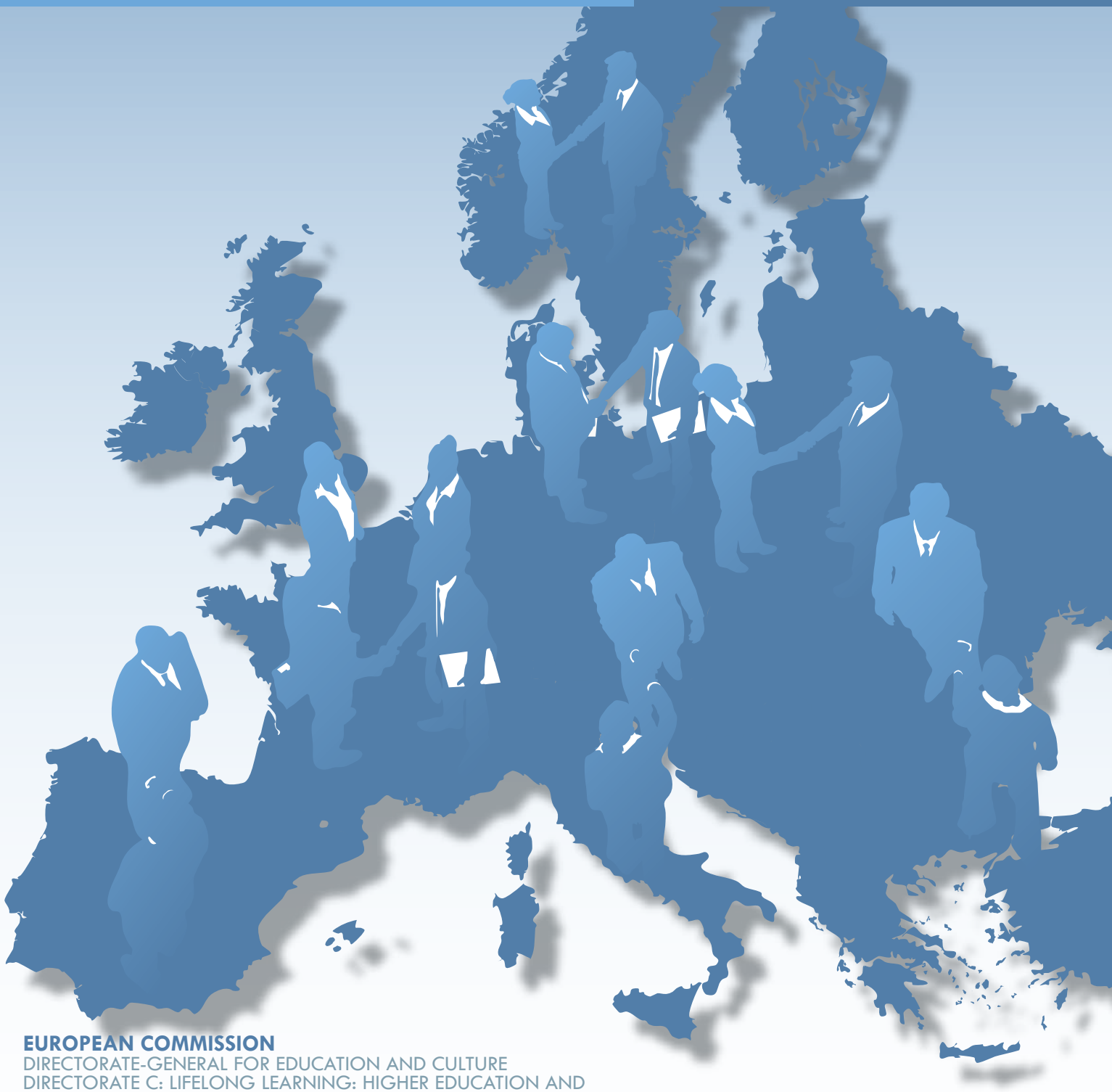
30 GOOD PRACTICE CASE STUDIES IN UNIVERSITY-BUSINESS COOPERATION

PART OF A STUDY ON THE COOPERATION BETWEEN HIGHER EDUCATION INSTITUTIONS AND PUBLIC AND PRIVATE ORGANISATIONS IN EUROPE



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ABBREVIATIONS

ACE	Advance Certificate in Education
CUE	Cracow University of Economics
CSE	Chalmers School of Entrepreneurship
EC	European Commission
ERDF	European Regional Development Fund
EU	European Union
EUA	European University Association
FFG	Austrian Research Promotion Agency
FTE	Full Time Equivalent
GIBBS	Gothenburg International Bioscience Business School
HEFCE	Higher Education Funding Council for England
HEI	Higher Education Institution
ICT	Information and Communication Technology
IDI	Institute of Digital Innovation
IP	Intellectual Property
IPR	Intellectual Property Rights
KTP	Knowledge transfer professional (University professional working with business)
LLL	LifeLong Learning
MICINN	Spanish Ministry of Science and Innovation
MUAS	Münster University of Applied Sciences
MUHC	Malta University Holding Company
NQF	National Qualifications Framework
PhD	Doctorate of Philosophy
QRC	Network of Quality Reference Centres Romania
R&D	Research and development
SEA	Supporting Entrepreneurship programme at Aalborg University
SME	Small and medium company
SPEED	Student Placements for Entrepreneurs in Education
S2BMRC	Science-to-Business Marketing Research Centre
TTI	Technology Transfer Interface
TTO	Technology Transfer Office
TUM	Technical University of Munich
TU/e	Technical University Eindhoven
UB	University-Business
UBC	University – Business Cooperation
UL	University of Latvia
UP	University of Pécs
VU	Free University of Amsterdam
VUB	Free University Brussels
WCTT	Wroclaw Centre for Technology Transfer

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30 BEST CASE STUDIES OF GOOD PRACTICE IN THE AREA OF UBC WITHIN EUROPE

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INTRODUCTION

SCOPE OF REPORT

The following report includes 30 cases of European good practice in University-Business Cooperation (UBC). The cases have been researched and selected to show the broad diversity of examples in UBC in a European context covering the breadth of the European Union (EU) (existing, or candidate members) and economic community and members of the European Economic Area (EEA). The cases are relevant for university management and knowledge transfer professionals, all levels of government responsible for economic development and for business seeking to increase innovation through UBC.

INTRODUCTION TO UBC

UBC is the collaboration of university and business with the support of government for mutual and societal benefit. If UBC is understood as transactions between higher education institutions (HEIs) and business for mutual benefit, fostering UBC and extracting its value can help universities to face the problem of decreasing public funds , help businesses to gain and maintain their competitive advantage in today's dynamic international markets , contribute to the economic development at regional and national level as well as meet the demands of the labour market to provide more relevant knowledge and skills . In this context, successful UBC creates mutual benefit for all parties involved, and wider, to society.

ELEMENTS IN THE UBC ECOSYSTEM

THERE ARE A NUMBER OF ELEMENTS THAT MAKE UP THE UBC ECOSYSTEM INCLUDING:

1. University-Business (UB) stakeholders – These include the so-called 'Triple Helix': Governments, HEIs and businesses working in a cooperative and mutually beneficial relationship.
2. The 4 Pillars of UBC – These embrace the strategies, structures and approaches, activities and framework conditions which can be implemented (action items) in order to directly stimulate UBC or indirectly address influencing factors affecting UBC.
3. Influencing factors – These include specific barriers, drivers and situational factors (such as age, gender, years working in the HEI, years working in business, type of HEI, size of HEI and country) that affect or influence the ability of HEIs or academics to undertake and pursue UBC.
4. The 8 Types of UBC – These encapsulate the different ways in which HEIs and business can cooperate, including: collaboration in research and development (R&D), mobility of academics, mobility of students, commercialisation of R&D results, curriculum development and delivery, lifelong learning, entrepreneurship and governance.

1. Carayol (2003)
2. Tucker (2002)
3. OECD (2002)
4. Gibb & Hannon (2006), Storm (2008), Razvan & Dainora (2009)

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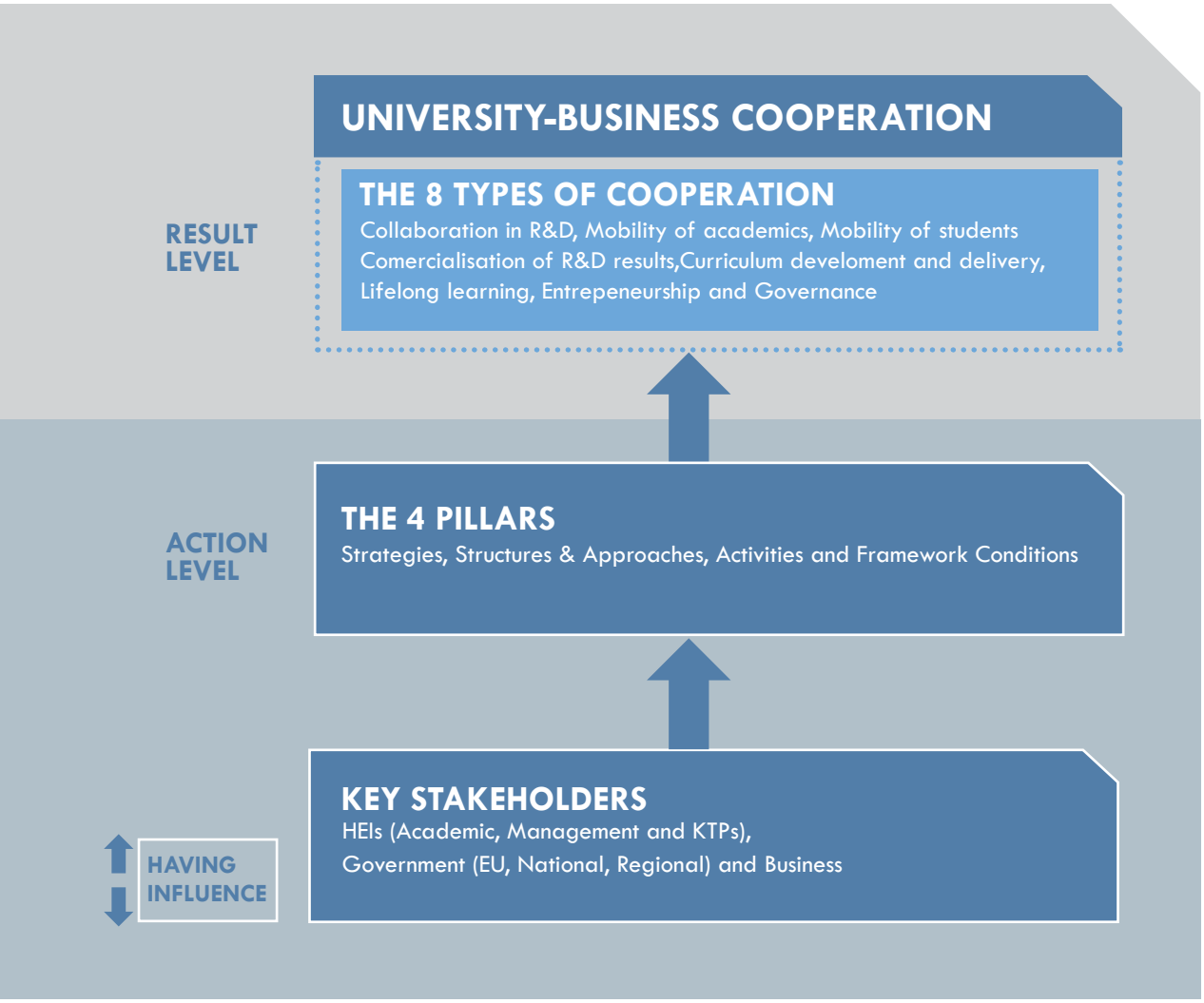

Diagram: The UBC Ecosystem (simplified version)
Created during the project by Davey, Galan Muros, Kliewe 2011

The following chapter introduces the aims of and methodology for the creation of the case studies.

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AIMS & METHODOLOGY

INTRODUCTION

This chapter introduces the methodology used in selecting the 30 good practice case studies and includes a description of the case studies' partners, the process for selection, the basis for selection and finally the countries considered in the selection of the good practice cases.

OBJECTIVE

The primary objective for the creation of 30 UBC case studies was to highlight good practice cases the principles of which could be clearly explained and had a high degree of transferability or usefulness for adaption in other settings. A further objective was to provide a range of cases with differing nature in order to provide key insights for all practitioners in UBC at all stages of UBC development.

PROCESS FOR SELECTION

Good practices in UBC were collected and sourced from all over Europe. In sourcing the case studies, a number of methods were used including personal interviews, a systematic review of previously documented cases as well as a comprehensive search for prize winners in UBC, conference presentations and recognised publications. Following the creation of criteria for the assessment of case studies, cases were then researched, collected and inputted into a database. This list of candidate case studies was then reduced to 50 for consideration by the project's Technical Excellence Advisory Board. The board then reduced this list of case study candidates to 30, which was subsequently submitted to the EC for approval. Once the case studies were approved, each partner had the task of writing six cases studies within the partner's region.

STEPS
1. Creation of an appropriate process and set of criteria for selecting cases by the project's Technical Excellence Advisory Board
2. Collection of candidates for good practise in European UBC by cases study partners
3. From an initial candidate list of over 100 cases, a preliminary elimination of 50 cases was execute based upon ineligibility, lack of unique qualities or lack of information
4. Assessment of 50 candidate cases by the Technical Excellence Advisory Board using the selection criteria to further reduce the list to 30 cases
5. Commencement of the process of writing the case studies
6. Case studies proofed and approved by HEIs

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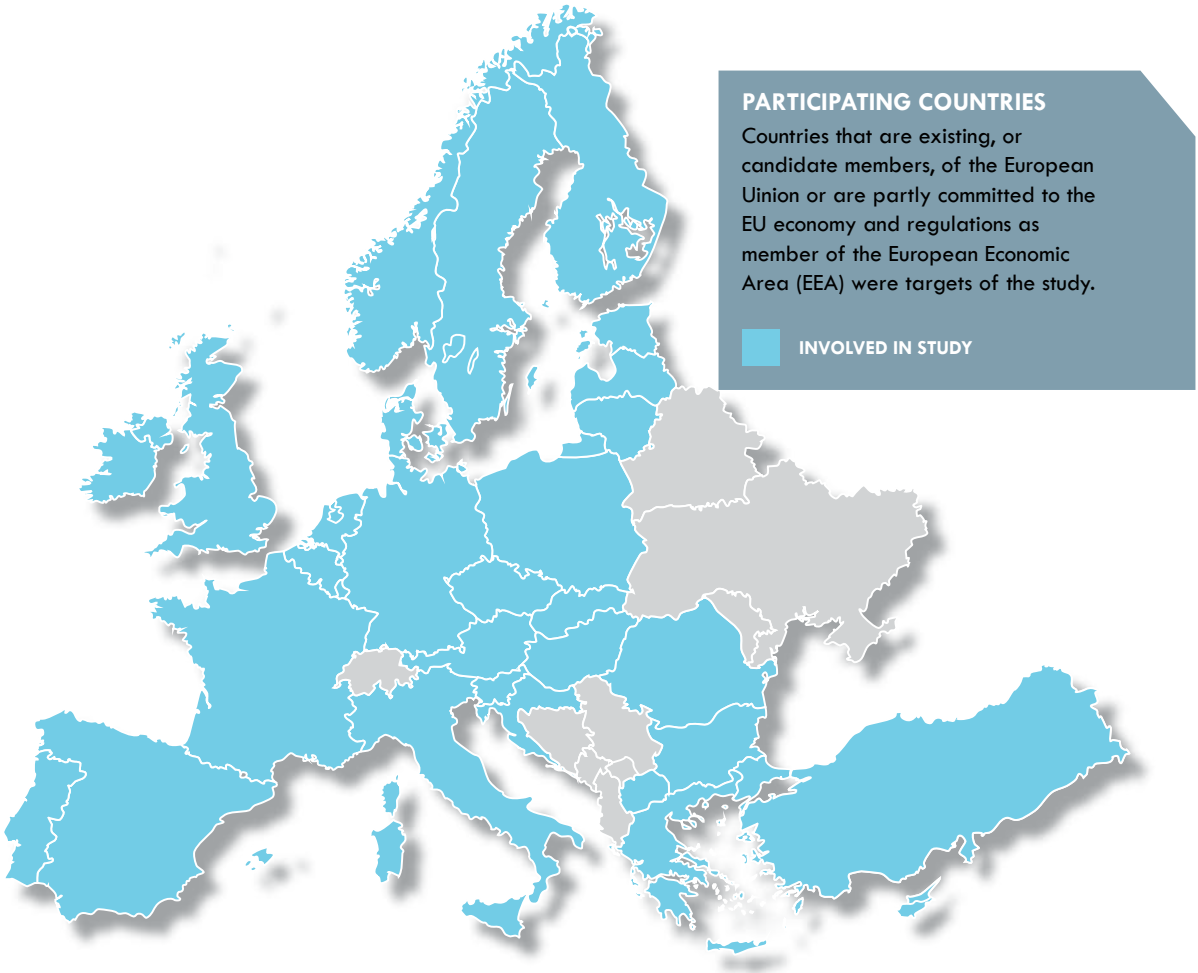
BASIS FOR SELECTION

The following are the base of the criteria considered in the selection of the good practice case studies. A balance in the case studies was sought in order to provide good practice examples in a number of relevant areas of UBC and for them to be accessible to a range of UBC stakeholders:

- Nature of good practice: strategy, structure/approach, operational activity and/or framework condition
- Type of cooperation: collaboration in R&D, mobility of academics, mobility of students, commercialisation of R&D results, curriculum development and delivery, lifelong learning, entrepreneurship and/ or governance
- Stage of development of the case: starting out in UBC, developing UBC example or highly developed UBC example
- Region: Northern, Eastern, Southern, or Western Europe

COUNTRIES CONSIDERED IN THE SELECTION OF THE CASES

Countries that were considered for case study selection were current or candidate members of the EU or those committed to the EU economy and regulations as member of the European Economic Area (EEA). The countries include: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxemburg, Macedonia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Turkey and United Kingdom



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CASE STUDY PARTNERS

The 30 good practice case studies were prepared by the Science-to-Business Marketing Research Centre (S2BMRC) in Germany and four partners, each based in one of four European regions (Northern, Eastern, Southern and Western Europe). The four partners involved in creating the cases studies were:

ORGANISATIONS	COUNTRY	REGION RESPONSIBILITY
Münster University of Applied Sciences	GERMANY	All Europe
Coventry University	UNITED KINGDOM	Northern Europe
Cracow University of Economics	POLAND	Eastern Europe
Spanish Network of University Knowledge Transfer Offices (RedOTRI)	SPAIN	Southern Europe
Vrije University	THE NETHERLANDS	Western Europe

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CASE STUDIES

CASE STUDY KEY INSIGHTS

Some of the key insights from the case studies are summarised as follows:.

