Involving Researchers in Innovation Processes
(ECQA Certified Researcher Entrepreneur)

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Abstract. The paper presents a specific approach for implementing the job role Researcher – Entrepreneur as a qualification and certification scheme at European level. A skill set of a Certified Researcher - Entrepreneur, a targeted practical training course and a skills portal system to test and certify the skills obtained have been developed in a European partnership from 2009 – 2011 under the EU Lifelong Learning Programme LLP – LEONARDO DA VINCI in the project ‘ResEUr’. Also the integration of the job role into the European Certification and Qualification Association (ECQA) is described together with experience from field tests.

Keywords: science, innovation transfer, entrepreneurship, e-Learning

1 Context

A partnership of research laboratories, universities and enterprise partners from Austria, Belgium, France, Ireland, Romania and Slovenia has developed a Europe-wide qualification and certification for Researcher-Entrepreneur co-ordinated by the European Manufacturing and Innovation Research Association – EMIRAcle [1]. Skills International GmbH is a private training company from Austria, which furthermore offers consultancy services for EU project management and innovation transfer paired with language & translation services.

The process of implementation of the Researcher-Entrepreneur qualification and certification has shown that there is a clear need for Europe-wide training and certification programmes targeted at promoting and strengthening qualification and capacity-building for science and technology in a knowledge-based society. Increased attention needs to be paid to create a fruitful synergy between science and entrepreneurship, as the majority of entrepreneurship courses are offered in economic and business studies environments only. At the same time large portions of the innovation capacities are to be found in science, research and development, where new business ideas have the most promising potential for innovation transfer and market boost.
It has shown that turning science and innovation into new and better services and products is a priority if we are to remain competitive on the global marketplace and improve the quality of life in Europe. A strategic approach to innovation requires that innovation becomes an overarching policy objective driving all other policies (science, research, education, labour markets, etc.). In this context, innovative ideas as from science or other areas are fundamental for developing innovation and to do much better at turning results with large innovation potential into new and better services and products.

Massive investment in skills will be needed to turn Europe into a world-class science performer. Europe is spending 0.8% of GDP less than the US and 1.5% less than Japan per year on research & development (R&D).

The Innovation Union is one of the seven flagship initiatives of the Europe 2020 strategy [2], [3]. It follows the crucial target of investing 3% of EU GDP on R&D by 2020. Its plan contains over thirty actions points, with the aim to
- make Europe into a world-class science performer;
- remove obstacles to innovation which currently prevent ideas getting quickly to market (expensive patenting, missing standards, skills shortages etc.);
- pave new ways for public and private sectors to work together, notably through Innovation Partnerships.

2  Innovation for Competitiveness

Innovation is the main driving force of economic development. SMEs play a vital role in innovation due to their flexibility in responding to the opportunities created by the changing and globalising marketplace. Science and technology are considered as key elements for developing innovation capacities. Skills shortages were identified as one of the major obstacles towards reaching the Innovation Union goals. The best way to turn research into innovations is to consider key innovation factors from the earliest phases of innovation processes, i.e. from the concept stage and development via innovation transfer all along the way to products and services. Creating successful and sustainable enterprises can be one of the possible next steps leveraged significantly by offering lifelong learning opportunities for creative minds to target their products and services specifically towards fruitful innovation transfer and entrepreneurship [4].

ResEUr is an ECQA certified training program aiming to increase Europe's entrepreneurial and innovation capacities by developing and implementing a training especially devoted to innovative brains. The project was co-funded by the EU Lifelong Learning Program – LEONARDO DA VINCI - Development of Innovation from 2009 – 2011. The ‘ECQA Certified
Researcher-Entrepreneur training course and Europe-wide certification is especially targeted to offer incentives to people and organizations willing to commercialize innovative ideas or results. Advice and educational support is offered in the framework of specific lifelong learning activities, with the aim to encourage innovative entrepreneurship and - if suitable - facilitate the establishment of new enterprises.

