

# Report from the BEPART symposium in Stockholm November 3-5, 2004

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## Foreword

Dear BEPART Friends and Colleagues,

It was great to have you here in Stockholm, and to listen to your testimonies of the importance of entrepreneurship and innovation in academic contexts. Evidently it is not only the actors within the BEPART framework who have noted that there might be a link between entrepreneurship and growth, but “science- and technology-based innovation has actually become the new “pet-area” for regional and national policymakers as well as for university administrators and decision-makers within industry. At least two major initiatives within this area have for example just started up in the Baltic Sea Region; The Baltic Metropolis network – promoting the “Baltic Sea of Innovation” ([www.baltmet.org](http://www.baltmet.org)) and the Baltic Sea Initiative, with its emphasis on a better coordination of existing initiatives and the formulation of an action agenda for the Baltic Sea Region with regard to strengthening the EU Lisbon process ([www.balticsea.net](http://www.balticsea.net)). Apart from that, a number of national and European initiatives and programs are set out to develop networks of innovation within and across clusters and universities.

This is of course great news for all of us in the field, but also a cause for concern. There is a risk that our area will be “embraced to death”, and that policy and decision makers will turn away when the expected short-term outcomes in the form of new companies, increased employment and economic growth fails to materialize! It is in this perspective that the BEPART becomes particularly important. The critical benchmarking that takes place among the partners in the BEPART consortium, and the possibility to distinguish Best Practice programs of education and training, will eventually provide a much needed state of the art review of entrepreneurship education in our part of the world. We have seen the Stockholm symposium as a first step in this critical evaluation process, and thus would like to thank all of you who participated for making it possible and this report a reality.

Per Olof Berg, Prof.  
President of the Stockholm School of Entrepreneurship

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## **BEPART – Baltic Entrepreneurship Partners**

### ***General***

Baltic Entrepreneurship Partners (BEPART) is an Interreg IIC-financed project with the objective to contribute to the

“development of a creative and responsible Entrepreneurship Culture in the Baltic Sea Region and Europe at large that can be expected to contribute to a more productive utilisation of scarce human (talents, knowledge) and natural resources, thereby fostering innovation as well as sustainable socio-economic development.”

BEPART works towards the achievement of its goals within five activity components:

**Component 1:** Project management and network co-ordination.

**Component 2:** Experience exchange on (a) the role of entrepreneurship promotion in regional development strategies, (b) existing types of activities, and (c) more effective ways of entrepreneurship promotion at universities/ education and beyond.

**Component 3:** A broader discussion and adoption of findings with policy makers, the business community and scientists – involvement of actors in charge, dissemination and implementation of action programmes being the intentions and goals.

**Component 4:** Interregional/ international Action-Learning and Reflection Groups (ARGs – formed in autumn 2004) focus on new ways for entrepreneurship education and training.

**Component 5:** Facilitation of high quality joint learning.

A basic aim and concept of BEPART is to give practical impact to regional socio-economic development by interregional cooperation.

Latest information on the project will be obtainable on the website: [www.bepart.info](http://www.bepart.info)

This report is a summary of the presentations and discussions at the BEPART symposium in Stockholm, Sweden on November 3-5, 2004, as a part of the project's second component. At the symposium the partner institutions of the BEPART network defined their basic positions for the future project work.

The BEPART network includes the following twelve institutions:

Germany	University of Rostock, Economics and Business Education and International Baltic Entrepreneurship Centre (IBEC)
Denmark	Aarhus School of Business
Estonia	University of Tartu, Faculty of Economics & Business Administration Tallinn University of Technology, Institute of Business Administration
Finland	Kajaani Polytechnic, Research and Development Unit University of Oulu, Learning and Research Services University of Tampere, Research Centre for Vocational Education Häme Development Centre
Lithuania	Kaunas University of Technology, Regional Business Incubator
Netherlands	University of Twente, Dutch Institute for Knowledge Intensive Entrepreneurship (NIKOS)
Poland	Jagiellonian University, Centre for Innovation, Technology Transfer and University Development (CITTRU) – <i>not represented in person at the symposium</i>
Sweden	Stockholm School of Entrepreneurship (SSES)

### ***On the symposium in Stockholm***

The BEPART symposium in Stockholm took place from 3 to 5 November 2004. The goal of this meeting was to discuss different pedagogical approaches in entrepreneurship education within the participating institutions.

After a welcome from the hosting Stockholm School of Entrepreneurship (SSES) by their President, Professor Per Olof Berg, the symposium was divided into two parts: a first session at which each participating partner presented his/her respective institution and possible topics for the action-learning and reflection groups (ARGs) and a second session at which preliminary ARGs were created and discussions held on selected topics.

### ***Report overview***

This report focuses on the results of the presentations and the discussions on the ARGs. The report consists of the following two parts:

- A compilation of the participants' presentations with a common starting point in their geographical position, their organization, the educational programme offered, internal and external challenges, suggested topics for the ARGs and comments from the concluding discussion and question and answer session.
- An outline of the topics, project team and challenges for the future ARGs.

In addition, there is an appendix at the end of the report containing the graphical presentations by all participants.

## **Presentation of the partner institutions**

### ***The Aarhus School of Business in Denmark***

Represented by Associate Professor Poul Dreisler, PhD.

#### ***Where/Geographic position***

Aarhus is the main town of Jutland with approximately 300,000 inhabitants, 15 percent of whom are enrolled in universities and other institutes of higher education. The County of Aarhus has approximately 600,000 inhabitants.

#### ***Who***

The Aarhus School of Business (ASB).

The school, which is EQUIS accredited, has enrolled 5,600 Bachelor and Masters (MSc) students, 1,800 Diploma students in a part time study programme and 25 MBA students in the part time executive programme. The 430 employees include a faculty of 220, 30-40 of whom are full professors and 60 of whom are PhD students, employed as staff.

The Aarhus School of Business consists of six departments: Department of Accounting, Finance and Logistics, Department of Marketing, Informatics and Statistics, Department of Management and International Business, Department of Law, Department of Economics and Department of Language and Business Communication.

#### ***The BEPART Project Team:***

Associate Professor Poul Dreisler, PhD, Department of Management and International Business (project leader)

Associate Professor Bent Martinsen, ASB (development of database)

Student assistants: Tinna Stroejer Madsen and Jens K. Kjersgaard (Collection of data/information, analysing and communication tasks, etc.)

The work is organized with different task forces related to specific elements of the project.

#### ***What***

General Programme and Entrepreneurship courses.

The ASB programme follows the Bologna structure: 3 + 2 + 3 (Bac + MSc + PhD).

The courses in entrepreneurship and related subjects are electives. They are open to all ASB students, as well as to qualified students from other institutions. In addition to the entrepreneurship education offered to students in the core programme, there is a Change Management course in intrapreneurship, offered to executive MBA students, as well as two courses in entrepreneurship and innovation, offered to doctoral students. The teaching method varies with the context of the course. The core values of the institution's pedagogy are interactivity, student involvement,

engagement, guest lectures and case studies. The didactics are aimed at creating independent self confident students who will understand and have the ability to manage the complexity of business life. The pedagogy follows a cross-disciplinary approach, focusing on more practical issues.

Courses:

- Bachelors: *Innovation and Entrepreneurship, Organizing in Small Growing Firms, Product and Business Development* (a project course with engineering and industrial design students).
- MSc Courses: *Innovation and Creativity, Entrepreneurship* (given in cooperation between Aarhus School of Business and Aarhus University), *Evolution of Enterprises*.
- Planned courses for 2005: *Introduction to Entrepreneurship* (compulsory), *Intrapreneurship and Innovation in Firms* (combined with an internship in a small firm).
- Planned courses for 2006: *International Summer School in Entrepreneurship*.

*ASB-related institutions promoting entrepreneurship:*

- *Centre for Entrepreneurship (CFE)*. Established in co-operation with The Aarhus School of Architecture, The Aarhus School of Business, The Engineering College of Aarhus, Aarhus University, The Aarhus Academy of Music, Aarhus County Council and Aarhus City Council with the support of the European Regional Social fund. *Main objectives:* Develop and support an innovative entrepreneurship culture. CFE provides courses, training programmes, business plan competition, etc.
- International Danish Entrepreneurship Academy (IDEA).  
Based on a governmental policy to promote entrepreneurship in the education system from kindergarten to university. Vision: To strengthen the entrepreneurial competencies in Denmark in order to take the country to an internationally leading position in a future entrepreneurial knowledge society. Mission: To create an internationally-based network organization, aimed at bringing researchers, teachers, advisers, investors and business people together in a committed and engaged way, creating more and more competent entrepreneurs with knowledge rooted in the university and higher school system.

The IDEA launching date is (officially) set for January 1, 2005.

Budget for a four-year period: 5.5 million EURO from the State and an expected amount of 10 million EURO from other sources.

The ASB has been a main partner in the founding process and is the coordinator of one of five regional centers in the IDEA organization.

*ASB - Research Activities related to Entrepreneurship:*

The Department for Management and International Business has two groups:

*SESME (Research in SME's and Entrepreneurship):*

Latest projects of relevance to BEPART:

- Promoting Entrepreneurship — changing attitudes or behaviour?
- Pedagogical Innovation in Learning Entrepreneurship (PILE)

‘An exploratory study for development of learning- and pedagogical methods for promotion entrepreneurship and innovation’. (2003 -04)

*Management of Innovation and Change (MIC)*

- Social network and entrepreneurship
- Projects about high technology and knowledge-based firms inside and outside incubators, research parks and many other projects.

***Challenges***

- Teaching entrepreneurship ought to be process-oriented and cross-disciplinary. New ways of cooperation, new learning processes and new incentives should be introduced. The teacher's role should be redefined and new ways to structure the studies should be found.
- The universities ought to include elements in the studies of personality development in order to foster enterprising attitudes and behavior
- The development of pedagogical processes, based on a ‘practical/academic’ didactics, demands change in the way teaching is organized.