INSIGHT 1

THE TYPE AND METHOD OF COOPERATION NEEDS TO FIT TO REGIONAL CHARACTERISTICS TO MAXIMISE ITS SUCCESS

Two very important themes ran through the cases:

1. Fitting to the region's strengths: policy and direction to foster UBC, whether it be in terms of strategies, structures / approaches, activities or framework conditions, needs to fit the unique strengths of the region, the HEIs and the local institutions.
2. Fitting to the region's environmental framework and regional limitations: also to be observed are the obvious barriers that exist in the region, including the legal and funding frameworks

For further information, the cases studies that illustrate this point include: Case 1 - Entrepreneurship at Aalborg University, Case 6 - Chalmers School of Entrepreneurship (CSE), Case 27 - The 'partnering university' approach,
Case - 30 Innovation focus through strategic partnerships.

INSIGHT 2

MULTIPLE UBC ACTORS NEED TO COME TOGETHER IN ORDER TO TRULY DELIVER NEW AND SUSTAINABLE VALUE TO A REGION

There were few cases where the HEI had worked alone to create their area of competence; in general they worked closely with regional development agencies, business, business groups, government organisation and other HEIs.

For further information, the cases studies that illustrate this point include: Case 3 - Demola platform, Case 4 - Roadmap for Employment-Academic Partnerships (REAP), Case 9 - Institute of Digital Innovation (IDI)/ DigitalCity, Case 15 - Q-PlaNet – Quality Placements Network, Case 19 - InnoCash programme and Case 22 - Science Fit programme.

INSIGHT 3

THE EXTENT OF UBC DEVELOPMENT DIFFERS AMONG THE DIFFERENT REGIONS IN EUROPE

The concept of 'good practice' is relative to the stage of development of UBC in the region (the case studies selected within this document reflect these stages of development). In many cases the UBC is highly developed, with long-term relations and complex interactions whereas other regions are at a much earlier stage in the process of building the right UBC ecosystem. However, they are doing it in their own unique way.

INSIGHT 4

GOOD PRACTICE CAN BE TRANSFERRED

Principles or elements of the good practice can be successfully transferred to other regions though some adaptation will be required. This is because the case studies chosen offer a high level of adaptability and the manner in which the cases have been written which highlights non-region/institutional-specific characteristics.

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INSIGHT 5

A LONGER-TERM COMMITMENT TO UBC IS REQUIRED

Sustained high-level commitment, funding and patience from all UBC stakeholders are required for successful UBC. These qualities are required to overcome the barriers related to the differing mode of communication, motivations and time horizon among the UBC stakeholders and to forge longer-term partnerships.

For further information, the cases studies that illustrate this point include: Case 7 - Centre for Innovation and Entrepreneurship (CIE) and SMIL, Case 14 - Wroclaw Centre for Technology Transfer (WCTT), Case 23 - Austrian Research Promotion Agency (FFG), Case 25 - PROMOTECH Living Lab, Case 27 - The 'partnering university' approach.

INSIGHT 6

THERE IS A MOVEMENT TO LONGER-SUSTAINABLE FUNDING MODELS

In order to ensure the long-term sustainability of some initiatives, some cases demonstrate the move to alternative funding models including private funding and funding from multiple stakeholders involved in UBC.

For further information, the cases studies that illustrate this point include: Case 6 -Chalmers School of Entrepreneurship (CSE), Case 7 - Centre for Innovation and Entrepreneurship (CIE) and SMIL, Case 9 - Institute of Digital Innovation (IDI)/ DigitalCity, Case 11- GIS Transfer Centre, Case 14 - Wroclaw Centre for Technology Transfer (WCTT), Case 16 - The Malta University Holding Company (MUHC), Case 17 - Premio Nazionale per l'Innovazione (PNI) CUBE, Case 22 - Science Fit programme, Case 26 - UnternehmerTUM, Case 27 - The 'partnering university' approach.

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CLASSIFICATION OF COUNTRIES

An even and representative mix of countries and regions was selected from the candidate countries in the four regions:

REGION	COUNTRIES	NO. OF COUNTRIES IN THE REGION	NO. OF CASE STUDIES SELECTED
Northern Europe	Denmark, Estonia, Finland, Iceland, Ireland, Lithuania, Latvia, Norway, Sweden, United Kingdom	10	10
Eastern Europe	Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia	6	5
Southern Europe	Croatia, Cyprus, Greece, Italy, Macedonia, Malta, Portugal, Slovenia, Spain	9	6
Western Europe	Austria, Belgium, France, Germany, Luxem-burg, Liechtenstein, Netherlands	7	9

NATURE OF CASE STUDY

The following tables detail the number of cases focussed on each of the 8 Types of UBC and on each of the 4 Pillars of UBC. A balance was sought in the cases selected among the 8 Types as well as the 4 Pillars of UBC.

CASES SELECTED ADDRESSING THE TYPES OF UBC	NO.
Collaboration in R&D	8
Personnel mobility	3
Commercialisation of research & development results	12
Curriculum development and delivery	2
Lifelong learning	3
Entrepreneurship	11

CASES SELECTED ADDRESSING THE 4 PILLARS OF UBC	NO.
Strategy	2
Structural instrument or approach	11
Operational activity	14
Framework condition	3

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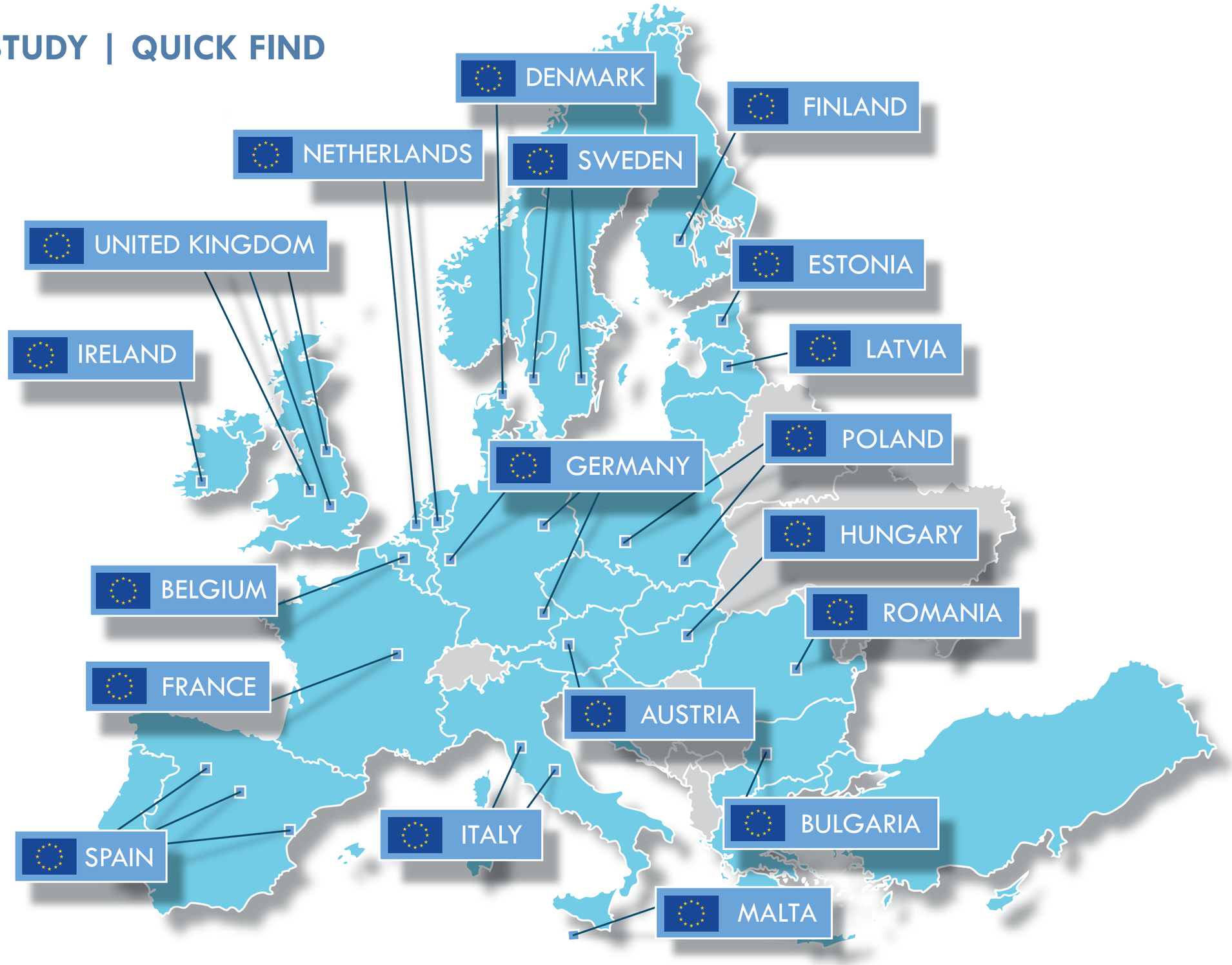
CASE STUDY | QUICK FIND



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SELECTED CASES STUDIES

CASE	REGION	COUNTRY	CASE STUDY NAME	HEI / ORGANISATION NAME	DESCRIPTION	TYPES OF UBC	FOUR PILLAR FOCUS
1	Northern Europe	DENMARK	Entrepreneurship at Aalborg University (SEA)	Aalborg University	Aalborg's knowledge-intensive entrepreneurial training ground	Entrepreneurship	Operational activity
2	Northern Europe	ESTONIA	Master of Entrepreneurship and Technology (ETM)	University of Tartu – Faculty of Economics and Business Administration	Pioneering Baltic MBA for entrepreneurs and technology managers	Entrepreneurship Lifelong learning	Operational activity
3	Northern Europe	FINLAND	Demola platform	Hermia Ltd, Tampere University of Technology, University of Tampere, Tampere University of Applied Scienes.	Open innovation platform for the creation of next generation products and services by Demola, Finland	Collaboration in R&D	Operational activity
4	Northern Europe	IRELAND	Roadmap for Employment - Academic Partnerships (REAP)	Cork Institute of Technology, Seven Higher Education Institution Partners	Reaping the benefits: partnering employers and HEIs to create the lifelong educational pathway	Lifelong learning	Structural instrument or approach
5	Northern Europe	LATVIA	Mobility at UL	University of Latvia	Emerging from strong structural foundations, this Baltic region player is now expanding its impact in mobility within Europe	Personnel mobility	Operational activity
6	Northern Europe	SWEDEN	Chalmers School of Entrepreneurship (CSE)	Chalmers University of Technology	The entrepreneurial venture creation and start-up factory	Curriculum development and delivery Entrepreneurship	Operational activity
7	Northern Europe	SWEDEN	Centre for Innovation and Entrepreneurship (CIE) and SMIL	University of Linköping	SMIL: The knowledge-intensive programme (plus 'circle of friends' network) for start-ups	Entrepreneurship	Operational activity
8	Northern Europe	UNITED KINGDOM	Student Placements for Entrepreneurs in Education (SPEED)	Wolverhampton University, University partners	SPEED: the entrepreneurial 'apprenticeship' accelerator	Entrepreneurship Personnel mobility Curriculum development and delivery	Operational activity
9	Northern Europe	UNITED KINGDOM	Institute of Digital Innovation (IDI) / DigitalCity	Teesside University	Digital excellence enabling institute in Digital City, Middlesbrough	Collaboration in R&D	Structural instrument or approach

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CASE	REGION	COUNTRY	CASE STUDY NAME	HEI / ORGANISATION NAME	DESCRIPTION	TYPES OF UBC	FOUR PILLAR FOCUS
10	Northern Europe	UNITED KINGDOM	Acua Limited	Coventry University	Employers' education support and business coach programme in Coventry provided by ACUA	Lifelong learning	Operational activity
11	Eastern Europe	BULGARIA	GIS Transfer Centre	Technical University of Sofia	The GIS Transfer Centre in Sofia, a knowledge-intensive industry hub	Commercialisation of R&D results	Structural instrument or approach
12	Eastern Europe	HUNGARY	Technology Transfer Office (TTO) of the University of Pécs (UP)	University of Pécs	The TTO at Pécs navigates with a knowledge map to guide science-society linkages	Commercialisation of R&D results	Structural instrument or approach
13	Eastern Europe	POLAND	The Science and Economy Project	Cracow University of Economics (CUE)	CUE has an online platform and quarterly publication for matchmaking academics to industry	Commercialisation of R&D results	Operational activity
14	Eastern Europe	POLAND	Wroclaw Centre for Technology Transfer (WCTT)	Wroclaw University of Technology	WCTT is the bridge linking scientists with the ideas and capital coming from entrepreneurship	Commercialisation of R&D results Entrepreneurship	Structural instrument or approach
15	Eastern Europe	ROMANIA	Q-PlaNet – Quality Placements Network	University Transilvania of Brasov, Consortium of ten partners	Strengthening links with business through a multinational European quality student placement network	Personnel mobility	Operational activity
16	Southern Europe	MALTA	Malta University Holding Company	Malta University	Straddling business and HEI to maximise commercial potential with the MUHC	Commercialisation of R&D results	Structural instrument or approach
17	Southern Europe	ITALY	Premio Nazionale per l'Innovazione (PNI) CUBE	Association of the Italian Incubators and Academic Business Plan	This award is a sort of 'Champions League' for the best enterprise projects originating in a university environment	Entrepreneurship	Structural instrument or approach
18	Southern Europe	ITALY	Technology Transfer Office (TTO) of Milan Polytechnic	Milan Polytechnic	A patent-focussed TTO gives Milan Polytechnic a leading edge	Commercialisation of R&D results	Strategy

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CASE	REGION	COUNTRY	CASE STUDY NAME	HEI / ORGANISATION NAME	DESCRIPTION	TYPES OF UBC	FOUR PILLAR FOCUS
19	Southern Europe	SPAIN	InnoCash programme	Genoma España Foundation, Spanish Ministry of Science and Innovation (MICINN)	Filling the 'valley of death' for innovative R&D with Spanish InnoCash	Commercialisation of R&D results	Framework condition
20	Southern Europe	SPAIN	INNOVA programme	Polytechnic University of Valencia (UPV)	Financing innovative scientific proof-of-concept projects through to commercialisation	Commercialisation of R&D results	Operational activity
21	Southern Europe	SPAIN	INNPACTO	Spanish Ministry of Science and Innovation (MICINN)	INNPACTO is creating the Spanish framework for the knowledge economy	Collaboration in R&D	Framework condition
22	Western Europe	AUSTRIA	Science Fit programme	Graz University of Technology, Montan University Leoben, Karl Franzens University Graz, Joanneum Research	Science Fit in Graz is using science to make the economy fit	Collaboration in R&D	Structural instrument or approach
23	Western Europe	AUSTRIA	Austrian Research Promotion Agency (FFG)	Ministry of Economy, Family and Youth (BMWFJ)	Mind the Gap! FFG closing the gap between science and marketing with a funding initiative in Austria	Commercialisation of R&D results Collaboration in R&D	Framework condition
24	Western Europe	BELGIUM	Technology Transfer Interface (TTI)	Free University Brussels (VUB)	Using Confucius and an open exchange platform to guide researcher research valorisation efforts, the case of TTI in Brussels	Commercialisation of R&D results	Operational activity
25	Western Europe	FRANCE	PROMOTECH	PROMOTECH Living Lab	Living Lab in France offers an open innovation process driven by end-users to create a new type of entrepreneur	Entrepreneurship	Structural instrument or approach
26	Western Europe	GERMANY	UnternehmerTUM	The Technical University of Munich (TUM)	Educating and supporting entrepreneurs in Germany's engine room	Collaboration in R&D Entrepreneurship	Structural instrument or approach
27	Western Europe	GERMANY	The partnering university approach	Münster University of Applied Sciences (MUAS)	Tools and mechanisms of the partnering university to create long term strategic partnerships with industry	Commercialisation of R&D results Collaboration in R&D	Strategy