3 Qualification and Europe-wide Certification as Researcher-Entrepreneur

To become an ECQA Certified Researcher-Entrepreneur and be listed in the pool of experts for professionals of the European Certification and Qualification Association (ECQA, www.ecqa.org), participants have to take the exam and pass the required number of learning elements. A pool of test questions was defined by European experts to provide the basis for the certification of students following the same performance criteria across Europe, but applicable also internationally. Elements were verified with a number of students in the context of initial trainings and certification.

The training for ECQA Certified Researcher-Entrepreneur is divided into following units and elements:

| Shaping Ideas          | Key Success Factors for Entrepreneurship |
|                       | Forming the Mindset of Students          |
|                       | Methods for Structuring Ideas            |
| Innovation Transfer   | Creating Joint Visions of Products and Services |
|                       | From Prototypes to Products              |
|                       | Business Potential Profiling             |
|                       | Preparing Innovation Transfer Contracts   |
| Knowledge Networking  | Complementary Skills Networking          |
|                       | Business and Services Networking         |
|                       | Use of Web 2.0                           |
| Empowerment by Learning Organisation Environments | Openness and Team Learning |
|                       | Leadership and Team Motivation Factors   |
|                       | Social Skills Paired With Technical Abilities |
| Facilitators of Entrepreneurship | European Facilitators of Entrepreneurship |
|                       | National Facilitators of Entrepreneurship |
| Selected Aspects      | Risk Consideration and Mitigation        |
|                       | Open Innovation                          |
Trial trainings have been successfully carried out in various countries. Training opportunities comprise e-Learning as well as on-site workshops for ECQA Certified Researcher-Entrepreneur. Skills International has carried out a series of trainings, like workshops at the EuroSPI 2010 conference in Grenoble, France and also at the EuroSPI 2011 conference in Roskilde, Denmark, and other trainings were performed in Austria. Partners have carried out trainings as well. Participants came from research area, like PhD students, universities and other learners were from the enterprise sector or administrations etc. From the feedback valuable conclusions could be drawn to target the training course to the expectations and needs of the learners. Some participants were especially interested in company start-up, others in innovation transfer methods from the point of view of existing organizations within research or enterprise area.

The training course and certification was considered very useful by the learners, as it covers the whole chain from idea creation to innovation transfer and market entry. Participants found the approach to focus on the most promising core competences of researchers or organizational units as especially promising. Knowledge about how to avoid errors in starting up a business, models for structuring ideas and methods for problem solving and root cause analysis were also assessed as above-average among other topics. Also the integration of know-how related to European Union approach were rated high due to usefulness on European but also national level.

Participants could also take advantage of online training courses paired with the possibility for Europe-wide certification, provided by competent pool of international trainers and facilitated by a fully configured e-Learning platform. The ResEUr training course is available in English, German, French, Romanian and Slovene language.

4 Outlook and New Trends towards Europe 2020 and Innovation Union

Summing up, Europe needs to do much better at turning innovative ideas and generally speaking innovation into new and better services and products if we are to remain competitive on the global marketplace and improve the quality of life in Europe.

- Implementation of the Innovation Union Flagships where innovation has a clear added-value, e.g. social innovation, innovation policy, etc.
  - The Innovation Union contains over thirty action points including proposals like the European Innovation Partnerships.
  - The Innovation Union also introduces the strategic use of public procurement to finance innovation and a European knowledge market for patents and licensing.

- Implementation of policies in line with Europe 2020

- Building a bridge to HORIZON 2020 (follow-up programme of FP7) [5]
Therefore, the ECQA Certified Researcher-Entrepreneur intends to boost the entrepreneurial initiative by supporting actions and instruments aimed at improving technological and organisational innovation of the enterprise, but also as a transfer mechanism from science to marketable services and products. This will go hand in hand with promoting activities to establish an appropriate environment so that innovative SMEs can realise their potential and innovation capacities by developing human resources through linkages between industry, education and research institutions.

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References:


