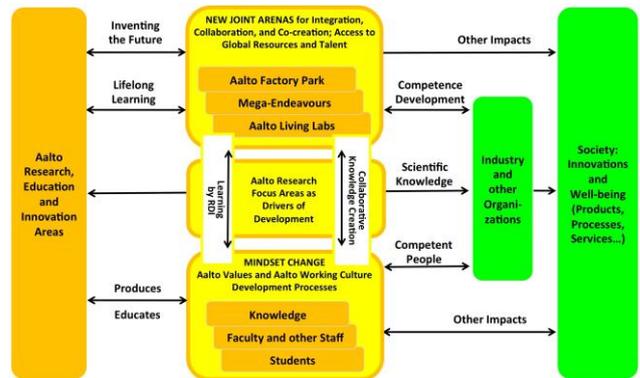
The key word is orchestration – many corporations are transforming themselves from traditional large enterprises where raw materials enter at one end and products leave at the other end to orchestrators of smart services and enterprises as illustrated in the figure below.



It is about thinking bigger, far beyond their own institution, but also in what other companies and institutions might need. As an example, he showed the actors in the current ecosystem in Aalto. Currently, these companies and institutions are located in the area surrounding Aalto University: Microsoft, Rovio, EIT ICT Lab, Laurea (a Finnish University of applied sciences). Also nearby is the very attractive Tapiola Garden City. During the next 10 years, there will be investments of €5billion in the area. Projects include construction of a metro, tunnel construction of a ring road, other infrastructure, housing, office and business buildings, public

services, university buildings, and sports and cultural facilities.

Mr Markkula explained how the university-business interaction in Aalto has become increasingly complex, so that now, the links are multiple, as shown in the figure below.



Most importantly, the mindset has changed. Making a reference to a hugely popular smartphone app developed in Finland, he said that the young tech entrepreneurs in the area are lovebirds, not angry birds! The Aalto entrepreneurial community comprises a Start-up Centre with 80 companies in incubation; a Small Business Centre that offers training; a Centre for Entrepreneurship which processes more than 100 applications for innovative projects each year, resulting in the creation of 10-15 companies and 15-20 patent applications; facilities for entrepreneurs such as an App Campus for smartphone app developers; a Start-up Sauna for students; and a ventures programme.

Summing up, Mr Markkula observed that, in addition to research and education, universities have more societal options and responsibilities ahead, which calls for a modernisation of the Triple Helix model:

1. Universities can and should focus more on societal challenges and as a result, broadening the innovation base by

- Increasing a general motivation towards innovation;
- Stressing the importance of the real-life & real-case approach;
- Moving towards Open Innovation 2.0.

2. Universities are natural platforms for entrepreneurial discovery, especially in:

- Increasing entrepreneurial understanding and activities through science-society dialogue;
- Creating platforms and other pre-conditions for start-ups;
- Universities can be key actors in creating the new culture for strategic alliances through multifinancing and orchestration.

3. Universities have a crucial role in creating regional innovation ecosystems to be based on the co-creation culture and the network of innovation hubs, especially in:

- Creating living labs and innovation test-beds for knowledge co-creation;
- Encouraging bottom-up activities by creating new arenas as innovation hotspots;
- Moving towards experiments, demonstrations and rapid prototyping.

4. Universities are the knowledge base in defining and implementing regional research and innovation strategies based on smart specialisation RIS3, especially in:

- Increasing smart city & smart region initiatives;
- Prioritising the regional activities and strengthening the base for focused activities;
- Building critical mass based on European-wide strategic partnerships.

The roundtable explored the role of the public sector, of enterprises and universities at a local, regional, national and European level for the creation of a knowledge economy.

The first speaker was **Mr Carlo Calenda**, vice minister, Italian Ministry for Economic Development who opened his contribution declaring that the issues on the table are as crucial as they are complicated. He focused his attention on the internationalisation perspective of university-business collaboration, and on how to enter into strategic alliances for creating ecosystems.

Concerning collaboration experiences, there are fewer in Italy compared with the rest of Europe. However, when collaboration starts taking place, the stakeholders appear very satisfied. One reason, as he saw it, is that industrial districts in Italy, while cooperating very efficiently within the region, appear to be tightly shut off towards international value chains.

He went on to consider lessons from the case of Pavia University, where a network has been created between the university, Pavia Chamber of Commerce and industrial associations. This case clearly demonstrated that a public investment is crucial, especially where SMEs are involved. It takes time and money to convince the SMEs that they can gain from the cooperation. Also public finance can completely change the attraction of foreign capital and investment.

To attract businesses, universities need to map the offer and identify the university's key selling points with reference to innovation. As a rule, business associations are critical, even if they ought to be forerunners of innovation. In Pavia, this exercise resulted in a framework that is used to present the initiative to investors. It will be tested for a year, and then rolled out to other universities.

Mr Calenda then went on to consider a second example. In Italy, he said, there is a need for a professional profile as export manager. There is a lack of professional managers in Italy with knowledge of foreign markets. The few persons with the right skills for this type of job are very well paid,

and SMEs cannot afford to hire them. Universities have received targeted funds for the development of a post graduate course in export management. The aim is to educate 3,000 to 4,000 specialised export managers.

The lessons learnt from these examples and others, according to Mr. Calenda included:

- *It is difficult to design a common framework that works in all situations. It is not all experiments that should end up being useful for national policy. It is better to work case by case and look at the instruments to be used in each case.*
- *The flexibility of universities (or lack thereof) is one of the key problems.*
- *The role of national policy makers is not to create tools, but to put in place a flexible framework for cooperation.*
- *The role of the local authorities is crucial in designing specific tools.*

Professor António Cunha, Rector, Minho University (North Portugal) spoke next. He presented the UMinho ecosystem for entrepreneurship and innovation. The ecosystem centres on the university, which offers several facilities, sites for incubation, spinoffs, and partnerships. Up until now, they have incubated about 50 companies with about 500 people.

All activities have to be based on new knowledge, i.e. what companies need, and what universities have to give. Internationalisation is a key to the different activities – in particular, there is much exchange with Brazil.

Minho University is also closely involved with the North Portugal smart specialisation strategy, NORTE

2020.



The three universities in the region have set up a consortium to link the universities and their specificities with the region. NORTE 2020 aims to develop six areas of business (see figures below) with a view to developing the region and stopping the ongoing brain drain.

- Finally, Professor Cunha shared some doubts and questions that the university's involvement in regional development has led him to consider
- First, what will happen to the ability of the faculty (100 academic staff) to combine teaching and innovation?
- The university cooperates quite intensively with local SMEs, but their main contract is with Bosch. This requires insight into issues pertaining to international competitiveness

He concluded that purely regional research is not relevant – research should be advanced and of international quality. To facilitate this end, EU2020 should promote an effective and fluid link between regional strategies and R&D competitive programmes (Horizon 2020).

Professor Donato Iacobucci, Università Politecnica delle Marche subsequently shared the experience from the Italian region of Marche. The region is characterised by a prevalence of small and medium sized firms organised in industrial districts. There is a prevalence of traditional sectors (food, textile and clothing, footwear, furniture) and mechanical products (machinery and equipment, household appliances). The university is traditionally very open to industry. As far back as 2006, the university set up an industrial liaison office (ILO).

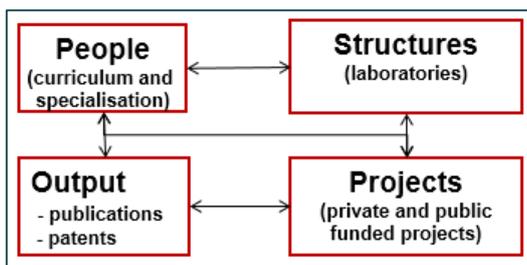
The main aims in the first phase were:

- To create a better reciprocal knowledge between university and firms through meetings and
- To disseminate of information about ILO as a 'gate' for companies to approach the university.
- To enlarging the number of firms collaborating with the university.

This was achieved by co-financing industrial PhDs in a very successful programme which is now sustained by the regional government.

A particular challenge was the prevailing innovation model of the SMEs in the region. It can be characterised as innovation without research, so the university ran the risk of ending as a consultancy, solving short-term business problems rather than contributing to innovation and growth. Therefore, the industrial liaison office created a manual for how industry can cooperate with university, which, among other things, state that if a problem can be solved within a matter of weeks, universities should not solve it.

In the second phase, the university developed a methodology for mapping research and technology transfer capability. The elements in the methodology is shown in the figure below.



This mapping, Professor Iacobucci indicated, is very important in order to answer the questions from firms.

In the third phase, collaborating has been initiated with firms and the regional government to identify common technological domains for investment with a

view to developing a smart specialisation strategy. This represents a great chance for firms to change their innovation model, and for universities to further develop their TT capability and impact.

Professor Iacobucci concluded by identifying two risks involved in initiating this process: One is that regional authorities may tend to want to extend the scope of the innovation strategy into all sectors present in a region. Here, it is essential that they are reminded to maintain the specialisation approach. The other is that regional authorities focus too much on innovation policy and not enough on the links between research and innovation.

Mr Lorenzo Bacci, responsible for students, financial support and research and development, Regione Toscana spoke from the point of view of the regional authority. He started by pointing out that the Tuscany region has different types of intervention to support university-business collaboration, in many cases similar to those of Marche. Tuscany is a small region, and like many other Italian regions, the industrial structure is fragmented and highly specialised in traditional sectors. The region's performance on innovation indicators is low.

The region has three large universities, several schools, and a regional council of research, but the SME system does not appear very willing to take up what comes from the research sector.

Therefore, the Regional Authority prioritises a strengthening of the intersections of institutional spheres, as this will strengthen innovation. Regional higher education policies focus on the university-business intersection.

Mr Bacci emphasised that it is essential to have strong governance system, and that bureaucracy will not lead to desired results. Joint university-industry research projects are needed, and in Tuscany, the first of these projects is ongoing, 50% funded by companies.

For universities to play an active role in strengthening the innovation ecosystem, universities have to engage in activities such as business scouting, tech-transfer, IPR and licensing, networking at local and global level. This requires specific competences i.e. new competences. Therefore, the Tuscany Region funded mixed education and training paths to develop these specific competences. The courses were addressed to PhDs and post graduate students with more than one year of practical experience on the particular subject.

Further, the Region has funded courses to support academic entrepreneurship. The course programme included: business plan; legislation on spin-off and start up; credit financing, support policies, fund raising, and R&D funding schemes.

The presentation of the next speaker, **Mr Hank Kune**, Director, EDUCORE, the Netherlands, was entitled 'Some Practitioner Perspectives And Provocations'. He started by addressing the question of ecosystems and orchestrators. He claimed that the future will revolve around challenge-based

innovation ecosystems. Social, environmental, and economic challenges provide the why and the what, and all actors have a role to play. No stakeholder plays a central role – the challenges are at the centre. Rather than being a collaboration, such an ecosystem is a commons, where people need to be aware of their role in the system. The role of the stakeholders with power to orchestrate is to find the balance between orchestration and self-organisation, and to provide meeting spaces and data services. We all need to learn to respect diversity and not try to be equal. We need to engage people – in the street and in companies.

A problem with RIS3, he said, is that the 'usual suspects' come to conferences – but what about the more than 300 regions, who are not here today?

What we need, he concluded, is more experimentation and entrepreneurship – not over-planning and over-compliance. He challenged politicians to commit to policy innovation and maybe political innovation.

Additional input for discussion:

Hannes Klöpfer, Co-founder and Managing Director, IVERSITY

Giovanni Lo Storto, Director General, LUISS

Catherine Jacqueline Silvestri, Manager, Engineering Section - GE Oil & Gas Turbomachinery Solutions; Vice-President, Valore D

This penultimate session, where company representatives were invited to give their view on the discussions during the Forum, was moderated by **Dr Stefan Humpl**, Geschäftsführer, 3s Unternehmensberatung, Austria.