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CASE	REGION	COUNTRY	CASE STUDY NAME	HEI / ORGANISATION NAME	DESCRIPTION	TYPES OF UBC	FOUR PILLAR FOCUS
28	Western Europe	GERMANY	Telekom Innovation Laboratories	Deutsche Telekom Innovation Laboratories	A research centre shaping tomorrow's world by combining scientific knowledge with the innovative drive of a global corporation	Collaboration in R&D	Structural instrument or approach
29	Western Europe	NETHERLANDS	Minor Entrepreneurship	Free University Amsterdam (VU)	A course not just for the role of entrepreneur but for the future policy-maker, consultant and researcher in the area of entrepreneurship	Entrepreneurship	Operational activity
30	Western Europe	NETHERLANDS	Innovation focus through strategic partnerships	Technical University Eindhoven (TU/e)	Integrated approach to valorisation creates an ecosystem where innovation starts	Commercialisation of R&D results Entrepreneurship	Operational activity

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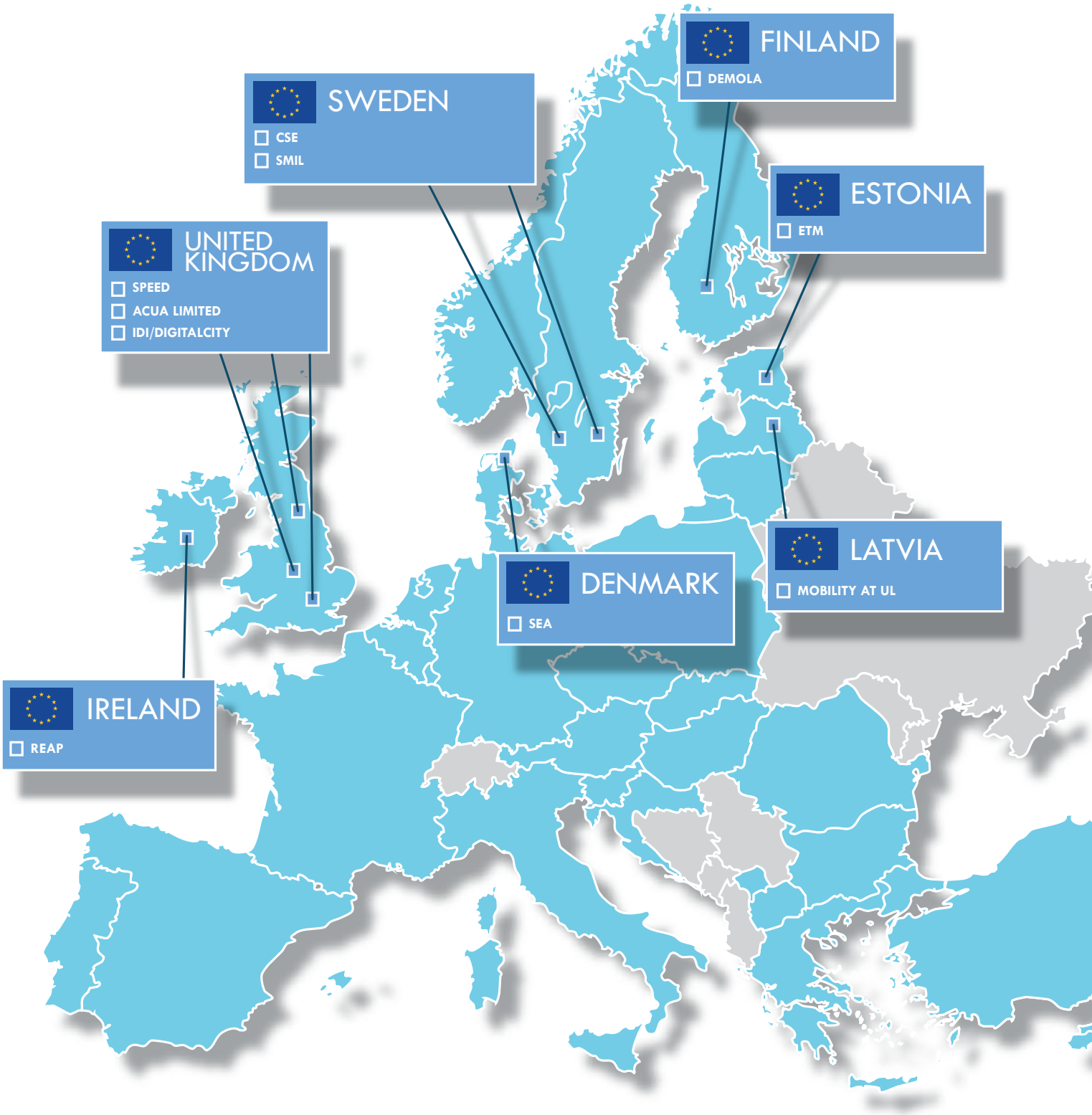
NORTHERN EUROPE CASE STUDIES



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NORTHERN EUROPE

CASE 1 SEA DENMARK

CASE STUDY TITLE	ENTREPRENEURSHIP AT AALBORG UNIVERSITY
HEI / ORGANISATION NAME	UNIVERSITY OF AALBORG
COUNTRY	DENMARK
DATE	JULY 2011
NATURE OF INTERACTION WITH BUSINESS	ENTREPRENEURSHIP
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

AALBORG'S KNOWLEDGE-INTENSIVE ENTREPRENEURIAL TRAINING GROUND

Rooted in the university's philosophy of problem-based learning, the Supporting Entrepreneurship programme at Aalborg University (SEA) prepares students for a career after their studies as entrepreneurial employees, researcher and also as entrepreneurs through the provision of training, mentoring and coaching and the provision of infrastructural support. Through SEA's activities with industry, new ideas are created and start-ups are established. The university also supports other members of the academic community and those generally in the region with knowledge based business opportunity to set up a company.

BACKGROUND

Denmark has a law on inventions made within public research institutions (Law no. 347 of June 2nd 1999), which came into effect on January 1st 2000. According to this law, the researchers are obligated to notify the university in the event that they have made a patentable invention. The university will decide whether to take over the researchers' rights. In the event that the university decides not to take over the rights, the rights will remain with the inventors, and they are free to commercialise the invention on their own. Another major key to new venture creation are the university students who are not a part of the law 347, and against this background the University of Aalborg has developed its entrepreneurship programmes (for start-ups) and knowledge and technology transfer programmes (joint and individual spin-outs).

AIM AND TARGET

SEA aims to prepare students for their active working life after university in all capacities: as researchers, as employees and as entrepreneurs. With the global knowledge economy, SEA sees a growing need for innovative and flexible entrepreneurs and intrapreneurs. They see new emerging structures where businesses are established, sold, closed or continued in new contexts. The notion of a life-time business which is established by young entrepreneurs, consolidated through their mature years and eventually inherited and continued by their sons and daughters now belongs to the long-gone industrial society. Nowadays, entrepreneurship is about self-realisation, about growing, changing, seizing new opportunities and continuously meeting new challenges. Young people today have seriously different expectations and SEA sees them as its most important goal to

prepare the students for the challenges and opportunities of today and tomorrow.

FUNDING

The main knowledge transfer activities are maintained by a sister office under Aalborg University Innovation called the knowledge exchange office. The Aalborg University Innovation is part of the administration for the faculties of engineering, science and health, but it is also a service unit for all the faculties of the university. The main parts of the knowledge transfer activities are placed at Aalborg University Innovation, whose role is to ease the entrance to the university and to support innovation, business creation and growth in the business community of the region through its three offices: knowledge exchange office, patent and commercialisation office and the SEA entrepreneurship office.

Funding (annually)

University funding	€780,000
External funding (e.g. EU)	€1.2m
Total	≈€2m

IMPLEMENTATION

STRATEGY AND ACTIONS

Central to the SEA programme, the role of the knowledge exchange office is to assist the university and organisations in creating and strengthening mutually beneficial relationships. This is used between researchers and industry in the creation and maintenance of contacts and networks. Through the project and funding office, joint projects are formulated, funds are applied for and joint agreements can be made. When the partners need a collaboration agreement, the patent and commercialisation office gets involved, IPR can be developed and spin outs are created. A large number of the collaborations go all the way through to the patent and commercialisation office. This results from the extensive informal collaboration that takes place all around the university. Through the process of the collaboration, some might need the expertise of the patent and commercialisation office. The students receive entrepreneurship training in the early phases of the business development through the courses, events and pre-incubators. Through SEA's activities with industry, new ideas are created and start-ups are established. Yet others use SEA's activities to work on turning their idea into a business plan through coaching and mentoring before establishing their business. Other students go into collaborative research and establish a joint spin-out with Aalborg University.

The patent and commercialisation office ensures that the university receives notice of most of the inventions that are made at Aalborg University. However it is also expected that some researchers choose not to notify the university because they do not 'believe in the system', meaning

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that they do not think that commercialising technology should be the task of a public university ('old school'). Furthermore, it is expected that some researchers are unaware of the fact that they sometimes generate patentable inventions and that technologies are made public before patenting possibilities have been considered. It is also expected that some researchers are not aware of the existence of a Danish law regarding inventions in public research institutions and that they also are not aware of the university office that deals with commercialisation activities (mainly foreign employees).

COOPERATION WITH ENTREPRENEURS

SEA offers business people a unique opportunity of getting professional advice and testing of knowledge based business ideas. In short, SEA can help realise the entrepreneur's vision. Since all ideas and thoughts are distinct, the offer by SEA comprises different arrangements, each adapted to a specific period of the process from idea to reality.

TRAINING OF ENTREPRENEURS WITH MENTORS

SEA is continuously organising training programmes for entrepreneurs. The programmes are open to all interested, irrespective of educational background. However, the business idea should have a knowledge intensive focus. The programmes function as introductory programmes to the incubator arrangement and provide useful tools for the development of business plans. During the course programme the entrepreneur is assigned to a mentor who assists in guiding the project during the course.

THE INCUBATOR ARRANGEMENT

The incubator arrangement with SEA is an offer directed at innovative souls with an interest in entrepreneurship and starting up a business. Through the incubator arrangement, the entrepreneur will be joined to internal and external resource persons with specific knowledge. Additionally, through the incubator arrangement the entrepreneur will get in touch with other students with different professional competences to challenge their expectations and patterns of thinking in relation to their business idea. In this way, focus will be directed on the interdisciplinary aspect around their idea and business.

CONSULTANCY FOR ENTREPRENEURS

SEA cooperates with a large number of experts who are available for consultancy. Such consultancy may comprise:
Assessment and development of ideas
Preparation of business plan
Operation, sales and marketing of the business
Loan and financing

NETWORK

To many entrepreneurs, success is associated with knowing the right people and being able to draw on resources through one's network. Aalborg University provides access to the network of researchers employed by the university. The university participates in many networks. For an overview see:
www.en.aau.dk/digitalAssets/10/10516_collaboration_with_aau.pdf

TRAINING OF TRAINERS

A key issue of entrepreneurship culture and teaching at the university is to have teachers that are in a position and have qualifications that allow them to teach entrepreneurship and to use innovative pedagogies in teaching. For this reason SEA provides courses for teachers at all levels of the educational system.

INNOVATION X

For entrepreneurs, it is essential that they are surrounded by a well-functioning eco-system that can provide access to e.g. professional guidance. For this reason, SEA has initiated and runs a partnership open to all public and private actors in the innovation system to join forces in quarterly knowledge days. On a knowledge day, entrepreneurs and SME's have the opportunity to listen in on a variety of different sessions, meet people from the innovations system and network with other entrepreneurs.

MONITORING AND EVALUATION

Most SEA activities are externally funded, for instance through social funds projects, where evaluation and assessment are integral parts of the project. When arranging conferences and seminars, SEA conducts post-evaluations on participants, and all activities are evaluated. However, alumni involved in SEA-based or SEA-initiated activities are not tracked, and therefore the long-term impact has not yet been investigated. Incubators evaluate entrepreneurs' needs in a mid-term evaluation discussion and a closing evaluation interview with a small group of entrepreneurs.

SUSTAINABILITY

SEA works with the goal of developing most entrepreneurship activities into traditional courses and curricula of
Aalborg University, or into project work that can be considered as part of the curricula. SEA also works on setting up start-up grants and has an '11th semester' option with a full focus on entrepreneurship and start up processes.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

In working with entrepreneurship for some 10 years, SEA has managed to place an increasingly higher focus on entrepreneurship at the university and in the region, which has resulted in increasingly more courses and increasingly more students starting their own companies. A brief review in mid-2010 showed that more than 400 people participated in the incubation programme, and that more than 43% of these have been involved in the formation and registration of a company.

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Further achievements include:

- The establishment of a major workshop for all university master students called WOFIE
- The establishment of an entrepreneurship board to secure a continued focus on developing the problem-based learning model and the connection to entrepreneurship education.

SUCCESS FACTORS

SEA sees its activities, basic philosophy and definition of entrepreneurship as being closely connected to the 'basic' teaching rule of Aalborg University – problem-based learning. Problem-based learning has always been the prime teaching and learning metaphor of Aalborg University and is probably the most distinctive feature of Aalborg University compared to other universities inside or outside Denmark. According to SEA, entrepreneurship thinking and problem-based learning are closely related and they perceive problem-based learning as a significantly different environment and precondition for entrepreneurship than what is the reality in most other HEIs in Europe. Problem-based learning is by its nature heavily associated with 'the art of finding solutions', which is also one of the corner stones of knowledge intensive entrepreneurship. SEA is embedded in the knowledge transfer process of the university.

IMPACTS

More start-up companies coming out of the university and a larger number of accredited courses.

STRENGTHS AND WEAKNESSES

The entrepreneurship programmes are embedded in the university's curricula as well as the interaction with the region and regional entrepreneurs.

The most important obstacle against entrepreneurship education is how public resources are administered to universities and how universities are rewarded. As long as entrepreneurship education or dissemination through third stream activities do not release additional resources, it is very difficult to obtain funding for the extracurricular activities within the university budget. SEA argues that the introduction and implementation of entrepreneurship education in any given department and faculty still depend too heavily on personal commitment on the part of professors. For some departments, the idea of entrepreneurship seems easier to adopt, as they have a stronger tradition with regard to business start-up, or it is easier for staff and students to see what entrepreneurship is.

TRANSFERABILITY

The transferability of the Aalborg entrepreneurship programmes is high – but the local / university circumstances (e.g. policy) need to be taken into account. Aalborg University has a pedagogical model that is more suitable than others to support entrepreneurship, but key elements in the Problem-Based Learning model can be transferred.
Furthermore, the focus in the incubation programme of business development taking place within the academic society (as

opposed to in a science park detached from the academic society) could be further investigated.

THEMES

Entrepreneurship, Knowledge Exchange Office, incubator, Commercialisation Office, Law on inventions, Faculty entrepreneurship, Problem-Based Learning (PBL)

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www.innovation.aau.dk
www.wofie.aau.dk
(all accessed 18th March 2011)

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RESOURCES

DOCUMENTS AND PUBLICATIONS

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A shortcut to knowledge, expert help and highly qualified employees:
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www.en.aau.dk/digitalAssets/10/10516_collaboration_with_aau.pdf

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NORTHERN EUROPE

CASE 2 ETM ESTONIA

CASE STUDY TITLE	MASTER OF ENTREPRENEURSHIP AND TECHNOLOGY (ETM)
HEI / ORGANISATION NAME	UNIVERSITY OF TARTU – FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION
COUNTRY	ESTONIA
DATE	JULY 2011
NATURE OF INTERACTION WITH BUSINESS	ENTREPRENEURSHIP LIFELONG LEARNING
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

PIONEERING BALTIC MBA FOR ENTREPRENEURS AND TECHNOLOGY MANAGERS

The master programme in Entrepreneurship and Technology Management (ETM) was launched in 2002 as an 'open university' MBA programme at the University of Tartu – Faculty of Economics and Business Administration. The need for the programme emerged from the region's economic life, as at that time many new high-tech companies were founded in Estonia: 25 in biotech and 350-400 in the information and communication technology (ICT) sector. Working closely with local industry representatives, the master program targets managers of high-tech companies, SMEs and employees of the public sector responsible for regional development as well as entrepreneurs in Estonia. Launching the ETM programme was a pioneering initiative in the Baltic States, since it was quite novel for other neighbouring countries as well. The ETM master programme in curriculum is carried out by the Faculty of Economics and Business Administration.