***Suggested topics for the ARGs***

- The teacher's role in the new entrepreneurial university
- Change from teaching to learning in entrepreneurship (didactics and pedagogy)
- Development of entrepreneurship education in another context (from ivory tower to entrepreneurial university).

***Discussion***

Teachers of entrepreneurship are put in a precarious situation, as they are not exercising the traditional role of a professor, yet they are not practitioners. Researchers who wish to become practitioners of entrepreneurship face challenges as well. Neither faculty nor investors fully understand their role. When trying to build a foundation for knowledge-based entrepreneurship, the role of the researcher is hard to define. Moreover, researchers have become somewhat isolated.

An entrepreneurial university would have to behave differently than a traditional university. Education will have less to do with ordinary courses and more with how to behave in institutions beyond the academic setting. Science parks have not solved the problem. There is still a division between the practical world and academics.

## ***The University of Tampere in Finland***

Represented by International Coordinator Anna Ripatti.

### ***Who***

University of Tampere, Research Centre for Vocational Education.

The University of Tampere has approximately 14,800 students, 1,800 post graduates and 600 foreign students. The faculties include education, economics and administration, humanities, information sciences, medicine and social sciences.

The Research Centre for Vocational Education is a part of the Faculty of Education that concentrates on the development of economic life as well as vocational and professional education. The centre has one full-time professor of vocational education, media education and entrepreneurship education. The staff includes ten researchers, eight docents and eight visiting professors from the USA, Canada, Great Britain, Estonia, Italy and Tunisia. The centre provides about 50 percent of the PhD degrees in the Faculty of Education. The Research Centre launched a new study programme, namely Entrepreneurship Education in autumn 2003.

The project team:

Paula Kyrö, Professor of Entrepreneurship Education, Director of the project

Talvikki Kauppi, Financial coordination of the project

Anna Ripatti, International Coordinator

Entrepreneurship education website: [www.uta.fi/entrenet](http://www.uta.fi/entrenet)

### ***What***

Programmes on entrepreneurship education.

The University of Tampere is a national coordinating university of entrepreneurship education and has been nominated a regional Centre of Expertise in Entrepreneurship education.

The goal of the entrepreneurship education at the University of Tampere is to develop a scientific knowledge base and competence in entrepreneurship education and to become a national expert on entrepreneurship education. The entrepreneurship education programme is divided into three parts: 1) Entrepreneurship pedagogy which is based on research, 2) internationally recognised scientific collections and 3) personal and virtual research, learning and interest group networks.

The strategy of entrepreneurship education within the field of professional and vocational education is to concentrate on research, teaching and expertise in our centre, as well as to serve the needs of other universities in the field of entrepreneurship education. Furthermore, entrepreneurship education strives to generate collaborative, multi-scientific networks with national and international universities.

**Courses:**

**Study programme I:** Basic level studies (22.5 ECTS)

The programme consists of three modules:

- orientation to entrepreneurship education and its pedagogy
- small business management and ownership
- intrapreneurship and learning organisation

The purpose of entrepreneurship education studies at the University of Tampere is to familiarize the student with the general principles of entrepreneurship education and its pedagogy from a societal view, from an individual view, from an organisational view or from the view of SMEs. The students will be introduced both into the important terminology of the field of study, with its key theoretical and methodological concepts, and its most significant research results and problems.

The objectives of the three-module entrepreneurship education course are:

1. To achieve basic competence in entrepreneurship education and different dimensions of entrepreneurial pedagogy from a societal or individual perspective, or from the perspective of small businesses and other organisations.
2. To introduce participants to the newest international aspects of entrepreneurship concepts and theory-building.
3. To support participants' competencies for applying and advancing entrepreneurial pedagogy in their own working contexts.

**Study programme II:** Advanced study level (30 ECTS) (available for PhD students as well).

The programme consists of four modules:

- orientation to entrepreneurship education
- international research on learning and the conceptualisation of entrepreneurship
- methodological approach to research on entrepreneurship education and its dynamics
- design and analysis of an entrepreneurship education research process

Study programme II overviews international research on entrepreneurship education, gives an understanding of the scientific discussion with regards to entrepreneurship education and provides the participants with means to conduct research in the field. The focus is on conceptualising entrepreneurship education and on the dynamics of growth and research methodology.

### **Doctoral seminar**

- Doctoral group
- PhD students are integrated into a large research consortium DYLETRA (The Dynamics of Learning in Transitions).
- DYLETRA is a joint research consortium with 8 subgroups within the Faculty of Education, including nine professors, 16 senior researchers and altogether 100 PhD students.

We have an entrepreneurial virtual learning environment ([www.entrenet.fi](http://www.entrenet.fi)) which is used in our study programmes. Finland is among those in the forefront of virtual learning. There appears to be an increasing need to focus more on social, interactive and networking learning practises. Together entrepreneurial learning and a virtual learning environment challenge to explore and create new practices and solutions. At the same time, they challenge us both to consider the theoretical basis of a learning environment and to develop a practical platform for their application.

### ***Challenges***

To establish a position at the regional and national level.

To conceptualise entrepreneurial and methodological learning.

### ***Suggested topics for the ARGs (for Component 5)***

The idea of networking benchmarking is important and relevant when forming a scientific reflection group. Networking benchmarking refers to a form of benchmarking in which the partners and benchmarkers are the same, with mutual motives and/or problems and with the aim of learning together from and with each other in order to create new best practices. Being a new form of benchmarking, this expands the very scope and concept of benchmarking.

### ***Discussion***

The level of entrepreneurship education, and at what stage to infuse this type of education, was a central question in the discussion on how to achieve the BEPART goals. Entrepreneurship education is a young tradition in the field of education. At the University of Tampere it is based on multi-disciplinary research. There is only one Professor of Entrepreneurship Education in Finland.

A more theoretical discussion followed whether a learner is ever free or whether he/she is automatically embedded in the pedagogy of his/her society and the subsequent ramifications of this phenomenon, with all that this implies for entrepreneurship education.

## ***The University of Twente in the Netherlands***

Represented by Project Leader Aard Groen.

### ***Where***

The Twente region is situated between Amsterdam and the Ruhr. The death of the textile industry – once the basis of the regional economy – has created a need for more entrepreneurs in order to bring economic revival.

### ***Who***

The BEPART Project Team:

Gert Jan Hospers, regional economics and entrepreneurship

Gerben Blaauw, entrepreneurship, knowledge management

Aard Groen, entrepreneurship, networks and multi-level support systems, project leader

### ***What***

Dutch Institute for Knowledge Based Entrepreneurship (NIKOS).

NIKOS has the following activity areas:

#### 1. Teaching

Minor in entrepreneurship

- High tech marketing
- Business development
- Commercialization of science

Courses include

- Entrepreneurship and business development (first semester)
- Master Class Entrepreneurship Theory and Practice (second semester). This is a methodology-oriented class.
- Entrepreneurship and Technology (second semester)
- Entrepreneurship with Radical New Technology (third semester)

#### 2. Training and Consultancy

- Market orientation
- Project with Rabo-Bank: This project is aimed at stimulating a region with a struggling agricultural sector. This six-month programme has 15 participants who will come up with a business plan. They are coached and trained in how to develop such a plan.
- International Consultancy.

#### 3. Business Development Support

#### 4. Research

- The role of entrepreneurial networking
- The interaction between the university and industry
- E-commerce in SME's
- Global start-ups
- Database of knowledge-intensive firms
- Marie Curie training site
- High-tech small firm conference

#### ***Challenges***

Until now, universities never took an equity position in the development of knowledge-based entrepreneurship. The process of patenting has changed in the past two years. Now the share of risk is split between the university and the entrepreneur. There are also other questions that have arisen, for example, if a professor can retain his position after he has become an entrepreneur. The university pays 2,500 Euros, or 1 percent share of the firm, if the firm is believed to have potential. It is also a way by which they can maintain contact with the firm.

#### ***Suggested topics for the ARGs***

- Reflective and interactive learning in practice: in education programmes and incubation support.
- Regional networking and performance analysis of networks in regions working on entrepreneurship and innovation. This includes the analysis of existing and developing programmes.
- Building knowledge-system entrepreneurship learning and development tools, methods and techniques.
- Academic reflection groups.

#### ***Discussion***

Should professors remain professors after becoming entrepreneurs is an important question in the creation of an entrepreneurial university? This, of course, ties into the question of the professor's role and his or her relationship to both the traditional role of an academic and to the outside world. It is a hard issue to solve and various universities have dealt with it in many different ways.

## ***The University of Rostock in Germany***

Represented by Professor Dr. Gerald Braun

This text refers to and comments the presentation and slides on the University of Rostock in Appendix 1 of this report.

### ***Who are we***

Our activities are based on two organizational pillars:

- The chair and study course of “Economics and Business Education” which is an integral part of the University of Rostock and its Faculty for Economics and Social Sciences.
- The IBEC institute (“International Baltic Entrepreneurship Center and Institute for HRD”) which is linked to the University of Rostock but able to work with a higher degree of independence.

The team of Rostock consists of:

- Gerald Braun (professorship for Economics and Business Education and Director of IBEC).
- Doreen Holtsch (research assistance at the Chair for Economics and Business Education).
- Anke Reichert (research assistance at the Chair for Economics and Business Education).
- Kerstin Wilde (project manager at the IBEC/ ROXI-programme and visiting lecturer at the Chair for Economics and Business Education).
- Christoph Diensberg (project coordinator of BEPART and visiting lecturer at the Chair for Economics and Business Education).

