Skjemainformasjon

Skjema	SFU
Referanse	1006150
Innsendt	12.05.2013 19:41:03

Host

Information about host institution and center

Name of centre	Centre for Entrepreneurship
Host institution	University of Oslo
PO Box address	PO Box 1169 Blindern
Postal code / City/place	0318 OSLO
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Contact person

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About the centre

About the centre

Is the centre already established at the time of application	Yes
When was the centre established	2004

Describe briefly the aims and current as well as planned activities of the centre (maximum 1500 characters)

We are currently offering the nationally renowned Gründerskolen programme, including a MSc degree programme in innovation and entrepreneurship. We seek with this application to develop the 'next generation' entrepreneurship education. During the last decades, universities have been experimenting with various educational programmes in entrepreneurship, and many struggle with the MSc format. The main reason is that the curriculum of such programmes are orientated towards understanding entrepreneurship, not necessarily towards the creation of entrepreneurial artefacts (e.g. products, firms, new markets). Traditionally, much of the focus of entrepreneurship education has been on the subject matter to be taught, neglecting the importance of practice and experience-based education. In other words, most programmes teach about entrepreneurship, they do not prepare for the practice of entrepreneurship, nor do they teach through entrepreneurship. This application aims, therefore, to develop reflection-in-and-on-action methodologies for entrepreneurship education. We are convinced that, building on our knowledge base acquired through Gründerskolen, our collaborating partners, and many pilots, such a pedagogical leap is necessary in order to develop the next generation entrepreneurship education. In short, we seek to link insightful scholarship with thoughtful entrepreneurship education.

Application Document

Application Document

Upload application document	profile_CEE Proposal FINAL12.pdf

Timeline and budget

Timeline and budget

Upload planned timeline and the activities to be conducted	timeline_SFU_Timeline_5Years.pdf
Upload plan for financial resource acquisition	financial_SFE Resource matrix.pdf
Upload budget	budget_SFU_Budget_5Years.pdf

Attachments

Attachments

- App_6_Article_on_Entrepreneurship_in_Residence.pdf
- App_5_Ongoing_Research.pdf
- App_4_Industrial_Partnerships.pdf
- App_3_Academic_Partnerships.pdf
- App_2_Core_Faculty.pdf
- App_1__References.pdf

Comments

Comments to the application form (maximum 1500 characters)

Application for the Status as Centre of Excellence in Education (CEE): Centre for Entrepreneurship at the University of Oslo (UiO)

Our vision: 'SFE links insightful scholarship with thoughtful education'

The Centre for Entrepreneurship (SFE) is UiO's unit for education in science-based innovation and entrepreneurship, and has emerged into a hub for the nationally renowned *Gründerskolen* (GS). Based on this GS programme, a Master of Science (MSc) programme in innovation and entrepreneurship has been developed, and with the current application, we apply to develop and pilot a new teaching methodology based on design thinking with the MSc programme at UiO as the initial 'test bed'. Entrepreneurship, given its importance particularly in terms of knowledge-based economies, commercialization of university research and social and economic value creation, is an emerging area of interest. Although there has been an increased interest in entrepreneurship education (Kuratko, 2005), traditional learning and teaching methods do not seem to be sufficient to make entrepreneurial skills and knowledge learnable and teachable (Hwang & Powell, 2005). Thus, there is ample need for developing novel approaches and tools, and with this application, we aim to contribute to the development of more practice-oriented learning approaches grounded in 'design thinking'.

As an exemplar, GS received an Award in 2007 from the *Norwegian Agency for Quality Assurance in Education (NOKUT)* for the thorough planning and execution of the programme, confirming its importance as a role model. Moreover, GS received the 'Best Learning Environment' Award by UiO in 2006, and the programme was awarded 'Best Service Provider' by Nordic StartUp Awards in 2012. GS is nationally associated with what can be labelled a 'global entrepreneurship lab'; the programme has so far had 1500 MSc students in start-up internships globally. This experience and practice-based programme has a 15-year history, and this year, it supports *six cohorts* totalling 178 MSc students on *four continents*. We do not know of any similarly successful programme, except for MIT Sloan's 'global learning lab'. The core of GS is a 12-week experience-based exposure to start-ups in Asia, Africa, America and Europe, including tutorials and mentoring. The programme, organized by SFE, has this year had more than 400 applicants, and it is an active *inter-university co-operation* between most of the universities in Norway, and renowned international universities such as The University of California (at Berkeley), The National University of Singapore, The University of Cape Town, Rice University, and Boston University. This programme brings together students from Engineering, Natural Sciences, Business Administration, Arts and Humanities, and the Social Sciences with a focus on innovation and entrepreneurship action.

Objective of the Application

This application targets the establishment of a solid knowledge base of GS and the development of a more profound school of practice. SFE's goal is to develop educational programmes that are well suited to helping students translate their academic education into effective entrepreneurial practice. During recent decades, universities have been experimenting with various educational programmes in entrepreneurship, and many struggle with the MSc format. The main reason for this is that the curriculum of most MSc programmes is orientated towards understanding entrepreneurship, rather than towards the design or the creation of entrepreneurial artefacts (e.g. products, firms, new markets). Another challenge is connected with the dichotomy between theory and practice, and not least, the challenge of working between the natural science and the social science disciplines. Traditionally, much of the focus of entrepreneurship education has been on the subject matter to be taught, neglecting the importance of practice and experience-based education. In short, most programmes teach **about** entrepreneurship, they do not prepare **for** the practice of entrepreneurship, nor do they teach **through** entrepreneurship. Even business schools struggle with the teaching format (e.g. BI (the 'national' private business school) recently closed down its MSc programme in entrepreneurship and innovation).

We want to enhance the effectiveness of science-based entrepreneurship education, and we therefore seek to develop a new educational approach and a learning environment that stimulate and support students' engagement in entrepreneurship. As a consequence, the objective of this application is to develop a foundation for a new action-based teaching methodology that trains candidates **through** and **for** entrepreneurship, based on effectuation methods grounded on real, science-based cases. While such an educational programme is more resource demanding, we are convinced, building on our knowledge base acquired through GS, that this kind of pedagogical leap is highly important and necessary for providing quality in future entrepreneurship education. We choose to achieve this by employing the 'design model' elaborated in later sections of this application.

The Norwegian School of Entrepreneurship (Gründerskolen)

Before elaborating on the details of our application, we believe it is important to provide additional insight into GS. The first initiative behind GS was taken by Professor Nils D. Christophersen from the Department of Informatics at UiO. During the autumn of 1997, Christophersen spent his sabbatical leave at Stanford University. After his return to Norway, he launched GS as a way to strengthen collaboration between academia and industry. Table 1

demonstrates the growth of that particular programme, and it captures most of the input, process and output factors also elaborated in the subsequent sections in this application.

TABLE 1
Programme Destinations

Year	No. of students	Silicon Valley*	Boston	Singapore	Shanghai	South Africa**	London	Houston	Oslo***
1999	6	6							
2000	21	21							
2001	49	49							
2002	65	30	19	16					
2003	67	25	20	22					
2004	131	28	35	41	27				
2005	136	23	37	28	28	20			
2006	150	23	58	28		18	23		
2007	98	17	42	20	11	8			
2008	137	25	53	26	13	20			
2009	143	29	30	29	23	17		17	
2010	153	25	36	28		19		32	13
2011	168	36	36	29		18		32	17
2012	177	36	44	30		19		36	12
2013	178	39	47	30		11		34	17

* San Jose and/or San Francisco. **Johannesburg and/or Cape Town *** Oslo (SFE & ERASMUS students).

The table shows the growth of Gründerskolen with regard to the number of students completing the programme each year, and the addition of new destinations over time.

Current programme structure, status and success factors

While the programme has grown considerably in terms of student numbers and national and international partners, the initial ideas for the programme have been maintained over the years. A summary of the most important programme characteristics is given below:

- The programme teaches technology (science-based) entrepreneurship.
- The aim is to inspire students to start their own business or to work with entrepreneurship and innovation, and thereby to increase their chances of success by equipping themselves with relevant theory, experience and networks.
- The main part of the programme is a 12-week stay abroad, where the students work full time in start-up companies and follow tailored entrepreneurship programmes during evenings/weekends.
- Before the stay abroad, the students complete a full introductory course in entrepreneurship.
- In preparation for their stay abroad, all accepted students attend a seminar which is specifically designed to prepare them, both practically and mentally for their stay abroad. Cross-cultural understanding, reflective practices and leadership are typical topics covered. While abroad, the students reflect on, and log their experiences in diary format, and they submit a reflection report at the end of their stay.
- For every student cohort, there are typically 30-40 students at each destination abroad.
- The programme is open to students from all disciplines but the aim of the programme is that 1/3 of the accepted students have an academic background within disciplines such as engineering, natural sciences or medicine, 1/3 come from disciplines in management, economics and marketing, and 1/3 from other disciplines. This distribution of candidates is frequently typical.
- The programme consists of 30 ECTS credits at master's level, and the minimum admission requirement is a completed bachelor's degree, or the equivalent.
- Our current destinations abroad and the university partners there are San Francisco (UC Berkeley), Boston (Boston University), Singapore (National University of Singapore), Houston (Rice University) and Cape Town (University of Cape Town). It should be noted that, in 2009, the Cape Town programme was transformed into a programme focusing solely on social entrepreneurship, but still with the internship experience as a key component.
- In 2010, SFE launched an Oslo GS-based programme for SFE and ERASMUS students where the programme was initially created in co-operation with Oslo Cancer Cluster and Université de Toulouse.

The Gründerskolen programme has already been awarded three quality prizes

In 2006, GS was awarded 'Best learning environment' at UiO. In 2007, the programme was given a prize by the Norwegian Agency for Quality Assurance in Education, which emphasized the thorough planning and execution of the stay abroad, and the programme was awarded 'Best Service Provider' by Nordic StartUp Awards in 2012. In 2011, 86% of the students said that they would recommend the programme to other students, and 70% of the 2012 applicants said they knew someone who had previously attended the programme. Some of the positive outcomes highlighted by former students include the experience of personal growth from having dealt with many challenges and the new network of highly competent and ambitious entrepreneurial people. Moreover, 109 unique newspaper articles have been written about GS. The feedback we receive –almost without exceptions– are of the following nature:

Absolutely fantastic programme. You are doing a great job, keep it up! | *Very good teaching programme! A+* | *Gründerskolen has changed my life* | *Gründerskolen is a fantastic programme and is the best way to learn entrepreneurship in Norway* | *Excellent, I am very happy I did this!* |

Connecting our vision with strategy: Strategy packages for the CEE

We have created two strategic development packages that directly relate to our new vision that *'SFE links insightful scholarship with thoughtful education'*. The first strategic development package (SDP) serves, jointly with ongoing research [A5], to develop a deeper understanding of entrepreneurship, while the second one elaborates on how we plan to do this within the educational framework of science-based entrepreneurship. The following two strategic development packages provide an outline for how we plan to reach our objectives:

SDP1: Advancing 'insightful scholarship' for innovative entrepreneurship education

There are many debates within the field of entrepreneurship and entrepreneurship education. Clearly, our understanding of entrepreneurship has consequences for the way we teach it. One of the debates, most explicitly prominent in the periodicals *Academy of Management Review* and *Journal of Business Venturing,* regards the 'discovery theory', advocated by Scott Shane (2003; 2012) in contrast with 'creation theory', most strongly advocated by Saras Sarasvathy (2004; 2008). This debate has led Venkataraman *et al.* (2012) to promote an understanding of entrepreneurship as a science of design. That is, whereas scholars favouring the discovery notion state that opportunities are found by entrepreneurs who then further develop these, scholars advocating the creation viewpoint state that opportunities are created by entrepreneurs. In SDP1a, we seek to advance the understanding of entrepreneurship as creation (that is, design), and we plan to develop this understanding interactively together with the methods advancement in SDP2 (a&b)).