BACKGROUND

The University of Tartu has a portfolio of activities with regard to the stimulation and support of entrepreneurship. The objective with regard to education is to raise entrepreneurship awareness at the University of Tartu. Further, it is to offer entrepreneurship training for students and university staff, including the execution of the master programme. There is also a Centre for Entrepreneurship (CE) which has the task of supporting entrepreneurship in the university through:

- the support of the commercialisation of the uversity's technological and scientific achievements, including analysis of business ideas for spin-out and spin-off companies, and business consulting jointly with the Institute of Technology couch entrepreneurs,
- the promotion and undertaking of research in entrepreneurship and innovation as well as the development of entrepreneurship teaching competence,
- the contribution to the development of Tartu, Soutern Estonia and Estonia in general.

There are also services with regard to technology transfer and business incubation.

CASE 2 ETM ESTONIA

AIM AND TARGET

The current curriculum of the Faculty of Economics and Business Administration (FEBA) of the University of Tartu offers a bilingual MBA programme in Entrepreneurship and Technology Managment. This is a two-year programme (120 ECTS), compatible with the Bologna framework.

The aims of the present programme is to prepare the MBA students for the following tasks:

- Teaching activities in the fields of entrepreneurship and technology management
- Operating at top-level management positions in the innovative knowledge-based companies
- Working in leading positions at public institutions related to enterprise, innovation and technology development.

The following participants are targeted for the master programme:

- Students with background in natural sciences, engineering, economics or social sciences
- Students who have proved their capacity in entrepreneurial and management practices
- Individuals from industry and other business entities, from public sector, and from other universities, aiming to enhance their theoretical knowledge and professional skills and to obtain an MBA degree in Entrepreneurship and Technology Management.

OTHER REFERENCES

The entrepreneurship activities and the ETM programme are regularly subject to studies of best practice in Europe. As an example,. in the BEPART-project (Interreg project: www.bepart.info) which published a book on 'Teaching entrepreneurship' (ISBN 978-3-7908-2037-9) and Endeavour (Erasmus Mundus: www.endeavour-erasmus.net)

FUNDING

The feasibility and curriculum development activities have been funded by the Estonian government and the European structural funds (ESF, ERDF and Interreg). The pilot-executions of the master programme were supported by national grants. Presently, there are 10 state-funded student positions in the programme, and 20-30 students pay the fee themselves. In the future, the master programme needs to be self-sufficient through student fees and study credits.

IMPLEMENTATION

STRATEGY AND ACTIONS

The curriculum consists of modules of

- Entrepreneurship: 'Entrepreneurship and Innovation',

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'Project management', 'Business strategy, planning, product and service planning and development'; for a total of 18 ECTS,
- Technologies and Innovation, IPR, TQM, Technology and Innovation Policies, Technology Transfer, Technology Strategy, Modern Key Technologies: for a total of 18 ECTS and
- Innovative Enterprise Management: Finance, Internationalization, Organisation and Management, Marketing; for in a total of 27 ECTS,
- Alternative modules of specialisation (compulsory 15 ECTS), electives (6 ECTS) and Master's thesis module (36 ECTS)

The programme has two strands: 'teaching entrepreneurship' and 'technologies and processes'. The nominal study lasts two years; there are lectures during three semesters and the sessions take place Thursday-Sunday, once a month at the Faculty. What makes the programme unique is the fact that it is a master study that can be selected by all students from all study backgrounds, even in combination with a job either in business or in the government. Furthermore, the programme focuses on technology entrepreneurship (not usual in an MBA programme) and also the entrepreneurship pedagogy makes it special.

MONITORING AND EVALUATION

Accreditation according to the Bologna criteria has been confirmed by the Estonian Ministry of Research and Higher Education according to an evaluation by the international commission in 2005. As such it is continuously monitored and regularly evaluated in order to maintain its accreditation.

SUSTAINABILITY

The master programme is sustainable since it is financed via the study credit (ECTS) system for regular students and via a fee for non-regular students. As long as the university is able to offer an interesting programme to potential students, it can be sustained.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

Until now approximately 300 students have enrolled in the master programme; of which about 70% came from SMEs and larger companies and some 30% came from the public sector. The programme is primarily attended by 'non-regular' students, although this will change in the future.

SUCCESS FACTORS

One of the success factors is the positioning of the master programme: it is targeted at students from different disciplines and other universities as well as individuals from industry and other business entities from the public sector.

Another success factor is the two different strands in the programme: 'teaching entrepreneurship' and 'technologies and processes'. Finally, it is unique in Estonia and the university teams up with the other university in Estonia (Tallinn) – see also impacts.

IMPACTS

As a result of studying in the programme, students have launched their businesses, with some of them being in Silicon Valley in the US. The Centre for Entrepreneurship has supported the launch of

approximately 10 companies (outside the ETM programme), plus the same number of students' projects as well as support for the incubator of creative industries at the college of university – Viljandi Culture Academy. Likewise CE has contributed to similar incubators in Tartu and Tallinn.

COLLABORATION BETWEEN UNIVERSITIES IN ESTONIA

In collaboration with Tallinn University of Technology (joint) courses have been developed and included in the Master of Technology Governance since 2010.

STRENGTHS AND WEAKNESSES

The strengths of the master programme lie in its interdisciplinary nature (technology, entrepreneurship, business); the access to a network of specialists who are willing and able to teach; its uniqueness in the Baltic States and the sustainable structure of the courses (its follows the normal credit-systems and remuneration). A further strength is the two strands in the programme which enables the university to educate future staff for the support of entrepreneurship in Estonia.

An initial weakness of the programme was that there were no qualified staff, a factor that has been since overcome (e.g. by educating and training staff). The master programme also needs to adhere to the academic criteria for e.g. thesis, classes etc. thus restricting the ability to be innovative with the courses. A further potential weakness is that the programme has been designed to meet the demands of the Estonian society though this can also be viewed as a key strength.

TRANSFERABILITY

The master programme is a programme specifically developed for Estonia (a transitional economy), a programme that meets the demands of Estonian companies. On the one hand this limits the transferability; on the other hands it enlarges the transferability within the country and to other countries with an economy in transition.

THEMES

Entrepreneurship education in transitional economies, Entrepreneurship and technology

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Mets, T. (2010) How to train educated entrepreneurs: small (post) transition country case. Socialinia tyrimai/Social Research, 4, 21, 20 – 27.

DATABASES AND WEBSITES

There is no website of the master programme. Information on the entrepreneurship activities of the University of Tartu in general: www.ut.ee/en/entrepreneurship
(accessed 18th March 2011)

NORTHERN EUROPE

CASE 3 DEMOLA FINLAND

CASE STUDY TITLE	DEMOLA PLATFORM
HEI / ORGANISATION NAME	HERMIA LTD WITH TAMPERE UNIVERSITY OF TECHNOLOGY UNIVERSITY OF TAMPERE AND TAMPERE UNIVERSITY OF APPLIED SCIENCES.
COUNTRY	FINLAND
DATE	MAY 2011
NATURE OF INTERACTION WITH BUSINESS	COLLABORATION IN R&D
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

OPEN INNOVATION PLATFORM FOR THE CREATION OF NEXT GENERATION PRODUCTS AND SERVICES BY DEMOLA, FINLAND

Funded by the Creative Tampere Programme, Demola is a Finnish open innovation platform for the creators of next generation products and services. Demola provides students and companies with a collaborative and multidisciplinary innovation environment where students from three regional universities create demonstrations of novel service and product concepts coming from companies. Offered by higher education institutes in Tampere and Hermia Ltd, Demola gives multidisciplinary student teams the opportunity to develop demo products and services based on company concepts. Companies ranging from local SMEs to international large-scale enterprises as well as public organisations collaborate with the teams.

Demola is an important case study because it reflects successful open innovation between companies and students within a dedicated (neutral) innovation environment and manages innovation ownership rights successfully.

BACKGROUND

Tampere, a city in Southern Finland, is an international growth centre for versatile services, know-how, and creativity. It is recognised that successful business activities and the growth in well-being brought to the area as a result of these activities can be enhanced significantly through investment in culture and in structures enabling innovation.

The Creative Tampere Programme accepts this challenge by creating products, successful business, and new services based on content development, and by increasing the co-operation between creative sectors and business life. Demola directly responds to the issues raised in the Aho report of 2006 and the Finnish Innovation Strategy of 2008 through its focus on open innovation in a global environment.

AIM AND TARGET

The objective of Demola is to boost multidisciplinary agile innovation culture and encourage entrepreneurship in the Tampere region.

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CASE 3 DEMOLA FINLAND

OTHER REFERENCES

The development of Demola in late 2008 coincided with the publication of a new innovation strategy for Finland to improve its competitive position in R&D markets given increased competition from emerging countries including China and India. Finland's National Innovation Strategy (2008) identified that 'around the world, leading edge companies are involving consumers in product development. Enterprises are even processing previously unrecognised needs together with users, thus influencing the emergence of a completely new kind of market. Various forms of open and public innovation activity are gaining ground alongside traditional closed innovation activity. Policies must create the preconditions for the emergence of open innovation environments.'

The Demola project can also be seen as a response to the Aho Report of 2006 on 'Creating an Innovative Europe', which focused on the creation of innovation friendly markets, the strengthening of R&D resources, increasing structural mobility in Europe and the fostering of a culture of celebrating innovation.

Demola is part of a project in Creative Tampere, the City of Tampere's business development policy programme (2006 - 2011), which aims to facilitate new business, services, innovation and creativity. The Creative Tampere Programme (Luova Tampere) was established to accelerate this growth by promoting interaction among representatives of different sectors in order to develop new creative concepts.

Great potential is seen in the commercialisation of creative trades – especially in culture. The goal of the Creative Tampere Programme is to strengthen the cultural industry and to elevate it to one of the most significant trades in Tampere. The practical implementation of the Creative Tampere Programme is performed in three selected theme areas: the creative industries, innovations and entrepreneurship and attractive city. Each theme has its own individual goals that guide the selection of projects to be implemented.

FUNDING

Revenue funding of €200,000 (to €300,000) per year financed through the City of Tampere Business Development Programme (2006-2011) 'Creative Tampere'.

IMPLEMENTATION

STRATEGY AND ACTIONS

Actions have been taken to ensure that all players in the region have been included and involved in development of the project from the beginning. Ensuring that Demola is maintained as a neutral ground resource for all local universities gives each the confidence to fully participate in activities and support innovation activities.

Involvement from all participants is voluntary. The value for participants must be clear and present. By establishing the platform, which is open to all disciplines, and creating solid tools and methods, which are universal, the platform is expandable and has proven to be a valuable tool for many industries.

MONITORING AND EVALUATION

Financiers and Demola facilitators work together to monitor the status and results of projects and the Demola environment as a whole. Some of the key figures from the first two years of operations include:

More than 500 students engaged:
- More than 30% international students
- 72% of students involved seriously consider becoming entrepreneurs.

More than 110 projects delivered:
- 96% of completed projects licensed by project part-ners
- More than 10% of students headhunted
- New start-ups, Protomo teams and co-founders
- €500 rewards to students.

SUSTAINABILITY

In order to sustain the growth and future of Demola, steps are being taken to integrate innovation projects into the core university course structure. These include offering dedicated Demola courses, integrated into the curriculum, thus offering students from all local universities the chance to work in multi-disciplinary teams with support from professors and industry professionals.

The New Factory concept helps to ensure that results and products created in Demola will have a path for continuation and development into business-creating concepts. Furthermore, national and international networks are being created to both generate talent flows between regions and to create maximum value for the players involved and partner companies.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

The Demola project was the winner of the 2010 Regional Innovation Award from the Assembly of European Regions.

The key results of Demola highlight the engagement of over 500 students in developing product and service concepts with project partners and with over 110 projects completed or in development. As a result 96% of results are licensed, new jobs have been created and new companies have been established. Within the project, in excess of €500,000 has been awarded to students.

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CASE 3 DEMOLA FINLAND

SUCCESS FACTORS

Demola operates on a region-wide basis with three universities engaged in the project. The range of stakeholders involved in the project is important with the project being managed by Hermia Science Park and funded through the City of Tampere. The project also operates on a limited budget enhancing the overall value of the achievements and impacts.

The role of the students is central to the success of the programme. It is their commitment to team working, problem-solving and creating demonstrable solutions that enhances the delivery of the project with the support of industry mentors and Demola staff.

IMPACTS

The development of Demola and its open innovation approach has been further enhanced with its integration into the 'New Factory' platform which also includes Protomo and Suuntaamo as innovation approaches that respectively support the development of innovative ideas by entrepreneurs and business professionals and the engagement of citizens in innovation, product and service development.

STRENGTHS AND WEAKNESSES

The establishment of Demola as a neutral ground location, not dependent on any one partner or university, has allowed flexibility in growth and has given confidence to potential new partners when joining. Running in a cost-efficient and agile manner has allowed quick reactions to changing environments and events.

Focusing on producing concrete demo results has helped to lead a change in the mind-set of innovation thinking in local environments. It has also helped to change some minds to an entrepreneurial point of view.

The implementation of the project has been resource intensive and a continuing development process. Positive development has required a regular cycle of evaluation and adjustment to methods and tools.

TRANSFERABILITY

The Demola project approach is highly transferrable to other industry-university settings.

The key features that should be considered are the neutral location (not in the university, not in a business), the approach to ownership of results balancing industry and student perspectives and the staffing of the facility.

The development of the 'New Factory' open innovation platform also provides for transferability with its Protomo and Suuntaamo programmes alongside Demola adding value to the open innovation support offer.

THEMES

Open Innovation, Collaboration

CASE 3 DEMOLA FINLAND

INFORMATION SOURCES

Project Website
http://demola.fi/what-demola-new-factory

New Factory Open Innovation Platform
http://uusitehdas.fi/en

Funding Programme
www.luovatampere.fi/eng

Assembly of European Regions, Winner 2010 Regional Innovation Award Profile
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NORTHERN EUROPE

CASE 4 REAP IRELAND

CASE STUDY TITLE	ROADMAP FOR EMPLOYMENT - ACADEMIC PARTNERSHIPS (REAP)
HEI / ORGANISATION NAME	CORK INSTITUTE OF TECHNOLOGY SEVEN HEI PARTNERS
COUNTRY	IRELAND
DATE	MARCH 2011
NATURE OF INTERACTION WITH BUSINESS	LIFELONG LEARNING
NATURE OF GOOD PRACTISE/PROJECT	STRUCTURAL INSTRUMENT OR APPROACH

PROFILE

SHORT DESCRIPTION

REAPING THE BENEFITS: PARTNERING EMPLOYERS AND HEIS TO CREATE THE LIFELONG EDUCATIONAL PATHWAY

REAP is a collaborative project involving eight HEI partners, for the research, development and validation of a Higher Education-Industry Partnership Model and Roadmap. It will identify learning needs within workplaces, draw up a comprehensive plan for partnership between employers and HEIs and verify the effectiveness of the strategy through a diverse range of demonstrator collaborative activities. It will provide the gateway to integrate and rationalise complementary initiatives and offer a single simple, relevant, inclusive framework to facilitate interaction with the workplace.

This case study example provides information on a structured approach for employer-academic partnerships at an institutional level adopted with eight HEI's.

BACKGROUND

The project is funded by the Irish Strategic Innovation Fund (Cycle II) in line with the 'human capital' objectives outlined in the National Development Plan 2007-2013.

It builds on the activities of the Strategic Innovation Fund (Cycle I) project, Education in Employment (EIE) that promoted a 'learner led' model of education providing those in the workforce who wanted to undertake a third-level qualification the opportunity to do so through establish workplace-education collaborative partnerships.

AIM AND TARGET

The project aims to identify learning needs within the workplace, draw up a comprehensive model for partnership between employers and HEIs and verify the effectiveness of the model through a range of demonstrator collaborative activities. The main aim is to develop a mechanism to integrate and rationalise complementary initiatives and offer a relevant, inclusive framework to facilitate interaction with the workplace.

OTHER REFERENCES

Through its examination of existing relationships between learners, employers and HEIs and the establishment of a roadmap for the development of successful partnerships, the REAP project addresses the needs identified in the National Development Plan (NDP) 2007 – 2013.

The NDP set a national objective for the Higher Education System to be among the leading OECD countries. A key area for action was identified as the 'development of a high skilled, adaptable workforce through continued emphasis on lifelong learning and training of those in employment.'

FUNDING

Revenue funding of €4,205,000 was initially allocated to the project. Funding was secured through the Strategic Innovation Fund (SIF), a multi-annual fund, totalling €510m over the period 2006 – 2013. A number of reductions to the SIF budget meant that the overall funding allocated was reduced over the project timeframe.

The fund is directed towards the support of innovation in HEIs, particularly enhancing collaboration between HEIs, improving teaching and learning, supporting institutional reform, promoting access and lifelong learning and supporting the development of fourth level education.