### ***What we do – Chronology of Rostock Milestones and Main Foci in Entrepreneurship***

The activities at the chair “Economics and Business Education” (Wirtschaftspädagogik) and the IBEC (International Baltic Entrepreneurship Center) at the University of Rostock can be best understood historically<sup>1</sup>. The University of Rostock (founded in 1419) certainly has always had strong links to the Baltic Sea Region. It is one of two universities in the state of Mecklenburg-Western Pomerania, a state belonging to the socialist GDR after World War II and up until 1990. Political upheaval and the German reunification in 1989/ 1990 caused a deeper change of and within all Eastern German public and private institutions. This can be applied to the University of Rostock as well (e.g. in terms of suspension and exchange of staff, closing of study courses and establishment of new ones).

Also a regional short-termed “explosion” of business start-ups during the years 1990-1994 was caused by the dismissal of former university staff. Under such conditions of internal and external change, in an atmosphere of both demolition and departure, the “Section of Socialist Industrial Planning” (“Sozialistische Betriebswirtschaftslehre”) was closed and re-established as the “Faculty of Economics and Social Sciences”. Part of this work was the set-up of an institute for economics,

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<sup>1</sup> For more in-depth historical information, see: <http://www.uni-nordverbund.de/html/3pub/german4.html#0.1>.

where Dr. Gerald Braun initiated a “Research Group Mecklenburg-Western Pomerania”. The idea was to investigate – by a large empirical study – the dramatic structural and economic change which the region and state of Mecklenburg-Western Pomerania underwent after 1990 (see Bandelin, Braun 1994).

In 1994 the state government and university decided to establish a study course of “Economics and Business Education” (“Wirtschaftspädagogik”). Dr. Gerald Braun was appointed the professorship. At the same time, he was the engine that established the university-attached “Institute for HRD”, into which the above-mentioned research group on regional development integrated itself. This historical retrospective explains why the ideas and interests in (a) regional development and (b) education and human resource development came together. Furthermore, it explains why the idea of fostering entrepreneurship developed, namely because of its important function for regional innovation and development, areas which had both been strongly neglected. The main focus of our activities is on education and training which is quite understandable in the light of our belief in the grass root development, based on creative and active human beings.

In 1997/98 we developed a training programme for young entrepreneurs at the University of Rostock called “ROXI” (“Rostocker Existenzgründer Initiative”/ Rostock Entrepreneurship Initiative) which was funded by the state (Ministry of Labour) and the EU. We are running this programme still today and it is headed by Kerstin Wilde. The programme development over the years shows that by far ROXI has constituted the most important basis for our own learning, research and experimenting within this field. In addition, the establishment of ROXI triggered a growing interest in entrepreneurship education within our university-based study course of economics and business education.

In 1999/ 2000 also the State Ministry of Education and the university itself began to show an increased interest in entrepreneurship development, although first in a neglectful way and even with disrespect of learning, however, strongly focusing on hardware and infrastructure (e.g. venture capital, business plan competitions, building computer platforms, etc.). Our first attempts at deeper collaboration within the university in order to put our strengths together collapsed due to quite different basic ideas of how to promote entrepreneurship effectively. Such misunderstandings – regional and within the own university – have diminished over the years, but do still occur. Meanwhile, and supported by ROXI, we have intensified our national and international cooperation with researchers and institutions with similar and related ideas, experience and findings. Important milestones are two publications: (1) A teaching book for self-directed learning “Basics of Entrepreneurship Education and Training” (Braun, Diensberg 2001) for the German Distance Teaching University Hagen, and (2) the anthology “Entrepreneurship in the Baltic Sea Region” (Braun, Diensberg, eds., 2002) with contributions by experts of almost all countries of that region. Some of them joined the subsequent symposium in summer 2002 in the city of Rostock. That symposium triggered the transformation of the former Institute for HRD into the IBEC: “International Baltic Entrepreneurship Center & Institute for HRD” initiated in the year 2003. At the same time the acceptance within the own university improved considerably and resulted in a joint project entitled “Entrepreneurship Curriculum Development into the University of Rostock”.

The basic curriculum is completed so far, and at the moment we concentrate on its implementation within the university – a project which started in 2004. Simultaneously international collaboration culminated in the successful second BEPART project application followed by the project start in autumn 2004.

Our main foci are therefore:

- Training programmes with technical/ practical ends (to start up a business and to take basic start-up decisions, to acquire/ improve practical skills and competencies for start up) (= ROXI programme).
- Education and teaching with blended goals: theoretical and technical (e.g. how to teach entrepreneurship) (= our university study course).
- Institutionalization of entrepreneurship education and organizational development towards that goal within our university and region (e.g. curriculum development, network-approaches, common events with regional planners).

All these activities focus on, affect and challenge learning – at different levels and for different uses and goals.

Below we concentrate on entrepreneurship training programmes, especially the activities within the ROXI-programme mentioned above.

### ***Some Basic Assumptions for Entrepreneurship Promotion***

1. Diversity is one important facet of entrepreneurship. Programmes which aim to foster entrepreneurship may have to concentrate on certain goals. But the concentration on goals, and possibly on target groups, shall not kill the type of pluralism which characterizes entrepreneurship and the uniqueness which characterizes each entrepreneur. Programmes should not wipe out the colourful and everchanging pictures that entrepreneurs paint each day. Entrepreneurship is neither only high tech nor limited to certain branches. It is not even limited to “traditional” business: we can find social entrepreneurship, eco entrepreneurship and entrepreneurs in arts and culture, and even in the often forgotten informal sector.
2. The accumulation of capital, new infrastructures, technological change and other “hardware” are not the cause of entrepreneurship. They are results. More infrastructure, more capital and more technology cannot create entrepreneurship. It is the creative mind and spirit which mobilizes capital, employment, resources – and not the other way around. (Röpke 1982, p.36) Public promotion of entrepreneurship should therefore concentrate on improving the causes and conditions –not the results.
3. Programmes to foster entrepreneurship can ideally be distinguished as follows:
  - Entrepreneurship Development Programmes: Interventions into the process of business start-ups, either with a full range of combined offers (finance, marketing, consultancy, training, coaching, etc.) or as a bottleneck intervention.
  - Entrepreneurship Education Programmes, which focus on learning and the development of skills.

4. Entrepreneurship Education Programmes can ideally be based on two contrary agendas:
- Container education following the idea of input-output models: supply-driven and focusing on hard skills mainly (e.g. accounting, business plan writing and marketing plan) and based on traditional instruction.
  - Evolutionary education based on the idea of complex, evolutionary systems: demand-driven and focusing on soft skills as well (e.g. self-reliance, networking and collaboration), and working with modern educational methods which facilitate learning.

The Table on page 4 of the presentation slides opposes the different approaches (source: Shresta 1992, p. 13).

Our theoretical and methodological frame of reference is based on the following sources:

- Psychology, e.g. Jean Piaget and Robert M. Gagné – with the conclusion that human beings learn, act and react self-determinedly and goal-orientedly.
- Pedagogy, e.g. Reg Revans, Paolo Freire, Donald A. Schön, David A. Kolb – with the conclusion that learning needs both reflection and experience.
- Entrepreneurship Research, e.g. Jeffrey Timmons, Pamela S. Horwitz, Donald McClelland, Michael Frese – with the conclusion that personal entrepreneurial competences are crucial for successful entrepreneurial action.
- Systems research and synergetics, e.g. Helmut Willke, Herman Haken, Walter Dürr – with the conclusion that we shall respect and assist self-organized systems (e.g. human beings) and help them to self-stabilize and be successful.

Furthermore, we observe research activities and gain experience from other programmes of entrepreneurship training and education. A most influential approach for our own activities was the CEFE®-concept (Competency-based Economics through Formation of Enterprises) by GTZ in Eschborn (Germany). GTZ is a public-equivalent private body with an official mandate from the German Government to distribute development aid. CEFE® is therefore implemented in many third world and threshold countries.

The current ROXI training is based on this type of different theoretical and practical experiences and insights.

The ROXI structure is shown on page 7 of the presentation slides in the form of a staircase consisting of four basic steps: (1) Developing basic personal entrepreneurship characteristics; (2) Matching of person and project/ business idea; (3) Formulation and elaboration of the business plan; (4) Presentation of the business plan.

The methods used in the training revolve some traditional use: it is not “tell – show – do” but “do – show – tell”. This means that the participants are usually confronted by practical exercises first, during which they discover both their strengths and weaknesses, e.g. when meeting obstacles or

making mistakes. The process, steps and experiences are the starting point of further learning and deeper understanding.

We prefer

- methods of experiential learning and simulation;
- methods which challenge a tolerance of ambiguity – a right or wrong is not always possible to determine;
- methods which integrate mental action, physical action and emotional action;
- methods which function as “creative destruction” of prevalent cognitive structures;
- methods which need collaboration instead of only individual work.

The training practice within ROXI certainly differs from usual academic work. Academic insight is not an important learning goal of the training which, instead, aims to produce tangible results and therefore ends with the presentation of business plans, of which also external experts are invited to take part. Finally, the participants shall be able to decide whether or not to start up the businesses planned during the training. Our aim is that sustainable business plans should be put into practice and that participants should take entrepreneurial action. Those who do so can expect additional advice and assistance from ROXI during their start-up phase. The post-training assistance chiefly consists of additional coaching and network support (e.g. contacts with the right people at banks, at the local administration and in the local business community).

### ***Challenges for University-Based Entrepreneurship Education and Training***

- Can we develop and implement didactical standards?
- What does “quality” mean in entrepreneurship training and education?
- How to deal with the immense diversity in entrepreneurship and of entrepreneurs and their start-ups within entrepreneurship education and promotion.
- Can we transfer experience and practice from one context to another? To what extent is entrepreneurship training and education context-dependent?
- How can entrepreneurship education be implemented in and integrated into regular academic curricula (bachelor/ master courses)?
- How can autonomy, self-reliance, independence, leadership, etc. be promoted in the university curricula?
- Ways to an “entrepreneurial university” – what are the structural challenges?
- How can teaching and training competencies of university staff teaching entrepreneurship education be improved=

### ***Suggested Foci for the BEPART ARGs (Action Learning and Reflection Groups)***

- Practical tools for training and teaching.
- Professionalisation of trainers: Training of Trainers.
- Evaluation of entrepreneurship training and education.