A third group of scholars claims that opportunities are neither discovered nor created, but are instead imagined (Klein, 2008), and that entrepreneurship (action under uncertainty) is a function of the entrepreneurs' imagination and judgment. This debate is typically reflected in *Strategic Entrepreneurship Journal*, and the *Journal of Management Studies.* Major proponents of this debate are Foss and Klein (2012) who advocate the Cantillon-Knight-Mises understanding of entrepreneurship as judgment, that is, entrepreneurship understood as judgment under Knightean (1921) unknowable (that is, unpredictable) uncertainty. Judgments rest on various decision-making heuristics, and it is these heuristics that we seek to understand more deeply. Heuristics in entrepreneurial decision-making can be conceived of as what goes on between the mind and environment. This means the challenge for entrepreneurs is either to adapt to the environment, or to change or create it, and it is with the latter view that we enter into the debate of entrepreneurship as design. From a mind-environment point of view, we enter the heuristics debate over not only 'bounded rationality' (Simon, 1969), but also 'ecological rationality' (Gigerenzer *et al.* 2011) as a key asset of entrepreneurial expertise.

In contrast to the decision-making *biases* studied by (Nobel Laurate) Kahneman *et al.* (1982), Gigereinzer (2011) *et al.* highlight the *benefits* of the heuristics decision makers use. That is, heuristics and their affiliated judgments have significant implications for how we understand effectuation logics and the way people deal with uncertainty. In this SDP1 (a&b), we seek to understand these "value creating" heuristics more profoundly, and with an educational focus. We therefore take as point of departure the following research questions: ***How do entrepreneurs create/make decisions when time is limited, information is unreliable, and the future unknowable? How do novice entrepreneurs differ from serial or expert entrepreneurs? What can novice entrepreneurs ('our students') learn from that? What are the implications for our curriculum development?*** In order to be able to develop viable design-based programmes, we need to develop a more profound working knowledge of the activities that can potentially lead to successful entrepreneurship, and which ones do not. These insights will serve as an important knowledge basis for new MSc programmes and provide crucial input to our system of iterative programme evaluation and redesign.

SDP2: Advancing on 'thoughtful education' - new reflection-in-and-on-action methodology.
This strategic development package aims at advancing thoughtful entrepreneurship education. By the term 'thoughtful education', we mean new methods and reflection technologies in support of a new teaching philosophy based on entrepreneurship understood as a science of

design. That is, this development package seeks to develop viable reflection technologies for science-based entrepreneurship education piloted at the master level.

a) Developing and piloting the methods in an action-based MSc programme

Building on GS, we seek to make a pedagogical leap into a new teaching methodology to science-based entrepreneurship education. In this subpackage, we therefore seek to develop a design-based methodology that provides a more practical route to entrepreneurship training – in collaboration with Start-Up Lab, Inven2 (the university's Technology Transfer Office) and industry. This entails that students enrolled in our pilot programme will follow a carefully designed and facilitated effectuation training programme as shown in Figure 1 and 2.

FIGURE 1:
Sarasvathy's (2008) Effectuation Model with Reflection Frames

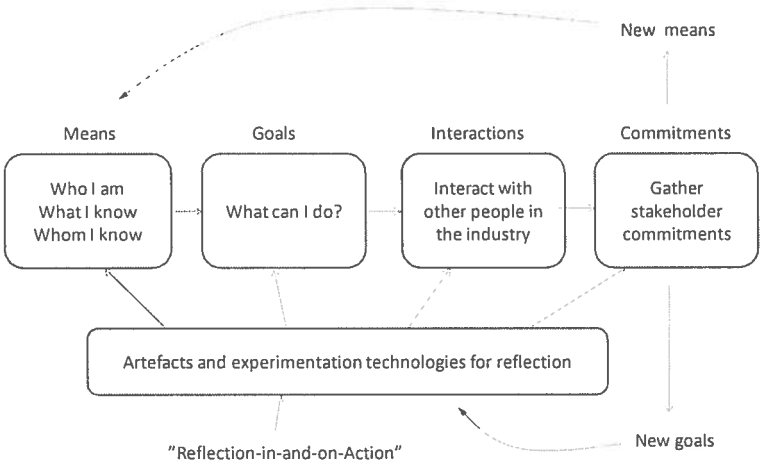
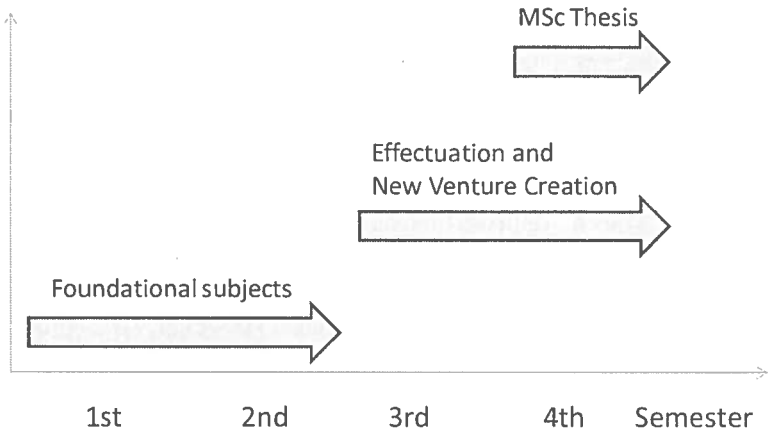


Figure 1 illustrates the effectuation methodology (the design logic), a practical method used by expert entrepreneurs uncovered by Saras D. Sarasvathy (under the mentorship of Nobel Laurate Herbert A. Simon). The effectuation model shows how expert entrepreneurs start with the means at hand (who they are, what they know, and whom they know), and then interact with potential stakeholders to create new products, firms or markets. However, in order to develop the framework beyond a classroom course, we also need to develop suitable experience-based 'reflection-in-and-on-action' methods, and this is what we seek to accomplish with the next subpackage (SDP2b). Venkataraman *et al.* (2012) argue that the design logic has not yet been recognized in entrepreneurship research and education, and that we need to move forward towards developing new insights and methods. Entrepreneurship as design deals with different degrees of uncertainty – possibly dependent on varying stages of venturing. Furthermore, a variety of artefacts and experimentation techniques are functional for different purposes.

Today, most educational programmes in innovation and entrepreneurship employ the causation methodology, or hybrids. However, we will here develop and pilot new training methods through a 'practitioner's track', and develop the effectuation methodology into a 'fully fledged' design-based programme. In order to achieve this, we have already entered into more organized and tighter collaboration with our industrial partners [A4].

FIGURE 2:
The Effectuation MSc Programme



In addition, some of the student team projects could also be based on industrial ideas, so we need to develop stronger relationships with industry in order to source in science-based new ideas with suitable potential. We have already piloted the above-mentioned initiatives, and one example is shown in A6. This pilot received significant funding from the University Rector in the past few years. The lesson learned from this pilot, GS, and our collaboration partners, is that, while these action-based programmes are highly beneficial to the students and the other stakeholders, they are much more resource demanding; a methods development challenge that we can meet only with the additional CEE funding. In the appended timetable, we have outlined some major steps in the development of the design-based programme, see also the budget and the comments. A more detailed plan is a prioritized task in early 2014.

b) Methods Development: Reflection-in-and-on-Action

In this subpackage, the aim is to prototype a learning arena for MSc entrepreneurship students that draws on previous experiences at SFE and models outlined above. In line with the international research literature calling for more emphasis on entrepreneurial competences as learning outcomes, SFE has piloted an educational scheme for the MSc entrepreneurship students that integrates their writing of a thesis and a development of a science-based business together with industry. Two major approaches have been tested in these experiments using

innovative teaching methods – a reflection-in-action model inspired by the ideas of Schön (1983) and an action research approach (Coghlan & Brannick, 2009). Preliminary summaries of these constructions indicate that they have the following strengths and weaknesses: The "reflection-in-action" approach finds its empirical backing in counselling in health and social work or apprenticeship in artistry. Here the student is asked to reflect on his/her own behaviour (and cognition/feelings) in dealing, respectively with a patient or with a piece of art. For entrepreneurship candidates who are enrolled in in-service training, it is essential to have a forum and techniques that stimulate reflective practice. However, their projects do not involve only one "client" in a limited number of situations, but instead a lot of different actors in numerous situations and sites. Experience-based training methods may involve a myopia making one blind to contextual factors in the practice of entrepreneurs.

The "action research" approach (Coghlan & Brannick, 2009) provides a platform that can combine principles of action learning, artefacts/experimentation techniques for reflection and an awareness of institutional dependencies. However, the preliminary experiences involving MSc students in their thesis phase reveal that such an approach may be unrealistic and overambitious given the short duration of these projects. One of the strengths of this methodology is that it provides the students with tools for reflecting on their roles and strategies in complex institutional settings. International reviews of entrepreneurship education have pointed out that an overemphasis on "intention", "self-sufficiency" and other psychological traits as outcome variables has led to students being insufficiently aware of their strategies and responses to the institutional ecology in which they navigate (Garavan & O'Cinneide 1994; Mwasalwiba, 2010). Based on these experiences and the aforementioned debates about entrepreneurship expertise, we are applying for CEE grants in order to develop and implement a design model of entrepreneurship education. This package will proceed through four steps: (1) design artifacts/experimentation techniques for reflective learning, (2) trial these in concert with the previous subpackages, (3) develop a system for iterative evaluation and redesign, and (4) conduct follow up studies of learning outcomes in relation to entrepreneurship competencies will be conducted. This framework will thus address the following questions: ***How do artefacts/experimentation techniques improve reflective learning? In what way are they supportive to the development of entrepreneurship competencies? Does this type of action-based educational programme have a specific strength in influencing the professional success of entrepreneurs?***

The present and future organization of SFE

SFE currently has one full time professor (also the director), one full time associate professor, nine adjunct professors (in 20% positions) on teaching, two PhD students (see their supporting research in A5), and an administrative staff of four persons. To maintain quality in future educational programmes, we need to develop our educational methods knowledge platform, as it is unavailable on the market. As part of this CEE application, we will therefore recruit three PhD fellowships and/or postdocs in tenure track (recruitment) positions, as well as one more full time faculty member to develop the action-based design methodology. The PhD/postdocs will (with an additional teaching allowance) serve as co-developers of the design-based methodologies. As a CEE, SFE will be organized in the following way:

SFE's Management Team [A2]:
Mari Saua Svalastog, Programme Manager, Gründerskolen, UiO. [AS TODAY]
Professor Truls Erikson, Director, Centre for Entrepreneurship, UiO. [AS TODAY]
Cecilie M. Sundet, Head of Office, Centre for Entrepreneurship, UiO. [AS TODAY]

CEE Management Team [A2] Additions:
Professor Leif C. Lahn, Co-director, Department of Pedagogy, Faculty of Education, UiO.
Adjunct Associate Professor Mirjam Knockaert, R&D Director, Centre for Entrepreneurship.
Each 'work package' will have its own group leaders who will form the wider directorship.
Beyond the Programme Council (comprised of MSc students and internal and external faculty), the new centre's management team will regularly consult with the following advisory entities:

SFE's Scientific Advisory Board
Professor Solveig Kristensen, Vice-Dean, Department of Pharma, UiO. [NEW]
Professor Kari Kværner, Research Director, Oslo University Hospital (OUS). [NEW]
Professor Magnus Klofsten, Director, CIE/Helix Centre, Universitetet i Linköping, Sweden.
Knut Traaseth, General Secretary, Norwegian Venture Capital Association (NVCA).