IMPLEMENTATION

STRATEGY AND ACTIONS

The strategy for the REAP project is based on an initial learning needs analysis that has reviewed and researched the learning needs of workplace sectors followed by partnership model development.

The initial learning need-analysis strand has key actions including a review of employers, learning needs and partnership approaches, and regional and sectoral research.

The partnership model development activity has three key strands: implementation and validation, integration and dissemination aimed at establishing a framework of employer, and HEI collaboration based on specific activities and context.

The REAP project adopted a 'trial implementation approach' specifically delivering demonstration programmes in specialist targeted courses, co-operative placements, academics and researchers into the workplace, professional postgraduate programmes, and industry into academia.

In each demonstration programme particular emphasis has been placed on situational analysis, good practise identification, cost-benefit analysis, scalability and transferability, and the production of practical reports and guidelines.

The integration and dissemination strands of the REAP project seek to support the HEI mainstreaming, transfer and wider dissemination of the employer-HEI framework established in the implementation strand through networking and collaboration with education and employer led organisations, and the wider publicity of good practices cases and guidelines through the establishment of a virtual gateway/portal.

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MONITORING AND EVALUATION

The project is monitored through a series of regular reports required by the funding agency. These reports tend to be quarterly in the case of financial reporting and bi-annual in the case of reporting on outcomes and outputs. The project outcomes reporting format is defined by the HEA and includes details of objectives met, outputs and outcomes achieved, collaborations developed, and on-going plans. The financial reporting format requires details of spending and expenses incurred and 'matched' activity reported by institutional partner and by project activity or strand.

In addition to these regular reporting formats a mid-term evaluation of the Strategic Innovation Fund was carried out in November/December 2009 by Dr Gordon Davies who was charged as an external expert with reviewing and rating all activities funded under the Strategic Innovation Fund.

The subsequent metrics of success will be part of the REAP project closing report:

- Structures in place to support partnership activity
- Staff development and awareness raising activities
- Networking and partnership generating events
- Dissemination and circulation of reports and practise guides
- Website visits and hits

There is on-going monitoring and evaluation of the project activity within each of the eight HEIs in the partnership. A Steering Group, whose membership includes a representative of each of the partner institutions regulates and controls the project activity. The Higher Education Authority, as the funding organisation on behalf of the Department of Education and Skills is responsible for the overall project monitoring and evaluation.

SUSTAINABILITY

Two strands of the REAP project, namely integration and dissemination, are directed at sustainability activity.

The integration strand of the REAP project supports HEI mainstreaming, transfer and wider dissemination of the Employer-HEI framework established in the implementation strand of REAP through networking and collaboration with education and employer-led organisations ensuring integration with complementary programmes and initiatives.

The dissemination strand of REAP will establish a virtual gateway/portal that is designed to be a reference point for relationship development and a repository for case studies and reports providing a practical guide for HEIs and employer organisations.

CASE 4 REAP IRELAND

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

All academic partners have undertaken activities to develop new partnerships and to enhance existing partnerships to meet learning and R&D needs. An exploration into the potential of external engagement and partnership activities has raised awareness and set the agenda for a consideration of the structuring of HEIs in order to maximise activity. This has yielded changes to management structures in a number of partner colleges.

A number of events have been held to create networking opportunities and to unlock the potential of greater understanding across the University/Business divide.

Research into the experiences and views of the three main actors in the undergraduate placement process, the HEI, Employer and Student have been distilled into a report which provides a framework for good practice and a number of useful guidelines and checklists.

A number of extended case studies of customised course development in collaboration with industry partners have been shared among the consortium and will be developed into practice guidelines for specialised course development. Some project publications include:

- Learning Needs Analysis in Selected Employment Sectors (2009)
- Partnerships for Progress – HEIs and External Engagement Conference Proceedings (2010)
- Work Placement in Third-level Programmes (2011)

In addition to these reports a number of conference papers based on the project work have been published.

SUCCESS FACTORS

Some of the main contributors to success include:

- Availability of funding from Department of Education and Skills in difficult economic times
- Support of institutional management for research into engagement and mechanisms for enhancing engagement with employers
- Willingness of the project institutional partners to share experience and expertise
- Support from beyond the consortium including Expert Group on Future Skills Needs (EGFSN), Irish Business Employers' Confederation (IBEC), National Qualifications Authority of Ireland (NQAI)

Factors limiting progress include the uncertainty of funding

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during difficult economic times, and, resulting from that, some variation in the willingness of some partner institutions to commit resources to the project. Employers, too, are constrained by the economic environment from some of the engagements, for example undergraduate placements and industry - academia staff exchange, which were envisaged in the original project submission, became more difficult in times of headcount limitations.

IMPACTS

At a project implementation level one of the most significant and positive unforeseen impacts of REAP has been the opportunity for project participants to create an informal network beyond their own institutions allowing access to a range of expertise and experience that was otherwise unavailable to them.

At a project level REAP has also provided a platform for dialogue between the Institutes of Technology and national agencies including the Ministry of Education and the Higher Education Authority and as a result, enabling the project to provide input to policy and strategy.

STRENGTHS AND WEAKNESSES

REAP at an institutional level has provided an appropriate framework for understanding and examining institutional-employer relations. At the project level REAP has brought together a significant range of institutions each with differing aspects to their missions and vision. A key strength of REAP has been the strength of its management ensuring the success of its collaborative approach.

A key weakness of the programme is the reliance on public funds for survival.

TRANSFERABILITY

The REAP case study provides a transferable methodology for analysing, piloting and conceptualising a framework for employer-academic partnerships. It provides a 'needs-driven' basis for the identification of the broad strands of partnership activity between HEIs and employer organisations on a regional, national (member state) and sectorial basis. The framework established through REAP will be of interest to other member states, regions and institutions. However, it will not be directly transferable outside of Ireland, given cultural and contextual differences.

THEMES

Partnership Model, Roadmap, Workplace, Lifelong Learning

INFORMATION SOURCES

Project Website
http://reap.ie
(accessed 18th March 2011)

Funding Website
www.hea.ie/en/sif
(accessed 18th March 2011)

CASE 4 REAP IRELAND

PUBLIC CONTACT DETAILS

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Project Website
http://reap.ie
(accessed 18th March 2011)

Acknowledgement: The support and input of Irene Sheridan and Cork Institute of Technology in the construction of the case study were greatly appreciated

RESOURCES

DOCUMENTS AND PUBLICATIONS

Ireland National Development Plan (2007 – 2013)
www.ndp.ie/viewdoc.asp?fn=%2Fdocuments%2FNDP2007-2013%2Foverview.htm
(accessed 18th March 2011)

Project Presentation
John Murphy, EU-University Business Forum, Malahide, Dublin, October 2009
http://ec.europa.eu/education/higher-education/doc/business/ireland/report_en.pdf
(accessed 11th August 2011)

DATABASES AND WEBSITES

Project Website: http://reap.ie
(accessed 18th March 2011)

Funding Website: www.hea.ie/en/sif
(accessed 18th March 2011)

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NORTHERN EUROPE

CASE 5 MOBILITY AT UL LATVIA

CASE STUDY TITLE	MOBILITY AT UL
HEI / ORGANISATION NAME	UNIVERSITY OF LATVIA (UL)
COUNTRY	LATVIA
DATE	OCTOBER 2011
NATURE OF INTERACTION WITH BUSINESS	PERSONNEL MOBILITY
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

EMERGING FROM STRONG STRUCTURAL FOUNDATIONS, THIS BALTIC REGION PLAYER IS NOW EXPANDING ITS IMPACT IN MOBILITY WITHIN EUROPE

The University of Latvia (UL), focusing its strength as a prominent research university, is a developing Eastern European example of student and academic mobility good practice. Through involvement in the Baltic States region, as well as their expansion in Europe with the INENTER project that began in 2010, they have developed a strong structural base and functional system from which to build further elements of an ecosystem supporting student and academic mobility. By maintaining an emphasis on improving the placements of students in different sectors, as well as enhancing both academic and administrative staff professional training and workshops, UL is providing a good example for other HEI's looking to develop their competencies in the area of mobility.

BACKGROUND

UL was first involved in student mobility with the Erasmus programme (then Socrates) in 1999. Furthermore, they are an active participant in the Lifelong Learning Programme (LLP) for students and staff such as Comenius, Leonardo da Vinci and Grundtvig. The University of Latvia is currently involved in five Erasmus Mundus projects which include staff mobility, both academic and administrative.

As a member of many Baltic region projects (eg Baltic Sea Region University Network – BSRUN) and European projects, university academic staff are developing good networks for exchange of ideas, co-ordinating placements and providing management skills. Their continued growth in mobility and their involvement now in the INENTER project with thirteen partner institutions from ten different countries provide the UL with solid background and experience.

AIM AND TARGET

UL aims to establish better student mobility placements in professional training programmes and increase exchanges to achieve a 10% student mobility exchange by 2020.

The university is a partner in the European funded INENTER project, which aims to help HEIs such as the University of Latvia prioritise specific quality strategies that can identify needs, raise awareness and fully develop the models, tools and measures for good practice regarding internships at all levels in industry and enterprises.

With academic personnel, the aim is to increase personal international experience of professors/tutors (e.g. lecturing

abroad, joint projects with other institutions) and improve language skills, especially at an administrative level. It is the University of Latvia's aim to aid professional development of students and staff through stronger communication and cooperation between enterprises and academia.

FUNDING

European Commission, Education and Culture DG LLP, 509962-LLP-1-2010-1-CY-ERASMUS-ECUE.

INENTER commenced in October 2010 and will last for two years with a total budget of € 390,943.

IMPLEMENTATION

STRATEGY AND ACTIONS

Over the last two to three years, UL has taken a much larger step in professionalising their mobility activities through an established system that is functioning productively incorporating student bodies, faculty co-ordinators in academia and a central administrative system for handling of both outgoing and incoming student placements.

At UL there is a document that regulates the organisational procedure of the student placements. The document determines who is responsible for what in the organisation of the student placements, the financing of the placements and the official registration of the placement in the information system of the UL. This document also contains annexes with different examples of documents that should be used in organising the placements:

- agreement between the UL and the hosting institution on the conditions of the placements,
- document that regulates the registration of the placements in the University of Latvia,
- agreement between the student, UL and the hosting institution (both in Latvian and English languages).

This document agrees on the organisation of placements both in Latvia and abroad. Each study programme has an additional document that regulates the organisation of the placements within the respective study programme, stating the aims, objectives, duration and place as well as the guidance, responsibilities of persons involved and reporting of the placement. The document is available to all faculties within the HEI.

The implementation of a guide booklet to good practices for international student placements in various European countries will be set up within the INENTER project. Additionally, there will be a survey, round-table meetings and conferences for sharing knowledge among the institutions where the UL is an active participant. UL is also a major player in the Baltic region, being a coordinating member of BSRUN, which was founded eleven years ago.

UL supports the mobility of its academic staff as one

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of its most important prerequisites for renewal of ideas and professional staff development. Academic staff is employed for at least one semester every five years in a foreign country institution. At least 5% of academic staff must deliver lectures in partner HEIs abroad.

MONITORING AND EVALUATION

Evaluation is carried out both internally and externally. Figures on student incoming and outgoing placements are evaluated inside a table and presented at end of each year for re-evaluation. There is also monitoring of student placements through Erasmus programme and monitoring of project involvement in the INENTER programme. The external evaluator for INENTER has been subcontracted to offer services for the duration of the project.

Professors and administrative staff training experiences are also evaluated at end of each year, as well as financial grants for staff. There is an academic re-election process that is also carried out every five years.

SUSTAINABILITY

It is very important to incorporate more people, motivate staff through new training courses, receive input from international coordinators and motivate faculties (especially faculties that are not as active in placements/academic training), increase international experience in new projects and widen the system overall. The ability to share experiences is seen during participation in the INENTER project. This project will help to broaden the expertise over a far greater network.

Greater involvement of companies to offer paid internships is another option to develop the sustainability of the initiative. With reference to the companies, increasing their interest in cooperating with the science sector, through further initiatives such as science-business will influence the level of sustainability. A basic-level European course on the project's subject would further contribute to its sustainability.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

UL has broadened possibilities for both university placements and placements in business now to 42 professional study programmes (both Bachelor and Master). Students should have practical training within these programmes for at least one semester. Faculties have industry and business agreements to fulfil this task. Professionals from industry and business are involved in the final examination commission work as well as the accreditation of the programmes.

The Career Centre organises 'career days' for students and has a database for business and industry companies which are interested in cooperation. There is continued growth with approximately 500 outgoing students and 190 incoming exchange students (including placements) last year. There is a solid functional system in place at all levels of university for student and academic mobility. The Erasmus programme placements have increased from 4 students a few years ago to now 26 students most recently.

CASE 5 MOBILITY AT UL LATVIA

Whilst figures of academic mobility to business are difficult to obtain, academic staff are involved in teacher mobility to partner HEIs, an indicator of the level of academic mobility to business. Outgoing and incoming teacher exchanges have increased significantly over the last five years, with latest 2010 figures showing 74 outgoing and 41 incoming teacher exchanges.

Partner HEIs organise visits to companies or institutions, which do not refer to academic commitments, however are needed for additional expertise (especially in natural sciences). Moreover with the INENTER project, the development of good practices for staff training mobility is to be developed and will be another valuable project outcome.

SUCCESS FACTORS

The success of the programme is established through responsible people, programmes, funding guidelines and agencies that support and facilitate mobility. It will be in increasing the number of student placements and expanding industry and other university involvement. Further, success is determined by how many will get a job after the internship. Knowledge transfer and experience will be enhanced through INENTER and other projects.

IMPACTS

Short-term
UL is striving hard to enlarge numbers for participation of both student and academic mobility's, firstly at a national level but also within other European networks including the Baltic region, the former Soviet Union countries and the Network of Universities from the Capitals of Europe (UNICA) and the INENTER project.

Long-term
The objective is to achieve sustainability in all processes. UL wants to make faculties within the university more accountable and active in promoting both student and academic mobility. Some faculties, such as medicine, have already established international good contacts. They are also looking at allocating more university funds towards teacher training programmes. Participation of students in more international companies is a long-term university initiative.

STRENGTHS AND WEAKNESSES

The number of incoming and outgoing students is a positive factor in the developing growth of UL. There is a Career Centre for finding placements and wonderful support systems in place, such as student bodies and the Erasmus council, as well as within the faculties with their international coordinators. The students participating in exchanges have the opportunity to go abroad and acquire interesting international experience.

The INENTER project is also helping as it involves large numbers of European players. The project, therefore, is an example of a very exciting partnership.

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CASE 5 MOBILITY AT UL LATVIA

	Language knowledge within staff, and especially administrative staff, is an identified weakness. Academic staff across some faculties are not always willing participants in mobility. International coordinators have a role to play in motivating staff. At the moment at the faculty level, strategies are revised within each faculty whereas the university strategy is implemented above the faculty level.
TRANSFERABILITY	The level of transferability of this good practice from the UL is very high and the direct participation in projects such as INENTER and others provide further sources of knowledge transfer among institutions. Thus, all previously acquired knowledge and skills can be put to use in the HEI in which they will work.
THEMES	Student internships, knowledge transfer, human resources
INFORMATION SOURCES	www.inenter.eu
PUBLIC CONTACT DETAILS	Ms. Alina Grzibovska Director, International Relations Department University of Latvia Latvia Phone: +371 67034334 Email: ad@lu.lv

RESOURCES

DOCUMENTS AND PUBLICATIONS	INENTER flyer available on the project website
DATABASES AND WEBSITES	www.inenter.eu

NORTHERN EUROPE

CASE 6 CSE SWEDEN

CASE STUDY TITLE	CHALMERS SCHOOL OF ENTREPRENEURSHIP (CSE)
HEI / ORGANISATION NAME	CHALMERS UNIVERSITY OF TECHNOLOGY
COUNTRY	SWEDEN
DATE	APRIL 2011
NATURE OF INTERACTION WITH BUSINESS	CURRICULUM DEVELOPMENT AND DELIVERY ENTREPRENEURSHIP
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

THE ENTREPRENEURIAL VENTURE CREATION AND START-UP FACTORY

Established in 1997, Chalmers School of Entrepeneurship (CSE) provides for the development of entrepreneurs through a two-year master's programme that incorporates the development of new technology companies by 'matching' student teams (teams of 2-3 students) with a scientist or innovator to take forward a business idea into a business. The programme integrates entrepreneurial education with real-world incubation through a venture-creation approach, where at the end of the process, business ideas have the potential to be incorporated, with students (and the scientist/ innovator) taking ownership shares in the newly formed business.

CSE provides an important case study, established over more than a decade, on the integration of entrepreneurship within an academic structure, particularly technology transfer, the development of students as professional entrepreneurs, and the promotion of an entrepreneurial culture and spirit within a university environment.