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### ***Discussion***

Do educators of entrepreneurship have enough tools, such as e-learning, games, role playing, to develop a comprehensive entrepreneurship education from a more methodological and didactic point of view? What are the conditions of success and what can be learned from different success stories? Are there cultural factors, such as religion, that affect entrepreneurship? Understanding the results of an educational programme is very important. Moreover, learning how to use skills to stimulate regional economic development is invaluable.

## ***The University of Oulu in Finland***

Represented by Project Manager Gottfried Effe.

### ***Where***

The University of Oulu is situated in the northern part of Finland on the Botnian Gulf. Oulu is the main city of northern Finland (and the biggest city in the northern part of Scandinavia) with more than 126,000 inhabitants. Oulu has been known as the city of technology for more than twenty years and has the first and one of the largest technology parks in Scandinavia, founded in 1982. Oulu is also the capital of the Province of Oulu, which has about 450,000 inhabitants, approximately 200,000 of whom live in the city region of Oulu. In all, the northern part of Finland has about 700,000 inhabitants.

### ***Who***

The University of Oulu.

The university was founded in 1958 as one of the first universities outside the capital region of Helsinki. Its mission is as follows: The University of Oulu is an international research university whose central mission is to promote culture and well-being especially in northern Finland.

The university provides a high-quality learning environment, in which both specialists and generalists are given a thorough grounding for demanding tasks in the national and international arena. The vision of the university is to be a valued and influential learning and research university both nationally and internationally, to be a major force internationally in priority areas of research, with special emphasis on multidisciplinary approaches, to be a significant part of the European innovation system, to be a driving force in regional development, especially in northern Finland, by providing science-based knowledge and skills in both traditional and future fields, to be a vibrant and supportive academic community attractive to students, faculty and staff and, finally, to be a sought-after partner for cooperation at all levels.

In building “The Northern Gateway to Knowledge”, the university is working close together with the rest of Europe and the world and has immediate contact networks especially with Northern Scandinavia, Karelia and the Kola Peninsula.

### ***Some central figures***

Founded	1958
Students	15,829
admissions	2,206
Staff	3,096
professors	236
Awarded Degrees	1,558
first degrees	1,181
doctorates	120

Expenditure	196.6 M€
state budget	127.0 M€
external funding	69.6 M€

Faculties	students
Humanities	2,261
Education	1,886
Science	4,077
Medicine	1,953
Economics and Ind. Management	809
Technology	4,843
Other disciplines: dentistry (205) and health care (347).	
There are 45 training programmes in all.	

The primary regions of influence are the northern half of Finland. The university has nine institutions outside the city of Oulu in the area of Northern Finland.

### ***LEARNING AND RESEARCH SERVICES (LRS)***

The LRS is an independent unit inside the University of Oulu and functions in a "cross-border" position between university and regional/ international nearby environments. The chief product is competence – above all our clients' competence. The clients are small and medium-sized enterprises, large international corporations, public sector organizations, open university students, mature students, university teaching and research staff. The staff amounts to approximately 60 people (2004).

The main tasks are to develop our clients' knowledge base by providing educational courses as well as multiple development programmes and projects. In LRS we combine the strengths of traditional university studies with the principles of lifelong learning in a practical and innovative way to enhance the working practices in our clients' organizations. With such resources, we can ensure that new data and new patterns of activity integrate and merge for the eventual implementation into daily practice. Our education technology programmes also include distance education.

### ***Who***

#### **Oulu BEPART Project Group:**

Gottfried Effe	Project manager
Bärbel Fink	Educational Development Processes
Martti Hyry	Business Development
Marianne Mäntylehto	Knowledge Exchange
Sauli Pajari	Business Planning
Pekka Räsänen	Innovations and Commercialisation

### ***What***

LEARNING AND RESEARCH SERVICES provide training and development programmes in the following fields: Open University, Management Training (at MBA level), Human Resources Development, Education Technology, Social and Healthcare and Well-being, Content Production and Digital Economics, Languages and Intercultural Training. Activities in continuing education programmes, professional development (PD)- programmes, open university studies, regional, national and international development projects, consulting enterprises and public organizations, congress services, tailor-made education- and development projects, EU- programmed projects, expert services within the university (project management, ICT in education, education environments, staff development).

### ***Programme overview***

Entrepreneurship education at the University: Courses for students in the Faculty of Economics and special programmes for postgraduates and others in the LRS, such as: biotechnology and software. Regional-specific projects (SCRI funded by NPP). Entrepreneurial education in basic studies offers university students abilities to either work for corporations by utilising their skills in entrepreneurship or to be self-employed in their own business. The courses in entrepreneurship offer know-how in entrepreneurship and business operations. The staff also helps the students with questions on how to found a company and how to develop student-owned companies. More specific information can be found on the Entrepreneurship homepage: [http://www.taloustieteet oulu.fi/en/departments/management\\_and/index.html](http://www.taloustieteet oulu.fi/en/departments/management_and/index.html)

### ***Examples***

#### **SCRI**

Structure for Commercialisation of Rural Innovation (SCRI). This innovative project aims to exchange skills and experience between research institutions, academia and the public and private sectors in order to create a more dynamic use of the skills which are required for the sustainable exploitation of innovative ideas. Mechanisms will be devised to improve access for companies in the target region to academic and public sector expertise in order to improve competitiveness and regional attractiveness through exploitation of information systems technology and the new networking business culture. The project will create a pool of relevant opportunities and through spin-out activity will demonstrate, by creating new businesses, a sustainable approach to the creation and support of new and developing rural companies.

#### **R2B**

Research to business: Business training for science and technology is a programme for researchers involved in science or technology research at the University of Oulu, the Oulu Polytechnic, VTT (Technical research centre of Finland), or other institutions and private businesses wanting to commercialize their research findings or aiming for a career in business. Programme objectives are to learn to understand business operations, to operate successfully in a business environment, to turn research findings and scientific/technical knowledge into commercial applications, to operate at the

interface between science and technology and business and to identify and exploit wider career options.

The programme consists of contact days and tutoring as well as independent tasks and a study tour (to Sweden). Topics / Modules are Knowledge-based business activity and entrepreneurship, Building the management team, Recognizing and evaluating customer needs, IPR, licensing and protecting technologies, Financing of business start-ups, from research result to product innovation, Business models for start-ups, International business operations, Business plan intensive, BioBusiness Special, Group size is max. 30 people. Additional information <http://kotu.oulu.fi/r2b>

### ***Research***

Doctoral theses in entrepreneurship (Jorma Männistö, Vesa Puhakka), articles.

### ***Suggestions for ARG***

- Exchange of experience in supporting entrepreneurship education and programmes in regional development
- Evaluation of entrepreneurship training and education
- Regional networking and comparison of specific tools in fostering innovation and entrepreneurship

## ***The Kaunas University of Technology in Lithuania***

Represented by Project Manager Jurgita Sarkiene.

### ***Who***

The Kaunas University of Technology Regional Business Incubator (KTC) was established in 1998 with the goal of increasing the efficiency of research and development (R&D) activities at the Kaunas University of Technology (KTU) and the Kaunas region. The KTC is the first of seven business incubators in Lithuania and differs from the others by being oriented towards high technologies and innovations. The KTC has more than five years of experience in assisting and supporting innovative and technology-oriented SMEs as well as start-up and spin-off companies in the Kaunas region and Lithuania. The KTC's services include business and technology transfer consultancy, technical-administrative services, organisation of workshops and training courses for entrepreneurs and, finally, the provision of access to the KTU laboratories.

The original founders of the KTU regional business incubator were the Ministry of Economy of the Republic of Lithuania and Kaunas University of Technology. When realizing that the business incubator was working successfully, that its impact on the Lithuanian economy was good and that it needed to expand its activities in 2002, the Kaunas County Governors Administration provided a building located near the city centre, thereby joining the other founders.

A business incubator is an economic development tool designed to accelerate the growth and success of *entrepreneurial companies* through an array of business support resources and services.

### ***KTC Mission:***

- Support innovative and technology-oriented small and medium businesses in Kaunas and other regions of Lithuania.
- Stimulate the technology transfer processes from science to industry.

A business incubator's main goal is to produce successful firms that will leave the programme financially viable and freestanding.

### ***KTC Goals:***

- Stimulate the development of SMEs in Lithuania.
- Create a favourable business environment for start-ups.
- Produce businesses that are viable and freestanding when leaving the incubator.
- Stimulate entrepreneurship in the high-tech sector.
- Stimulate the creation of new businesses and jobs.

To determine companies' potential to profit from the business incubator services we use three criteria:

- Young company (in operation up to 3 years).
- Must conform to a definition of SMEs (up to 49 employees).
- Technology-oriented and/or innovative.

At the moment the KTC has 64 incubated companies.

### ***What***

One of the incubator's main goals is to promote entrepreneurship culture among its firms, the university and the regional authorities, and to coordinate these organizations for different joint projects.

### ***How we work***

- Traditional business support
  - Entrepreneurs' support programme
- Training programmes
  - Entrepreneurship motivation programme
  - Entrepreneurship training programme
- Networking activities (BASTIC, Baltic States, SPICE group)
- Project-based activities

### **Entrepreneurship motivation programme**

Aim:

- Promotion of self-employment and entrepreneurship
- Create an outflow of business plans
- Create new sustainable SMEs
- Improve societal attitudes to entrepreneurship

Comprehensive Training:

- Based on university teaching competence
- Focus groups
- Senior entrepreneurs who have an interest in encouraging their own development and that of younger colleagues.