The first speaker was **Ms Catherine Jacqueline Silvestri**, Senior Manager, Engineering Section - GE Oil & Gas Turbomachinery Solutions and Vice-President, Valore D, who addressed the issue of equal opportunity in studies and work. She first gave some figures on women's employment in Italy:

- 47% of women are in employment;
- More than 56% of graduates are women;
- Women graduate with higher marks and in a shorter time.

In order to promote equal opportunities in the labour market for women and harness the talent of women for innovation and growth, Valore D (Valore Donne, Female value) was founded by 12 enterprises in 2009. Valore D now has 115 members.

According to Ms Silvestri, there are four main causes for inactivity among women:

- Cultural and environmental influences linked to the family;
- Women tend to choose educational paths not linked to the market;
- Many companies will not employ women – and when they do, wages are 10-20 % lower;
- Women choose less scientific subjects.

The solutions proposed by Valore D involve three players:

- Girls, who should make educational choices in line with their capabilities and market demand.
- Families, who should stimulate girls to make choices free of gender stereotypes.
- Companies, who should promote a gender-based policy

At the University of Florence, a gathering was arranged for participants from ten secondary schools and six companies. More than 100 girls met with companies and role models – young women who were newly recruited as well as seniors. One of those companies, GE Oil & Gas, offered 30 internships for female secondary school students over the summer, and tutors were assigned. The students worked every day with engineers, both male and female.

Finally, Ms. Silvestri related the experience of GE Oil & Gas in this respect. The leadership is engaged in creating a HR-policy turnaround with focus on gender. Four main areas are identified:

1. Recruitment – active search, assessment centres, market mapping;
2. Synergy – working with Valore D and women's networks;
3. Branding to make the company appealing to women;
4. Working with universities – events for principals of technical universities.

She concluded by saying that if there were closer relationship between universities and companies, all this could be much easier.

VALORE D is the first association of large companies formed in Italy in order to support women's leadership in the corporate world. Our mission is to support and increase women's representation in top positions in major Italian companies through tangible and concrete actions. The activity of Valore D in support of women's leadership is developed in three directions: towards women managers, Italian companies and society as a whole. Valore D promotes an innovative corporate structure that overcomes the implicit gender bias and favours reconciliation, provides women managers the tools and knowledge relevant to their professional growth and proposes a new cultural model that includes the full participation of women in the economic and social life of the country.

For further information <http://valored.it/en/>

Mr Giovanni Lo Storto, Director General, LUISS was the next speaker. LUISS is a university created by the Italian Confederation of Industries. Priority is given to creating problem-solving, flexibility and a cooperative spirit. He opened his talk by quoting a Chinese curse: 'May you live in interesting times' – meaning that interesting times are usually rich in events, and observing that we certainly are living in interesting times, but that we should think of it as a challenge and an opportunity, not as a curse.

We should remember that we are living in the context of crisis, and that there is a young generation in Europe who has never experienced the good times. We should also remember that a degree is no longer a guarantee of a promising career. As an example, he reminded the audience that 18% of Italian university students drop out and a significant number of under 30 is NEET (Not in Education, Employment or Training).

We need trust, he said, to share and make useful the knowledge that we have in abundance, and which is

not depleted when we use it – unlike natural resources.

He went on to talk about how to change the situation. LUISS, together with companies, has developed summer school programmes for secondary school students in order that they may experience entrepreneurial collaboration even before graduation.

He reminded the audience that social media companies were all founded by young entrepreneurs and gave the example of Atooma, a 'hot' Italian start-up that has just moved to San Francisco, due to rigid legislation.

But he also called attention to the fact that innovation has not to be spectacular. For example, 'Whatsapp' is not a radical innovation – it is an app for chatting using the Internet instead of the mobile network - and often that is what we need: "not a new wheel, but the idea of four wheels to create a car".

Summing up, he identified the keywords as trust, knowledge, sharing, courage.

Mr Hannes Klöpper, Co-founder and Managing Director, iversity gave the next contribution. Hannes Klöpper is in his early 30s. In 2008, co-founder Jonas Liepmann developed a learning platform concept that enabled working groups from different universities to exchange and cooperate online, a concept that was awarded seed funding from a grant. Jonas called his platform iversity. Meanwhile, Hannes and some friends were working on a similar idea to publish university lectures and other educational materials online within an online student social network.

He attended a conference and was invited for lunch of the Chairman of Euro University in Budapest who was writing a book about the university in the 21st century. Hannes was asked to write about the

influence of digital technologies and became involved in the book project.

In 2011, Hannes joined forces with Jonas, and over a period of 6 months they talked to lots of investors, but found it difficult to convince investors to contribute to such an uncharted territory as online education. When eventually they did receive funding, they had to make it work, even though the territory was new to them as well.

The lessons of the story thus far read like this: You must trust young people to get things going, even if they are not totally clear how to go about it. Persistence pays. You must be part of a community to succeed.

MOOCs took off, Coursera took off, and not so much happened in Europe. Hannes and Jonas decided to fill this gap and turn iversity into a MOOC platform. In 2011, the two young men approached businesses,

'which were sclerotic and slow (at least the big ones) even more than universities!'. They showed interest: *'Oh, that's great – good luck!'*, but did not help. Mr Klöpfer thinks that we can learn from US start-up culture, where there is a willingness to give people the benefit of doubt.

In 2012, the partners eventually got funding and started a MOOC production fellowship contest – awarded EUR 25,000 to professors who would develop content for their not-yet-existing system. In October 2013, they launched iversity and looked for partners across Europe. Lessons learnt are:

- Start-ups need trust and capital.
- Non-tangibles are important – investors should be ready and willing to commit to a project without everything being in place.

Policy outlook – Looking ahead: What are the hurdles that are to be removed to boost academic development and corporate culture within HE institutions and how different stakeholders can engage, and improve their cooperation for a stronger impact on innovation and growth?

Panelists:

Innocenzo Cipolletta, President of UBS Italia SIM, UBS Fiduciary; President, University of Trento

Guido Fabiani, Councillor, Productive Activities and Economic Development, Lazio Region

Andrea Fiorini, President, Italian Council for University Students (CNSU)

Cristina Messa, Università degli Studi di Milano – Bicocca

Moderator: **Adriana Cerretelli**, Journalist, Il Sole 24 Ore

The concluding session addressed the hurdles that need to be removed to boost academic development and corporate culture within HE institutions. It also explored how different stakeholders can engage, and improve their cooperation for a stronger impact on innovation and growth.

Moderator of this session was **Ms Adriana Cerretelli**, Journalist, Il Sole 24 Ore.

The first intervention came from **Professor Cristina Messa**, Università degli Studi di Milano – Bicocca, who highlighted three important objectives:

1. Facilitating and increasing the idea of entrepreneurship;
2. Giving strength back to the economy;
3. Interaction between universities and the business community.

This requires easier collaboration between the universities and business community. Facilitating and increasing exchange is not about small projects or dialogue, but true exchange of people, ideas, and resources. Professors should be allowed to work in businesses, including SMEs and business people in universities. Industrial PhDs and new curricula of interest to businesses should be prioritised.

Everybody should cooperate in removing cultural barriers and invest in a common language. Failure should be acceptable. It is important to introduce new modes of assessment of universities and to facilitate entrepreneurship at all levels in society.

Mr Innocenzo Cipolletta, President of UBS Italia SIM, UBS Fiduciary; President, University of Trento, addressed changes that have already taken place. He acknowledged that there are difficulties, but that things have changed for the better since the 60s and 70s. Among remaining challenges are: The governance of universities and the autonomy of individual professors makes it difficult to work with companies on a project with shared goals. It is unusual for a university department to work with industry, collaboration is initiated and carried out by individual professors.

In Trento, a more direct governance has been set up, whereby the province finances the university. The university has developed a strategic plan with local industry and developed a programme in mechatronics. His conclusion is that authorities need to reinstate governing power in universities for collaboration to succeed.

Another important challenge is that most companies are SMEs, often family run, and the owner/manager does not have university degree. Often they cannot express their needs. Business associations and chambers could have a role here in establishing consortia in order to communicate with universities in an easier manner.

The next speaker was **Mr Guido Fabiani**, Councillor, Productive Activities and Economic Development, Lazio Region. Until 18 months ago, Mr Fabiani was a director of a university. He is aware of the limitations that have come about due to the financial crisis. In Europe and Italy, people are reasoning according to the situation in the economy. However, it must be acknowledged that in particular manufacturing has achieved a totally different meaning than in the past. Production processes are now highly knowledge-based, and relationships between universities and enterprises are more necessary than ever.

The barriers include: Poor visibility of universities seen from industry, and similarly, poor attention at university to the needs of a productive environment. To overcome these barriers, financial and institutional instruments are needed.

He remarked that we are starting an experiment – and he is confident that it will grow. However, it should also be evaluated in order to choose the most efficient pathways.

Mr Andrea Fiorini, President, Italian Council for University Students (CNSU) directed the attention of the audience towards a stakeholder, who had not achieved attention during the Forum: The consumers, who, according to Mr Fiorini, ‘know what the world is about’.

He called for instruments that would allow students to learn from the experiences of entrepreneurs and businesses, and for programmes closely linked to the territory.

COFFEE BREAKS PRESENTATIONS

A series of parallel coffee-break- presentations introduced tools and actions of University-Business cooperation and Innovation in education.

Knowledge Alliances



Knowledge Alliances are transnational, structured and result-driven projects between higher education and business. They are open to any discipline, sector and to cross-sectoral cooperation. Knowledge Alliances are included in the Key action 2 "*Cooperation for Innovation and Good Practice*" of the Erasmus + Programme.

The purpose of Knowledge Alliances is to strengthen Europe's innovation capacity by fostering innovation in higher education via balanced, two-way knowledge exchange with enterprises and across the broader socio-economic environment. They implement a coherent and comprehensive set of interconnected activities through transnational partnerships, involving a minimum of six organisations from at least three Programme Countries, of which there must be a minimum of two higher education institutions and a minimum of two enterprises. Projects should last for a minimum of 2 and a maximum of 3 years.

Knowledge Alliances will:

- Develop new, innovative and multidisciplinary approaches to teaching and learning;
- Stimulate entrepreneurship and the entrepreneurial skills of students, academics and company staff;
- Facilitate the exchange, flow and co-creation of knowledge.

More information are available at:

http://ec.europa.eu/education/opportunities/higher-education/business_en.htm#alliances

Organisations wishing to apply for Knowledge Alliances are invited to **submit applications** online by **26 February 2015, 12:00 noon (midday, Brussels time)** to the Education, Audiovisual and Culture Executive Agency in Brussels

The 2015 call is available at:

http://eacea.ec.europa.eu/erasmus-plus/funding/knowledge-alliances-sector-skills-alliances-2015_en



The Knowledge Alliances were presented by Ms. Renata RUSSEL, EACEA Education, Audiovisual and Culture Executive Agency

Study Anywhere!



iversity.org is a European online platform for Massive Open Online Courses (MOOCs). iversity supports universities on their way into the digital age and enables instructors from recognised institutions to teach interactive online courses to thousands of students from around the world. MOOCs represent the biggest media revolution in the academic world since the invention of the blackboard. They make the spatial, temporal and financial restrictions of higher education things of the past. Iversity transforms excellent university teaching with digital media and enables online learners to have their achievements recognised with verified certificates. Course certificates can award real university credit and serve as proof of qualification for

more and more employers everyday.