BACKGROUND

Mats Lundqvist and Sören Sjölander from the department of Innovation Engineering and Management at CSE decided to establish the School in 1995 based on reflection that there was a gap between university research and the marketplace. This gap could be filled by individuals willing to take package-able ideas, develop business strategies, etc. and take them to the market. The programme, initially called Entre, was launched in January 1997. Initially, the programme was a one year 'final-year' master for students in the department (IEM). In 2001, the programme was opened to students outside CSE, and became a one and half year masters-level programme. This was also the year in which the incubation activities through collaboration with 'Encubator' were integrated into the programme. Encubator links business ideas with student teams to create new business start-ups in an incubation environment. In 2007, the programme was opened internationally and then, in line with the Bologna process, became a two year international master's programme.

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CASE 6 CSE SWEDEN

The context for the development and launch of CSE is particularly important. Jacob, Lundqvist and Hellsmark (2003) highlight in their paper on Entrepreneurial transformations in the Swedish University System, the transformation of the Swedish Research and Technology Development approach from a science system to an innovation system and the adoption of a third (impact on society) mission of universities that took place in the early 1990s. This transformation was driven by economic downturn, a change of government and the preparations for Swedish entry into the EU.

In addition, the privatisation of CSE in 1994 provided the university with an opportunity to enhance its entrepreneurial activities. This enabled the university to have a higher degree of autonomy and, important within the context of the CSE case study, to develop an infrastructure for commercialisation of knowledge.

AIM AND TARGET

The aim of CSE is to develop new entrepreneurs and to develop new technology-based companies. It provides for educational learning through its master's programme and for the pre-incubation of technology based start-ups commercialising technology that would otherwise remain undeveloped.

A key aim for establishing CSE and subsequently Gothenburg International Bioscience Business School (GIBBS) was also to increase the degree of commercialisation from R&D undertaken at Chalmers and across the university and across industrial sectors

OTHER REFERENCES

The establishment of CSE and its subsequent development is in line with national policy and strategy, defined by the Swedish agency NUTEK. Its activities are now incorporated into Tillväxtverket, the Swedish agency for economic and regional growth. It has as its core aim the creation of new enterprises, enterprise growth and a sustainable and competitive business and industry in Sweden.

In addition, the development of CSE is in line with the policies of VINNOVA, the Swedish governmental agency for Innovation Systems, which was established in 2001 as part of a major restructuring of the public research funding system in Sweden. It was one of the first national agencies in the world to base its operations explicitly on an innovation system approach. The pronounced strategy to fund needs-driven research and support the formation of efficient innovation systems highlighted the need for a strong national research base in the field of innovation systems research.

FUNDING

As a master's programme entitled 'Entrepreneurship and Business Design' CSE receives funding for each enrolled student. However, this amount does not cover the cost of running the programme and there is a need for additional funding from other sources.

Additional funding has come from various sources in association with projects. Funding organisations have included the region (Västra Götelandsregionen – VGR), BRG (Business Region Gothenburg), HSV (Ministry of Higher Education), and others mentioned in relation to Encubator. In general, facilitation of the education has required high levels of engagement from those involved, and has also built upon volunteer activities of for

example, alumni.

The development of Encubator has been funded by Teknikbrostiftstelsen (now called Innovationsbron – 'innovation bridge'), Chalmers Invest (from the second year until 2005), Regional Funding from Västra Götalandsregionen (from 2003), and funding support from NUTEK/VINNOVA.

Funding is provided for the companies to facilitate initial developments and customer relationships, for example through attending conferences. Encubator then matches additional funding brought in by the student team up to a certain amount; the main kick-off funding that the projects/teams receive during the incubation period is funding they are able to attract from actors like VINNOVA, specific research or innovation agencies or partner investments, as well as award money from business plan competitions.

IMPLEMENTATION

STRATEGY AND ACTIONS

Ideas for development by master's students are sought from academics, existing businesses and innovators. Until 2001, the idea recruitment process was undertaken by CSE. Since 2001, it has been managed by Encubator, an entity established by CSE to manage the project and company portfolio.

Ideas are submitted to Encubator, where projects are evaluated by business developers who evaluate the technology, cost, time, IPR, and market potential of the idea. Following the selection of student teams and the matching of teams and ideas, a co-operation agreement is established between the idea generator and Encubator.

The student teams subsequently lead the business development process with the support of Encubator with mentoring support, access to incubation space and support from a Board of Directors and the CSE.

MONITORING AND EVALUATION

Encubator is monitored as an incorporated company, wholly owned by CSE, and also has a board of directors.

CSE is monitored through a system involving both the director of the master's programme, and the head of the department. Each of the courses in the masters programme are evaluated by the students each year, and these evaluations are reviewed by both programme faculty and the division as a whole, together with the other masters programmes. Alumni also evaluate CSE as a whole, particularly those still involved in the portfolio of graduated companies. In addition, there have been three external peer reviews of CSE over the years (one of them also including GIBBS), by organisations such as the Ministry of Higher Education.

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SUSTAINABILITY

In 2001, after four years of operating CSE, Chalmers established Encubator as a mechanism to manage the project and company portfolio established by CSE (and subsequently GIBBS). Encubator is involved in the identification of business ideas and the matching of students and student teams to ideas. It provides a professional mechanism to enhance financial support and investment.

Encubator supports the development of an idea in its pre-incubation phase through the provision of incubation space and support including mentoring, capital and networking. After one year, the business graduates the incubator, with the students remaining with the business, seeking other new business ventures or gaining employment.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

Since its establishment in 1997, CSE has educated over 200 students. These students have established over 27 companies, which have a combined market value in excess of €56m with an annual turnover of more than €14m.

SUCCESS FACTORS

The three key factors that have led to the success of CSE include:

1. the benefits to the CSE brand and its engaged alumni,
2. the overall approach of having separate project recruitment and student recruitment processes, the results of which are then integrated into teams and supported by a core team of coaches (including but not limited to faculty),
3. the incremental development over time (i.e. continuous revision and evolution).

The factors that inhibited the success of CSE include:

- the inability of traditional incentive structures and organisational leadership to adapt. Specifically leadership wanting to provide input for an initiative they were keen to support but did not fully know how to assist,
- the lack of sustainable financing (the first 14 years were built on a series of short-term financing).

IMPACTS

A number of technology ventures are highly interrelated with the building of clusters and innovative research areas. As a result, there is a need to consider the transformation of university incentives and leadership behaviours.

To secure the on-going sustainability of CSE (and GIBBS and Encubator) has required the investment of significant (50% plus) Programme Director time which could have been more appropriately invested into the development of the operation.

STRENGTHS AND WEAKNESSES

The Chalmers CSE case study highlights the fact that successful and sustainable actions are a long-term endeavour. The development

and expansion of CSE into GIBBS, recognising the need to have a separate bio-science based programme, and evolution of the CSE concept into Encubator highlight the commitment to the approach. The establishment of CSE in a period where Entrepreneurship was barely on the radar of most universities makes this an interesting and valuable case study.

The integration of the master's education programme and entrepreneurial idea development represents a classic combination of University-Business Collaboration. One of the key strengths of the case study is the commitment to the on-going sustainability of CSE, the delivery environment and the commitment of its staff to ensuring the successful education of students and the development of their business potential.

TRANSFERABILITY

There has been a significant development of entrepreneurial education programmes in the EU since the launch of CSE in 1997.

In itself, the master's programme is transferable; however CSE operates within an established innovation support system in Göteborg that supports the incubation and growth of businesses which may not be established within other contexts. In addition the approach of developing entrepreneurial students that work on ideas from an 'idea provider' rather than commercialising their own ideas is also a core component in the transferability of the programme.

THEMES

Entrepreneurial Education, Pre-Incubation, Entrepreneurship

INFORMATION SOURCES

CSE Website
www.entrepreneur.chalmers.se/cse/

Encubator Website
http://encubator.com/

(all accessed 31st May 2011)

INFORMATION SOURCES

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RESOURCES

DOCUMENTS AND PUBLICATIONS

Jacob, Lundqvist and Hellsmark (2003), Entrepreneurial transformations in the Swedish university System, Research Policy, Elsevier B.V. ISSN: 0048-7333

NORTHERN EUROPE

CASE 7 SMIL SWEDEN

CASE STUDY TITLE	CENTRE FOR INNOVATION AND ENTREPRENEURSHIP (CIE) AND SMIL
HEI / ORGANISATION NAME	UNIVERSITY OF LINKÖPING
COUNTRY	SWEDEN
DATE	JULY 2011
NATURE OF INTERACTION WITH BUSINESS	ENTREPRENEURSHIP
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

THE KNOWLEDGE-INTENSIVE PROGRAMME (PLUS 'CIRCLE OF FRIENDS' NETWORK) FOR START-UPS

The University of Linköping is involved in a wide variety of networking activities and programmes to develop and facilitate entrepreneurial competencies. The entrepreneurial programmes are designed for different phases in a company's development. The success of these programmes and the other networking activities are heavily dependent on the SMIL network, a regional network of companies with a background in the University of Linköping.

BACKGROUND

SMIL is a network of knowledge-intensive firms in the Linköping region. A number of firms, with roots in IT, laid the groundwork for the network and in 1984 this network was formalised with the establishment of SMIL. This network arose of its own accord and through self-organisation and it has evolved over time. SMIL works to 'promote development and growth in knowledge-intensive firms'. It is based on the competence, know-how and networks found in the companies. Today SMIL has around 150 member firms, all from the Linköping area. Half are 'academic' firms that were founded by students, doctoral candidates or postgraduate students. Other members come from 'the circle of friends', the former NUTEK (the Swedish Agency for Economic and Regional Development), banks and a number of especially interested private persons. The board of SMIL, which primarily consists of business leaders, meets about once a month; it has no permanent staff of its own. Since SMIL was founded, a total of 16,000 entrepreneurs have participated in the different networking activities.

AIM AND TARGET

The aim is to support companies in the Linköping area to develop and grow through the provision of activities in the domain of entrepreneurial competence. The Centre for Innovation and Entrepreneurship (CIE), part of the University of Linköping is the vehicle for the execution of the activities and programmes in the domain of entrepreneurship and business development. The network SMIL provides access to the member companies. Numerous other networking activities are available in the Linköping region, including Meeting-Place SMIL, focus groups, Management Leadership School and different seminars. More information concerning these can be found on www.smil.se.

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CASE 7 SMIL SWEDEN

FUNDING

The financial resources of SMIL are limited and largely consist of annual membership fees of about SEK 200,000 (€20,000). Because of its close cooperation with the University of Linköping (through the CIE), an efficient organisation and distribution of tasks have been developed. This enables the energy and competence in SMIL's network of entrepreneurs to be exploited even though access to financial and human resources at the university have diminished.

IMPLEMENTATION

STRATEGY AND ACTIONS

ACTIVITIES AND PROGRAMMES FOR ENTREPRENEURS

There are three types of programmes:

1. The Entrepreneurship and New Business Development programme (ENP): This is a programme in entrepreneurship and new business development that concentrates on people who are contemplating starting a firm or a similar endeavour. Participants include students, researchers and employees from established enterprises. The programme is about six-months long and is designed around the participants' own needs. The goal is to evolve a business plan by complementing theoretical and practical work. Each participant is assigned a 'mentor' in SMIL's network. The programme has spread and is now being implemented in other parts of Sweden, for example, in Västerås (Kick-start), Örebro (Startblocket), Kista and Umeå. So far, 1,500 people have participated and approximately 500 spin-offs have been created.

2. The development and mentoring programme: This programme is a 'development and mentoring programme for knowledge-intensive firms that have established a business'. In these programmes, the participants work together to solve central issues, so-called teething problems, in one or more of the participating companies. The problems can, for instance, concern employment policy, ownership issues, the development of business or marketing plans, funding or the organisation. Six to nine firms participate in each development programme, and each firm is represented by a maximum of three people. The firms work as shadow boards for each other, in groups of three to four firms. The participants meet for three or four two-day sessions over a period of one year. Certain common activities such as lectures and plenary discussions are also conducted. Between meetings, each company is given its own assignments. The development programmes have been highly appreciated and have long formed the basis of SMIL's activities. So far, over 150 firms have participated. The participants emphasise how important it is that the programmes target the needs and problems of the companies. A thorough survey is made before the companies are allowed to begin the programme. The survey often shows that the problems in the firm are different from what was thought. The 'nutrient supply' that takes place through consultants, solicitors and so on is also based on the companies' current needs.

3. Management groups: The third type of programme comprises management groups, each of which targets a specific issue such as quality assurance, market positioning, internationalisation and board work. The method of working is the same as in the development programme, except the participant meetings are more frequent and of a shorter duration. The supervisor for a management group usually comes from a firm in the SMIL group. There are special reasons for engaging external specialists. So far, 250 firms have participated. Since the strategy and focus of the groups change from year to year, many of the firms have actually 'gone more than one round'

MONITORING AND EVALUATION

In 2003, the CIE surveyed owners of 420 projects who have taken part in the ENP programme. The study included all of the locations where ENP programmes are offered. In 95% of the companies surveyed, the business idea originated from the founders. Nonetheless, it was also evident that the actual development of the idea doesn't find its maximum acceleration until external partners are involved in the process. Identification and interaction with the potential client is essential.

The study demonstrated that of these 420 participating projects:

- 75% start new companies, and
- 20% of those starting companies expand to more than five employees.
- Company characteristics included:
  - 85% sell services or a combination of services & product
  - 60% are started by the founding team
  - 70% have less than SEK1.5m in turnover
  - 70% have fewer than five employees

SUSTAINABILITY

The bases for the activities were laid down in 1984 and the activities still continue. Today, SMIL has around 150 member firms, all from the Linköping area. Half are 'academic' firms and were founded by students, doctoral candidates or postgraduate students.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

Since SMIL was founded, a total of 16,000 entrepreneurs have participated in the different networking activities. 450 firms/projects were in the ENP programme, 130 firms were in the development programme and 195 firms in the management groups (data up to 2004).

SUCCESS FACTORS

The success factors of the Linköping entrepreneurship model can be summarised as a close relationship of the entrepreneurship activities of the university (CIE) with the region and especially with the network of high-tech

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companies (SMIL). This close relationship is the key to be able to address the real entrepreneurial issues in the entrepreneurship programmes. The close relationship provides the focus and the legitimisation of the activities. In summary the success factors are:

- close relations between SMIL and the university (CIE),
- having a clear focus. Since the start, CIE-SMIL has focused on the development of the entrepreneurship of small, technology-based firms concentrating, in particular, on the executive group within the venture, and
- the ability to meet real needs of entrepreneurs and entrepreneurial management teams.

IMPACTS

The impacts can be seen in the following light: the entrepreneurship education on Entrepreneurship Research and vice versa. The CIE is part of the university and as such the entrepreneurship activities impact on the research that is carried out. Research concentrates on three areas that originate in the entrepreneurship programmes: idea- and business idea development, early stage financing, business-support and successful support environments. The educational programmes impact on research, which leads in its turn to new education programmes. For example, the central concept of the 'business platform' has (recently) been complemented with the concept of the 'ideas platform'. In its annual report (2009) CIE writes: 'CIE provides a unique environment for catalysing both quality entrepreneurship research and new business growth development. We offer programmes and activities designed to stimulate the successful creation, development and growth of technology and knowledge intensive firms. We carefully integrate these programmes with research and teaching to provide the best platform for theory and business practice.'

STRENGTHS AND WEAKNESSES

The strength of the Linköping approach is the integrated approach: students with or without a business idea who go through the ENP programme, a development programme for companies, management groups and network activities. The students have a mentor (an entrepreneur) who coaches the student throughout the entrepreneurship programme. The entrepreneurship activities and programmes are embedded in a regional network of other (high-tech) entrepreneurs and support organisations (e.g. the Mjardevi Science Park).

TRANSFERABILITY

The Linköping model has been successfully implemented at the following 12 universities and regions in Sweden: Vasteras, Umea, Norrkoping, Kista, Motala, Orebro, Finspang & Soderhamn. The (EU sponsored) UNISPIN project and the (TII) UNISPIN-workshops in the period 1996 – 2006 disseminated the information from Linköping (and other universities) throughout Europe. In Sweden the programme ENP has been successfully implemented at other Swedish universities and regions.

THEMES

Entrepreneurship education, Spin-off creation, Business development.