SFE's Industrial Advisory Board
Kathrine Myhre, Director, Oslo Medtech [RENEWED]
Leif Rune Skymoen, Director, Nansen Neuroscience Network. [NEW]
Eva Næss Karlsen, Director, Oslo Renewable Energy & Environmental Cluster.
Jónas Einarsson, Director, NCE Oslo Cancer Cluster.
Øystein Lie, Executive Manager, MARE Life. [NEW]

Industrial Partnerships [A4]
Oslo Medtech (sources in industrial projects and internships). [RENEWED]
Nansen Neuroscience Network (sources in industrial projects and internships) [NEW]
Oslo Renewable Energy & Environmental Cluster (sources in industrial projects/internships)
NCE Oslo Cancer Cluster (sources in industrial projects and internships) [RENEWED]
MARE Life (sources in industrial projects and internships) [NEW]
Inven2 (sources in industrial projects and internships)
Start-Up Lab (facilitates innovation space) [NEW]

Academic Partnerships [A3]
University of Tromsø [NEW]
Norwegian University of Life Sciences
Department of Engineering, Bergen University College
Department of Pedagogy, Faculty of Education, University of Oslo [NEW]
Sahlgrenska Academy, University of Gothenburg, Sweden [RENEWED]
Adaptive Rationality Center, Max Planck, Berlin. [NEW]
The Darden School, University of Virginia [NEW]

Diffusion of knowledge and new methods

All new insights and methods will be employed in all our educational programmes, which in itself represents nationwide dissemination of new knowledge. As we develop new methods, we will develop and facilitate 'train-the-trainers' seminars, as these unique methods can be expected to receive global attention. We have already established pre-commitments with the recently launched global Effectuation conference to take a lead role in facilitating PhD teaching and research seminars ('doctoral consortiums'), and we will contribute to facilitate and disseminate design-based teaching and research from this 'global diffusion platform'. The second annual conference meeting is located to Lyon, France, in June this year.

Regionally, we will develop and test out the new methods in close collaboration with our industrial and academic partners – many with similar MSc programme challenges [A3]. Thus, the most active faculty members from these universities will serve in an advisory capacity (in the recruitment and co-supervision of the new PhD research fellows), and since the reflection in-and-on-action technologies are piloted and developed in close collaboration with industrial actors and the Department of Pedagogy, diffusion of the core reflection-in-and-on-action frameworks will take place graduately – in an interactive manner. In the second CEE period, we expect that tailored versions of these methods will be adopted and implemented by our collaborating partners (in the north, west and east of the country), and it is then naturally for them to take the lead in further developing and refining these methods.

In terms of the secondary outputs of the methods advancement work, we believe that publication in both national and international journals is the best way to disseminate quality assured knowledge. It almost goes without saying, all results will be presented and discussed at national and international teaching and research conferences prior to publication. Examples of such conferences are those arranged by the Academy of Management, European Academy of Management, Babson Entrepreneurship Conference, and/or the Effectuation conferences.

Finally, we will develop unique teaching materials that can be distributed nationally and internationally. These materials are probably optimally distributed through a website. We will also distribute digital Newsletters, make Apps, and use Gründer-TV to feature the new methods. The following extra-curricular activities involve students in various ways:

SFE PhD Seminars - Yearly held research seminars together with PhD students (2010-)
SFE Quarterly - Quarterly held research seminars with researchers and MSc students (2011-)
SFE Roundtable - Monthly lunch meetings with MSc students over a relevant article (2012-)
SFE Colloquium - Bi-monthly meetings held with industry leaders and MSc students (2013-)
SFE Seminars – Infrequently held seminars on 'best practice' entrepreneurship (2014-)
SFE Gründer-TV– Infrequently made Gründer-TV on educational methods (2014-)
Entrepreneur of the Year – Yearly Award (awarded by the MSc students (2014-))

APPENDIX 1

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McCormick, D. W. 1993. Critical Thinking, Experiential Learning, and Internships. *Journal of Management Education*, 17(2): 260–262.
Narayanan, V.K., Olk, P.M., & Fukami, C.V. 2010. Determinants of Internship Effectiveness. An Exploratory Model. *Academy of Management Learning & Education*, 9(1): 61–80.
Payette, A. 1993. To Teach Experience, *Journal of Management Education* 17: 440-453.
Revans, RW. 1980. Action Learning: New Techniques for Management. London: Blond & Briggs.
Schön, D.A. 1991. *The Reflective Practitioner: How Professionals Think in Action.* Ashgate.
Simon, H. A. 1969. *The Sciences of the Artificial.* Cambridge: MIT Press.
Simon, H. A. 1996. *The Sciences of the Artificial. (3rd ed)* Cambridge: MIT Press.

Relevant Links:

SFE's webpage: http://www.uio.no/sfe
Gründerskolen's webpage: http://www.grunderskolen.no/inenglish.php
Gründerskolen **Alumni**: http://www.grunderskolenalumni.no/pages/open/

Timeline

2014 2015 2016 2017 2018

PhD project on SDP1a>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>> Postdoc phase
PhD project on SDP1b>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>> Postdoc phase
New employee facilitating the pilot program SDP2a>>>>>>>>>>>>>>> Postdoc phase
PhD project on SDP2b>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>> Postdoc phase
Make final agreement with Start-Up Lab (a newly opened on-campus-incubator)
Make final agreement with Inven2 (The University's Technology Transfer Office)

General comments:

2014 2015 2016 2017 2018

2014 is the planning and recruitment year
2015 is the first intake of MSc students for the design based program…
Launch Phd/doctoral consortium emphazising R&D on design based methods.
Develop basic insight and new methods to be employed in the pilot program starts from year one…
Collaboration partners as an active reference group throughout, aslo in the formation phase…
Diffusion of new methods starts….

Budget	New PhD Research Fellows				Postdoc phase...
in 1000kr	***2014***	***2015***	***2016***	***2017***	***2018***
SDP1a	600	800	800	800	800
SDP1b	600	800	800	800	800
SDP2a	600	800	800	800	800
SDP2b	600	700	700	700	700
Incubator space	150	200	250	250	250
Inven2 projects	150	200	250	250	250
Free resources	900	100			
SUM	3600	3600	3600	3600	3600
Top funding:	***3000***	***3000***	***3000***	***3000***	***3000***
Add-on funding (UiO)	600	600	600	600	600
Base funding (UiO)	8000	8000	8000	8000	8000

Total	
18000	total top funding
15000	**from NOKUT**

Comments:

Most of the development subgroups will have one PhD student with a teaching allowance, plus an adjunct professor and some extra funds. The exception is SDP2a, that will have one person on full time facilitating the pilot program and "How to Teach Experience" methodology...

Free resources: Coaching seminars, procurement of external services, travel costs, market- and dissemination. Gründer-TV/Apps/Reports.

Resource matrix for SFE today

		'Tenured'	'Non-tenured'	**Total**
Faculty		1 Professor 1 Associate prof	9 Adjunct professors (20%) (all on teaching) 2 PhD students	Approx. 6 man year
Administrative staff*		1 Head of Office 3 Adm. Officers		4 man year
# of MSc students	25 per two-years cohort (50 full time-equivalents)			(50 % of the budget)
# of students yearly on Gründerskolen	150 (75 full time-equivalents)			(50 % of the budget)
# of Bachelor students	120 (20 full time-equivalents)			

*The Gründerskolen programme is extremely time consuming/demanding due to SFE's extraordinary student service (assisting in handling all types of matters including visas, etc.).

Please, see budget for numbers.

Core faculty at the new Centre for Enterprenership [A2]

Professor Truls Eikson, Director
Professor Leif C. Lahn, Co-director
Associate Professor Mirjam Knockaert, R&D Director
Associate Professor Birthe Soppe, Research Group Leader

CV for ***Professor Truls Erikson*** *(born in Harstad 23.06.62, married, two kids)*

Educational background

2001 Doctor of Business Administration. Manchester University, UK.
- ✓ *Includes a Visiting Fellowship program at Harvard University, USA.*

1994 Master of Business Administration. Norwegian School of Management (BI).

1989 Practical-pedagogical exam in Business Administration, University of Trondheim.

1988 Four-year Cand. mag. in 'Industrial Economics', Horten School of Engineering.

Professional experience

2008 - Director (Senterleder) and Professor in Innovation and Entrepreneurship.
Centre for Entrepreneurship, Faculty of the Natural Sciences, University of Oslo.
- *I am responsible for the pedagogic content of the MSc & Gründerskolen programs (initially as 'Undervisningsleder', and as Head of the respective Program Councils).*
- *I have developed and teached ENT5100 Research Design (4 times); and ENT4050 Dynamic Organizing, and teached ENT4400 Innovation Strategy & Management (3 times). I also supervise MSc and PhD students, and serve in exam committees. I have developed and organized two PhD courses within Innovation and Entrepreneurship.*
- *As part of the directorship, I completed: 'Leading High-Impact Teams' at Kellogg.*
- *I have completed UiO's Research Director Program delivered by CBS in Denmark.*
- *I have <u>initiated</u> and led several 'Regional Innovation Program' projects together with NCE Oslo Cancer Cluster, Oslo Medtech, and Oslo Renewable Energy and Environmental Cluster. It also includes establishment of ERASMUS MSc exchange programs with Université de Toulouse III (France), and other cross-border projects sponsored by EU Interreg (Kattegat-Skagerak) with Aalborg University (Denmark), and industry sponsored MSc exchange programs with Chalmers University (Sweden).*

2008 - Adjunct Professor in Innovation & Entrepreneurship, Bergen University College.
- *I consult and assist Bergen University College in the launch of their MSc program.*

2008 - 2009 Adjunct Professor in Entrepreneurship.
Department of Industrial Economics and Technology Management (NTNU).
- *Finalizing co-ordination and teaching of experienced based & PhD programs.*

2000 - 2008 Associate Professor (Førsteamanuensis) in Entrepreneurship.
Department of Industrial Economics and Technology Management.
Norwegian University of Science and Technology (NTNU)
- *In 2003, I was a Visiting Research Scholar at Scandinavian Consortium for Organizational Research (SCANCOR) at Stanford University, California, USA.*
- *I have taugth almost 50 MSc level courses at NTNU: 'Research Methods' (2 times); 'Experts in Teams' (5 times) (rated as 'best course' over several years); 'Strategic Negotiations' (15 times (regular and experience based programs); 'Commercialization of Technology' (4 times); Entrepreneurship in 'Entrepreneurship & Marketing' (3 times), Economics in 'Technology Management' (4 times (more than one thousand students with two parallels); 'Entrepreneurial Finance' (5 times); and Cross-Cultural Management in 'Internationalization' (7 times). Responsible for 'field specialization'.*
- *I received my negotiation teacher training from Harvard's Program on Negotiation.*
- *I have completed supervision of 4 PhD candidates in Innovation and Entrepreneurship.*
- *I have supervised numerous MSc thesis students within Innovation & Entrepreneurship.*
- *Initiated and completed a practical e-learning project funded by 'Norgesuniversitetet'.*
- *Research project involvement (acquisitions and/or management, and/or completion): NFR FAKTA (2002), FORNY (2004); KUNI (2005), Nordic Ministry Councils (2006). Approximately a dozen of my research articles derive from these 'external' projects.*
- *I <u>developed</u>, and served as the program manager on two experience based master's programs in innovation and management. One of them was requested by, and offered to university college teachers. Approx 20 teachers finalized their 2nd master's degree, which contributed to partially qualify many as Associate Professors ('Førstelektor').*
- *I developed my second 'Academic spin-off' company in 2004: Negotiation AS.*

1998 - 1999 Associate Professor (Førstelektor) in Business Administration, Harstad College.