More information available at: <https://iversity.org/>

Iversity was presented by the Managing Director Hannes Klöpfer and Ms. Manuela Verduci

Industrial doctorate



The Marie Curie Actions offer the possibility to companies and institutions to propose two new formats of PhD training "the European Industrial Doctorates" and the "Innovative Doctoral Programme". The principle is simple, to strengthen the links between academia and industry, and to develop research careers combining scientific excellence with business innovation. More information are available at: <http://www.apre.it/en/>

The industrial doctorate was presented by Ms. Katia Insogna, APRE - Agenzia per la Promozione della Ricerca Europea

HEInnovate

How innovative is your institution? Do your students get the training they need to be more entrepreneurial, more flexible? Is your staff entrepreneurial? What makes a higher education institution entrepreneurial? HEInnovate is an online self-assessment tool which addresses higher education institutions interested in developing their entrepreneurial potential and capacities.



gives access to tailored resources addressing that particular institution's needs, based on the results of a self-assessment, thereby providing guidance on how to become a more entrepreneurial HEI. It is open to everyone and can be used as a formal or an informal exercise, by individuals, or at the faculty or the institutional level. HEInnovate does not

have any benchmarking or ranking functions. All data entered by users is, by default, confidential and accessible only to that user.

Since its launch, HEInnovate has been used by HEIs in all 28 EU Member States and over 20 seminars and workshops have been held across the Union. Its impact, however, has gone well beyond Europe. So far, more than 500 HEIs worldwide have used the tool to assess their entrepreneurial and innovative capacity. A budding community of users and stakeholders has made HEInnovate its own. Grass roots activities and initiatives are springing up all over the world using the tool as a starting point.

Over the course of 2015, HEInnovate will continue to grow and develop; and the creation of a Training Package that will allow HEIs to carry out their own, independent workshops, tailored to their particular institution and audience. Further workshops and dissemination events will continue to be held across Europe as HEInnovate strives to support and encourage institutional change.

The HEInnovate Challenge (deadline: January 5th 2015) looks for brief examples of how your institution has tackled any one of the seven dimensions covered by HEInnovate; the approach taken, the challenges, the successes, the difficulties and pitfalls encountered, and the outcomes. For example; staff incentives or recruitment policies, outreach and exchange with the local, regional business community, new teaching approaches and curricula, to mention but a few.

The HEInnovate Challenge is not about best practice at a European level but about the diversity of different approaches taken within the context of specific institutions and the progress and changes made according to that context. It's about what really happens at your HEI.



All submissions will be reviewed by a group of experts and 7 will be selected and published on the HEInnovate website as part of the resources available to users. Your experience will become part of the knowledge base supporting the development of the entrepreneurial and innovative HEI.

Representatives from the selected institutions will be invited to the Sixth University-Business Forum in Brussels in March 2015.

We are looking for short, concise and clear, stand-alone narratives, which can be easily understood by a diverse and varied audience.

- Submissions must be no longer than **750 words**.
- Submissions must be written in plain, simple **English**.
- **One dimension** can be addressed per individual submission.
- No more than two submissions per institution.

- All submissions **via the website only**.

Website: <http://heinnovate.eu>

HEInnovate was presented by Mr. Georgi Dimitrov, Policy Officer, European Commission, Directorate Education and Culture, Higher Education and Innovation; Entrepreneurship; EIT.

TERRA (Technology for Research and Archaeology) Digital Cultural Heritage, an example of ecosystem

TERRA is an experimental exhibition area for community to diffuse the results of scientific research applied to archaeology along with the ancient history of the island of Procida-Vivara. The exhibition has been achieved according to modern forms of representation aimed to have a greater involvement of the visitor and an easier understanding of complex scientific information.



The university has to deal with scenarios that the digital revolution has put in place and should investigate the possible dynamics for the identification and construction of new languages and tools for the understanding and communication of cultural heritage. Unpublished matrices need for meaning and new schemes critical to generate content in support of the virtual and the proliferation of its contexts.

More and more urgent is the need to check all possible areas of convergence between research and its range of applications for new policies for territorial development and support youth entrepreneurship in the areas of promotion and enhancement of cultural heritage.

For these reasons, today we can talk about a "TERRA Model," a place where converge and interact different research areas (archaeology, digital technologies for 3D digitization, communication), training sessions, development, experimentation, use and testing of the solution designed and produced.

TERRA has been established by the research groups of the University Suor Orsola Benincasa, and the Distar - Department of Earth Sciences, Environment and Resources - University Federico II, in agreement with business Westend Aeronautics and Wind, meant to promote and communicate through digital devices, the results of the research that is being carried out within the project Sinapsis (PON01_01063 - MIUR).

More information are available at: <http://www.yelp.com/biz/terra-technology-and-research-for-archaeology-procida>

The TERRA project was presented by Prof. Leopoldo Repola, Università Suor Orsola Benincasa di Napoli and Mr. Nicola Scotto di Carlo, Comune di Procida - Assessorato alla Cultura

Conference speakers – Biographies

Bacci Lorenzo	
Regione Toscana, Florence (Italy)	Head of the Unit “Access to University studies and Support to Research
	<p>Programming Documents on Research and Innovation policies for Tuscany Region. Study and Monitoring of Research and Innovation policies of Tuscany Region. Support to the activities of the Regional Conference on Research and Innovation of Tuscany and coordination of thematic working groups of the Conference.</p> <p>Programming and management of policies in the following areas:</p> <ul style="list-style-type: none"> • support to University studies and tertiary education; • researchers’ career development and valorisation and transfer of research results; • support to third mission activities of University and Research Organisations; • research projects aimed at both Research Organisations and Enterprises. <p>Main research interests</p> <p>Research and Innovation Economics (applied research on regional innovation systems); Industrial policy with special attention to research, innovation and technological transfer measures. Productive firms and sectors analysis, production organisation models, outsourcing, offshoring and internationalisation. Sub-regional development models; local and regional development; structural analysis and evolution of local systems; input-output analysis at regional and sub-regional level; relationships between local systems; Tourism.</p>
Beutgen Christof	
Head of Employee Development Policies	Deutsche Bahn
	<p>Christof Beutgen is the Head of Employee Development Policies at Deutsche Bahn AG/DB Group. DB Group provides mobility and logistic services worldwide and operates in over 130 countries. With more than 196.000 employees in Germany the DB Group is one of the biggest nationwide employers. One of the department’s responsibilities is to attract motivated employees and retain them long term. Also they offer a broad portfolio of different junior entry programs at DB to ensure high-quality support and development of new employees. Additionally the department defines and brings forward employee development policies at the DB Group. The aim is to offer lifelong development perspectives to every employee.</p> <p>Christof Beutgen grew up near Düsseldorf. After his vocational training as tax accountant assistant he graduated in psychology with major in work and organizational psychology. He started his career at DB AG in the graduate programme. After working in different positions in the area of long distance trains, he took over the HR Department for the region East at DB Vertrieb (Sales). In 2010 he became Head of the department “Employee Development Policies” in the Holding.</p>
Bianchi Patrizio	
Emilia-Romagna Region	Regional Minister of Education, Vocational Education, University and Research, Labour
	<p>He graduated from the University of Bologna, Faculty of Political Sciences, specializing in Politics and Economics. He is professor of Applied Economics. From 2004 to 2010 he was the Rector of the University of Ferrara. He had formerly served as Dean of Faculty of Economics at the University of Ferrara. He is an industrial economics expert. He was Head of the Industrial Policy Laboratory of Nomisma, a member of the board of directors of IRI and president of Sviluppo Italia. He has been a member of the Commission for labour policies and manufacturing sectors at the National Council of Economy and Labour. He is an Economic Advisor to the Governor of Guangdong Province of China. He is honorary professor at the South China University of Technology in Canton. He is the author of several books and publications in International scientific journals.</p>

Elena Bou

KIC-InnoEnergy

Innovation Director



Elena Bou is the Innovation Director of KIC InnoEnergy, a European company founded in 2010 under the umbrella of the EIT, to foster innovation and entrepreneurship in the field of sustainable energy and operating in eight European countries.

Before becoming part of the executive board of KIC InnoEnergy, she was member of the founder team of this company. Prior to that, she developed her professional career in the field of management consulting in both private and public companies, nationally and internationally, giving her the opportunity to manage and develop many European Multinational Projects involving a high degree of complexity and stakeholders and including

the creation of two spin-offs.

Elena is also Associate Professor of ESADE Business School since 1998. Former Director of the Executive Master of Operations and Services and cofounder and former director of the GRACO Research Group (IIK) at ESADE. Consultant and researcher in the field of knowledge and Innovation Management and author of several publications.

Elena Bou holds a PhD in Management Sciences from ESADE-URL (Doctor Europeus) and has a degree in Business Administration and Management and an MBA from ESADE Business School. She also studied in Florida University and Copenhagen Business School.

Calenda Carlo

Ministry for Economic Development

Vice Minister



Born in 1973 in Rome, married, father of 4. He graduated in Law at the University of Rome. Until June 2011 he served as Chief Executive Officer at Interporto Campano. From 2004 to 2008 he was Assistant to the President of Confindustria – the Italian Industrial Association, responsible for International Affairs, and then Director of the Strategic Business Area. He mainly dealt with the development and implementation of international business missions.

He has worked on major issues relating to international trade and investments. He has lead several delegations of entrepreneurs abroad and developed economic penetration actions in major world markets, including India, China, Brazil, Russia, UAE, Thailand, Kazakhstan, Serbia, Romania, Bulgaria, Egypt, Turkey, Algeria, Tunisia, Morocco, Israel, South Africa, Mexico. Before joining Confindustria, he

was responsible for product marketing and programming for “Sky Italia”. Before that, he served as Responsible for relationship with financial institutions and for Customer Relationship Management at “Ferrari”.

In May 2013 he was appointed Vice Minister for Economic Development, in charge of internationalization policies.

Cammelli Andrea

Alma Laurea

Director



Since 1980 Andrea Cammelli has been Professor of Social Statistics, at the Faculty of Statistical Science, University of Bologna. He mainly focused his research on the long term analysis of the educational processes especially in the field of the third level education. His activity has resulted in several publications in Italy and abroad.

He was member of the Commission for the Statistical Surveys at UNESCO in Paris and of the Commission for the Right to Education and International Relations of the Ministry of University and Scientific Research and Technology. He served as Italian Delegate to the UNESCO-CEPES European Centre for Secondary Education in Bucharest.

He was appointed by the Italian First Minister as responsible for the surveys on the status and on the evolution of statistics on education in Italy (2003-2004).

He was Director of the Statistical Observatory of the Bologna University since its foundation. Within this competence he has developed and managed the implementation at the University of Bologna of the AlmaLaurea in 1994. The Project has been then extended to a growing number of universities (July 2014: 65 universities), resulting in 2000 to the establishment of the Interuniversity Consortium AlmaLaurea. In this context Professor Cammelli, AlmaLaurea Founder, is currently engaged as the Director of the Consortium?

Cantamessa Marco

PNICube

President



Marco Cantamessa is President of PNI Cube. Graduated in Electronics Engineering at Politecnico di Torino, he is now a professor at the School of Industrial Engineering and Management. He teaches courses in Innovation management and product development at Politecnico di Torino, and has lectured on the same subject in MBA programs offered by business schools such as SIMT, ESCP-EAP and EPFL.

His research activities have been carried out in the field of operations management, addressing the two areas of Product development and Manufacturing systems.

Research has been carried out within basic and applied research projects, both at national and European level. He is the author or co-author of more than a hundred scientific papers, of which twenty have been published in international peer-reviewed journals

He is a member of numerous boards of academic societies, journals and conferences (Design Society, Journal of Engineering Design, ICED, DESIGN). He also is President and CEO of the I3P technology incubator in Turin, and board member or consultant to other organizations engaged in technology transfer

Cipolletta Innocenzo

President of UBS Italia SIM, UBS Fiduciary and President of the University of Trento



Innocenzo Cipolletta was born in Rome on December 8, 1941 and is a "Cavaliere di Gran Croce".