CASE 7 SMIL SWEDEN

INFORMATION SOURCES	www.smil.se (in Swedish) (accessed 31st May 2011)
PUBLIC CONTACT DETAILS	Prof. Dr. Magnus Kloften University of Linköping, Department of Management and Economics SE-581 83 Linköping, Sweden

RESOURCES

DOCUMENTS AND PUBLICATIONS	Some recent publications on the Linköping model and activities: Klofsten, M., Heydebreck P., and Jones-Evans, D. (2009) Transferring Good Practice Beyond Organisational Boarders: Lessons from Transferring an Entrepreneurship Programme, Regional studies, 8, 1-9. Norrman, C., Klofsten, M. (2009) An Entrepreneurship Policy Programme: Implications and Expectations. International Journal of Entrepreneurship and Innovation, 10, 1, 33-42. Norrman, C., Klofsten, M. (2008) Seed Funding for Innovative Ventures: A Survey of Selection Mechanisms of a Public Support Scheme. International Journal of Entrepreneurship and Innovation, 9, 1, 11-19
DATABASES AND WEBSITES	www.smil.se (in Swedish) (accessed 31st May 2011)

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NORTHERN EUROPE

CASE 8 SPEED UK

CASE STUDY TITLE	STUDENT PLACEMENTS FOR ENTREPRENEURS IN EDUCATION (SPEED)
HEI / ORGANISATION NAME	WOLVERHAMPTON UNIVERSITY AND UNIVERSITY PARTNERS
COUNTRY	UNITED KINGDOM
DATE	MARCH 2011
NATURE OF INTERACTION WITH BUSINESS	ENTREPRENEURSHIP, MOBILITY AND CURRICULUM DEVELOPMENT AND DELIVERY
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

SPEED: THE ENTREPRENEURIAL 'APPRENTICESHIP' ACCELERATOR

The Student Placements for Entrepreneurship in Education (SPEED) programme offers a nine-month placement (36 weeks to 48 weeks in its implementation) to university students who have completed the second year of their degree programme. These students are budding entrepreneurs who create a self-employed placement as an alternative to traditional industrial placements.

SPEED is designed to help students from the project partner universities who have a sound business idea take the necessary steps towards running a real business. The objective is to provide students with a learning opportunity that aims to ultimately develop business ideas into successful businesses. This will run for a minimum of 18 months. It provides students with a learning opportunity (unaccredited) while they are still studying.

BACKGROUND

The United Kingdom (UK), as outlined by the UK Chancellor of the Exchequer in June 2002, significantly underperforms its competitor nations in the quantity of new businesses created. There was an obvious need to understand the educational and entrepreneurial potential of the UK.

The SPEED project was formed to address the issues surrounding the retention of creative and innovative graduates in the UK regions. As represented by the partner universities, this supports social, cultural and economic regeneration. It addresses many of the issues raised in the 2003 Lambert Review of Business-University Collaboration and the 2008 Innovation Nation White Paper.

AIM AND TARGET

The aim of SPEED is to identify and nurture entrepreneurial talent. During SPEED's first round of funding, through the 2006 Higher Education Innovation Fund Round 3 (HEIF 3), its target was to support 750 students (finally achieving a total of 771 students). Universities involved in the first round were: Birmingham, Central England, Coventry, Derby, Nottingham Trent, Southampton Solent, Staffordshire, Ulster, Warwick, Wolverhampton and Worcester.

In SPEED's second round of funding, approved in 2009's European Regional Development Fund (ERDF) and HEIF 4 (through the partner universities) its target was to support 1200 students and the creation of 140 ventures. Universities involved in the second

round were: Wolverhampton, Worcester, Aston, Coventry, Staffordshire, Keele, Birmingham City and Birmingham.

The background objective of SPEED has been to encourage the embedding of enterprise as an opportunity alongside others within the curriculum.

OTHER REFERENCES

The initial funding for SPEED was sourced from the HEIF 3. The HEFCE managed this funding. HEIF is a funding programme for HEIs to support their knowledge exchange activities and to engage with business and the community. It forms the basis of the Government's commitment to a permanent stream of funding to enhance the contribution of higher education to the economy and society.

FUNDING

The initial funding (€6m) for SPEED was provided by HEIF 3 through a competition intended to fund innovative projects of significant scale and impact during the period 2006-08. The funding specifically supported English HEIs.

Further funding was secured through the ERDF programme for the West Midlands. This additional funding helped to continue the programme on a regional scale until 2011 with co-financing from HEIF 4 institutional funding allocations (a €5.8m total funding package) with eight West Midlands HEIs benefiting.

The on-going activity of the project is not sustainable without funding; however a core aim of SPEED is to support mainstreaming of entrepreneurial learning and development within universities.

IMPLEMENTATION

STRATEGY AND ACTIONS

Engagement between the student businesses and the university is developed and delivered through the selection model and on-going support. The selection model for the SPEED programme is based on a ten-minute presentation from students who deliver their ideas or product development to a panel. Following these presentations, the panel make a judgement on the suitability of the students for the programme based on their potential, enthusiasm, aspirations and business feasibility.

The selected students receive on-going support in the form of mentoring, training workshops and events for the duration of their placement. The students also gain other more specific support where necessary for IP management and legal and financial advice.

The provision of a grant worth €5,175 (€3,450 under ERDF) is a significant attraction for students to develop their business ideas. The tailoring of support through the availability of the grant is a strong factor in the success of the programme.

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In the original SPEED programme €6,900 was available to support each placement, 25% of which was allocated to each Higher Education Innovation Fund to support their additional specialised mentoring programme. The other 75% was provided to the student entrepreneurs to cover their costs of incorporation, essential equipment, bursaries or initial office accommodation.

MONITORING AND EVALUATION

The selection model for the SPEED programme is based on a presentation of the business concept from the student to a panel that includes representation from at least two partner universities. Over the programme as a whole, and including some pre-selection, the review panels typically appoint about 70% of those students presenting their business ideas.

Once students are selected, the student entrepreneur has regular contact with academic supervisors and 'local' university project administrators. They also receive support through training programmes and workshops providing a continual monitoring of the student experience of SPEED.

At a programme level, an operational committee meets quarterly to review the day-to-day activities, processes, procedures and outcomes of the programme. Alongside this there is a Steering Committee of Pro-Vice Chancellors and independent business representatives which meets on a six-monthly basis to review the programme.

An independent evaluator from the Enhanced High Growth Initiative was appointed to monitor the HEIF 3 funded SPEED programme, specifically to evaluate the academic benefits and dissemination of academic knowledge resulting from the SPEED programme.

At a programme level the benefit to students has been measured alongside data collection on student businesses. Quantifying the entrepreneurial capacity of students was a particular target of SPEED. The evaluation specifically highlighted that students significantly increased their own perceptions of their ability to achieve. It also found that they had the knowledge and could personally achieve in starting a business or social enterprise.

SUSTAINABILITY

SPEED itself has supported enhancements in entrepreneurial education capacity and capability.

In terms of capability SPEED has enhanced the training and skills base of university staff in enterprise education and the embedding of entrepreneurship within the curriculum.

In respect to capacity, SPEED has focussed attention on entrepreneurship. This has led to the development and enlargement of student societies for enterprise within the participating institutions. There has also been the establishment of institutional led loan funds or linkages and partnerships with external funds. In addition, the partners in SPEED have established infrastructure (e.g. business incubation, 'hot-desking') for student entrepreneurs alongside access to funding and business support resources.

CASE 8 SPEED UK

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

The first SPEED programme funded through HEIF 3 supported over 770 students.

The second SPEED programme funded through the West Midlands ERDF programme and matched with HEIF 4 institutional funding supported 1200 students with a target of establishing 140 new graduate businesses. This second phase is due for completion in 2011.

SUCCESS FACTORS

The high degree of student support, particularly the provision of a grant worth €5,175 (€3,450 under ERDF), is a significant attractor for students to develop their business ideas. In addition, the tailoring of support through the availability of the grant significantly contributes to the success of the programme.

IMPACTS

SPEED has made a positive impact on the partner institutions of both the HEIF 3 and ERDF funded activities. SPEED has promoted enterprise and entrepreneurship within the student body and the role of educational institutions in enterprise and its place in the curriculum.

The engagement of an external HEI in the placement selection process, as well as in the wider institutional collaborative activities, has enhanced cooperation between institutions.

The SPEED programme has also seen an engagement of students beyond the expected academic disciplines (e.g. engineering, science, business) into areas including media, design and the arts.

STRENGTHS AND WEAKNESSES

The programme balances the juxtaposition of development of an entrepreneurial skill-set within educational programmes with the formation of new creative and innovative businesses.

The SPEED programme highlights entrepreneurial development as a key learning priority and an educational process develops the skills-set rather than purely being focussed on the measure of a company's success. It is open to all university students across all faculties and departments of students expected to undertake the placement on a fulltime basis. Further, it also highlights the opportunities that enterprise and entrepreneurial education can provide across all academic disciplines rather than the traditional business, engineering and science areas.

SPEED is one of the first programmes to encourage the entrepreneurial development of individuals, allowing them

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freedom in the development of their business profiles, whilst continuing their learning. SPEED has developed a 'new practice' model through its placement approach focussing on enterprise development as it is recognised by a student.

Implementing SPEED and similar programmes can be a challenge for some institutional 'systems'. Helping students and supporting their business means processes often happen in commercial, rather than academic timescales. Giving students some control of spending resources is different to standard procedure and does require some institutional processes to change in implementation if not in spirit.

The transfer of funding to ERDF added a degree of complexity. This meant the requirement for defrayed expenditure causing a particular challenge for financial management.

Unfortunately, the SPEED programme is unable to support non-European overseas students owing to restrictions related to student visa conditions.

TRANSFERABILITY

The SPEED programme follows a structured methodology and its advice, training, facilities and resources package is transferable. The intensity of funding support at a level of €7,666 per student placement is of a high level of intensity and may be prohibitive without public sector investment.

THEMES

Entrepreneurial Education, Student, Business

INFORMATION SOURCES

www.speedwm-wlv.org/
(accessed 7th March 2011)

Documents (Kindly provided to the author by Steve Moore, University of Wolverhampton)
SPEED HEIF 3 Final Bid and HEFCE (HEIF 3 Final Report)
ERDF Full Application
SPEED Biennial Report

Email: speed@wlv.ac.uk

PUBLIC CONTACT DETAILSV

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Acknowledgement: The support and input of Stephen Moore and the University of Wolverhampton in the construction of the case study were greatly appreciated.

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http://webarchive.nationalarchives.gov.uk/+/http://www.berr.gov.uk//science/knowledge-transfer/heif/page33805.html
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SPEED Presentation, International Entrepreneurial Educators Conference, York, United Kingdom
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DATABASES AND WEBSITES

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NORTHERN EUROPE

CASE 9 IDI/DIGITALCITY UK

CASE STUDY TITLE	INSTITUTE OF DIGITAL INNOVATION (IDI)/ DIGITALCITY
HEI / ORGANISATION NAME	TEESSIDE UNIVERSITY
COUNTRY	UNITED KINGDOM
DATE	APRIL 2011
NATURE OF INTERACTION WITH BUSINESS	COLLABORATION IN R&D
NATURE OF GOOD PRACTISE/PROJECT	STRUCTURAL INSTRUMENT OR APPROACH

PROFILE

SHORT DESCRIPTION

DIGITAL EXCELLENCE ENABLING INSTITUTE IN DIGITAL CITY, MIDDLESBROUGH

The Institute of Digital Innovation (IDI) is one of the two core components of the DigitalCity development in Teesside, North East England. This initiative is designed to put the area at the leading edge of digital technology development. It operates in conjunction with DigitalCity Business located on a separate site in Middlesbrough.

IDI is based within the purpose-built €14m Phoenix Building at Teesside University, Middlesbrough. It is designed as a centre of excellence to support graduates and academics from Teesside and the wider North East of England in establishing businesses through the provision of specialist facilities, mentoring support, skills development and access to finance. IDI has four core activities; fellowships, industrial engagement, digital inclusion and cluster promotion.

BACKGROUND

Teesside is an area that thrived in the period of the industrial revolution with employment historically based around heavy engineering, shipbuilding and the iron and steel industries. Decades of industrial restructuring have severely impacted on the Teesside area with the closure of coal mining, ship building and steelmaking businesses. Middlesbrough, Teesside's biggest city, has seen unemployment rise to become the second highest rate in England. It reached a peak of 12.4% in August 1993.

Teesside, like many similar post-industrial areas, needed to develop new industries to replace those lost as a result of restructuring and globalisation. It was recognised that the University of Teesside's expertise in digital technology, specifically digital media and their applications, could make a significant contribution to local and regional regeneration.

DigitalCity addresses the need to develop new industry and harnesses the expertise of the University of Teesside with the aim of maintaining and developing highly valued skills, creativity and R&D in the digital technology field.

DigitalCity was developed in 2003, and has grown to become an integral part of the regeneration of the Tees Valley and the Northeast Region as a whole. Initially begun as a pilot project at Teesside University, it now boasts two key interlocking operational centres: the IDI at Teesside University and DigitalCity Business located in downtown Middlesbrough. Whilst these two purpose

built locations are the flagships of the DigitalCity project, work is also carried out across the North East region.

AIM AND TARGET

The mission of DigitalCity is 'to create a vibrant, successful and self-sustaining super cluster in the Tees Valley and the north east based on the digital technologies, digital media and creative sectors, and their enabling capabilities'. The DigitalCity development's initial aim was to become the UK's most vibrant digital hub by 2010 as part of a twenty-five year plan to create an internationally renowned digital 'super-cluster'.

The current challenge is to build upon the foundations already established by keeping a constant focus on objectives and ensuring they continually evolve to stay up to date. DigitalCity needs to continue to invigorate and inspire by optimising and accelerating current activities in order to ensure that DigitalCity provides the maximum beneficial impact to the region.

OTHER REFERENCES

The development of DigitalCity in Teesside is part of the 'innovation connector' approach established by the regional development agency OneNorthEast. Each 'innovation connector' has a geographical focus, world class facilities, and new approaches to business-university collaboration, community engagement in education and access to employment.

The development of innovation connectors and DigitalCity is highlighted as a key transformational activity for boosting productivity and innovation in business as part of the North East (UK) Regional Economic Strategy Action Plan (2006 - 2011) and the ERDF Competitiveness programme (2007 – 2013).

FUNDING

DigitalCity was initially established by Teesside University to realise the Tees Valley's potential to generate and sustain a fast-growing, high-level economic base in the digital technologies and media sectors.

Middlesbrough Council was a key partner from the outset. Other stakeholders included Middlesbrough Town Centre Company, the Tees Valley Partnership, OneNorthEast (Regional Development Agency), Tees Valley Regeneration and Government Office North East.

Funding providers include; Regional Development Agency, ERDF, European Social Fund, UK Learning and Skills Council (LSC), UK National Endowment for Science Technology and the Arts (NESTA) and other external sources.

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CASE 9 IDI/DIGITALCITY UK

IMPLEMENTATION

STRATEGY AND ACTIONS

The actions of the IDI within DigitalCity can be broken down into five key strands:

1. Fellowships - this enables graduates from the region to make their ideas a business reality thanks to specialist facilities, business development and mentoring support.
2. Industry engagement - this includes identifying skills gaps and providing professional development.
3. Digital discovery route - the aim is to deliver digital skills to individuals and communities who might otherwise not have the opportunity to acquire these skills.
4. Events and festivals - provide help, assistance and services to both large and small events in the area. This includes The University of Teesside's hugely successful annual Animex International Festival of Animation and Computer Games. This festival celebrated its 11th anniversary in January 2010.
5. New programme development - building on IDI's digital expertise to create innovative cross-school courses within the university that bring together a whole range of subjects and disciplines.

MONITORING AND EVALUATION

Over the past seven years the University of Teesside has worked in partnership with DigitalCity Business to develop and deliver innovative solutions to address barriers and market failures in the development of a new cluster.

Operational activity has been overseen by individual project boards and by the DigitalCity Governance Board, established to steer activity. In addition, there are two operational sub committees: the DigitalCity Executive which is a core executive group reporting to the Governance Board and the DigitalCity Operations panel which includes key staff from both projects and reports to the project boards.

SUSTAINABILITY

For the last three years the IDI has been actively pursuing funding opportunities. In addition to support from the ERDF this effort is showing signs of success with a more sustainable funding ecosystem beginning to develop. In the future it is hoped that this will include increased support from the private sector in addition to funding from existing supporters.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

Working with DigitalCity Business, the IDI has made a significant contribution to the creation of a thriving digital business cluster by capitalising on the specialist research and innovation expertise

and facilities of the university. In this way it seeks to enhance the business acceleration and inward investment focus of DigitalCity Business. It aims to nurture, whilst raising the profile of the Digital Cluster in the region, both nationally and globally.

From April 2008 to the end of March 2011 IDI has achieved the following selected outputs, results and impacts:

- Fellowships awarded: 211
- Businesses Created: 101
- Businesses Collaborating with the Knowledge Base: 96

Alongside its direct impact the development of DigitalCity can be seen to have an indirect impact on the local economy. Between 2003 and 2008, the rate of growth in businesses in Middlesbrough exceeded that of the UK and the North East with a growth rate of 6.6% over that period compared to 2.9% nationally and 4.1% for the North East.

SUCCESS FACTORS

Companies with IDI in the fields of animation, computer games, digital film and sound, web design, digital communication solutions visualisation and virtual reality have benefited from extensive networking activity, high level support, established commercial models and a strong external perception to enable their business to grow on a global marketplace.

The strong partnership between the University of Teesside and Middlesbrough Council in delivering DigitalCity is a key factor in the success of the project together with the provision of funding from OneNorthEast (Regional Development Agency).

IMPACTS

In addition to its achievements IDI has supported the development of the softer, project-based working skills through its mentoring scheme and hands-on business support. This addresses an identified skills shortage in the North-East of England.

STRENGTHS AND WEAKNESSES

The IDI and DigitalCity case study provides valuable lessons in the sustainable development and growth of clusters which link public sector agencies, universities and businesses.