Strong partnership involvement:

- Volunteers – private lecturers, mentors
- Brokerage events

### **Entrepreneurship training programme**

Aim:

- Explore the phenomenon of entrepreneurship and its various forms.
- Formulate attitudes necessary for the dissemination of entrepreneurship culture.

Goals:

- Bring forth the concept of entrepreneurship as being a separate entity.
- Explore the mechanism and background of the formation of entrepreneurship.
- Offer the necessary tools for the formation of entrepreneurial and intrapreneurial skills and abilities.
- Put theory into practice.

**Take-away for participants**

Analytical thought, creativity, wider perception, information management, innovation as a primary goal, risk tolerance, capability to find and use unorthodox solutions, appreciation of diversity, ability to motivate others and work in teams, market orientation.

***Suggested topics for the ARGs***

- Entrepreneurship:  
Importance of entrepreneurship, organizational entrepreneurship, intrapreneurship, implementation of activities, creativity and decision making in entrepreneurship, strategies of entrepreneurship; business models' prospect in entrepreneurship; entrepreneurship experience in the EU and the USA; EU policy towards development of entrepreneurship; stimulation of entrepreneurship in Lithuania; cases of good practices from other countries.
- Innovation management.

***Challenges***

Understanding how much support to provide entrepreneurs is a major challenge. Lithuania needs to develop a culture of entrepreneurship and enhance the skill of their people with regard to entrepreneurial activities. The environment in the region surrounding the incubator has a great affect on how the incubator operates and, in turn, on how effective it is in helping entrepreneurs. The incubators want to stimulate entrepreneurship and business creation in Lithuania, and they want to find out the optimal way to go about this.

***Discussion***

Certain regions have a great deal to learn about incubator management and entrepreneurship education. A difference must be made between facility manager and incubator services. Even if an incubator receives subsidies, it still must be competitive. Twente is market-oriented in their incubator management, with market prices, etc. Rostock maintains that many entrepreneurs who use incubators take subsidies and become dependent. It is hard for regions that have undergone transition to find the correct balance, especially when people are drawn to them because of subsidies and low market rents.

## ***The Tallinn University of Technology in Estonia***

Represented by Ene Kolbre and Urve Venesaar.

### ***Who***

Tallinn Technical University (TTU), founded in 1918, is the only higher educational institution in the field of technology in Estonia. TTU is a national centre of education, research and development in the fields of engineering, natural, exact and social sciences and the humanities, operating in the interests of Estonian society, students and staff and being open to international cooperation.

TTU is organized into the following faculties:

1. Faculty of Civil Engineering
2. Faculty of Power Engineering
3. Faculty of Humanities
4. Faculty of Information Technology
5. Faculty of Chemical and Materials Technology
6. Faculty of Economics and Business Administration
7. Faculty of Science
8. Faculty of Mechanical Engineering

TTU prepares specialists with higher education in all main fields of engineering sciences, in the field of economics and public administration. More than 9500 students are currently studying at TTU. Teaching staff at TTU consists of 109 professors, 143 associate professors, 132 university lecturers and 888 teaching assistants. The second largest faculty is the Faculty of Economics and Business Administration with its more than 1700 students and 90 members of the teaching staff.

### **Faculty of Economics and Business Administration (FEBA)**

The Faculty of Economics and Business Administration (FEBA) was founded in 1940, when the Faculty of Economics of Tartu University was transferred to TTU. At that time, the FEBA was the largest faculty of TTU, with almost 600 students in the spring semester of 1941.

The mission of the FEBA is to be a national centre of education, research and development in the field of economics and business administration. Its objective is to assure reproduction of academic competence and to engage in international educational and scientific collaboration in economics and in the areas that relate modern technology with economics. Educational programs are aimed at assuring the graduates' social and vocational competence corresponding to their educational level and at creating prerequisites for fast and flexible orientation in prospective occupations. For this reason the educational programs are directed at acquiring basic knowledge, on the one hand, and specializing in a particular narrower field in economics or business, on the other hand. The above-mentioned specialists are responsible for the future economic and social development in Estonia to increase the welfare of a society. Skilful management of data and knowledge, and implementation of respective technologies play a crucial role at achieving this main aim. The graduates from the

Faculty will play a key role in the business and public sector management. FEBA offers study programs at Bachelor, Masters and Doctoral level.

The FEBA is composed of the following units (departments and respective academic chairs and heads of departments and chairs):

1. Department of Economics
  - Chair of Economic Theory
  - Chair of Statistics and Econometrics
  - Chair of Mathematical Economics
  - Chair of Finance and Banking
2. Department of Business Administration
  - Chair of Logistics and Real Estate
  - Chair of Organization and Management
  - Chair of Production Management
  - Chair of Marketing
  - Chair of Small Business
  - Chair of Labor Environment and Safety
3. Department of Accounting
  - Chair of Financial Accounting
  - Chair of Managerial Accounting
4. Department of Public Economy
  - Chair of Public Economics
  - Chair of Economic Policy
  - Chair of Economic Sociology
  - Chair of Economic Law

The total number of students as of October 1, 2004 was 1745, including 1084 Bachelor students, 614 Master students and 47 PhD students.

The members of the academic staff were 91, including 14 Professors, 23 Associate Professors, 24 Lecturers, 19 Assistants and 11 others.

The total number of curricula as of October 1, 2004: Bachelor's degree - 2/2; Master's degree - 3/2; PhD degree - 1/1 (new curricula from September 1, 2002 / existing old curricula).

The number of graduates (during the period from October 1, 2003 to October 1, 2004) was 267 including 209 Bachelor's degrees, 55 Master's degrees and 3 PhD degrees.

The following reformations of the study process at TTU have taken place in connection with the restitution of Estonian independence and the introduction of changes in the legislative acts:

1. Transition from the year-based system to the curriculum-based system in the study process
2. Adoption of the system 'Bachelor – Master – PhD' with nominal duration of studies 4 + 2 + 4 years (since 1995)

3. Admission to Diploma studies since 1997 (nominal study period – 4 years)
4. Transition to the system ‘Bachelor – Master – Ph.D.’ with nominal duration of studies 3 + 2 + 4 years (since 2002).

### ***What***

The curricula of the Business Administration.

#### **Bachelor study:**

- Nominal duration: 3 years; Volume 120 CP
- Qualification of graduates: Bachelor of Arts in Economics
- Number of obligatory courses: 32; average volume 3 CP
- Proportion of optional courses: 23 percent (excluding Bachelor’s theses, 4 percent)
- Percentage structure of the programme: lectures 18 percent, seminars 22 percent, creative work 40 percent, others 20 percent (preparation for seminars and tests etc.)
- Specialization: accounting; financial management; marketing; management

#### **Master study:**

- Nominal duration: 2 years; Volume 80 CP
- Qualification of graduates: Master of Arts in Economics
- Number of obligatory courses: 13; average volume 3 CP
- Proportion of optional courses: 29 percent (excluding Master’s theses, 25 percent )
- Percentage structure of the programme: lectures 20 percent, seminars 20 percent, creative work 40 percent, others 20 percent (preparation for seminars and tests etc.)
- Specialization: accounting; financial management; marketing; management

#### **Master study (MBA)**

- Nominal duration: 2 years; Volume 80 CP
- Qualification of graduates: Master of Business Administration
- Number of obligatory courses: 12; average volume 2,9 CP
- Proportion of optional courses: 19 percent (excluding Master’s theses, 11 percent)
- Percentage structure of the programme: lectures 10 percent, seminars 10 percent, creative work 55 percent, others 25 percent (preparation for seminars and tests etc.)
- Specialization: accounting; financial management; marketing; management

#### **Continued training**

One-year courses in

- Accounting ( 2 different levels)
- Financial management
- Marketing

### Structure of the programmes

Each degree programme is a collection of modules. Each module consists of obligatory and optional subjects rated in CPs. One CP corresponds to 40 hours of study, including lectures, seminars and individual work. Instruction in a degree programme is organized so that a student can acquire 40 CPs in one academic year. Structure of the curriculum (CP):

	Bachelor	Master	MBA
General studies	16	7	5
Basic studies	41	12	12
Core studies	40	18	18
Special studies	12	20	15
Free choice courses	3	3	0
Practice	3	0	0
Graduation thesis	5	20	30
Total	120 CP	80 CP	80 CP

### Main teaching and learning methods

The main teaching methods used are: lectures, seminars and practical activities in computer classes, teamwork, case studies, simulation games, video training, situation analyses, individual consultations, supervision of research papers and bachelor's theses. The students' individual work includes: literature retrieval, study of lecture and seminar materials, writing reports and reviews, home assignments, research papers and bachelor's theses. Relatively small seminar groups (5-30 students) allow for an effective implementation of active learning methods, such as discussions, case-studies and group-work. In some courses (marketing, management), audio-visual materials are used. An intensive use of computer classes for seminars and practical work allows students to use contemporary technology when making their presentations. In the Business Communication course video training is used.

### Economic courses for technical specialties

There are mainly two economic courses for bachelor studies in six faculties: Micro- and Macroeconomics (2.5CP) and Business Administration (2.5CP), and in some specialties also Entrepreneurship and SME Management (3.5CP). These will also be the courses for Master studies in 3+2+4 curricula starting 2004/2005.

### The Business Administration course

The course objective is

to present an overview of the main aspects of internal and external enterprise environment and the practical exercising of business planning.

Students will develop their own business idea, prepare a written business plan and defend it; they will analyse case studies in seminars; some lectures by managers of operating enterprises can be included.

### ***Suggested topics for the ARGs***

- develop interactive methods of teaching for a large number of students (50-200)
- provide additional simulation games for different courses, e.g. the BA course
- find case studies connected with entrepreneurship in Europe
- develop continued training programmes in entrepreneurship for different target groups
- provide more possibilities for action learning
- develop e-study courses

### ***Challenges***

Business education is relatively new to Estonia, in comparison with North America and Western Europe. This delegation would like to learn more about what methods are being successfully used elsewhere and see what can be implemented in Estonia.