He graduated in Statistics from the University of Rome in 1965. Among his professional experience, he has been President of Ferrovie dello Stato (Italian State Railways) from 2006 to 2010, President of Sole 24 Ore from 2004 to 2007, President of UBS Corporate Finance Italy from 2002 to 2006, President of Marzotto SpA from 2000 to 2003 and General Director of Confindustria from 1990 to 2000. He has also held director and manager roles in OECD (Organization for Economic Cooperation and Development) and ISCO (National Institute for the Study of the Italian Economic Situation).

As a university teacher he has led teaching assignments in Statistical Sciences at the University of Rome La Sapienza, at the LUISS - Guido Carli University of Rome, at the Cesare Alfieri of Florence and at the University of Reggio Calabria. He is currently President of UBS Italia SIM, UBS Fiduciary, and President of the University of Trento and AIFI, the Italian Private Equity and Venture Capital Association. He is on the Board of Directors of Poltrona Frau SpA, iGuzzini SpA, Lunelli SpA, Laterza-Agora Srl, Civita Servizi e BonBoard SpA. Currently he is a Board member of the Censis Foundation, Music for Rome Foundation and the Lars Magnus Ericsson Foundation. He is President of the Scientific Committee for the Nomination of Venice and the European Capital of Culture 2019 "Venezia con il Nordest 2019" and takes part, among others, in the scientific committees of the "Italian Economy" of the "Rivista di Politica Economica" and of the "Fondazione del Nord Est". He is also a shareholder in non-profit organizations such as the Italian Society of Statistics, the Italian Society of Economists, the Italian Society of Economics, Demography and Statistics, Adriano Olivetti Institute for the Study of Economic and Business Management (ISTAO) and the Institute of International Affairs (IAD). He is a journalist and economic commentator of the weekly publication, L'Espresso, in addition to having written numerous articles and books.

Cuhna Antonio M.

University of Minho

Rector



Born in Braga, Portugal, in 1961. Graduated in Industrial Engineering (1984) and PhD in Polymer Engineering in 1991.

Full Professor of the Polymer Engineering Department (DEP) of University of Minho (UMinho). Research activity at IPC (Institute for Polymers and Composites – I3N Associate Laboratory), UMinho, developing several projects under the frame of national and European programmes, in the fields of: structure development in polymer processing, non-conventional moulding techniques and tools and natural polymers. Author of 120 refereed ISI papers, 3 books (editor), 4 patents and supervisor of 14 concluded PhDs. Head of DEP from 1999 to 2004 and Dean of the School of Engineering of UMinho from 2005 to 2009. Member of the Executive

Board of PIEP (Innovation in Polymer Engineering) from 2001 to 2009 and CEIIA (Engineering and Innovation Centre for Automotive Industry) from 2005 to 2009.

Rector of University of Minho since 2009. Member of Executive Board of the Portuguese Rectors Council, of the Conselho Nacional da Educação (Portuguese Education Council) and of the Research Policy Working Group of the European University Association. Board member of Iberian Nanotechnology Institute and of the MIT-Portugal

Program. Chairman of Instituto Internacional Casa de Mateus and of CEER Foundation (consortium of the Northern Portugal and Galician Universities). Golden Insignia of the University of Santiago de Compostela.

Fabiani Guido

Region Lazio

Councilor for Productive Activities and Economic Development



Education and Titles: After graduating in Agricultural Sciences in 1962, he took a postgraduate diploma at the Centre of Economic and Agricultural Studies for the South of Italy, directed by Manlio Rossi-Doria, in Portici/Naples and, in 1970, a visiting scholar specialization degree in Economic Planning at the London School of Economics. He became Full Professor in 1980. In 1991, Dr. Fabiani was Copeland Fellow at Amherst College, Massachusetts (USA). In 2005 he was awarded the title of Chevalier de la Légion d'honneur - Knight of the National Order of the Legion of Honour of the French Republic. In 2007 he was awarded the title of Doctor Honoris Causa by the Universidad Ricardo Palma, Lima, Peru. He was also awarded with the Grado de Gran Oficial, Orden de Bernardo O'Higgins,

Republica de Chile – Officer in the Bernardo O'Higgins Order, Chile.

Dr. Fabiani's main fields of research include international and Italian agriculture, territorial and environmental planning and development in Southern Italy.

Career: Since March 2013 he has been appointed Councillor for Productive Activities and Economic Development in the Latium Regional Government; from November 1998 to March 2013 Prof. Guido Fabiani was Rector of Roma Tre University. He was a full-time research scholar at the Rossi Doria Centre from 1962 to 1970. Beginning in 1971, he became a professor at the Universities of Modena, Naples, Rome and Salerno, teaching theory of planning, agricultural economics and policy, agricultural market economics and environmental economics. From 1981 to 2000, he was editor-in-chief of the review *La Questione Agraria*. In 1992 he became the first Dean of the "Federico Caffè" Faculty of Economics at the newly founded Roma Tre University, a position he held until 1998. Between 1997 and 1999 he was President of the Istituto Nazionale di Economia Agraria - INEA (Italian National Institute of Agricultural Economics). In 1998 he became chairman of the Italian Committee for Reviewing (auditing) Agricultural Statistics, ISTAT; in 2000 he became the Italian Representative in the Food and Agriculture Organization of the United Nations (FAO) Trilateral Mission Evaluation Committee (Italy, Japan, China) of the First China Agricultural Census; he was member of the Administrative Board of the Southern Regions Training Centre (Formez) and of Agenzia Nazionale per la Protezione dell'Ambiente - ANPA (Italian National Agency for Environmental Protection); in 1985 he was FAO consultant in the project *Projecto de capacitación en Planificación, Políticas Agrícolas en América Latina y el Caribe*. In 1972 he was member of a United Nations Commission in Poland on the Role of Cooperation in the Development of Micro-Regions; he was scientific consultant in other national and international institutions such as ISTAT, Ministry of the Environment, Ministry of Agriculture, Ministry of Foreign Affairs - Department of Development Cooperation, Ipalmo, EEC, CNEL and UN. Since January 2006 he has been member of the National Research Council Evaluation Committee. From 2007 to 2009 he was member of the Advisory Committee and of the Executive Committee of the National School for Public Administration. He is President of the Latium Universities Regional Coordination Committee (CRUL) and member of the Conference of Italian University Rectors (CRUI) and of the European University Association (EUA).

Publications: Major works, essays, volumes have been published by Il Mulino, Einaudi and Franco Angeli and translated into Japanese, French, English, Spanish and Portuguese.

Alain Fayolle

EMLYON Business School, France

Director of the entrepreneurship research centre



Alain Fayolle is a professor of entrepreneurship, the founder and director of the entrepreneurship research centre at EMLYON Business School, France

His academic background includes a Degree of European Engineer (1992), a Master of Science in Management Research, University Jean Moulin, Lyon(1992), a Ph.D. in Management Sciences, Lyon University (topic: Contribution to a study on entrepreneurial behaviours of French engineers and in 2000, he has got an Habilitation in Management Research Supervisory Activities (HDR), University Pierre Mendes France, Grenoble.

Alain Fayolle research interests cover a range of topics in the field of entrepreneurship: education and training, corporate entrepreneurship, new venture creation process, family entrepreneurship, opportunity and necessity entrepreneurship, entrepreneurship as a field.

Alain Fayolle is regularly invited as a keynote speaker by international universities.

He has been visiting professors at HEC Montreal (Canada), Solvay Brussels School of Economics and Management (Belgium), Universities of Sfax, Sousse and Tunis (Tunisia). He has been also (or still is) acting as an expert for

different governments and international institutions (OECD, EC).

Alain published twenty five books and over one hundred articles in leading international and French-speaking journals. Among his editorial positions, he is notably an Associate Editor of JSBM and an Editor of two leading French-speaking journals. In 2013, Alain Fayolle got the 2013 European Entrepreneurship Education Award and has been elected officer of the Academy of Management Entrepreneurship Division (a five year commitment culminating with position as Chair of Division in 2016).

Fiorini Andrea

National Council for Univeristy Students-CNSU

President



He is a second year master's degree student in Administration, Economics and finance. Since July 2013 he is the National University Council President for the Italian Ministry of Education, after being first a member of the Faculty Council of the business College and than a member of the student Council . He attended the University Of l'Aquila in 2007 and in 2012 he obtained the Bachelor's degree in Economics and Business with a qualification of 99/110. From 2002 to 2007 Andrea Fiorini attended the Senior High School L. Classico "Tulliano".

Since 2010 he developed important communication and management skills thanks to the various activities he joined. As a matter of fact, in 2011 he became the President of a new born cultural association in his city called "Prossimamente". Its aim is to promote different cultural events and thanks to Mr Fiorini's ideas this association grow up immediately developing projects and courses for free.

Garcia-Miranda Miguel

CEO

LiquidFloors



Miguel García is the founder and CEO of Liquidfloors, based in Kirtrijk, Belgium. As a serial entrepreneur he is also the founder: co-owner of M-Interieur, Subfloors, Keyconcepts and currently serves as a board member on the Board of Directors at Youthstart (former NFTE), a non-profit organization dedicated to helping young people build their future in today economy.

Bitten badly by the entrepreneurial bug, Miguel realized early that he wanted to create his own business. Leaving school soon with little qualifications, he worked as a decorator for a few years before starting a first successful business in interior finishing for buildings, M-Interiors. During the same period, Miguel co-founded Keyconcepts, which develops vertical search engines for the service industry and currently owns Zoekadvocaat.be; a lawyers search engine for the Belgian market.

An autodidact on a consistent quest for knowledge, Miguel later studied at the Vlerick Business School and is also an alumni of Youthstart by which he was later awarded with the "Young Entrepreneur of the Year" title in Manhattan NYC (2007). Currently he serves –as President of the Youthstart alumni organization- on the Youthstart Board of Directors, keen on helping aspiring young entrepreneurs reaching their potential.

Giannini Stefania

Minister

Ministry for Education, University and Research



Stefania Giannini, the new Minister of Education, University and Research, was born in Lucca on November 18, 1960. She studied at the university of Pisa and Pavia and in 1999 she became full professor of Glottology and Linguistics. She was the Rector of the University for Foreigners of Perugia from 2004 to 2012 and served as government expert in national and international committees, in the fields of education and cultural promotion. She became a member of the Ministry of Foreign Affairs National Commission for the Promotion of Italian Culture abroad, President of the Study Commission for research ethics and bioethics of the Italian National Research Centre (CNR), member of the strategic steering Committee for scientific and cultural relations between France and Italy.

From 2006 to 2011 she was appointed representative of the Conference of Rectors of Italian Universities, in charge of International Relations.

In 2011 Stefania Giannini was given the title of Grand Officer of the Order of Merit of the Italian Republic by the President of the Republic Giorgio Napolitano. She was elected member of the Senate during the February 2013 political elections with the political party Scelta Civica (Civic choice) in the Tuscany region.

She became Head of the Scelta Civica Senate group in the VII Commission (Public Education and Cultural heritage) and President of the parliamentary delegation for INCE (Central European Initiative). In November 2013 she became political secretary of the Scelta Civica party.

Gibb Allan

Emeritus professor of Entrepreneurship and Small Business

Durham University



Professor Gibb is Emeritus Professor of Entrepreneurship and Small Business at Durham University, and a world acclaimed academic and practitioner in terms of Entrepreneurship Enterprise and small business development. He is well qualified to commentate on enterprise education: he developed the first UK Centre for small business at Durham in 1971 which was eventually the largest in Europe and unique in its approach; he developed the first UK small firms peer support agency in the 1970s – Enterprise North – which subsequently trained all the national staff of the Small Firms Counselling Service as well as directors of over 300 of the UK’s first enterprise

agencies; he is the pioneer of all the original enterprise education for primary and secondary which he insisted were made open source and copyright free in order to encourage the widest dissemination; he has worked all over the world in Small Medium Enterprise (SME) development; and he designed and directed the first Entrepreneurial University Leaders Programme (EULP) which has been recognised as a ground-breaking executive development programme for University leaders.