- *Applied for, and granted Leave of Absence: Teached 'Investment Analysis', and 'Management Science' at Vestfold College, and Organisational Design at UMB.*
- *I launched my first 'Academic spin-off' company in 1998: labelled Webnett AS.*

1994 - 1998 Assistant Professor (Amanuensis) in Business Administration, Harstad College.

- *Granted tenure as 'Amanuensis' in 1997 (after a three-year's tenure track program).*
- *Teached 'Introduction to Business Economics' each fall, and 'Investment Analysis & Finance' each spring (typically with 120-150 Bachelor business program students).*
- *Supervised numerous bachelor thesis students on business administration topics.*

Conference papers this year

Erikson, T. Towards a Team Production Theory: A Moderated Mediation Study. Prepared for the International High-Tech Conference in Manchester, UK: May 2013.

Knockaert, M., Bjørnåli, ES., & Erikson, T. Board Strategic Involvement in Early Stage High-Tech Firms: an Attention Based Perspective. Accepted for the AoM Conference in August 2013.

Erikson, T., & Gertsen, F., et al. Effectuation and Reflection-in-Action. Accepted for the 2nd Effectuation Conference, EM Lyon, France: 3.- 4. June, 2013.

Erikson, T., & Leunbach, D. Effectuation: Affective and Cognitive Judgments (advancing the Cantillon-Knight-Mises understanding of entrepreneurship as Judgment). Accepted for the 2nd Effectuation Conference, EM Lyon, France: 3.- 4. June, 2013.

George, B., Erikson, T., & Parhankangas, A. Preventing Dysfunctional Conflict: Examining the Relationship between Different Types of Managerial Conflict in Venture Capital Backed Firms. Accepted for the BCERC Conference, EM Lyon, France: 5. - 8. June, 2013.

Other papers in progress

Erikson, T., Aspelund, A., & Løvdal, N. (In review). Developing Technological Artifacts or Developing Business: Successful Energy Entrepreneurs Avoid Technological Myopia.

Erikson, T., Knockaert, M. & Foo, Maw Der. (In review). Enterprising PhDs: A Multilevel Analysis of the Role of Enterprising Norms, Prior Experience and Scientific Productivity.

Foo, Maw Der, Knockaert, M., & Erikson, T. (In review). The individual-environment nexus: The impact of individual characteristics and family/work environments on research scientists' interest to pursue an entrepreneurial career.

Knockaert, M., Foo, Maw Der, & Erikson, T. (In review). Growing in Style: A cognitive style perspective on which research scientists are likely to exhbit growth intentions.

Erikson, T., Leunbach, D., & Ricciardi, M.R. (Soon in review). Closing the Behavioural Integration - TMT Effectiveness Gap: Team Positive Affect.

Books, chapters and articles

Erikson, T., Leunbach, D., & Svalastog. M.S. 2013. *Global Start-Up Internships as a Source of Experiential Learning*. In Redford, D., & Fayolle, A. (Eds.). Handbook of Research in Entrepreneurship Education: Entrepreneurial University. Vol 4. Edward Elgar, UK.

Bjørnåli, E.S., Erikson, T., & Knockaert, M. 2011. The Impact of Top Management Team Characteristics and Board Strategic Involvement on Team Effectiveness in High-Tech Start-Ups. *Academy of Mangement's Best Paper Proceedings.* San Antonio, Texas.

Erikson, T., & Bjørnåli, E.S. 2011. Styret som ressurs og ressursene i styret. *Magma - Tidsskrift for økonomi og ledelse*. ISSN 1500-0788. *14*(7), s 37- 45.

Sætre. A.S., & Erikson, T. 2011. Deep Sea Fishing Inc.: Acquiring the 'right' capital for a new technology-based firm, In Paul Westhead, Mike Wright & Gerard McElwee (Eds.), *Entrepreneurship: Perspectives and cases*. Prentice-Hall. Case study 11: 320 – 326.

Erikson, T., & B. George. 2010. *Decision Making Disagreements and Performance in Venture Capital-backed Firms* in C.G. Brush *et al.* 'The Life Cycle of New Ventures'. Edward Elgar Publishing, UK.

Erikson, T., & Zacharakis, A. 2010. *Exploring the Venture Capitalist/Entrepreneur Relationship: The Effect of Conflict upon Confidence in Partner Cooperation* in C.G. Brush *et al.* 'The Life Cycle of New Ventures'. Edward Elgar Publishing, UK.

Zacharakis, A., Erikson, T., & George, B. 2010. Conflict between the VC and entrepreneur: the entrepreneur's perspective. *Venture Capital - an international journal of entrepreneurial finance.*

Bjørnåli, E.S., & T. Erikson. 2010. *Board Features Associated with New Team Member Addition in Academic Spin-offs* in C.G. Brush *et al.* 'The Life Cycle of New Ventures'. Edward Elgar Publishing, UK.

Bjørnåli, E.S., Sørheim, R., & T. Erikson. 2010. *Design Characteristics Associated with Venture Capital Acquisitions in Academic Spin-offs* in C.G. Brush *et al.* 'The Life Cycle of New Ventures'. Edward Elgar Publishing, UK.

Erikson, T., & Berg-Utby, T. 2009. Pre-investment negotiation characteristics and CEO dismissal in venture capital backed firms. *Negotiation Journal.*

Berg-Utby, T., Sørheim, R., & Erikson, T. 2008. The influence of history and time horizon on the robustness of the venture capitalist/new venture team cooperation. *Frontiers of Entrepreneurship Research.*

Erikson, T . 2008. Discriminating 'Schumpeterian' from 'Austrian' informal investors. *Journal of International Entrepreneurship.*

Moen, Ø., Sørheim, R., & Erikson, T. 2008. Born Global firms and informal investors – high growth firms and high-risk investors? *Journal of Small Business Management.*

Jenssen, J.I., Kolvereid, L., & Erikson, T. (Red.) 2006. *'Perspektiver på Entreprenørskap'. Høyskoleforlaget. Kristiansand. [Revised 2012].*

Erikson, T., & Sørheim, R. 2005. Technology 'angels' vs. other informal investors. *Technovation.*

Erikson, T. (Red.) 2005. *'Teknologiledelse – økonomiske betraktninger'.* Gyldendal Akademiske Forlag, Oslo.

Drnovsek, M., & Erikson, T. 2005. Competing models of entrepreneurial intentions. *Economic and Business Review.*

Erikson, T. 2005. Idiosyncratic portfolio characteristics of seed and venture capital funds. *Journal of Small Business and Enterprise Development.*

Erikson, T. 2005. Benchmarking NTBFs' support actors: an explorative study. *International Journal of Technology Transfer and Commercialization.*

Erikson, T., Sørheim, R., & Reitan, B. 2003. Family angels vs. other informal investors. *Family Business Review.*

Erikson, T. 2003. Towards a taxonomy of entrepreneurial learning experiences among potential entrepreneurs. *Journal of Small Business and Enterprise Development.*

Erikson, T., & Gjellan, A. 2003. Training programmes as incubators. *Journal of European Industrial Training.*

Erikson, T. 2002. Entrepreneurial capital: The emerging organization's most important asset. *Journal of Business Venturing.*

Aernoudt, R., & Erikson, T. 2002. Business angel networks; a European perspective. *Journal of Enterprising Culture.*

Erikson, T. 2002. Entrepreneurial self-efficacy and goal setting. *The International Journal of Entrepreneurship and Innovation.*

Erikson, T. 2001. Entrepreneurial Governance: Determinants of the Entrepreneurial Mindset. *Doctoral Dissertation.* Manchester University: Manchester Business School.

Erikson, T., & Nerdrum, L. 2001. New venture management valuation; a special case of human capital. *Venture Capital - an international journal of entrepreneurial finance.*

Nerdrum, L., & Erikson, T. 2001. Intellectual capital: a human capital perspective. *Journal of Intellectual Capital.*

Erikson, T. 2001. Perceiving entrepreneurial opportunities in the Wireless Alley. *Quarterly Journal of Electronic Commerce.*

Erikson, T. 2001. Revisiting Shapero. Towards a taxonomy of entrepreneurs. *New England Journal of Entrepreneurship.*

Curriculum Vitae: Leif Chr. Lahn

Academic position

Professor, Institute of educational research, University of Oslo
Adjunct professor (20%), Department of Vocational Pedagogy, Oslo and Akershus University College of Applied Sciences

Education

Cand.psychol., Department of psychology, University of Oslo (1979)
Cand.polit., Institute of educational research, University of Oslo (1986)
Dr.polit., Faculty of educational sciences (1995) Thesis: "Professional competence in the melting pot. A study of transformations in engineering work"

Specialist in organizational and work psychology.

Visiting scholar at Stanford University (SCANCOR) Oct. 2007-sept 2008. Studies of network analysis and design methodology.