### ***Discussion***

As of now, this faculty uses mainly Estonian cases for which the students find solutions. The delegation from the University of Twente uses simulation games, which proves very helpful when teaching the American view of economics. However, different scenarios can be played.

## ***The University of Tartu in Estonia***

Represented by Dr. Tõnis Mets

### ***Who***

The University of Tartu is the largest university in Estonia; the number of students is constantly growing. By the end of 2003, there were 17650 students studying at the University, including 440 international students.

The University was founded as Academia Dorpatensis in 1632 by king Gustavus II Adolphus of Sweden. Today, the University of Tartu has eleven faculties, three research institutes and six colleges with more than 70 departments, institutes and clinics. The number of students studying at the faculties is represented in Figure 1.

<b>Üliõpilasi Students</b>	<b>Structural Division</b>
246	Faculty of Theology
926	Faculty of Law
1 964	Faculty of Medicine
2 849	Faculty of Philosophy
1 372	Faculty of Biology and Geography
1 092	Faculty of Physics and Chemistry
1 042	Faculty of Education (exclusive of the Teacher Training College)
606	Faculty of Sport and Exercise Sciences
1 433	Faculty of Economics and Business Administration
705	Faculty of Mathematics and Computer Science
2 018	Faculty of Social Sciences
<b>14 256</b>	<b>All faculties</b>



Some facts on modernization of the University and on the quality of studies:

- Growth of e-learning programmes; there were over 150 Internet courses in 2003.
- Over 50 databases available in intranet, covering 7000 science journals.
- In 2003, 73 doctorates were defended at the UT, accounting for 62 percent of all doctorates conferred in Estonia that year.
- During the period 1998-2003 publications by UT researchers amounted to 62 percent of the total number of articles published on the corresponding level by all Estonian researchers.

The University of Tartu plays a central role in Estonian science. The most remarkable recent research achievements have been in molecular and cell biology, gene technology, immunology, pharmacology, laser medicine, materials science, laser spectroscopy and biochemistry.

### ***What***

Until 1991 Estonia was a part of the Soviet Union. Thus the country's economy was centrally planned and entrepreneurial initiatives were suppressed. As a result, entrepreneurship and market economy subjects were excluded from the teaching programmes.

Shortly before regaining independence, however, Estonian managers were able to attend lectures on entrepreneurship and on market economy for the first time. The classes on entrepreneurship were organized by the Trade Management Institute (in Ireland) and by an Estonian banker from Sweden (in Estonia).

During the early 1990s, several educational programmes were organized for Estonian management consultants. The entrepreneurship courses were supported by NUTEK and Phare funds. Most of the courses taught consultants how to help people to convert their ideas into businesses.

Until the late 1990s, entrepreneurship-related subjects were mostly taught by foreign experts and were sponsored by foreign funds. Only in the late 1990s, Estonian universities and colleges started to tune their curriculum to the market needs, whereas private colleges were faster to adjust their programmes and to introduce entrepreneurship-related courses.

By now, most colleges offer entrepreneurship-related single courses. Some vocational schools also offer entrepreneurship courses within their professional areas. Only the University of Tartu has introduced a teaching programme that is fully oriented on entrepreneurship. This master programme was started in 2002 and has the name of the curriculum – “Entrepreneurship and Technology Management” (ETM).

### **The Faculty of Economics and Business Administration**

At present, the faculty consists of three institutes: Economics, Finance and Accounting, and Management and Marketing. Within each institute there are several chairs run by professors. The Centre for Entrepreneurship is a separate faculty unit. It was founded in 2003 with the original objective of starting to use the faculty's academic competencies for the benefit of private companies in Estonia.

The faculty offers education on all academic levels: bachelor, master and doctoral studies, as well as intensive business administration courses (usually during summer) and internships. All bachelor, master and PhD programmes (except for the ETM) are internationally accredited. The ETM, which was started in 2002, is expected to be accredited by 2006.

### **Entrepreneurship teaching methods**

In addition to traditional teaching methods (conducting lectures), several faculty members have implemented entrepreneurial teaching methods. However, the way of conducting classes is mostly unregulated. Entrepreneurial teaching methods are used more often within the ETM and MBA programmes.

Table 1: Short description of entrepreneurial teaching methods at the Faculty.

Method	Short description
Interactive communication	Trainers organize seminars on certain topics or case studies. Master students are encouraged to talk about their business experience and share their opinions.
Team work	Instead of assigning individual tasks, teachers initiate team building, coordinate work in teams, coach and give feedback.
Internship	To take part in internships, students choose the company, find their supervisor, and build a team if necessary. First internships were launched in 2001, since the year 2003 internships are coordinated by the Centre for Entrepreneurship, which also coordinated the first international internship in 2004 (University of Tartu, University of Ohio).
Computer-based simulations	The business simulations are usually conducted for MBA students. This year, however, also the students who do not major in economics could participate in simulations, and compete online with students from other European countries.
Applied research	During the research, students apply their academic knowledge into practice. The outcome is either a master thesis with an empirical part or a seminar paper on a specific topic.
Knowledge transfer	Selected scientists from the University of Tartu are being sent to foreign companies to be trained and to receive professional assistance in the area of their research.

### Teaching staff

In the 1990s the majority of the teachers at the Faculty were from academic staff. There were few practicing managers and consultants invited to teach. Nowadays, there are more practicing managers and consultants involved in the teaching process. Also, the ratio of foreign experts has recently grown.

### Challenges

The entrepreneurship teaching is in the developing phase at the Faculty. Therefore, we face numerous challenges as to pedagogical skills, curriculum structure and long-term partners.

The tasks for the Centre of Entrepreneurship is to a) expand entrepreneurial teaching methods within the faculty and then within the University, b) join/establish networks of experts on entrepreneurship, c) initiate change in the curriculum (bachelor, master level) in favour of entrepreneurship, and c) establish incubators for biotech companies.

### ***Suggested topics for the ARGs***

Within the BEPART programme the Faculty wants to focus on its challenges in order to achieve realistic changes in the curriculum and teaching methods.

1. Entrepreneurship:
  - Teaching methods and content of the subject.
  - Improving curriculum (courses, techniques, lecturers)
  - Training of teaching staff (professors' exchange)
2. Finding experts among BEPARTners.
  - Specific fields: biotech, IT.
  - Finding long-term cooperation partners.

### ***Discussion***

Introducing entrepreneurship to a culture is quite difficult. During the 1990's in Denmark, very few students wanted to start their own companies after finishing the university. The university system graduated students who wanted to make a career in the public sector. This is a basic trend in European cultures that needs to be changed. Eastern European countries are facing the same problems as Western European countries. Communism actively destroyed entrepreneurship culture. A discussion ensued about how to structure different tools in order to help foster entrepreneurship, in other words, what should the incubator's relationship to the university be and when should entrepreneurship education start. Family and friends might pose an additional problem, as they can exert pressures that discourage would-be entrepreneurs.

## ***The Kajaani Polytechnic in Finland***

Represented by Päivi Malinen

### ***Who***

The following five fields of education are available at the Kajaani Polytechnic

- Social Sciences, Business and Administration
  - Bachelor of Business Administration (marketing, accounting, production economics, practical business)
  - Degree programme in International Business (taught in English)
- Natural Sciences
  - Bachelor of Business Administration (Data processing)
- Technology, Communication and Transport
  - Bachelor of Engineering (production, construction, information engineering)
- Social Services, Health and Sports
  - Bachelor of Nursing – Nurse or Public Health Nurse
  - The bachelor's degree of sports studies (sports instructor)
- Tourism, Catering and Domestic Services
  - Bachelor of Hospitality Management (tourism, hospitality)

In addition, there is the field of Business Services that also include a Research and Development unit. The Kajaani Polytechnic currently has some 2,000 students and a staff of about 150 people.

The BEPART project team is a team of business teachers, including project manager Päivi Malinen (economics, business), Maritta Pikkarainen (business), Sami Malm (accounting); Pasi Näsänen (communication, business) and Arto Huuhtanen (business).

### ***What***

Securing the expertise and skills of students planning to become entrepreneurs forms the cornerstone of entrepreneurship education at the Kajaani Polytechnic. We provide core skills to our students either in their future role as entrepreneur or employee. Some 40 percent of Kajaani Polytechnic's teachers have acted as project-learning instructors and about 10 percent have acted as mentors to students in drawing up actual business plans. Entrepreneurship mentoring has been implemented using the developmental transfer theory.

Entrepreneurship studies as students' choices:

Basic entrepreneurship information is provided in all fields of education (accounting, marketing, legal issues). The actual entrepreneurship studies are implemented through students' personal choices. They can choose project studies in all fields of education in order to gain more in-depth professional skills in practical expert duties. The pedagogical model relies on the developmental transfer approach (e.g. Engenström Yrjö) and on combining and transforming theoretical, practical and self-regulation knowledge into expertise (e.g. Tynjälä Päivi, Bereiter Carl and Eraut Mische).

In project studies, students learn the vocational content of the project and how to use the project as a working method. In the most extensive projects, students carry out the entire product development cycle that ranges from customer needs to tested product. This is the same process that entrepreneurs complete when planning and developing their business.

One of the main subjects taught in Business and Administration at the Kajaani Polytechnic is entrepreneurship (practical business) in which students select project studies and draw up a business plan. Annually, some 10 -15 percent of the students of Business and Administration choose entrepreneurship as their main subject.

Polytechnic studies include 5 -12 months of practical training, depending on the field of education. The students can also complete the training in his/her own company or the family company. The student, company and tutoring teacher draw up personal business-development learning tasks for the duration of the training period. The student can also complete his/her thesis, the scope of which is 15 ECTS, in his/her own company or in the family company. The tutor and the student will together decide on the company's aspect of business to be developed.