Hannes Klöpfer

Co-founder and Managing Director

Iversity



Hannes Klöpfer recently co-authored a book on the university in the 21st century in collaboration with distinguished Professor Yehuda Elkana (edition Körber-Stiftung). He holds a Dual-Masters in Public Administration from Columbia University and the Hertie School of Governance in Berlin and a B.A. in International Relations from the Technische Universität Dresden. Moreover, he spent a semester at SciencesPo Strasbourg and completed the Academy Year programme at the European College of Liberal Arts in Berlin. From 2010-2011, Hannes Klöpfer was an associate at the stiftung neue verantwortung, working on a project that explored impact of digitalisation on education. In 2014, he joined the board of jurors for the OpenEducation Challenge and the "New Business Models" of the German government-initiated "Hochschulforum Digitalisierung". He is a former Berlin ambassador of the Sandbox networks and as of 2014 member of the Global Shapers network of the

World Economic Forum and a fellow of the Royal Society of the Arts

Kune Hank

Director

EDUCORE bv



Hank Kune is founder and director of Educore, a Netherlands-based agency supporting innovative practice in government, business and society. Much of his work focuses on public sector innovation, the creation of dedicated innovation-enabling environments, participative engagement processes, and the strategic role of learning in society. He is an active member of the New Club of Paris, co-initiator of the Aalto Camp for Societal Innovation (ACSI), and a Founding Partner of the Future Center Alliance. His work on dedicated innovation spaces has been influential in establishing future centers in several countries.

Hazelkorn Ellen	
	Policy Advisor to the Higher Education Authority (Ireland); Director, Higher Education Policy Research Unit (HEPRU)



Ellen Hazelkorn holds a joint appointment as a Director the Higher Education Policy Research Unit (HEPRU), Dublin Institute of Technology, Ireland, and Policy Advisor to the Higher Education Authority (HEA). She is also President of the European Higher Education Society (EAIR) and Chairperson of the EU Expert Group on Science Education (2014). Ellen has over 18 years senior management experience in higher education, previously holding positions as Vice President of Research and Enterprise, Dean of the Graduate Research School and Vice President and Founding Dean of the Faculty of Applied Arts, Dublin Institute of Technology. Ellen works as a consultant/specialist with various international organisations, and has been/is a member many government/international review and evaluation teams. Ellen has published articles and books on Irish politics and society, and higher education policy.

Iacobucci Donato	
Professor	Università Politecnica delle Marche



Associate professor of applied economics at Università Politecnica delle Marche, Ancona, Faculty of Engineering, 2005.
 Senior researcher in applied economics and lecturer in business economics at Università Politecnica delle Marche, Ancona, Faculty of Engineering (2001-2004). Researcher in applied economics and lecturer in business economics at the University of Urbino (1994-2001). From 1985 to 1986 he was responsible for market and industry research at CEDIM (Ancona).
 From 1987 to 1994 he did research and consulting activities for private and public institutions in the following fields: a) applied industrial research with specific regard to the economics of small firms and industrial districts; b) project analysis and business

planning.

His main research interests are the following:

- a) Innovation and entrepreneurship;
- b) Technology transfer: university industry relations; academic spin-offs;
- c) Business groups: rationale, organization and governance;
- d) Small and medium sized firms: clustering, financing and growth.

He is also:

Director of the “Center for Entrepreneurship and Innovation” of Università Politecnica delle Marche (2012-present).
 Rector’s delegate for Innovation and Technology Transfer and supervisor of the Industrial Liaison Office of the Università Politecnica delle Marche (2006-present).
 Member of the Board of Jesi Cube, an incubator for innovative start-ups set-up by Università

Lo Bello Ivanhoe	
Vice-President for Education	Confindustria



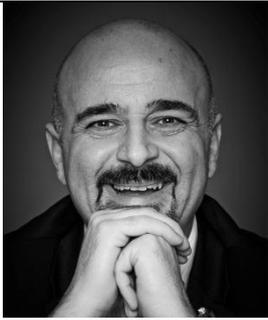
Born in Catania in 1963. Degree in Law
 President of Lo Bello Fosfovit srl
 Shareholder and Managing Director of several other industrial companies
 Vice President of Unioncamere

Previous appointments held:

President of Confindustria Siracusa
 President of Confindustria Sicilia
 Member of the Board of Confindustria

Lo Storto Giovanni	
Director General	LUISS

Born in 1970, and himself a LUISS Guido Carli Economics graduate, he was appointed General Manager of the Confindustria University in 2013.



Following his experience in the Armed Forces as an Officer of the Army Administration Corps, he worked at Swiss Re, where he specialised in alternative risk transfer, financial planning and controlling and strategic planning and performance monitoring. He also worked as a Manager for Bartolini Corriere Espresso.

At LUISS he was initially responsible for planning and management control, before gradually taking on more roles and eventually serving for several years as Deputy General Manager. As an economics lecturer specialising in insurance companies he taught both at LUISS and at the University of L'Aquila.

LUISS is an independent private university, based on an innovative didactic approach that is provided across four departments: Economics and Finance, Business and Management, Law, and Political Science. In addition to the presence of important Schools active in higher

education in management, economics and in the science of government, the University has a special relationship with the business world, not least due to its strong links with the main organisation representing Italian manufacturing and services companies.

He is a board member of various organisations and associations related to the world of culture and information, including the magazines Internazionale and Formiche, the Asca News Agency.

He was awarded the 'Daunia 2006' International Prize and the 'Argos Hippium 2008' Award, and was declared a Knight of the Order of Merit of the Italian Republic in 2010.

On May 2014, he was also awarded the Prize Guido Carli, an important honour conferred under the High Patronage of the Italian President of the Republic.

He recently supervised the translation into Italian of the book "Jugaad Innovation" by Navi Radjou, Jaideep Prabhu and Simone Ahuja.

Markkula Markku

Advisor to the Aalto Presidents

Aalto University



Mr. Markku Markkula works within Aalto University as the Advisor to Aalto Presidents, focusing on European Union strategy affairs. His previous university assignments comprised being the member of Aalto University Transformation Team (2008-2009) and heading the Centre for Continuing Education (1985-1991) and the Lifelong Learning Institute Dipoli (1992-1995, 2003-2008) of the Helsinki University of Technology (TKK) as the Director with the managerial responsibilities being in charge of one of Europe's largest continuing education providers with an average 100 staff members and an annual turnover of 6-10 million Euros.

Mr. Markkula is a former member of the Finnish Parliament (1995-2003) with the membership roles in the Committee for Education, Science and Culture and the Committee for the Future. As an MP his international role included the Presidency of EPTA Council,

European Parliamentary Technology Assessment Network. He has served the global engineering community as the part-time Secretary General of the International Association for Continuing Engineering Education IACEE 1989-2001. He has been awarded the European Society for Engineering Education SEFI Fellow 1995. Within SEFI he has been the Chairman of the Continuing Education Working Group.

In Finland his role has included memberships in the boards of several companies and other organizations, among others Tekes, the Finnish Funding Agency for Innovation and Technology. He has also served Finnish society as the Chairman of the Espoo City Council (1990-1992, 2010) and the Espoo City Planning Board (2004-2012), as well as the Chairman of the boards of the Finnish Association of Graduate Engineers TEK (1993-2005) and the Finnish Information Society Development Centre TIEKE (2000-2011). Markku Markkula is a member of the EU Committee of the Regions, CoR (2010-2014). Within CoR he is member of Commission for Education, Youth, Culture and Research EDUC, and Commission for Economic and Social Policy ECOS. He is the Chairman of the EPP/CoR Task Force on Europe 2020. His role also includes being the rapporteur on the Digital Agenda for Europe and the rapporteur on the role of local and regional authorities in achieving the targets of the Europe 2020 strategy, as well as the rapporteur on Horizon 2020 (the EU Framework Programme for Research).

Mr. Markkula's special competence areas are innovation and change management, lifelong learning, knowledge management, e-learning, as well as science, technology and innovation policy. He has published several books and given hundreds of conference presentations. As a tribute to his achievements he was in 2008 elected to the International Adult and Continuing Education Hall of Fame.

Maria Cristina Messa

Rector

Università degli Studi di Milano - Bicocca



From October 1st 2013 Cristina Messa is Rector of the University of Milano-Bicocca, where she is Full Professor of Diagnostic Imaging. Moreover, she has been Director of the Department of Health Sciences at the University of Milano-Bicocca. Cristina Messa is Vice President of the National Research Council (CNR).

In July 2013 she has been designated by the Minister of Education and Research as one of the Italian Delegate for Horizon 2020, the new EU Framework Program for Research and Innovation.

In September 2013 she became member of the Italian Superior Health Council (CSS). Her scientific activity has been almost entirely devoted to the research of diagnostic methods for the optimization of diagnosis, prognosis and therapy of many diseases of the Central

Nervous System and cancer.

She is author of more than 120 scientific papers and she has been invited to numerous national, european and international congresses.

Mora Ruiz José Ginés

Director

Centre for the Study of Higher Education Management, Valencia University of Technology



José-Ginés Mora is Visiting Professor at the Institute of Education, University of London. He was professor and director of the Centre for Higher Education Management at the Technical University of Valencia. He was Visiting Professor at The Pennsylvania State University and Visiting Scholar at Stanford University. He has been president of the European Higher Education Society (EAIR), vice-president of the Governing Board of the IMHE programme (OECD), member of the Bologna Follow-Up Group, and member of the Steering Committee of ENQA. He has coordinated many international projects on higher education in Europe and Latin America. He has been advisor and

consultant for higher education matters for several European and American governments and international organisations (EC, WB, OECD, OEI). He has been editor and member of editorial boards of several higher education journals. He has published around 300 publications on higher education and has delivered more than 500 speeches in 49 countries.

Muffatto Moreno

Team Leader, Global Entrepreneurship Monitor



Education
PhD Management of Innovation (University of Padua).
MSc Mechanical Engineering (University of Padua).

Academic positions

Coordinator of the Research Team on Management and Entrepreneurship, Department of Industrial Engineering, University of Padua.

Faculty member, Doctoral School in Managerial Engineering and Real Estate Economics, University of Padua.

Team Leader of the Global Entrepreneurship Monitor Italy (2012 - to date).

Research Affiliate, International Motor Vehicle Program, Massachusetts Institute of Technology

Cambridge MA (USA) (1998-2002).

Japan Foundation Research Scholar, University of Tokyo - School of Economics, Tokyo (Japan) (1994).

Founder and Director, Master Program in Project and Innovation Management (2004 – to date).

Founder and Director, Research Innovation and Entrepreneurship Forum (2008 – to date).

Founder and Director, International Summer School on Entrepreneurial Management and Innovation (2012 - to date).

Member of the board, Centro Servizi Informatici di Ateneo (CSIA), University of Padua (2012 – to date).

Head of Department, University of Padua - DIMEG (1 Oct 2009 - 31 Dec 2011).

Nazaré Maria Helena

President

European University Association (EUA)



Maria Helena Nazaré trained as a physicist, graduating in 1972 from the University of Lisbon, and obtained her PhD from King's College London in 1978. In 1986, she took up leadership of the research group in Spectroscopy of Semiconductors in the Department of Physics at the University of Aveiro. She was Head of Department between 1978 and 1980 and again between 1988 and 1990, Vice-President of the Scientific Council from 1990 to 1991 and Vice- Rector of the University of Aveiro, a position held until 1998.