Research

Project management and acquisition (major projects in the period 1996-2012)

(1) Scientific coordinator of the of national evaluation of "Strategic competence development in the public sector. Models and tools in practice" (1996-1998). Funded by the Norwegian Research Council, TYIN. Report in Norwegian: Work Research Institute.
(2) Scientific coordinator of the research project "Working life changes and training of older workers" (WORKTOW) under EU 4. FPR (TSER). 1998-2001. Report in English: EU Commission/Univ of Jyväskylä.
(3) National representative in work group 2 EUs COST A11 on "Flexibility and transferability: Transfer and boundary crossing" (1999-2002). Report in anthology (edited by Y. Engeström & T. Tuomi-Gröhn)
(4) Project leader of "Cooperation and coordination in crossdisciplinary work groups" (1999-2001) funded by the Norwegian Research Council under the program "Competence, education and value creation". Post-doc.scholarship to assoc. prof. Sten Ludvigsen, InterMedia, University of Oslo, and assoc. prof. Anton Havnes, University college of Oslo.
(5) Project leader of "Learning strategies in small and mediumsize companies (2000-2003) funded by the Norwegian Research Council under the program "Competence, education and value creation". Doc. scholarship to Ove E. Hatlevik, University of Oslo.
(6) Project leader of the research evaluation of NEMLIG ("Net- and multimediabased learning environment in graphical companies", 1999-2003) funded by the Norwegian Research Council under the TYIN-programme.
(7) Project co-leader and author of research application of LAP ("Læring på arbeidsplassen", 2001-2004). Coordinated by the Norwegian Computing Center (Norsk Regnesentral) and a focus on design research and system development of e-learning in companies.
(8) Scientific coordinator with prof Karen Jensen of the longitudinal research project PROLEARN (Professional learning in a changing working life, 2004-2008) financed by the Norwegian Research Council in cooperation with the Center for Professional Studies, Oslo University College. Focus on transitions from higher education to work in accounting, nursing, engineers and teachers.
(9) Scientific coordinator of the accompanying research project "Yrkespedagogikk og implementering av nye læringsplaner" (2006-2010) with focus on cooperation between schools, companies and teachers' education in the field of vocational education. Funded by the Norwegian Research Council programme "Praksis FOU".
(10) Project leader of the test development project MECVET ("Measuring competence development in vocational education and training" , 2012-2015. Administrative location at Oslo and Akershus University College of Applied Sciences but conducted in cooperation with the Faculty of Educational Science/UiO. Funded by the Norwegian Research Council programme "Utdanning 2020".

Teaching (major activities)

Courses at bachelor and masters' level.

(11) Bachelor courses at the Department of Educational Research (1998-2012): Organizational learning, competence development/bachelor courses Technology organization learning (TOOL)..

(12) Master courses at the Department of Educational Research (1998-2012): Professional master Didactics and organizational learning (DOL, 1998-2010), professional master Knowledge, education and learning with co-ordination responsibility.

(13) Master courses in methodology at the TOOL-programme and the Entrepreneurship programme (2004-2012) Supervision at masters' level.

(14) Master courses and theses at the Unit for vocational teachers' education at the Oslo and Akershus University College of Applied Sciences.

Courses at doctoral level and supervision.

(15) Courses in grounded theory, qualitative methodology, philosophy of science. Faculty of educational science/faculty of architecture.

(16) Supervision of several phd students in areas like project work in engineering, work based learning, on-line software development teams.

Reserch publications (selected)

Lahn,L.C. (1992) Action research in professional work: Developing new practices through design, dialogue og learning? Paper til *AERA (American Educational Research Association) Annual Meeting, San Fransisco April 20-24., 1992.*

Lahn, L.C. (1998) Tacit knowledge and the abstraction of computerized work, in K.H. . Sørensen (Ed.) *The spectre of participation.* Oslo: Scandinavian University Press.

Lahn, L.C. (1998) *Universities as learning organizations. On repunctuating change processes in knowledge-intensive companies.* Paper presentert ved Fred Emery Memorial Conference. On the future of universities and education. 10-13. april 1998 Istanbul, Turkey.

Lahn, L.C. (2001) *Developing web-based learning environments in smaller companies. An exploration into cases of complex boundary-crossing.* Paper presented at the Symposium on EARLI 2001, Fribourg (Switzerland), Aug. 29-Sept.

Ludvigsen, S., Lahn, L.C. & Havnes, A. (2003). Workplace Learning across Activity Systems: A Case Study of Sales Engineers. I: *Between School and Work. New perspectives on Transfer and Boundary Crossing.* . Amsterdam : Pergamon Press s. 291-310

Lahn, L.C. (2004) Dilemmas in the development of e-learning at work. *Journal of workplace learning, 16, 8,* 466-478.

Lahn, L. C.& Mørch, A. I. (2006) Developing learning portals in working life. Experiences with participative design in industrial firms and the service sector.. Technology enhanced learning at work. Kaleidoscope Network of Excellence; 2006-11-13 -15

Lahn, L, C. & Agerup, K. (2008) Learning trajectories. A case of organizational learning and knowledge in project management.. *Kindred spirits: developing ideas to catch and release. Scancor's 20th anniversary conference;* Stanford University. 2008-11-21

Kudrik, Y., Lahn, L.C. & Mørch, A.I. (2009) Technology-Enhanced Workplace Learning: Blended Learning in Insurance Company. I: *Proceedings of the 17th International Conference on Computers in Education (ICCE 2009).* Hong Kong: Asia-Pacific Society for Computers in Education (CD Rom) 2009 ISBN 978-986-84735-3-9. s. 955-959

Lahn, L.C., Wiik, R. & H.C. Garmann (2009) Et kunnskapsgrunnlag for evaluerende læring i VRI. NFR Innovasjon/UiO.

Lahn, L.C. (2010) Professional learning as epistemic trajectories. I: *Learning across sites : new tools, infrastructures and practices.* Routledge 2010 ISBN 978-0-203-84781-7. s. 53-68

Lahn, L.C. & Mørch, A.I. (2010) Towards a metatheory of designing learning environments in working life. FISCAR Nordic Conference on Activity Theory and the Fourth Finnish Conference on Cultural and Activity Research; 2010-05-23 - 2010-05-25

Jensen, K., Lahn, L.C., Nerland, M. (2012) *Professional learning in the knowledge society.* Sense publ.

Fugeli, P., Lahn, L.C. & Mørch, A. I. (2013) Shared solepsis and intersubjectivity in open source development: expansive grounding in distributed work. In *Proceedings of the 2013 conference on Computer supported dooperative work.* ACM Press. 129-144.

CV

Name	Mirjam Knockaert
Biographical note	Mirjam worked from 1997-1999 as financial auditor with Ernst & Young Belgium. She joined Vlerick Business School in 1999 and was involved in research, teaching and consulting at the school between 1999 and 2009. She finalized her PhD on early stage high tech VCs in September 2005. From July 2006 on, she was Assistant Professor Innovation and Entrepreneurship at Vlerick Business School. Since 2008, she is assistant professor in Entrepreneurship at Ghent University, Belgium and adjunct associate professor at Oslo University, Norway. Her main research interests are with academic entrepreneurship, financing and corporate governance in an early stage high tech context. She has published in international journals including *Research Policy, Industrial and Corporate Change, Small Business Economics, Entrepreneurship Theory and Practice and Technovation*.
Education	Master in Applied Economics at the Catholic University of Louvain, Belgium (graduation : July 1997) Ph D in Applied Economics (Ghent University). "Does Venture Capital Matter for High Tech Start-Ups? An analysis of Early Stage Investors". Advisors: Prof. dr. Bart Clarysse and prof. dr. Andy Lockett. (graduation: September 2005)
Experience	1997-1999: Financial auditor with Ernst & Young 1999-2006: Team leader and senior researcher at Vlerick Business School, Belgium 2006-2009: Assistant professor in innovation and Entrepreneurship (Vlerick Business School, Belgium) 2008-2009: Visiting Faculty at Imperial College Business School, London, UK 2009-now: Assistant professor in Entrepreneurship at University of Gent, Belgium 2009-now: Adjunct associate professor in Entrepreneurship at University of Oslo, Norway Teaching experience in the following courses: entrepreneurship, venture capital, business planning, business economics, entrepreneurial finance.
Other relevant?	Best Paper Award at the Gate2Growth Specialized Workshop on Venture Capital, IESE, Barcelona, Spain (Nov 2004); paper "Selection behaviour of early stage high tech VCs" Knut Holt Award for the Best conference paper at the ISPIM 2009 conference; paper: "Determinants and effects of users' search strategies in quasi internal technology transfer". Member of the board of directors of Fytolab since September 2010. Member of the board of directors of VIB since July 2011. Member of the editorial board of "Venture Capital" since January 2013.
Select publications	Knockaert M., Spithoven A. (2012). Under which conditions do technology intermediaries enhance firms' innovation speed? The case of Belgium's collective research centres. Forthcoming in: Regional Studies. Knockaert M., Vandenbroucke E., Huyghe A. (2013). Unraveling the need for innovation support services in new technology-based firms: the impact of

	commercialization strategy. Science and Public Policy, 40(1), 85-96. Knockaert M., Ucbasaran D. (2013). The Service Role of Outside Boards in High-Tech Start-ups: A Resource Dependency Perspective. British Journal of Management. 24, 69-84. Knockaert M., Vanacker T. (2013). The Association between Venture Capitalists' Selection and Value Adding Behavior: Evidence from Early Stage High Tech Venture Capitalists. Small Business Economics. 40, 493-509. Spithoven A., Knockaert M. (2012). Technology intermediaries in low tech sectors: the case of collective research centres in Belgium. Innovation-Management, Policy and Practice.14(3), 375-387. Knockaert M., Ucbasaran D., Wright M., Clarysse B. (2011). The relationship between knowledge transfer, top management team composition and performance: the case of science based entrepreneurial firms. Entrepreneurship Theory and Practice. 35(4), pp. 777-803. Spithoven A., Knockaert M. (2011). The role of business centres for firms' network capabilities and performance. Science and Public Policy. 38(7), 569-580. Spithoven A., Clarysse B., Knockaert M. (2010). Building Absorptive Capacity to Organise Inbound Open Innovation in Traditional Industries. Technovation. 30, pp. 130-141. Knockaert M., Spithoven A., Clarysse B. (2010). The innovation paradox explored: what is impeding the creation of ICT spin-offs? Technology Analysis and Strategic Management. 22(4), pp. 479-493. Knockaert M., Wright M., Clarysse B., Lockett A. (2010). Agency and similarity effects and the VC's attitude towards academic spin-out investing. The Journal of Technology Transfer. 35(6), pp. 567-584. Knockaert M., Clarysse B., Wright M. (2010). How do early stage high technology investors select their investments? R&D management, 40(4), 357-371. Wright M., Clarysse B., Lockett A., Knockaert M. (2008). Mid-range universities' linkages with industry: Knowledge types and the role of intermediaries. Research Policy. 37, pp. 1205-1223. Clarysse B., Knockaert M., Lockett A. (2007). Board Availability and Composition in High Tech Start-ups. Small Business Economics. 29(3), pp. 243-259. Clarysse B., Wright M., Lockett A., Mustar P., Knockaert M. (2007). Academic spin-offs, formal technology transfer and capital raising. Industrial and Corporate Change. 16(4), pp. 609-640. Knockaert M., Lockett A., Clarysse B. (2006). Do human capital and fund characteristics drive follow-up behavior of early stage high tech VCs? International Journal of Technology Management, Vol. 34, Nos ½, pp. 7-27.