The student can draw up a portfolio-type business plan targeted at setting up a company of his/her own. This will help him/her start-up a business after the completion of studies, provide access to the business incubator Innova and entitle him/her to assistance from other support organisations (Employment and Economic Development Centre). All business plans are tailored according to the students' needs and teaching is arranged using the mentoring method.

Kajability Ltd, a polytechnic student's learning enterprise, has been operating at the Kajaani Polytechnic since 1997. The enterprise is owned by the Polytechnic's students, staff and partners and is managed by the students. Teachers act as mentors, ensuring that all customer projects are backed up by a polytechnic theoretical basis. At Kajability, students have developed business ideas which have resulted in spin-off companies in the final phase of their studies. Kajability can be regarded as the Kajaani Polytechnic's "pre-incubator".

### ***Challenges***

1. To establish a Business Plan course: to develop mentoring methods and more systematized relations to other organisations in the Kainuu area.
2. In the Kainuu area there will be a great many entrepreneurs who are reaching retirement age – how will the Kajaani Polytechnic together with other actors be able to support students who either inherit or buy businesses / firms?

The Kajaani Polytechnic is currently discussing with its co-operative partners (Incubator, Employment and Economic Development Centre, Entrepreneurs, Banks, etc) and will subsequently decide on its focus.

## ***The Häme Regional Development Centre Ltd in Finland***

Represented by Jari Kattainen

### ***Where***

Hämeenlinna region is centrally located in the middle of Southern Finland, about 100 km north of Helsinki. The region has about 90 000 inhabitants and the area is readily reachable. The traffic connections are the best in Finland and nearly half (over two million) of the Finnish population with the greatest purchasing power live within a radius of 100 km. Most of the country's businesses are also located within the region. With regard to internationalization, there are good connections to airports and harbors. In a transnational context the Häme region is situated along the Old Kings Road corridor which runs from Stockholm to Saint Petersburg and along the Via Baltica corridor which runs from Tampere past Tallinn, Riga, Vilnius and to Berlin-Brandenburg and Poland.

### ***Who***

The Development Centre Häme Ltd is a regional development company established in 2000. The owners of the company are the City Council of Hämeenlinna and seven surrounding municipalities, which also cover the company's operating area, the Hämeenlinna sub-region. The company's main function is to promote and develop regional economic policy and also to arrange and organize business services in the Hämeenlinna region.

### ***What***

The Häme Development Centre has about 37 employees. Their main tasks are to serve companies and to offer business services within the "one-stop shop principle". The company's aim is to develop the region's attractiveness and competitiveness, to market the region's know-how and strengths and to coordinate the network and co-operation of the region's business service organisations. Other objectives of the company are to start and manage development projects and to improve companies' operating environment and co-operation. The company also offers financial instruments and innovation services. Furthermore, it provides and helps establish new companies.

The company is working in a local network, so that an entrepreneur can get all service from one place. This network covers 13 local organisations in the field of economic and business promotion. In the environment of strong local economic growth, the network has recently signed a special sub-regional co-operation agreement committing all contractors to jointly develop their services and products, to improve the local dialogue and information and to develop their expertise and excellence.

### ***Challenges***

BEPART challenges in the Hämeenlinna region can be divided into two main themes:

1. Dynamising and improving the efficiency of sub-regional networks.
2. Improving the general entrepreneurship policy and entrepreneurship education. BEPART should add some international context to the sub-regional co-operation, implying exchange of know-how, action learning and best practices. It could also offer a training of trainers

type of platform for the Häme regional business service players/actors when it comes to establishing, for example, new companies and starting advisory service, incubator activities, general SME policy or the structural surround of entrepreneurship. The second challenge of BEPART is to give some new insights into the improvement of regional entrepreneurship education, into determining the local entrepreneurship education strategy and into creating and updating the entrepreneur educational programmes at the vocational and higher levels.

In order to further highlight these two challenges, the Development Centre Häme Ltd presented two cases at the Stockholm symposium. The first was the preliminary PhD thesis work by Mr Kattainen entitled “Added Value of the actor in a business service organisation network: Case Hämeenlinna region”. The aim of the work is to improve the efficiency and co-ordination between the local network partners. The work is based on the Uppsala School of Economics’ theory of networking.

The second presentation underlined the current situation of entrepreneurship promotion in the Häme region. Mrs Ahonen presented the basic idea, some essential features and the results of the local entrepreneurship project which has just been completed. The “Yrittäjyyden Häme” project (2002 - 2005) brings entrepreneurs, teachers and students together for the purpose of trying to find the right entrepreneurial spirit for the future model of entrepreneurship in the region. The aim is to train teachers of vocational institutes and polytechnics to become new types of entrepreneurial trainers so that students at these institutions can consider entrepreneurship as a career option.

This project has also shown new needs and ideas for further development of the entrepreneurship education in the Häme region. These ideas will be a part of the region’s activity also in the BEPART project.

## ***The Stockholm School of Entrepreneurship in Sweden***

Represented by Director of Education Nick Kaye

### ***Where***

The Stockholm School of Entrepreneurship (SSES) is centrally located in the Stockholm Region, geographically defined by a four county cluster; the Stockholm County, the County of Sörmland, the County of Västmanland and the County of Uppsala. The approximate number of the inhabitants is 2.9 millions.

### ***Who***

SSES was established in 1997 and runs as a joint initiative by the leading universities in technology (Royal Institute of Technology), economics (Stockholm School of Economics), medicine (Karolinska Institutet) and design (University College of Arts, Craft and Design) in the Stockholm Region. The institution is financially supported primarily by the Stefan Persson Family Foundation, but also by public and private means. The goal of SSES is to promote the Stockholm Region as one of the leading hot-spots in the world within the entrepreneurial and the innovative field. With its specialization within the technology-based sector the institution functions as a supplier of education, research and development in these two overlapping fields, and is academically recognized as a trademark for creative academic entrepreneurship.

The Swedish BEPART project team consists of:

Per Olof Berg, Prof. – President of SSES

Nick Kaye – Director of Education

Claudia Feistner – Deputy Director Research

Bruce Henry Lambert – Professor of Strategy (Innovation, Alliances & Destination Marketing)

Staffan Gullander – Professor of Innovation and Entrepreneurship

Rasmus Rahm – Research Assistant

### ***What***

SSES offers undergraduate students, with at least 80 academic points, and PhD students a curriculum carefully constructed to tender the students both the opportunity to learn specific skills and to develop their ideas through several stages of the venture creation process, as well as to familiarize them with distinct business environments or contexts. The programme is taught in English and attracts both domestic and international participants. SSES has graduated more than 2000 students in entrepreneurship.

### ***Programme overview and courses***

The programme is demand driven by the different parent school's departments, and presently consists of ten different five credit courses, grouped as four core courses and six context courses.

The core courses (Ideation, Planning, Execution and Growth) offer students the opportunity to develop and activate the practical skills required to create and grow a new venture. The courses

focus on applied entrepreneurship, and at an aggregate level are designed to mirror the venture creation process. The context courses (Information Communication Technology Entrepreneurship, Social Innovation and Entrepreneurship, Design and Innovation, Concepts in Biotechnology, Global Entrepreneurial Leadership, and Languages of Innovation) are domain specific courses, designed to leverage the best of both the academic environments found at the parent schools and to draw together knowledge found in industry, government and society.

In order to enhance the student experience, SSES encourages participation in several complementary activities; Connect Springboards (presentation to an expert panel), Venture Cup (the leading Swedish business plan competition) and International Business Plan Competitions (EBPYC in Europe, and the Venture Challenge in San Diego). The core courses are specifically tailored to support student involvement in one or more of these activities. The activities also offer SSES feedback from external testing and international auditing of the education programme.

### ***Research***

The main part of SSES' research takes place at the competence centres of the member schools. The role of research at SSES is to serve as a joint platform/host for larger research programmes, in which SSES is committed to action-oriented research with a multidisciplinary perspective in the areas of entrepreneurship, innovation and business creation. The current projects are aligned with the mission to promote the Stockholm Region as a hot-spot for scientific and technological innovation and are carried out in close cooperation with partners from the public sector, universities and entrepreneurship support organizations.

### ***Challenges***

Being a dynamic organization SSES faces various kinds of challenges. Existing as an intermediary between different academic disciplines the relationship building with parent schools, staff and students is treated as a focal point for SSES. The long term goal is to construct a broader base permitting viable liaisons between the different institutions, and thereby facilitate the construction of common goals and short term lines of action.

The existence of different science disciplines on an administrative level provides a challenging environment for further development of the organization and curriculum in light of specific and differing needs from the parent schools.

One of the main foci within the school's organization is the creation of joint courses and use of teaching methods that leverage the cross disciplinary environment while stimulating all participants. Training of teachers is also a key challenge.

### ***Suggested topics for the ARGs***

SSES suggest four different topics for the ARGs:

- Incubator management and training of incubatees.
- Evaluation of entrepreneurship training and education.
- Exchange and exploration of alternative teaching methodologies.
- Benchmarking of entrepreneurship education, best practices, teaching methods, tools and incubators.

## ***The Centre for Innovation, Technology Transfer and University Development in Poland***

Material transmitted by Anna Jurkiewicz, PhD

### ***General information***

The Centre for Innovation, Technology Transfer and University Development (CITTRU) was founded to support innovative projects, to coordinate the collaboration with the business community, the public and private sector and other institutions interested in innovative projects developed at the University, as well as to acquire funds for research and expansion of the University. In addition, the Centre coordinates the realization of projects regarding strategic University development objectives, including EU funds or funds obtained from other countries or institutions. CITTRU will contribute its knowledge on the situation of promoting academic entrepreneurship at the Jagiellonian University and other universities in Krakow with whom we cooperate; it is also in direct contact with regional authorities. Entering the BEPART network will strongly benefit the activities of CITTRU. Experience will be gained from other countries and relevant information will be exchanged with partners. CITTRU has experience in organizing and conducting training sessions/seminars/conferences for researchers on entrepreneurship and commercialization of scientific results.