She was Rector of the University of Aveiro from 2002 to 2010, Chair of the Portuguese Rectors' Conference Committee for research and knowledge transfer, and a member of the Research Policy Working Group

of the European University Association (EUA).

As a member of the expert pool of EUA's Institutional Evaluation Programme since 2004, she has participated in the evaluation of universities in Spain, Turkey, Palestine, Slovenia and Kazakhstan. She was appointed Vice-President of EUA in 2009 and elected as President in April 2011.

She formally became President in March 2012. She has also participated in OECD-led evaluations in Catalonia and Lombardy and ENQA evaluations in Galicia and Finland. Currently she is a member of the Portuguese National Education Council and Chair of its Higher Education Commission, Member of the Administration Board of Portugal Telecom, President of the Advisory Board of Fundação Galp Energia and President of the Portuguese Physics Society

Nordal Erin

Vice-Chairperson

European Students' Union



Erin Nordal is Vice-Chairperson of the European Students' Union, which is the umbrella organisation for 47 national unions of students from 39 European countries. Nordal is currently working on a Master's of Philosophy in Higher Education at the University of Oslo in Norway, and has her Bachelor's Degree in Sociology from the University of Bergen. She has been an active student representative for the past five years, starting in Norway. She has served as International Officer of the National Union of Students in Norway (NSO), and was also a member of ESU's executive committee in 2013-2014. She works with issues related to public responsibility and funding of higher education, student-centred learning, as well as internationalisation and mobility.

Osburg Thomas H.

Director

Europe for Strategic Innovation and Corporate Affairs, Intel Corp.



Dr. Thomas Osburg is Director Europe for Strategic Innovation and Corporate Affairs at Intel Corp., responsible for developing and implementing key Business and Social Innovation Initiatives.

Thomas is a member of the Board of Directors for CSR Europe, VP Strategy and Organization and member of the Management Board of Directors for ABIS, and Speaker for the member companies of the German CSR Organization UPJ. In addition, Thomas is a Research Fellow at the Center for Corporate Citizenship at the University of Eichstätt-Ingolstadt and was appointed into the Scientific Committee of the MBA Program at the University of Geneva.

Thomas is publishing frequently and lecturing on Innovation, Strategic Management, Sustainable Marketing and CSR at leading Business Schools and Universities across Europe. He is also a regular reviewer of Scientific Papers, i.e. for the European Marketing Academy and the American Marketing Association.

In summer 2013, the leading European Compendium on Social Innovation was published by him.

Thomas holds a Ph.D. (Dr.rer.pol.) degree in Economics and Business Administration from the Leibniz University of Hannover (Germany). After his graduation, he held several Management positions in the area of International Management and Marketing, CSR and Innovation at Texas Instruments, Autodesk and Intel, living in France, the U.S. and Germany. Until 2005, Thomas was Director Consumer Business at Texas Instruments for the Pacific Markets and thus managing the expansion into China, Korea, Japan, Australia and South America.

Paleari Stefano

-President

Conference of Italian University Rectors (CRUI)



Born in Milano on 24 January 1965.
Since February 2001, Full Professor of Finance at the Faculty of Engineering of the University of Bergamo.
Since March 2006, Scientific Director of the ICCSAI (International Center for Competitiveness Studies in the Aviation Industry).
Since January 2009, External examiner in the MSc in Air Transport Management at the Department of Air Transport of the Cranfield University (UK).
Since June 2009, Airneth Academic Fellow and member of the Airneth Scientific Board, an international group of the most representative academic

researchers in Air Transportation.

Since October 2009, Rector of the University of Bergamo.

Since April 2011 to September 2013, Secretary General of the CRUI (the Italian Council of the Rectors of Italian Universities).

Since September 2013, President of the CRUI.

Since April 2013, Board Member of the EUA (European University Association).

Education and Academic Positions held

1990: Graduated Summa Cum Laude in Nuclear Engineering at the Polytechnic School of Milan.

1996: Assistant Professor of Managerial Engineering at the University of Bergamo;

1998: Associate Professor of Industrial Organization at the Polytechnic School of Milan;

2001: Full Professor of Finance at the University of Bergamo.

Teaching Activity

Finance I (Corporate Finance), in the MSc in Managerial Engineering;

Finance II (Financial Markets and Business Valuation), in the MSc in Managerial Engineering;

Finance (Corporate Finance and Financial Markets), in the PhD Program in Economics and Technology Management, and in the PhD Program in Managerial Engineering.

Main Research Topics: Initial Public Offerings, Business Groups, Business Valuation, Corporate Governance, New Technology Based Firms financing, Competitiveness Studies in the Aviation Industry, Governance of Higher Education Institutions

Pellizzari Michele

Professor

Geneva School of Economics and Management,
University of Geneva



Michele Pellizzari is professor of economics at the University of Geneva, where he is also the director of the Laboratoire d'Économie Appliquée.

Before joining the University of Geneva, Michele was an Economist in the OECD Employment Analysis and Policy Division and prior to that he was assistant professor of economics at Bocconi University in Milan (Italy) and Head of Welfare Studies at the Fondazione Rodolfo De Benedetti (Milan), where he is now a Senior Fellow.

He is also a Research Fellow at the Institute for the Study of Labor (IZA) in Bonn and an External Research Fellow at CREAM (UCL, London).

Michele holds a PhD in Economics from the London School of Economics (London, UK) and has visited the Economics Departments at Stanford University and at the University of California at Berkeley.

He is a member of the Conseil Stratégique de la Promotion Économique, the economic advisory board of the government of Geneva and has been a consultant for a number of institutions such as the OECD, the European Commission, the Italian Ministry of Education.

His main research interests lie in the area of labour and education economics and applied econometrics and his studies have been published in scientific journals such as the *Economic Journal*, the *American Economic Journal: Applied Economics*, the *Journal of the European Economic Association* and the *Industrial and Labor relations Review*.

He has also authored and contributed to numerous books, intended both for the academic and the wider public. Michele is a member of the editorial board of the Italian economic policy watchdog website lavoce.info.

Pratesi Carlo Alberto

Professor University of Roma Tre



1961 Born in Rome.
1985 Graduation in Economics at LUISS University of Rome.
since 1986 free lance consultant in marketing and communication.
since 1997 free lance journalist
since 2000 Associate professor of Marketing at Roma Tre University, faculty of Economics.
since 2008 Full Professor of Management at Roma Tre University: his course is “marketing, innovation and sustainability”
since 1990 member of the Scientific Committee of the Italian Marketing Award.
since 2009 scientific consultant for Barilla Center for Food and Nutrition

Foundation.

2010 Co-Founder of InnovAction Lab (with Paolo Merialdo and Augusto Coppola) a learning program with the aim of drawing university’s talents closer to the world of innovative entrepreneurship, start-ups and the investor community. His main research areas are: entrepreneurship and startup; marketing and innovation, business sustainability; corporate communication and employer branding.

He is author of several books and papers, the principals are:

- (1995) Il marketing dei prodotti alimentari di marca, Sperling & Kupfer
- (1996) Il marketing dei servizi ad alta tecnologia, Sperling & Kupfer.
- (1997) Sviluppare la fedeltà ascoltando il cliente, (with G. Iasevoli), Sperling & Kupfer.
- (2002) Il piano di marketing dei nuovi prodotti, (with G. Mattia), McGraw-Hill
- (2006) Branding. Strategie, organizzazione, comunicazione e ricerche per la marca (with G. Mattia), McGraw-Hill
- (2011) Mobile Apps (with E.Ascione), Mc Graw Hill
- (2013) Marketing (with Peter J.P. and Donnelly J.H. Jr.), 5th edition Mc Graw-Hill.
- (2014) Digital marketing (with A.Poggiani), Mc Graw Hill.

Prats Monne Xavier

Director General DG Education and Culture European Commission



Xavier Prats Monné is the Director-general for Education and Culture of the European Commission. Since 2011 as Deputy Director-general, he has been responsible for EU policies in the field of education and training, and for the EU education programmes for 2014-2020 period, including Erasmus+ and Marie Curie. Since mid-2014, as Director-general, he is also responsible for EU policies and programmes in the field of culture, youth and sports, and for the 2014-2020 Creative Europe programme. He represents the European Commission in the Governing Board of the European Institute of Innovation and Technology (EIT).

From 2007 to 2010 he served as Director for employment policy, and as one of the five founding members of the EU Impact Assessment Board, reporting to the President of the European Commission. He previously served as Director for employment policy and for the European Social Fund; as Deputy Head of Cabinet of the Commission Vice-President for international relations; as Advisor of the Commissioner for Cohesion policy; and as deputy to the Commission’s Spokesman under President Jacques Delors.

He completed his primary and secondary education at the Istituto Massimo of Rome, Italy. He holds degrees in Anthropology from the Complutense University (Madrid, Spain); in Development Cooperation from the International Centre for Advanced Mediterranean Agronomic Studies (Paris, France); and in European Studies from the College of Europe (Bruges, Belgium), where he graduated first of the Class of 1981-82 and served as assistant professor. He is from Spain, and fluent in Spanish, English, French, Italian and Catalan.

Ranga Marina

Stanford University Stanford University



Dr. Marina Ranga is Senior Researcher at Stanford University's H-STAR Institute, where she leads the Triple Helix Research Group. She came to Stanford as 2009-2010 Faculty Research Fellow of the Clayman Institute for Gender Research, and joined the H-STAR Institute in 2010. Prior to Stanford, she was Assistant Professor in Innovation Management at Newcastle University Business School, UK and University of Groningen, the Netherlands. Dr. Ranga is also a Visiting Professor at the University of Warsaw's School and Management, where she teaches a course on Innovation and Technology Strategy.

She holds a PhD and an MSc in Science and Technology Policy from SPRU, Sussex University, and a BA/MSc in Chemical Engineering from the Polytechnic University of Bucharest. Dr. Ranga's research interests include Triple Helix innovation and the entrepreneurial university, academic entrepreneurship policy and practice, national and regional innovation systems, innovation in higher education, the European Research Area and the impact of EU integration on the innovation performance of EU Member States, as well as the gender dimension in technology, innovation and entrepreneurship.

In the Triple Helix research area, she is the originator of the '*Triple Helix Systems*' concept that bridges key features of Triple Helix model with the 'innovation system' theory. She authored several book chapters, research reports and articles in Research Policy, Scientometrics, Science and Public Policy, Technology Analysis and Strategic Management, Journal of Technology Management and Innovation, International Journal of Transition and Innovation Systems, European Planning Studies, Industry and Higher Education, etc. She guest-edited several Special Issues for the Journal of Technology Management (June 2010), European Planning Studies (September 2012), and International Journal of Transition and Innovation Systems (September 2014).

Dr. Ranga has also done extensive consulting work for national and regional governments and international organizations. She has a long record of collaboration with the UN. She is a member of the UN Economic Commission for Europe's Expert Group on Innovation and Competitiveness Policies since 2007, and participated in several UN Country Innovation Performance Reviews expert teams (Belarus 2010, Republic of Moldova 2011, Kazakhstan 2011). She is also a member of the Gender Advisory Board of the UN Commission for Science & Technology for Development since its 1995 inception. In the past, she held several other positions within UN bodies, such as Vice-Chair of the UN Commission on Science and Technology for Development and member of the UN-ECE Senior Advisors on Science & Technology.