Birthe Soppe

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Centre for Entrepreneurship
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Biographical Sketch

- Current position: Associate professor at the Centre for Entrepreneurship, University of Oslo
- From September 2013 on a leave of absence: Appointed as post-doctoral research fellow at Stanford University, USA
- PhD in business administration and economic sciences (Dr. rer. pol., University of Regensburg, Germany)
- Degree at master level in business administration and economics, University of Hohenheim, Germany
- Best paper awards and scholarships
- Past visiting positions: Centre for Entrepreneurship, University of Oslo; Leeds School of Business, University of Colorado at Boulder, USA
- Ad hoc reviewer for international academic conferences
- Professional membership in various academic networks
- Extended teaching expertise at several universities in the US, Germany and Norway on topics related to entrepreneurship, innovation, technology-intensive industries, strategic management, organizational behavior
- Supervision of numerous master, diploma, and bachelor theses as well as student research projects at the University of Regensburg and University of Oslo in the area of institutional theory, innovation and entrepreneurship, market creation

Selected Publications

Books

Burr, W., M. Stephan, B. Soppe, and S. Weisheit (2007): *Patentmanagement: Strategischer Einsatz und ökonomische Bewertung von technologischen Schutzrechten*, Schäffer-Poeschel: Stuttgart, ISBN 3791025279 pp. 303.

Book Chapters

Soppe, B. and M. Stephan (2006): Patentinformationen strategisch nutzen - Grundlagen, in: *Digitale Fachbibliothek Innovationsmanagement - Produkte, Prozesse, Dienstleistungen,* H. Barske, A. Gerybadze, L. Hünninghausen, and T. Sommerlatte (Eds.), Symposion Publishing: Düsseldorf, pp. 1-28.

Soppe, B. and M. Stephan (2006): Patentinformationen strategisch nutzen - Anwendungsfelder, in: *Digitale Fachbibliothek Innovationsmanagement - Produkte, Prozesse, Dienstleistungen,* H. Barske et al. (Eds.), Symposion Publishing: Düsseldorf, pp. 1-41.

Papers and Refereed Proceedings

Lechner, C., B. Soppe, and M. Dowling: Vertical coopetition and the sales growth of young and small firms, forthcoming at *Journal of Small Business Management*.

Soppe, B., C. Lechner, and M. Dowling: Vertical coopetiton in entrepreneurial firms: Theory and practice, forthcoming at *Journal of Small Business and Enterprise Development*.

Soppe, B. (2009): How governments matter to sustainable development: Comparison of the German and U.S. wind energy industry
Best Student Paper Award, *Proceedings of the IAMOT 2009*, Orlando, USA, April 2009.

Papers under Review and Work in Progress

Doblinger, C. and B. Soppe (2012): Actor-driven changes in the U.S. electric energy system: Environmental groups' role in utility adoption and diffusion of wind power, under second review at *Energy Policy*.

Soppe, B. (2012): Regional variations in environmental entrepreneurial firm founding and firm size planning: The role of institutional actors, under review, *Industrial and Corporate Change*.

Jelaca, V., M. Knockaert, and B. Soppe (2013): Developing strategies to survive in adverse institutional environments: The case of plant biotechnology (data collection).

Arnold, N, and B. Soppe (2013): The social construction of multi-faceted market categories: Actor pluralism in the creation, legitimation, and evolution of Fair Trade in Switzerland.

Selected Conference Presentations and Invited Talks

An institutional perspective on the electric utility industry: The role of environmental groups in legitimating renewable energy technologies, contributed presentation at the *Technoport - Renewable Energy Research Conference*, Trondheim, Norway, April 16-18, 2012.

Coopetition and entrepreneurial firm growth, invited presentation at the *International Workshop on Coopetition and Entrepreneurship*, with C. Lechner, Montpellier, France, June 25-26, 2009.

How governments matter to sustainable development: Comparison of the German and U.S. wind energy industry, contributed presentation at the *18th International Conference on Management of Technology*, Orlando, USA, April 5-9, 2009.

Entrepreneurship and innovation systems approach: Towards an integrated framework, contributed presentation at the *9th Annual Conference of Science and Technology in Society*, Washington DC, USA, March 28-29, 2009.

How countries matter to technological change: Comparison of the German and U.S. wind energy industry, contributed presentation at the *DRUID-DIME Academy Winter 2009 PhD Conference on Economics and Management of Innovation, Technology and Organizational Change*, Aalborg, Denmark, January 22-24, 2009.

Selected Teaching Expertise

Centre for Entrepreneurship, University of Oslo

Innovation Strategy and Management, MSc level course
The purpose of this course is to expose students to entrepreneurial thinking, dynamics of industries driven by technological innovations, and related challenges. The course is based on lectures, case discussions, and project work in cooperation with local companies.

Norwegian Practical Start-up Experience, MSc level course
The purpose of this course is to bridge students' practical experience gained during internships with theoretical concepts; reflection on challenges in entrepreneurial organizations.

Others

Strategic Management and Technology Management, MSc level, University of Regensburg
Management of Innovation and Business Development, BSc level, Hochschule Deggendorf
Management of Intellectual Property Rights, University of Stuttgart

Academic Partnerships [A3]

The Darden School, University of Virginia [NEW]

Sahlgrenska Academy, University of Gothenburg, Sweden [RENEWED]

Adaptive Rationality Center, Max Planck, Berlin. [NEW]

University of Tromsø [NEW]

Norwegian University of Life Sciences

Department of Engineering, Bergen University College

Department of Pedagogy, Faculty of Education, University of Oslo [NEW]

NTNUs Globalization Programme, Norwegian University of Science & Technology

UNIVERSITY of VIRGINIA
DARDEN SCHOOL OF BUSINESS

Darden Graduate School of Business
University of Virginia
P.O. Box 6550
Charlottesville, Virginia 22906-6550
Shipping: 100 Darden Boulevard, 22903
Phone: 434.982.2079• Fax: 434.243.4351
Email: saras@virginia.edu

Saras Sarasvathy
Isidore Horween Research Associate Professor

April 24, 2013

To Whom It May Concern

Letter of Intent

Subject to the CEE funding, I am happy to take on a visiting professorship in an advisory capacity to the upcoming Oslo based MSc program in Effectuation. The collaboration with Centre for Entrepreneurship also provides an excellent opportunity to develop and launch a doctoral consortium around the newly established Effectuation conference in Europe. The proposed centre may contribute greatly in developing practice-based effectuation, and reflection-in-action, teaching methods with great potential for global dissemination.
I am more than happy to take part in such an initiative.

Sincerely

Saras

Saras Sarasvathy

Isidore Horween Research Associate Professor of Entrepreneurship

UNIVERSITY OF GOTHENBURG
THE SAHLGRENSKA ACADEMY

Institute of Medicine
Innovation and Entrepreneurship
The Sahlgrenska Academy
University of Gothenburg
Dr Boo Edgar
Visiting address:Medicinargatan 8B
Postal address: Box 417
405 30 Göteborg
Phone: +46 31786 3259 *Mobile:* +46738526690

April 12th 2013

Reference Letter

To whom it may concern,

At the Institute of Medicine, at the Sahlgrenska Academy we have an international master's programme; *Master of Medicine in Business Creation and Entrepreneurship in Biomedicine* which is a full two year programme in venture creation provided by University of Gothenburg, Sweden in collaboration with Chalmers University of Technology.

In addition we have since 2008 an *ongoing* institutional co-operation with the Centre for Entrepreneurship at the University of Oslo where we together seek to develop a "Scaninavian model" for entrepreneurship education based on practice. Sometimes this type of "tacid" education are named *venture creation* programmes, and are based on deep involvement of the student's in different phases of creation of businesses or driving utilization of research.

We use this opportunity to further strengthen our co-operation. Do not hesitate to contact me, should there be some more information needed.

Sincerely yours

Boo Edgar, Dr Med Sci, Associate Professor
Director, Innovation and Entrepreneurship, Institute of Medicine, The Sahlgrenska Academy, University of Gothenburg and MORE, Chalmers University of Technology

Max-Planck-Institut für Bildungsforschung
Max Planck Institute for Human Development

Research Center
Adaptive Rationality

30.04.2013
LoI_Oslov1

Letter of Intent

To whom it may concern,

contingent to the Centre for Excellence in Education (CEE) funding, I am open to take on a visiting professorship in an advisory capacity on the theme 'Heuristics and Entrepreneurship'.

(Jan K. Woike)

Dr. phil. Jan K. Woike
Researcher
Center for Adaptive Rationality (ARC), Office 135
Lentzeallee 94 D-14195 Berlin (Dahlem)
Telefon: +49 (0)30 82406-241
http://www.mpib-berlin.mpg.de/en/staff/jan-k-woike

UNIVERSITY OF TROMSØ UiT

FACULTY OF BIOSCIENCES, FISHERIES AND ECONOMICS
TROMSØ UNIVERSITY BUSINESS SCHOOL

Your reference:
Our reference:
Date: May 10 - 2003

To whom it might concern

Letter of intent

I confirm that Tromsø University Business School (TUBS) is part for the application from Center for Entrepreneurship, University of Oslo in support of developing a reflection in-and-on-action methodology around effectuation/design thinking within entrepreneurship education.

TUBS at the University of Tromsø has since 2008 run an international Master programme in Business Creation and entrepreneurship http://uit.no/for-studiesokere/programside?p_document_id=270730. The BCE programme is a unique model in the Norwegian context for educating both entrepreneurs-students interested in launching new ventures- and intrapreneurs -those interested in helping existing companies become more innovative. The main impetus for spearheading the BCE program was to bridge the gap between academic inventors with research-based ideas and entrepreneurship students with the motivation to found thriving startups. The BCE program is organized as a business-oriented, group-based master's program within an international learning environment. The action oriented edycational program offers a diverse group of students the tools to become entrepreneurs, innovators, and creative thinkers through an action-based curriculum involving real-life projects. Our students aim to found firms right after graduation or become intrapreneurs within well-established firms.

NO-9037 Tromsø • postmottak@uit.no • http://uit.no • Switchboard: (+47) 77 64 40 00 • Fax: (+47) 77 64 49 00
professor Lene Foss • lene.foss@uit.no • Phone 77 64 60 38

TUBS also offers a Phd course in Entrepreneurship and commercialization: http://uit.no/for-studiesokere/vis-emne?p_document_id=316907. University of Tromsø launched a Design Thinking Lab (www.thedtlab) in January 2013. Its mission is to help human beings find their creative inner self, and empower them to develop human-centered, design-driven, and innovative solutions to business and societal challenges. The Lab achieves this mission by offering workshops and special activities to members of the university and business community in Northern Norway and nationally.

We look forward to work with Professor Truls Erikson and the Center for Entrepreneurship at UiO to develop the in-and-on action methodology as this is really needed to take our BCE program to a more advanced level.

Sincerely,

Lene Foss

Lene Foss
Professor

NORWEGIAN UNIVERSITY OF LIFE SCIENCES
UMB SCHOOL OF ECONOMICS AND BUSINESS

OFFICIAL IN CHARGE ANDERS LUNNAN
TELEPHONE +47 64965686
E-MAIL ANDERS.LUNNANATUMB.NO
VISITING ADDRESS CHR. MAGNUS FALSENSVEI 18
TÅRNBYGNINGEN

OUR REF
YOUR REF
DATE 9/5 2013

To whom it might concern

STATEMENT

Question 1. How important is Gründerskolen for UMB?

UMB has participated in Gründerskolen since year 2000. Gründerskolen has created a lot of enthusiasm about entrepreneurship at UMB, students from different departments have participated and the evalutation from the students is overall very positive.