### ***The mission of CITTRU***

- To promote academic entrepreneurship – by transferring the results of scientific research to the market and developing businesses created on the basis of scientific research. This activity requires broad co-operation with commercial companies and public institutions for the purpose of obtaining their support – both financial and essential – for the development of scientific projects;
- To support scientific research related to and implementing new technologies able to compete with advanced research carried out by other economic units;
- To co-ordinate strategic investments of the Jagiellonian University related to the economic and social development of the school.

Creating entrepreneurial attitudes and promoting inventiveness would not be possible without the diversification of activities and identification of diverse problems and needs – ranging from raising funds and gaining high visibility for the University's research to co-ordinating individual scientific ideas and providing business help. In this aspect, the wide scope of CITTRU activities also involves co-operation with local authorities, educational and scientific institutions and the business community (on the regional, national and international levels).

### ***Our main range of activities***

- Multi-directional development of the academic entrepreneurship;
- Raising funds and co-ordinating University projects for structural funds;
- Creating and launching the Innovation Database, containing searchable information on the University's scientific experts, research projects and available specialised equipment;

- Creating the University Technology Incubator providing business, office space and consultancy support facilities for the commercial development of scientific products.

### *What do we do?*

- Co-operation with EU agendas, the Polish government, regional authorities and other organizations from which the University can receive funding
- Coordination of University participation in international tenders
- Assistance for University staff and co-ordination of administrative work connected with filing national and international patents
- Gaining national and international partners for joint ventures
- Providing assistance for University units in preparing and improving proposals of funding by the EU or other organizations
- Creative team-building workshops
- Thought Lovers Society; aimed at academics, discussing problems raised by other academics just for the sake of it
- Interdisciplinary innovations workshops = a source of commercial applications
- CITTRU – a broker facilitating cooperation between enterprises and the University
- CITTRU – a promoter for innovations developed at the University
- Assessment of the demand for technology solutions
- Initiating the transfer of technology in accordance with the course of its development

### *Products and services for businesses*

**Periodical popular conferences.** A series of conferences presenting emerging technologies is open on an invitation basis only. In today's fast changing environment, companies cannot afford to stand still. All businesses are focused on finding ways to achieve a sustainable competitive advantage. The latest trends and innovations in science are the key to success. This is why the Jagiellonian University is hosting a series of conferences that will provide an insight into the cutting-edge technologies. The conferences offer opportunities for the industry partners to share the know-how in the development of putting new ideas into applications.

**Innovation Database: experts, projects, equipment** is a system consisting of a database of records (single information entries) and an IT system of management and search. Users of this database are both scientific staff of the University who gain access to individually designed record packages open for editing and updating and representatives of the business community who gain the possibility of searching for information according to their needs.

The objective of the database is to facilitate contacts between the University and industrial- and service-oriented businesses/companies interested in using the scientific potential of the Jagiellonian University.

The database provides an easy way to gather and search for information on:

Experts Database module

- The possibility of expert co-operation with the scientific staff of the University

Projects Database module

- Scientific projects realised at the University

Equipment Database module

- Specialised equipment available at the University

### **Tailored at the University**

- “Solve my problem” – University experts contribute their knowledge by offering industry paid consulting services, commissioned research etc., or by brainstorming on problems submitted by industry and with the participation of industry
- Assessment of the university’s potential to solve the problems
- Analysing commercialization possibilities of existent solutions or their further development
- Intellectual property rights protection
- Cooperation with industry or spin-off within the Technology Park

**Access to University Resources.** The Jagiellonian University offers access to its libraries, exceptional range of quality scientific equipment, laboratories, etc. Highly experienced staff provides help and advice in undertaking scientific research projects for industry.

**Pool of Experts.** Providing collaborative research or consultancy work – scientific staff outsourcing. The academic and other staff of the Jagiellonian University is in constant demand for its precious expertise, mostly through consultancy engagements, by organisations representing all sectors of industry.

### ***BEPART team - Biographies***

Andrzej Rys, MD

Graduated from Medical School in Krakow, specialized in radiology. Established the School of Public Health of the Jagiellonian University – the first institution of this kind in CEEC – in 1991 and headed it until 1997. A member of the board of ASPER (Association of Schools of Public Health of the European Region). In 1997-1999 the director of the City Health Department. During this time he developed a master plan and implemented a reform of outpatient clinics in Krakow. In 1995-1999 the Polish director of the “Harvard-Jagiellonian Consortium for Health” – a project focused on the role of local governments in health care. In 1999-2001 a deputy Minister of Health; developed a new system of emergency medicine, a reform of the education system of health-allied professionals and was a member of the Polish UE-negotiation team. Currently working as a consultant with “Health and Management Ltd” in Krakow and for the WHO, the WB and the EAR. Vice President of the Institute of Emergency Medicine (NGO). Since January 2003 the director of the Centre of Innovation, Technology Transfer and University Development at the Jagiellonian University.

**Agnieszka Sito, MSc**

Has graduated in psychology from the Jagiellonian University and has completed the Post-Graduate Diploma in Personnel Management and the Post-Graduate Diploma in European Integration. Ms Sito has an experience of many years in informing and training as well as in acquiring and managing European funds.

**Paweł Błachno, MSc**

Graduated from the University of Economics in Krakow and Stockholm University in Stockholm, majoring in Banking and Finance. Experienced within the Investment Banking area as a specialist in capital gaining for non-public market organizations and projects. Worked as an analyst for the Investment Banking Department in DM Penetrator SA and as a consultant for Polinvest Sp. z o.o.

**Piotr Żabicki, MSc**

Graduated in sociology from the Jagiellonian University. Completing his PhD studies at the Faculty of Management and Social Communication. Professional experience in flood recovery and prevention projects (tasks connected with information campaigns and PR) and in various sociological analyses.

**Anna Jurkiewicz, PhD**

Graduated in Biology from the Jagiellonian University; PhD obtained in Biology at the Jagiellonian University, complemented with three years of law studies. Mrs Jurkiewicz has experience in EU-funded projects and IPR related to the biotech sector.

## The action-learning and -reflection groups (ARGs)

### Group 1: Training of trainers, incubator managers, incubatees

#### *Introduction to the topic*

Keywords in the plenum discussion before forming the group were: people with the role of teaching/training/coaching teachers, trainers, incubator managers, incubatees; training of trainers, curriculum development ; to search for suggestions to design training programmes.

#### *Project group*

The first ARG consists preliminarily of:

Anke Reichert	<a href="mailto:anke.reichert@uni-rostock.de">anke.reichert@uni-rostock.de</a>
Doreen Holtsch	<a href="mailto:doreen.holtsch@uni-rostock.de">doreen.holtsch@uni-rostock.de</a>
Gerald Braun	<a href="mailto:gerald.braun@uni-rostock.se">gerald.braun@uni-rostock.se</a>
Hillevi Ahonen	<a href="mailto:hillevi.ahonen@projektistudio.inet.fi">hillevi.ahonen@projektistudio.inet.fi</a>
Poul Dreisler	<a href="mailto:pd@asb.dk">pd@asb.dk</a>
Staffan Gullander	<a href="mailto:staffan@gullander.se">staffan@gullander.se</a>

## **Group 2: Evaluation, benchmarking, test programmes and tools**

### ***Introduction to the topic***

The central goal of the second ARG consists of three different parts:

1. To collect and categorize experiences, tools and techniques from the different regions regarding the educational programmes on entrepreneurship
2. To explore the different visions on the didactics of the programmes and the courses
3. To inventarise the themes and lay-outs used in the courses

### ***Plan***

These goals can be reached by creating a knowledge base. In this knowledge base the collected information can be stored in a common systematic structure.

### ***Project group***

The second ARG preliminarily consists of:

Bruce Henry Lambert	<a href="mailto:bruce@reorient.com">bruce@reorient.com</a>
Claudia Feistner	<a href="mailto:claudia.feistner@sses.se">claudia.feistner@sses.se</a>
Poul Dreisler	<a href="mailto:pd@asb.dk">pd@asb.dk</a>
Ene Kolbre	<a href="mailto:ekolbre@tv.ttu.ee">ekolbre@tv.ttu.ee</a>
Gerben Blauww	<a href="mailto:g.blaauw@utwente.nl">g.blaauw@utwente.nl</a>
Gottfried Effe	<a href="mailto:gottfried.ffe@oulu.fi">gottfried.ffe@oulu.fi</a>
Janita Andrijevska	<a href="mailto:janita@.ee">janita@.ee</a>
Jari Kattainen	<a href="mailto:jari.kattainen@kehittamiskeskus.com">jari.kattainen@kehittamiskeskus.com</a>
Jurgita Sarkiene	<a href="mailto:jurgita@ktc.lt">jurgita@ktc.lt</a>
Päivi Malinen	<a href="mailto:paivi.malinen@kajak.fi">paivi.malinen@kajak.fi</a>
Pekka Komulainen	<a href="mailto:pekka.komulainen@kehittamiskeskus.com">pekka.komulainen@kehittamiskeskus.com</a>
Tõnis Mets	<a href="mailto:tonis.mets@mtk.ut.ee">tonis.mets@mtk.ut.ee</a>
Urve Venesaar	<a href="mailto:venesaar@tami.ee">venesaar@tami.ee</a>

### ***Appendix 1***

This appendix is a compilation of the graphical presentations at the BEPART symposium in Stockholm. The presentations are presented in the same order as the written summaries in part one. These presentations are also electronically available at [www.sses.se](http://www.sses.se) and on [www.bepart.info](http://www.bepart.info)