She has led or contributed to several research projects funded by the European Commission and worked as a consultant for DG Research, DG Enterprise and Industry, DG Education and Culture and DG Regio in several initiatives: PRO INNO TrendChart, ERAWATCH Research Inventory, METRIS - Analysis of Social Sciences and Humanities in EU27, European Observatory of Research Universities and Funding Agencies in EU27, evaluation of 2007-2013 Cohesion Policy of the European Union, State Aid for RDI, ERALAW, Regional Innovation Monitor, Smart specialisation. She is a member of DG Research Horizon 2020 Ad hoc Expert Advisory Group on Spreading Excellence and Widening Participation. She served as an evaluation expert for the European Commission FP7 People (Marie Curie Fellowships) and was recently appointed as Vice-Chair of the Marie Curie ECOSOC Evaluation Panel. Dr. Ranga is also an Associate Member of the ERAWATCH Network Brussels.

She has worked for national and regional governments in both developed and developing countries (e.g. creation of Competence Research Centres in the High-Tech Valleys Programme of Lithuania, a methodological framework for examining S&T in Flanders/Belgium for the Flemish government, preparation of the National Innovation Strategy of the Republic of Moldova, a review of international entrepreneurship policies and practice for Newcastle Science City and the Northeast England Development Agency One Northeast, an analysis of the economic impact of large-scale research facilities for the South East England Development Agency SEEDA, a study on enhancing university-business links for the regional government of Northern Netherlands, a study on gender bias in research funding for the German Research Foundation DFG).

Dr. Ranga worked closely with the Triple Helix Association (THA) as Chair of the Membership and Strategy Committee and member of several other THA committees, until January 2014. In July 2011 she co-organized the Triple Helix 9 International Conference at Stanford University, and served as the Chair of the Scientific Committee. This 4-day conference gathered over 250 participants from 37 countries, and was the first Triple Helix conference organized in Silicon Valley in the 17-year long history of the conference series. In November 2012 she co-organized the Stanford Special Event Triple Helix Workshop "Building the Entrepreneurial University", which gathered over 30 participants from 18 countries to discuss different models of academic entrepreneurship in the US and Europe. In April 2010 she organized the workshop "Gender Perspectives on Innovation and Entrepreneurship: Policy and Practice", in collaboration between the Clayman Institute for Gender Research, the Swedish Innovation Agency Vinnova and Luleå University of Technology.

Riccaboni Angelo

CRUI Foundation

President

Professor Angelo Riccaboni has been Rector of the University of Siena since the academic year 2010-2011. He is a member of the board of the International Association of Universities (IAU) and head of the working group on sustainability, since 2012.



Prof. Riccaboni is a member of the Leadership Council of the United Nations' Sustainable Development Solutions Network (www.unsdsn.org) and chair of the Mediterranean Network of SDSN, named Med Solutions (since 2012).

He is chair of the CRUI Foundation, the operating body of CRUI, the Foundation of Association of Italian Rectors, since 2013.

He has been Dean of the Richard Goodwin Faculty of Economics and Management (2005-2010) and president of the Italian Conference of Deans of Faculties of Economics and Statistics (2008- 2010).

His research has a strong international emphasis, focusing on the topics of Governance and Control and on the role of organizations and universities to promote Sustainable Development. He has published numerous monographies, some through international publishing houses such as Kluwer, Routledge and Elgar, as well as many articles in national and international journals, such as Accounting, Organizations and Society, Management Accounting Research and Reflections: the Society for Organisational Learning Journal. His articles for the journals Financial Management and Accounting History were awarded "best article of the year" in 2001 and 2005.

According to Scopus, one of Prof. Riccaboni's articles published in Management Accounting Research was the most cited article in the journal in the period 2005-2008. He has been co-editor for special issues of Management Accounting Research and Accounting History.

He has been President of SIDREA (Italian Society of Accounting and Business Administration Teachers), which gathers together teachers of Scientific Disciplinary Sector P07 (Business Administration), since 2010.

Rocchitelli Laura

President

Rold Group S.p.A



Laura Rocchitelli started working in the family company in '90 years, beginning with a first training time during the last period of her studies. She has a degree in economics from Bocconi University in Milan.

Today she directly manages the financial department and she also plays a significant role in the strategic process being one of the main decisional point of reference.

Thanks to her determination the company has started a process of development and growth which has taken to the birth of new business divisions (Rold Lighting - Rold SmartPower) and new local branches (Rold Shanghai and Rold America).

Besides in 2010 Laura strongly supported the RoldResearch's launch, an innovative research Lab founded by Rold Group and two other historical companies located in Milan area, who decided to become together Institutional Participants of the Foundation

of Politecnico of Milan, investing their own capitals. Now RoldResearch is one of the rare cases of 'Enterprise Network' in Italy, totally independent, dedicated and focused on research activities.

Laura plays also a role in Assolombarda, taking part of education and orientation's working groups.

Catherine Jacqueline Silvestri

Engineering Section Manager

Vice President

GE Oil & Gas – Turbomachinery Solutions

Valore D



Catherine Jacqueline Silvestri is Productivity Leader for the Engineering division of the GE Oil & Gas, Turbomachinery Solutions business. In her current role she is responsible to develop programs to drive a more competitive product cost structure.

She has 19 years of experience with GE Oil & Gas and a solid expertise in oil & gas products and technologies built thanks to a variety of leadership roles in Engineering and Global Supply Chain.

Catherine started her career at GE as Aerodesign Engineer. After numerous roles in New Product Introduction and in Quality as Quality Master Black Belt, she led the Auxiliary Systems team, composed by more than 80 engineers globally, within GE Oil & Gas Gas Turbine Center of Excellence.

Most recently Catherine was named Global Engineering Operations Leader, responsible for establishing and executing the operational rhythm for the Engineering division globally. She got the GE Women in Technology Award 2009-2010, an award that each year honors women who succeed in a demanding

technology career but also are proven leaders amongst their peers and contribute to develop other women technologists. She holds a degree in Mechanical Engineering from the University of Florence (Italy). Catherine is an active leader of the GE Women's Network in Europe - a network that involves more than 100,000 women working at GE to cultivate their leadership skills, business practices, personal contacts and career opportunities - and Vice President of Valore D since 2013.

Ida Sirolli

Head of Research & Education

Telecom Italia Spa



Ida is currently head of Research & Education within Telecom Italia's People Value Dept. – with the responsibility to define models, systems and policies of Knowledge Management and Education and establish and manage partnerships with universities and national and international centers of excellence in order to introduce new models of education and ensure the update of internal know-how.

Ida is an Industrial Psychologist and has a master degree in Strategic Human Resources Management achieved at Bocconi University. She has worked in the HR depts. of large companies for 18 years managing activities related to development, recruiting, training, employer branding and internal communication. She is also a certified counselor,

psychotherapist and Executive Coach.

List of the registered participants

Name	Organisation	Type of organisation	Country
Ademi Shpresa	State University of Tetova	University	Macedonia
Aime Silvio	Università degli studi di torino	University	Italy
Aitor Mira Abad	Universitat Politècnica de València	University	Spain
Alvarez Benedi Javier	Junta de Castilla y León	Other	Spain
Andersen Tine	Danish Technological Institute	Research Institute	Denmark
Andrade Jonas	1969	Other	Portugal
Angeleri Elena	Università Cattolica del Sacro Cuore	University	Italy
Angress Alexandra	Aschaffenburg University of Applied Sciences	University	Germany
Antonelli Gilda	University of molise	University	Italy
Anyanwu Charles	Charles Bekeev International University	University	Great Britain
Aracil Antonio	ADEIT-Fundacion Universidad-Empresa de Valencia	Network/Association	Spain
Ari Nergiz	Istanbul university	University	Turkey
Ari Omer Onder	Arel University	University	Turkey
Ballatore Maria Giulia	Politecnico di Torino	University	Italy
Balsamo Alfonso	Confindustria	Network/Association	Italy
Banjevic Aleksandra	Faculty of Philosophy	University	Montenegro
Barbatelli Paolo	Gruppo Rold S.p.A.	Business	Italy
Baumanis Aldis	Turiba University	University	Latvia
Bellandi Marco	University of Florence	University	Italia
Berger Thomas	Institut inter.research e.V. (University of Applied Sciences Fulda)	Research Institute	Germany
Bianchi Patrizio	Emilia-Romagna Region	Other	Italy
Boisselier Yves	MAC-Team - European Multi-Actors Cooperation network	Network/Association	Belgium
Bonardo Antonio	Gi Group Spa	Business	Italy
Borrell-Damián Lidia	European University Association	ONG	Belgium
Braghiroli Daniele	students' representative - Università degli Studi di Parma	University	Italy
Brinda Aurora	SHAREMORE SRL	Network/Association	Italy
Brunetti Francesco	Università LUM "Jean Monnet"	University	Italy
Bucceroni Paola	University of Macerata	University	Italy
Buccolo Maria	Università degli Studi di Roma Tre	University	Italy
Cajus Pedersen Hans	Copenhagen School of Design & Technology	University	Denmark

Candela Gabriele	"Mediterranea University of Reggio Calabria"	University	Italy
Carlucci Aiello Luigia	Sapienza Università di Roma	University	Italy
Carobbio Egle Miriam	University of Bergamo	University	Italy
Catlaks Guntars	Education International/ETUCE	ONG	Belgium
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Ceravolo Roberto	Università della Calabria	University	Italy
Chelli Raniero	Sophia R&I	Network/Association	Italy
Chiaia Bernardino	politecnico di torino	University	Italy
Claudia Pelagatti	Confindustria Pescara	Network/Association	Italy
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Colaiuda Cinzia	MIUR	Other	Italy
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Costa Pina	Assocamerestero	Network/Association	Italy
Costantini Valeria	Roma Tre University	University	Italy
Cotovanu Ana Maria	Effebe Association	Network/Association	Italy
Creuznacher Isabel	University Koblenz-Landau	University	Germany
Cubillo Blasco Oscar	Fundación Universidad-Empresa	ONG	Spain
Cunico Giovanni	Centro Jean Monnet Trento	Research Institute	Italy
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De Toni Alberto Felice	Rettore Università degli Studi di Udine	University	Italy
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Di Carlo Ferdinando	University of Basilicata	University	Italy
Di Dio Denise	Ministero Istruzione, Università e Ricerca	Other	Italia
Di Fabio Raffaella	Ministry of Foreign Affairs	Other	Italy
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Doppler Elisabeth	Federal Ministry of Science, Research and Economy Austria	Other	Austria
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Faldi Michele	Università Cattolica del Sacro Cuore	University	Italy
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Fermaglia Maurizio	University of Trieste	University	Italy
Ferrari Bravo Pietro	IULM	University	Italy
Ferreri Calogero	Università degli Studi di Enna "Kore"	University	Italy
Ferro Valentino	Università degli Studi Magna Graecia di Catanzaro, Italia	University	Italia
Ferrucci Luca	University of Perugia	University	Italy
Finocchietti Carlo	Fondazione Rui	ONG	Italia
Finocchietti Giovanni	Punto nazionale di contatto - Italia Erasmus Mundus	Other	Italia
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Maher Nevenka	Association of Management and Research	ONG	Slovenija
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Martínez Gómez Fernando	Fundación Universidad-Empresa	ONG	Madrid
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Piazza Roberta	University of Catania	University	Italy
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Ransom James	Universities UK	Network/Association	United Kingdom
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Risikko Tanja	University of Jyväskylä	University	Finland
Riva Pietro	Student	University	Italy
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Ronsisvalle Giuseppe	University of Catania	University	Italy
Rossi Holden Linda	LANGPLAN	Business	Italy
Rossi Susanna	University of Bergamo	University	Italy
Rudenko Slavomir	Pan-European University	University	Slovakia