Gründerskolestudents started Start-UMB, a student activist entrepreneurship organisation, and this organisation has been a very important partner for us when building up education in entrepreneurship at UMB.

Gründerskolen is also a very important part of our entrepreneurship program. If we did not have this opportunity we would have had to invent and manage such a program ourselves.

Question 2. According to your opinion, what is excellent with Gründerskolen?

1. The students get valuable international business experience, very important in a more and more international world
2. The internship give students an excellent opportunity to test out theory in practise, this is from a pedagogical view very valuable in a curriculum
3. The students learns about the importance of business culture, they get an outside view of their own culture
4. The students get a valuable network with students from other disciplines and other universities in Norway. They also enlarge their business network during Gründerskolen
5. For Norway as a country, Gründerskolen is a very good investment. The build-up of international entrepreneurial competence through Gründerskolen makes the country more competitive in the future.

Anders Lunnan, Professor UMB, leader of the Entrepreneurship program at UMB

HØGSKOLEN I BERGEN

FACULTY OF ENGINEERING
Institutt for økonomiske- og administrative fag

Tom Skauge
Tlf.: +47 55587730

Our date: 08.05.2013
Your date:

To
Centre for Entrepreneurship (SFE), UiO

Please find enclosed our comments to your questions:

How important is Gründerskolen for Bergen University College?

Since 2009 In Bergen University College has offered a master's degree on Innovation and entrepreneurship close and fruitful cooperation with Centre for Entrepreneurship (SFE), University of Oslo.

The vision of the master programme is to educate highly skilled leaders of technology and innovation. The master provides education specifically tailored to students with knowledge from engineering and natural science bachelor degrees, and they get to further develop this knowledge throughout the programme. In addition, the students are given a good foundation in the various functional aspects of technology management, allowing them to pursue a management career or work as project managers of technology-based ventures. The master's programme trains managers in business development and in integrating technological knowledge with business knowledge in economically viable, socially responsible, environmental and ethical ways.

Grunderskolen organized by SFE has been a vital and important part of our education strategy for our students. The courses in Houston, Texas provide a three-month internship course outside of Norway. The students learn about a specific region, its culture, history, customs, business practices and entrepreneurial thinking, and gain first-hand start-up experience. The students have been exposed to different environments and different levels of stress to give a realistic understanding of the work involved in start-ups. The students undergo an intensive recruiting process with company presentations and job interviews where they have to negotiate with the internship companies. We have been lucky to send three courses of student to Grunderskolen, in total aprox. 30 students.

According to your opinion, what is excellent with Gründerskolen?

The objective is to give the students business practice and experience by working as an intern in a start-up company. The quality of Grunderskolen is excellent on

1. scientific based teaching at Rice University
2. processes for selecting relevant businesses for practical innovation management training
3. business partners for practical innovation management training
4. environment in Houston for learning
5. administration

The internship provided by Grunderskolen in second semester is a crucial part of our strategy for hands on- and practical experience with start-up businesses. In third semester the students have internships in organizations around Bergen. For this second phase internship, we provide more established companies.

Several members of our staff have visited Grunderskolen in Houston. They give the best evaluation from their visits. Our students give the same assessment after their period with Grunderskolen.

Yours

Tom Skauge
Associate Professor
Master Programme Coordinator

NTNU

Vår dato 10.05.2013

Vår referanse Arild Aspelund

Universitetet i Oslo
Senter for Entreprenørskap
Att: Truls Erikson

Grunderskolen

The business world becomes increasingly international and the international standards that face most entrepreneurs these days are hard to teach in a classroom. Grunderskolen is currently the most essential student arena for international entrepreneurship in Norway and is very well equipped to give the students the international insight and experience they need in order to be successful entrepreneurs. NTNU seek to educate the international entrepreneurs of the future and we are therefore content that our students regularly participate in Grunderskolen and get to take part in this great learning experience.

If requested, I'm willing to contribute to the proposed program as an advisory capacity.

Best regards,

Arild Aspelund, PhD, Professor NTNU
Leader of Global Production and Communication, under NTNUs Globalization Programme

Postadresse
7491 Trondheim

E-post: arild.aspelund@iot.ntnu.no

Besøksadresse
Alfred Getz vei 3
12. etasje
7034 Trondheim

Telefon
+ 47 73 59 7603

Industrial Partnerships [A4]

Oslo Medtech (sources in industrial projects and internships). [RENEWED]

Nansen Neuroscience Network (sources in industrial projects and internships) [NEW]

Oslo Renewable Energy & Environmental Cluster (sources in industrial projects/internships)

NCE Oslo Cancer Cluster (sources in industrial projects and internships) [RENEWED]

MARE Life (sources in industrial projects and internships) [NEW]

Inven2 (sources in industrial projects and internships)

Start-Up Lab (facilitates innovation space) [NEW]

Oslomedtech

Oslo, 2. Mai 2013

Til Truls Erikson, SFE og IFI

Oslo Medtech er Norges største klynge innenfor medisink teknologi, og en av Norges raskest voksende klynger. Vi bekrefter med dette at vi vil kunne bistå med å skaffe tilveie teknologiprosjekter til prosjektstudenter ved SFE ved UiO på samme måte som vi gjør i dag.

Mvh
Kathrine Myhre, CEO Oslo Medtech

NANSEN NEUROSCIENCE NETWORK
connecting brain science and industry

16. april 2013

Senter for entreprenørskap
v/ Truls Erikson
Universitetet i Oslo
Postboks 1169 Blindern
0318 Oslo

Bekreftelse på samarbeid

Nansen Neuroscience Network bekrefter med dette at vi vil kunne bidra til å skaffe prosjekter til masterstudenter i innovasjon og entreprenørskap ved SFE. Slike prosjekter kan for eksempel være markedsanalyser, kartlegging av finansieringsbehov, eller strategi og strategiutvikling i tidlig fase av innovasjonsprosesser.

Nansen Neuroscience Network er et nettverk av om lag 40 ulike aktører som arbeider med nevrovitenskap, det vil si tilstander og sykdommer som omhandler hjernen og nervesystemet. Våre medlemmer er forskningsinstitusjoner, oppstartfirmaer, etablert industri og firmaer som arbeider med teknologioverføring. Vi arbeider for at forsknings- og utviklingsarbeidet skal resultere i produkter som kommer pasienter, pårørende og samfunnet til gode, og for at nevrovitenskapelig forsknings- og utviklingsarbeid skal bidra til å etablere en levedyktig helseindustri i Norge.

Vi ser fram til samarbeidet.

Med vennlig hilsen

Leif Rune Skymoen
Daglig leder

OREEC
OSLO RENEWABLE ENERGY AND ENVIRONMENT CLUSTER

Senter for Entreprenørskap
Universitetet i Oslo

Attn. Truls Eriksson

KJELLER, 08.05.2013

Bekrefter samarbeid Senter for Entreprenørskap og OREEC

OREEC (Oslo Renewable Energy and Environment Cluster) er et nettverk av bedrifter, forskningsmiljøer og utdanningssteder innen fornybar energi og miljøteknologi i Osloregionen. OREECs formål er å øke innovasjonstakten, øke forretningsmulighetene og øke verdiskapingen for deltagerne i nettverket. OREEC arbeider for å fremme kompetansen innen fornybar energi og miljø i Osloregionen.

Vi bekrefter med dette at vi vil kunne bistå med å skaffe tilveie teknologiprosjekter, og praksisplasser til MSc studenter ved SFE/Universitetet i Oslo på samme nivå som i dag.

Med vennlig hilsen
OREEC

Eva Næss Karlsen
direktør

Oslo Cancer Cluster

Lysaker, 3. april 2013

Vedrørende Senter for entreprenørskaps søknad om status som Senter for fremragende utdanning (SFU): Bekreftelse på samarbeid med Oslo Cancer Cluster.

Oslo Cancer Cluster er en av Norges mest avanserte klynger, og har et nært samarbeid med Senter for entreprenørskap (SFE) gjennom skolefaglig samarbeidsavtale og Internship avtale med Cancer-Bio-Santé i Toulouse..

SFE søker om status som Senter for fremragende utdanning (SFU) og Oslo Cancer Cluster bekrefter med dette at vi støtter denne søknaden.

Oslo Cancer Cluster bekrefter at vi vil bistå med å skaffe tilveie teknologiprosjekter på samme vis som i dag. På samme nivå som i dag vil vi også kunne bidra med praksisplasser til masterstudenter ved Senter for Entreprenørskap.

Samarbeidet mellom Oslo Cancer Cluster og SFE forventes å styrkes ytterligere gjennom Oslo Cancer Cluster Innovasjonspark med tilhørende inkubator. Innovasjonsparken ferdigstilles i august 2015 og skal inneholde kontor- og laboratorielokaler for helserettet virksomhet, samt Ullern videregående skole. Innovasjonsparken vil bli Norges første bygg som forener klinisk kreftforskning, biotekbedrifter og en videregående skole i et fysisk bygg tilrettelagt for samarbeidsprosjekter.

Et nært samarbeid med SFE som et Senter for fremragende utdanning vil bidra til å løfte konseptet omkring Innovasjonsparken ytterligere.

Med vennlig hilsen

Jónas Einarsson
Kst. direktør
Oslo Cancer Cluster
Norwegian Centre of Expertise

NCE
Norwegian Centres of Expertise

Truls Erikson
Director/Professor
Centre for Entrepreneurship

University of Oslo
Po Box 1169 Blindern
N-0318 Oslo
Norway

Oslo 10.april, 2013

Ad. : Søknad: "Application for the Status as Centre of Excellence in Education: Centre for Entrepreneurship at the University of Oslo"

Vi bekrefter med dette at vi vil kunne bistå Senter for Entreprenørskap i deres utvikling av praksisbaserte utdanningsprogram innenfor vår sektor og våre fagområder.

Som innovasjonsnettverk legger MareLife stor vekt på langsiktighet hvor tilrettelegging for bygging av entreprenørkultur, kunnskap om tidligfase-prosesser, assistanse til oppstartbedrifter, rekruttering av talenter etc., inngår som viktige elementer.

MareLife vil kunne bidra med bedrifts- og næringslivskontakter der til eks praksisplasser inngår som elementer i utdanningen.

Mvh

Øystein Lie

Daglig leder MareLife

inven2

Senter for Entreprenørskap
v/Truls Erikson

Oslo, 24.april 2013

Kommersialiseringsoppgaver til masterstudenter

Inven2 er kommersialiseringsaktøren til Universitetet i Oslo og er Nordens mest effektive. Inven2 har til enhver tid ca 60 lovende prosjekter i verifiseringsfase.

Vi bekrefter med dette at vi vil kunne bidra med kommersialiseringsprosjekter til masterstudenter ved UiO. Vi kan også bidra med praksisplasser som på dagens nivå.

Med vennlig hilsen
Inven2 AS

Ole Kristian Hjelstuen
Adm. dir.

Inven2 AS
Org. Nr. 995 495 899

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post@inven2.com
www.inven2.com

invena

Senter for Entreprenørskap
v/Truls Erikson

Oslo, 24.april 2013

Kommersialiseringsoppgaver til masterstudenter

Inven2 er kommersialiseringsaktøren til Universitetet i Oslo og er Nordens mest effektive. Inven2 har til enhver tid ca 60 lovende prosjekter i verifiseringsfase.