Russo Daniel	Free University of Bolzano	University	Italy
Ryevad Lauritsen Maya	Copenhagen School of Design & Technology	University	Denmark
Saccenti Elisa	Università degli studi di Bergamo	University	Italy
Sala Camilla	Assocamerestero	Network/Association	Italy
Sali-Papasali Anastasia	Ionian University	University	Greece
Sandoval Maria Jose	Universidad de Santiago de Chile	University	Chile
Santomieri Katia	ISFOL	Research Institute	Italy
Scarpato Sabrina	Alma Mater Studiorum - Università di Bologna	University	Italy
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Setola Roberto	Università CAMPUS BioMedico di Roma	University	Italy
Simberova Iveta	Brno University of Technology	University	Czech Republic
Skadborg Monica	Student ESU	University	Denmark
Skerlj Marija	Ministry of Higher Education, Science and Sport	Other	Slovenia
Skonieczny Jan	Wroclaw University of Technology	University	Poland
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Speranza Mario Felice	LULA srl	Business	Italy
Spigarelli Francesca	University of Macerata	University	Italy
Stefanelli Cristina	UNIMED - Mediterranean University Union	Network/Association	Italy
Subrt Tomas	Czech University of Life Sciences in Prague	University	Czech Republic
Tapanelli Luigi	Università degli Studi di Camerino	University	Italy
Thiel Gerald	DEKRA Akademie GmbH	Business	Germany
Tino Brömme	ESNA European Higher Education News	Other	Germany
Tirelli Aurelia	Isfol	Research Institute	Italy
Toma Pierluigi	Università del Salento	University	Italy
Toompere Rait	Archimedes Foundation	ONG	Estonia
Tosatto Nereo	Unindustria bologna	Network/Association	Italy
Triglia Lavinia	Académie de France à Rome - Villa Medici	Other	Italy
Trovarelli Francesca	University of Siena	University	Italy
Tsompanoglou Georgios	University of the Aegean	University	Greece
Turicchia Lorenzo	Università degli Studi di Udine	University	Italy
Tvarozek Miroslav	Regional Development Agency EC/PHARE	Network/Association	Slovakia
Uricchio Antonio Felice	Università degli Studi di Bari Aldo Moro	University	Italy

Valkova Radosveta	AES Rome	Business	Italy
Vaníková Kristína	Ministry of Education, Science, Research and Sport of the Slovak Republic	Other	Slovak Republic
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Vázquez García-Peñuela José María	Universidad Internacional de La Rioja (UNIR)	University	Spain
Venturino Anna Ida	Thumbs Up srl	Other	Italy
Vidal Javier	University of León	University	Spain
Vitarelli Marco Costanzo	Università degli Studi dell'Insubria	University	Italy
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Zambiasi Roberto	EucA	Network/Association	Italy
Zbigniew Malara	Wroclaw university of Technology	University	Poland



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PROGRAMME

INTRODUCTION

Nowadays a world without interactions between universities and business is inconceivable, with discussions on cooperation with business no longer being about whether University – business cooperation is necessary, but rather how best to interact for the benefit of all stakeholders.

University – business cooperation needs to become common practice in a consistently number of activities, like for example the education of highly skilled graduates, applied research, knowledge transfer, dual degree programmes, 'science' park developments, entrepreneurial education, higher-level internships, research, upgrading of employees and life-long learning.

The closer cooperation between academia and the business world has proven to be advantageous and beneficial for Higher Educations Institutions, students, business and society alike.

The prosperity of regional economies increasingly depends on the development of knowledge clusters, where a number of actors from different sectors and

disciplines are connected together and continuously interact to advance knowledge and innovation. In each of these ecosystems, universities play a substantial role in creating new knowledge and its dissemination to society.

Additionally, we need future generations to have the mind-set and skills to be entrepreneurial in society, in work and in business. This is not only to boost the number of start-ups and increase the number of people working as entrepreneurs; entrepreneurial employees within a business can help enhance productivity, increase adaptability, and ensure that opportunities are fully realized.

In order to ensure this, and to adapt in an ever-changing world, learning systems need to be entrepreneurial in their design and thinking. Learning providers must engage with partners across society and make practical entrepreneurial learning a core part of the learner experience across all levels and disciplines.

Never before there has been a greater need for talented and enterprising workforce. The economic and social prosperity of Europe and all the Member States depend upon a strong knowledge-based economy with highly skilled, initiative and entrepreneurial human resources.





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The forum will be structured around the following round tables:

- **Rethinking and opening up education:** New and innovative approaches for delivering education more suitable to prepare graduates for the job market and to continuing education, upgrading and requalification of employees.
- **Business creation and employability:** Quality education and entrepreneurial skills boost growth and competitiveness. Which transversal skills can be taught in cooperation with enterprises to strength employability, creativity and new professional paths.
- **Strategic alliances and the creation of ecosystems:** The role of the public sector, of enterprises and universities in the implementation of local smart specialization strategies for a greater impact on regional development.

In addition, the forum will host two high level panel discussions. The first will investigate the most marketable skills of the perfect graduate able to compete in the global market and on how universities can provide the right mindset, knowledge, skills and motivation to engage in entrepreneurial activities.

The second will focus on the development of a corporate culture within HE institutions and how they can engage and improve their cooperation with external

stakeholders for a stronger impact on innovation and growth.

Coffee break presentations will be also organized. Short presentations will be given on practices of University-Business cooperation such as the **Knowledge Alliances** (the European Erasmus+ programme scheme that supports UB cooperation) and examples of innovative teaching delivery and programmes (industrial doctorates) and digital technologies (like MOOCs). As well as a presentation of **HEInnovate**, the new online self-assessment tool developed at the initiative of the EC and the OECD for HEIs looking for advice on how to become more entrepreneurial.

The forum is included in the official agenda of the **Italian Presidency of the Council of the European Union**.





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October 2nd 2014

9.30 -10.00

Registration and networking coffee

10.00-11.00

Welcome address

- Prof. Stefania Giannini, Minister of Education, University and Research

Welcome and introduction

- Xavier Prats Monné, Director General, DG Education and Culture, European Commission

- Prof. Stefano Paleari, President of the Conference of Italian University Rectors

- Thomas Osburg, Director Strategic Innovation, INTEL

11.00 - 12.30

Round table

How can national and European policies influence universities to recognize their role as economic growth drivers and support entrepreneurship education in any discipline to provide students, researchers, staff and teaching staff with the knowledge, skills and motivation to engage in entrepreneurial activities as entrepreneurs and intrapreneurs.

- Prof. Ellen Hazelkorn, Policy Advisor to the Higher Education Authority (Ireland); Director, Higher Education Policy Research Unit (HEPRU)
- Ivanhoe Lo Bello, Vice President for Education, Confindustria
- Prof. Maria Helena Nazaré, President, European University Association
- Erin Nordal, Vice-Chair, European Students Union

Discussion

The Most Marketable Skills in 2020: Are Graduates Equipped to Succeed in the Global World of the Future?

With the contributions of

- Andrea Cammelli, Director Alma Laurea
- Prof. José Ginés Mora Ruiz, Director, Centre for the Study of Higher Education Management, Valencia University of Technology

Moderator: Prof. Michele Pellizzari, Geneva School of Economics and Management

12.30-14.00

Lunch





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14.00-15.30

Introduction: Prof. Allan Gibb, Emeritus Professor of Entrepreneurship and Small Business at Durham University

Round table: *Rethinking and opening up education: The university and business cooperation for modern learning achievements. New and innovative approaches for delivering education more suitable to prepare graduates for the job market and to continuing education, upgrading and requalification of employees.*

- Christof Beutgen, Head of Employee Development Policies, Deutsche Bahn
- Prof. Carlo Alberto Pratesi, Professor, Università di Roma Tre
- Marina Ranga, Senior researcher, H-STAR Institute, Stanford University and scientific coordinator of the European study on Innovation in Higher Education
- Ida Sirolli, Head of Research & Education, Telecom Italia Spa

Moderator: Prof. Patrizio Bianchi, Councilor for Professional Education, University, Research and Employment

15.30-16.30

Coffee break

**15.45/16.00
/16.15**

A series of parallel coffee-break presentations of 15-minutes each will introduce tools and actions of university-business cooperation and innovation in education

- **Industrial Doctorate**
- **Innovation in Education** - IVERSITY an European platform for MOOCs
- **Knowledge Alliances** - the European programme for supporting university and business cooperation

16.30-18.00

Introduction: Elena Bou, Innovation Director, KIC InnoEnergy

Round table: *Business creation and employability: how to boost growth and competitiveness with quality education and entrepreneurial skills. Which transversal skills can be taught in cooperation with enterprises to strength employability, creativity and new professional paths?*

- Prof. Marco Cantamessa, President, PNI Cube
- Prof. Alain Fayolle, Entrepreneurship Professor, EMLYON Business School
- Miguél Garcia-Miranda, Founder, LiquidFloors, Beneficiary of YouthStart supported by Microsoft
- Laura Rocchitelli, Managing Director, Rold Group S.p.A

Moderator: Prof. Moreno Muffatto, Team leader of the Global Entrepreneurship Monitor Italy, Professor at the University of Padua





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- 18.00-18.15** **Presentation of the outcomes of the CRUI Foundation Observatory on University-Business Cooperation in Italy**
Prof. Angelo Riccaboni, President, CRUI Foundation
- 20.30** **Official Dinner**
Open Colonna - Palazzo delle Esposizioni - Scalinata di via Milano 9A

October 3rd 2014

- 9.00-10.30** **Introduction:** Markku Markkula, Member of the EU Committee of the Regions, Advisor to the Aalto Presidents, Aalto University
- Round table:** *Strategic alliances and the creation of ecosystems: The role of the public sector, of enterprises and universities at a local, regional, national and European level for the creation of a knowledge economy*
- Lorenzo Bacci, Responsible for students financial support and research development, Regione Toscana
 - Prof. Antonio Cunha, Rector, Minho University
 - Prof. Donato Iacobucci, Università Politecnica delle Marche
 - Hank Kune, Director, EDUCORE bv
- Moderator:** Valeria Bandini, senior Manager, Climate-KIC's Regional Innovation Centre in Emilia-Romagna
- 10.30-11.30** **Coffee Break**
- 10.45/11.00/11.15** **A series of parallel coffee-break- presentations of 15-minutes each will introduce tools and actions of university-business cooperation and innovation in education**
- Innovation in Higher Education - HEInnovate ideas and inspiration for making HEIs more entrepreneurial
 - TERRA Digital Cultural Heritage, an example of ecosystem
- 11.30-12.15** **Wrap-up and food for discussion**
- Hannes Klöpper, Co-founder and Managing Director, IVERSITY
 - Giovanni Lo Storto, Director General, LUISS





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- **Prof.ssa Maria Cristina Messa**, Rector, Università degli Studi di Milano - Bicocca
- **Catherine Jacqueline Silvestri**, Manager, Engineering Section - GE Oil & Gas Turbomachinery Solutions; Vice-President, Valore D

12.15 - 13.15

Policy outlook - Looking ahead

What are the hurdles that are to be removed to boost academic development and corporate culture within HE institutions and how different stakeholders can engage, and improve their cooperation for a stronger impact on innovation and growth?

- **Carlo Calenda**, Vice-Minister, Ministry for Economic Development (MISE)
- **Innocenzo Cipolletta**, President of UBS Italia SIM, UBS Fiduciary; President, University of Trento
- **Guido Fabiani**, Councillor, Productive Activities and Economic Development, Lazio Region
- **Andrea Fiorini**, President, Italian Council for University Students (CNSU)

Moderator: Adriana Cerretelli, Journalist, Il Sole 24 Ore



This report was drafted by **Tine Andersen**, Danish Technological Institute, and **Stefan Humpl**, 3s Unternehmensberatung on behalf of the Technopolis | group |

DISCLAIMER

This proceeding report presents the main points and conclusions of the presentations, speeches and discussions from the University-Business Forum held in Rome on 2-3 October 2014. The report does not contain verbatim all that what said during the forum. The information and views set out in this report does not necessarily reflect the official opinion of the European Commission.

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