Vi bekrefter med dette at vi vil kunne bidra med kommersialiseringsprosjekter til masterstudenter ved UiO. Vi kan også bidra med praksisplasser som på dagens nivå.

Med vennlig hilsen
Inven2 AS

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Adm. dir.

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www.inven2.com

STARTUP
LAB

StartupLab og SFE

StartupLab er Norges største teknologibaserte inkubator lokalisert i Forskningsparken i Oslo (www.startuplab.no), og vi bekrefter med dette at vi vil kunne stille med innovasjonskvadratmetere til rådighet for MSc-studenter ved SFE. Vi vil også kunne bidra med mentoringkapasitet fra erfarne entreprenører og investorer.

For StartupLab

Alexander Woxen og Odd Utgård

Appendix 5:
Ongoing SFE research relevant for the CEE application

Associate Professors Birthe Soppe & Mirjam Knockaert

Strategies to commercialize and grow entrepreneurial ventures

An important debate in the field of entrepreneurship clusters around challenges and barriers to commercialize technologies and grow early life stage ventures. Science-based entrepreneurship often relies on novel technologies and acts under uncertain market conditions (see also next subpackage on Knightean uncertainty). Thus, many new ventures fail before being able to commercialize their ideas (Sine, David, & Mitsuhashi, 2007; Sine, Haveman, & Tolbert, 2005).

While extant work has focused on entrepreneurial barriers such as liabilities of newness and smallness (Aldrich & Auster, 1986) as well as challenges related to the particular nature of entrepreneurial resources (Lockett & Wright, 2005), there is a growing consensus among entrepreneurship scholars that the ability to achieve legitimacy is critical for entrepreneurial organizations. Industry and organizational legitimacy seems to be particularly important for new ventures seeking to acquire critical resources, for example, finding investors, employees, business partners, board members, and customers (Aldrich & Fiol, 1994; Lounsbury & Glynn, 2001; Zott & Huy, 2007). However, a lack of legitimacy seems to prevent new ventures from acquiring the necessary resources to found a firm, produce and distribute a product or service, and thus, to commercialize their technologies and grow their firms. In this subpackage, we propose to investigate the strategic actions entrepreneurs employ to build and enhance legitimacy for their ventures. We seek to investigate what entrepreneurs do to legitimate their business ideas, commercialize their novel technologies, and grow their ventures.

Informed by institutional theory (DiMaggio & Powell, 1983), legitimacy can be defined as a social judgment of acceptance, appropriateness, and desirability (Suchman, 1995). Although legitimacy is acknowledged as a central construct in institutional theory (Deephouse & Suchman, 2008; DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Zucker, 1977) and has been identified as a critical issue for new organizations (Aldrich & Fiol, 1994), little theoretical and empirical research has been devoted to the diverse legitimating actions of entrepreneurs. Most studies are conceptual studies, and we therefore know very little about the diverse legitimacy building strategies of entrepreneurs aiming at commercializing their new technologies and growing their ventures. Thus, we address the following research questions: ***Which legitimating strategies do entrepreneurs engage in to grow their early***

stage ventures? What legitimacy building activities are most effective in order to increase the likelihood of commercializing their business idea and/or technologies? What type of entrepreneurial efforts can harm a new venture and lead to organizational failure? What implications do these insights have for the design of the MSc program curriculum?

A better understanding of the specific challenges science-based entrepreneurship faces and what entrepreneurs can do to overcome these hurdles is not only an important contribution to the academic literature, but informs and benefits, above all, excellent practice-based entrepreneurship education. A knowledge gain in this area would have important implications for novice entrepreneurs (our students) learning about and practicing effective strategies for technology/idea commercialization and bringing their business ideas to life.

Ongoing SFE research relevant for the CEE application –
PhD Research Fellow Eline S.L. Ingstad

Venture philanthropy and social entrepreneurship in the Norwegian context

How can we better teach aspects of social entrepreneurship in order to inspire and support the next generation of entrepreneurs and leaders to make positive changes in society through companies they establish or work in? Through the work on my Ph.D. with a specialization in social entrepreneurship and venture philanthropy, I hope to find solutions to meet these challenges. Social entrepreneurs establish ventures with a social mission as their primary objective (Mair, Battilana & Cardenas, 2012; Shaw & Carter, 2007). The field of social entrepreneurship is rapidly developing; constantly attracting new actors and proponents who share the vision, hope or belief that social entrepreneurship has the potential to create new solutions that will resolve, or at least reduce, some of our pressing societal problems (Dacin, Dacin & Tracey, 2011; Montgomery, Dacin & Dacin, 2012; Pless, 2012). Sharing this aspiration, venture philanthropists invest in social entrepreneurs and provide financial and non-financial support to help them build sustainable social ventures. In my phd-project I employ an abductive case study design method to investigate the relationship between a venture philanthropist (Ferd Social Entrepreneurs) and its portolio of social entrepreneurs. My cases constitute the Norwegian venture philanthropist 'Ferd Social Entrepreneurs' and six social entrepreneurs in their portfolio. I ask how and why do Ferd Social Entrepreneurs add value throughout the investment period? How do these value adding activities help the social entrepreneurs grow their social impact? This is the first research project about social entrepreneurhsip in Norway. The knowledge produced from my PhD research will be important for further developement of educational programs and courses in social entrepreneurship, as well as for a broader development of the field in Norway.

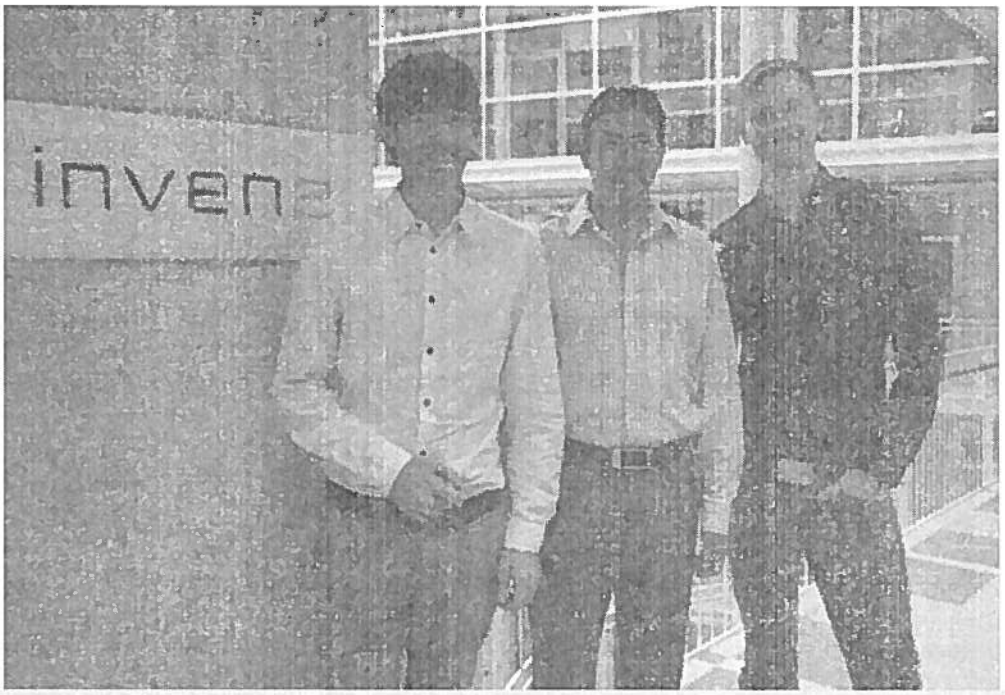
Ongoing SFE research relevant for the CEE application –
PhD Research Fellow Daniel Leunbach

Daniel Leunbach's research interests include both entrepreneurship and innovation management, specifically, he is interested in how people act and interact to successfully create and capture value from innovation. He is particularly interested in the social and cognitive processes underlying entrepreneurial behavior in both new and established firms, and in how venturing teams make important business decisions (e.g., relating to equity splits) under conditions of high uncertainty.

Appendix 6

'Entrepreneurs-in-residence program'

The students from Centre for Entrepreneurship (SFE) have impressed both Inven2 (the university's technology transfer office), and the inventors of the technology they have been working with. That's the conclusion when the first group of participants in the "Entrepreneurs-in-Residence" program have achieved their Master's degree.



From the left: Christian Müller, Cristhian Arturo Hidalgo and Pål Bjering Torgersen. *(Photo: SFE)*

Cristhian Arturo Hidalgo, Pål Bjering Torgersen and Christian Müller was among the first Master students from Centre for Entrepreneurship (SFE) to participate in the "Entrepreneurs-in-Residence" program, which was piloted in cooperation with Inven2 (the university's technology transfer office), in the fall 2011.

The three students had studied technology at universities in Germany, Mexico and Norway before they started their Master in innovasjon og entreprenørskap at SFE. In their last year, they chose the six month's internship at Inven2 in stead of the ordinary three month long internship. Having ahcieved their Master's degree, the new Master candidates are very satisfied with the program they have been a part of.

- We have gained valuable experience learning and doing market analysis and business strategy as well as through the interaction with expert business developers, people in the industry and the inventors of the technology during the commercialization efforts, says Cristhian Hidalgo.

Real life inpredictability

The entrepreneur students have worked with a technology developed at Department of Informatics called CacheCast; a system made to optimize data transference in large networks.

- The CacheCast technology turned out to not be quite ready for commercialization, so our internship has turned out a bit different than first planned. We worked more like business developers than management team, but the inpredictability of working with a real life project has given us unike experience of a kind you don't normally get in your studies, says Christian Müller.

- In my opinion, partnering up with the industry will be usefull for both students, SFE and Inven2. Practical experience will always be an important supplement to theoretical learning and should be incorporated in as many courses and studies as possible, whether it is through internships or by working with case studies from real companies. It has also been a good opportunity for us to become familiar with the innovation environment in Inven2, says Pål Torgersen Bjering.

Inven2 impressed

Hidalgo, Torgersen and Müller have had Kristin Sandereid at Inven2 as mentor during the internship, and she thinks they have done a very good job.

- They have taken leadership and have had all the business contact in this project in the Entrepreneur-in-Residence period. They have developed the business plan, conducted several investor meetings in addition to having a dialogue on cooperation or licensing of the technology with the largest market players in the field. They have had a steep learning curve, and their efforts have impressed both Inven2 and the inventor, says Sandereid.

Hidalgo, Torgersen and Muller have collaborated on writing a thesis on TTOs in Norway (Technology Transfer Offices), and the experience from working with CacheCast makes an important part of the discussion in the thesis. At present they are waiting on feedback from industry about whether CacheCast is a system they would like to try out.

CacheCast requires a partnership with one of the big firms in the field of design and production of network equipment to pay off. If the industry shows interest, it is up to Inven2 and potential investors to decide if they want Hidalgo, Torgersen and Müller to keep working on the project.

The three Master's candidates are also involved in other projects. For example, Torgersen and Müller works with the development of Music Impro App, a music application for the disabled that has previously been featured on the SFE website.

By Merete Granlund
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