A significant learning point of the case study is the identification of DigitalCity as a regional innovation connector. This includes promoting the establishment of new world-class facilities, new business-university collaboration approaches and community engagement which was especially important. This has provided a medium to long-term development perspective attracting a variety of funding sources and with achievements being realised through a strong core stakeholder partnership.

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CASE 9 IDI/DIGITALCITY UK

TRANSFERABILITY

The IDI case study and the broader DigitalCity collaboration provide a methodology for the development of clusters from an embryonic state to establishing and growing these clusters over a medium to long-term timeframe. This is combined with the active engagement of public sector partners (e.g. council, development agency) and a local university.

However, the transferability of the IDI and DigitalCity case study may be limited based on the availability of funding and the on-going support required to develop and maintain the initiative at a critical mass. The partnership approach and diversity of funding as exemplified in the case study are key factors in the transferability of the approach.

THEMES

Digital Technology, Innovation, Entrepreneurship

INFORMATION SOURCES

IDI Website
http://idi-uk.org/

University of Teesside
www.tees.ac.uk/sections/about/idi.cfm

DigitalCity
www.thedigitalcity.org/

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www.dcbusiness.eu/

(All accessed 31st March 2011)

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Acknowledgement: The support and input of Dr James TerKeurst of Teesside University in the construction of the case study was greatly appreciated.

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(accessed 31st March 2011)

North East England ERDF Operational Programme 2007 - 2013
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(accessed 31st March 2011)

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NORTHERN EUROPE

CASE 10 ACUA LIMITED UK

CASE STUDY TITLE	ACUA LIMITED
HEI / ORGANISATION NAME	COVENTRY UNIVERSITY
COUNTRY	UNITED KINGDOM
DATE	MARCH 2011
NATURE OF INTERACTION WITH BUSINESS	LIFELONG LEARNING
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

EMPLOYERS' EDUCATION SUPPORT AND BUSINESS COACH PROGRAMME IN COVENTRY PROVIDED BY ACUA

Acua Limited is a corporate trading subsidiary of Coventry University in England. Acua Limited works with organisations to embed higher level skills and qualifications into development programmes currently running or planned. With the programmes accredited by Coventry University, they commence at certificate level. However the qualification route can develop from a foundation degree to a full degree and potentially beyond.

Acua Limited uniquely focuses on the total integration of learning activities into the client organisation. By placing business coaches into the client organisation Acua Limited becomes a dedicated people development resource using academic knowledge as the basis for the learning.

BACKGROUND

Established in 2008, Acua Limited has grown from a pioneering university Employer Engagement Project (EEP) into a limited company providing a range of business development and capability improvement programmes.

AIM AND TARGET

The initial aim was to undertake a feasibility study where higher education qualifications were taken into the workplace and a vehicle for transferring and embedding these qualifications into the working environment of the target client was developed.

Following on from the initial work, a business plan was developed for the creation of a 'limited' business, to provide a conduit into target client organisations. A number of key performance indicators and targets were agreed upon, focusing on the development of the organisation and delivery of a range of higher education products. These products were measured against targets defined by Full Time Equivalent (FTE) student numbers, starting with 300 FTEs in year one, rising to 3000+ FTEs in the fourth year. Additional targets regarding the streamlining of university processes were defined in order to create a more responsive and flexible solution for the organisational client.

OTHER REFERENCES

On 8 July 2003, the UK Government published its white paper – titled '21st century skills: realising our potential setting out an England-wide strategy for improving skills and productivity of the workforce'.

CASE 10 ACUA LIMITED UK

On 22 March 2005 the UK Government produced a further white paper entitled 'Skills: Getting on in business, getting on at work'. This paper intends to put employer needs at the centre of the design and development of training and to thereby support individuals in gaining skills and qualifications.

The Higher Education Funding Council for England (HEFCE) Employer Engagement Strategy of 2006, responding to the 2003 and 2005 white papers, initiated a programme of activities to support workforce development, in particular supporting the enhanced engagement between HEIs and employers. Acua Limited was initiated as a pilot project of that programme.

FUNDING

Revenue funding was provided by the HEFCE under their workforce development programme. The programme supports the design and delivery of higher education courses in partnership with employers and intends to increase the number of learners in the workplace supported by their employers.

IMPLEMENTATION

STRATEGY AND ACTIONS

An implementation plan was developed that required engagement with a number of key stakeholder clients in order to ascertain the nature of the required organisational development products. A series of programme delivery interventions with a number of pilot clients - amongst them the AA, Solihull Care Trust, Caterpillar and Coventry PCT (Primary Care Trust) - were held. As a result the products and the level of cooperation from clients were determined, which have since shaped the solutions provided over the first two years of the business development phase.

Acua Limited designed and implemented a range of effective organisational development programmes, which improved decision making, problem-solving, learning and innovation. The learning experience is measured against higher education standards, providing recognised evidence of Continuous Professional Development (CPD) and practical qualifications. Programmes can be structured in such a way that participants are given a higher education-level award starting from certificate degree to honours degree.

The development programmes are designed for in-house implementation. Business coaches are on-site during the programme delivery to ensure that every opportunity to transfer skills into the workplace is seized and that maximum impact and increased benefit to the participant and the organisation are achieved through the development process.

The programmes designed by Acua Limited take higher education into the workplace so that skills and qualifications are integrated into work-based development activity. The programmes use blended delivery methods, including

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e-learning, self-directed learning, one-to-one coaching and group workshops, to ensure all learning is relevant, impactful and transferred to the workplace with materials developed to address the issues faced by the client organisation

MONITORING AND EVALUATION

Monitoring is undertaken at a number of levels and points within the overall delivery plan and cover the following:
In a client organisation (company level) once a delivery programme has been commenced the impact is closely measured and monitored with adjustments to the programme, as required to meet the need and to maximise the benefit of the client business. One-to-one sessions for learners with business coaches and a customised virtual learning environment enable individual issues and mixed ability groups to be addressed.

A broader level of monitoring and evaluation is undertaken through the following:

- HEFCE - Monitoring of progress against key performance indicators is undertaken twice a year (March and September) with additional information sought by HEFCE at regular points regarding forecast and actual performance.
- HESES (Higher Education Students Early Statistics Survey) - Annually a return of achievements against planned targets is submitted in October in order to measure overall performance and the calculation of funding levels.
- Internal - As part of the business management process, a review of performance against all projected key performance indicators is undertaken monthly and reports are produced for both the university stakeholders and the non-executive board of directors.

Programme evaluation is undertaken by HEFCE as part of a wider remit to understand the impact the Employer Engagement Project has in relation to skill-enhancement through higher education. Additionally, a number of smaller projects i.e. development of virtual learning environments, e-learning, flexible assessment, bulk enrolment have been undertaken within the business and are evaluated as required.

SUSTAINABILITY

Sustainability of the business with a removal or reduction in funding remains a key business imperative and the actions being undertaken include the following:

- Development of new product strands, e.g. SME specific programmes, non-accredited consultancy, products and services
- Delivery of higher education products in a non-traditional way to be more cost effective to the client, e.g. the Acua Limited business philosophy of work-based / work-placed learning ensures minimum disruption
- Growth of new business opportunities in particular the development of an international market.
- Building of long-term relationships with clients where a 100% client retention rate has been achieved to date

CASE 10 ACUA LIMITED UK

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

A number of key achievements have been accredited to the organisation during the tenure of the business and include:

- Growing a client base from three to 60 in two years
- The winning of a National Training Award in partnership with the AA
- Securing a number of blue chip clients who include; the AA, Santander, Ford Europe, Chubb Security, Busy Bees and TNT
- The successful achievement of all planned key performance indicators to date against HEFCE milestones.

SUCCESS FACTORS

The key lessons to be learnt from the Acua Limited experience are:

- Being clear about what the offer is and stick to it - do not be distracted
- Building and maintaining exceptional relationships with clients
- Offering leading edge solutions and constantly refining the proposition
- Sound back office processing to provide exceptional customer service
- Recognising the contribution made by the whole business team and building on their strengths.

IMPACTS

Acua Limited's programmes are integrating skills and qualifications by taking higher education into the workplace whilst developing the needs of the organisation into it. The impact on the organisation is to provide employees with the skills they need to make the organisation stronger and better able to cope with future changes in the market. Moreover, the employee benefits from working towards a globally recognised higher education qualification.

Some further impacts of Acua include:

- The delivery of higher education solutions to approximately 6,000 learners over a three-year period with a forecast of approximately 9,000 in the third year
- The delivery of 2,800 FTEs to date with a further 300 in the pipeline

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CASE 10 ACUA LIMITED UK

STRENGTHS AND WEAKNESSES

A main influence currently on Acua Limited is the current uncertain economic environment. The turbulent economic environment certainly impacted the business performance. Many organisations are experiencing budget cutbacks and in particular, the training budget. Organisations continue to report that they are still facing reduction in headcount and training resources.

Clients are still often reluctant to commit in any way to making any formal changes to their current learning and development plans. Feedback suggests that management teams are waiting for some sign of economic recovery before embarking on any externally sourced learning and development.

Despite this, Acua were able to grow and sustain the business. This was achieved through a number of factors. The engagement and retention of high profile clients enabled the business to position itself as a key solutions provider in a saturated market with clients citing trust, honesty, impartiality and integrity as major factors in their dealings with Acua Limited.

A further key challenge is the recruitment of key staff of the right calibre to meet business requirements.

TRANSFERABILITY

The case study organisation focused on enhancing business facing activity of the university, increasing student numbers and increasing employers' linkages. The organisation developed a capability improvement programme, foundation degrees, modern apprenticeships and enhanced part-time provision.

The case study is transferable to localisation and appropriate skills and resources.

THEMES

Employer Engagement, Skills, lifelong learning, Workforce Development, Organisational development

INFORMATION SOURCES

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PUBLIC CONTACT DETAILS

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Acknowledgement: The support and input of Sarah McQuilkin of ACUA in the construction of the case study was greatly appreciated.

CASE 10 ACUA LIMITED UK

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DOCUMENTS AND PUBLICATIONS

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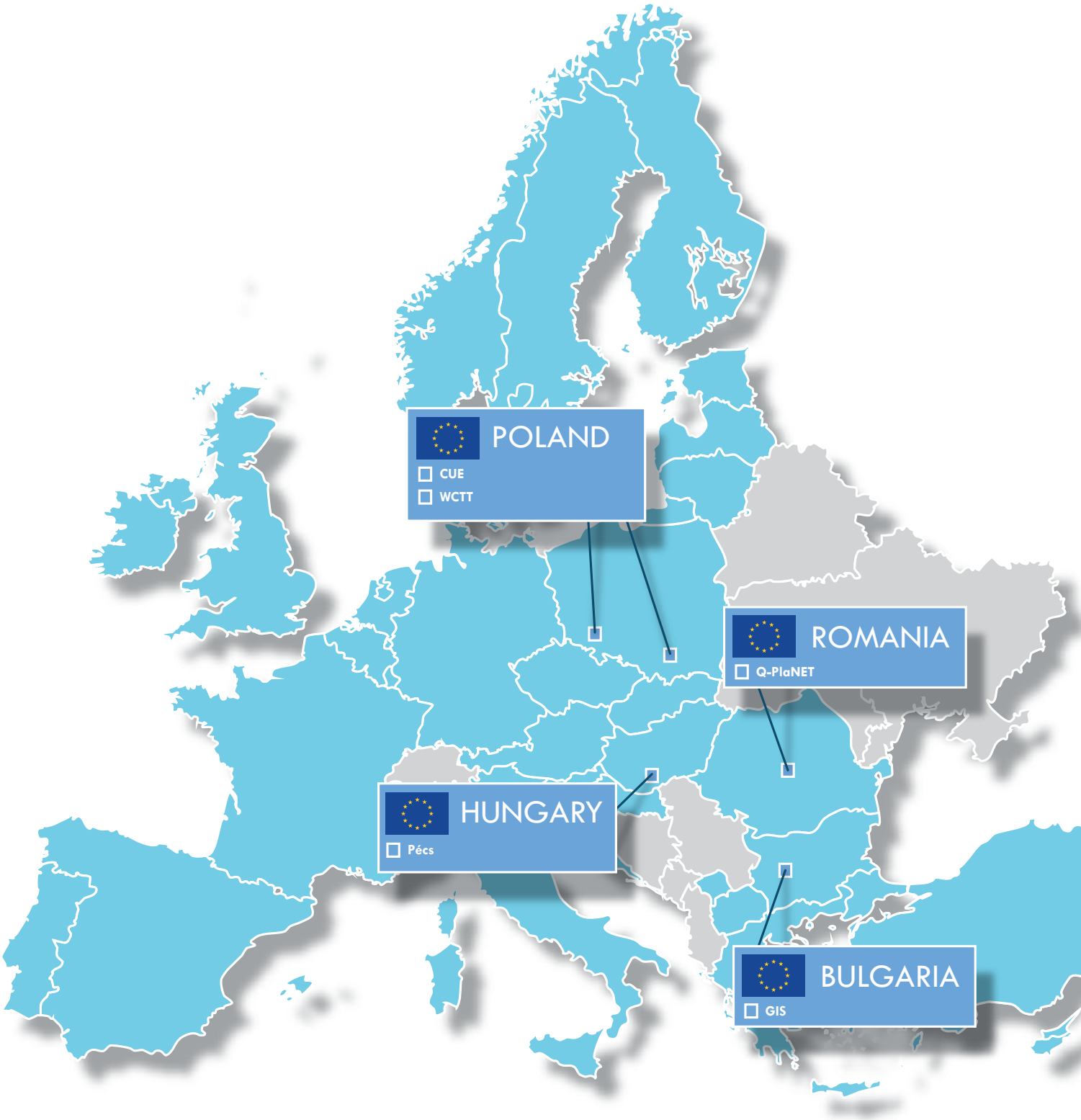
EASTERN EUROPE CASE STUDIES



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EASTERN EUROPE

CASE 11 GIS BULGARIA

CASE STUDY TITLE	GIS TRANSFER CENTRE
HEI / ORGANISATION NAME	TECHNICAL UNIVERSITY OF SOFIA
COUNTRY	BULGARIA
DATE	JULY 2011
NATURE OF INTERACTION WITH BUSINESS	COMMERCIALISATION OF R&D RESULTS
NATURE OF GOOD PRACTISE/PROJECT	STRUCTURAL INSTRUMENT OR APPROACH

PROFILE

SHORT DESCRIPTION

THE GIS TRANSFER CENTRE IN SOFIA, A KNOWLEDGE-INTENSIVE INDUSTRY HUB

The GIS Transfer Centre is one of the pioneer organisations of technology transfer and research commercialisation that have been set up in Bulgaria. The main objective behind this successful initiative is to set up a network of transfer centres in Bulgaria. These centres are focused on transferring research output from universities, laboratories, institutes and various research teams to all interested partners. Support provided by GIS and other centres is concentrated on all aspects: financial, juridical, educational and those concerning IP and management.

BACKGROUND

The GIS Transfer Centre Foundation was established in December 2000 in Sofia by twelve founders, coming mostly from the Technical University of Sofia. GIS, acting as an independent Bulgarian corporate body, is governed by the General Assembly (composed of fourteen founders and co-founders) and Managing Board led by the President. The GIS-Transfer Centre has been working under a franchising contract with the Steinbeis Foundation in Stuttgart (Germany) since April 2003. GIS is a member of the Steinbeis Technology Transfer Network comprising more than 600 Transfer Centres in 55 countries around the world.

AIM AND TARGET

The main objective of GIS activities is to build an organisational and information infrastructure that allows effective management of projects of technology transfer. The offer of support is dedicated to partners from different professional, technological and scientific fields. The provision of information is one the largest fields of support. In particular, GIS provides interested parties with a register of innovation and technology resources; register including innovation developments classified by their stage of advance and sphere of applicability (technology offers) and register of mediators classified by their roles, interests and competence that are connected to the process of technological transfer (brokers). GIS supports also a register of technological requests referring to specific industry problems or problems/questions coming from other technological centres or networks (technology request).

Moreover, GIS facilitates the creation of virtual consortia of participants with the aim to effectively manage technology

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transfer processes. The Centre provides the opportunity for discussion forums in order to stimulate new ideas and proposals for collaboration. An information system and database supported by GIS can be reached through the Internet and may be developed by adding new data online to enlarge the base of all active participants in the technology transfer processes. The provision of information is personalised according to particular needs of a certain user of a system.

FUNDING

There are 14 funders involved in the project. The three main funders are:

1. The Bulgarian Academy of Sciences,
2. The Technical University of Sofia,
3. The Institute of Mechanics – BAS.

IMPLEMENTATION

STRATEGY AND ACTIONS

The various GIS activities include the establishment of transfer centres for specific scientific, research and technological problems and innovation competitive products. Activities include studies, consultations and recommendations regarding needs of SME, competitive products and modern technologies. Apart from these 'instrumental' activities, other ones refer to the identification of applied research results and support for transformation of research output into new technologies and competitive products (through organising workshops, seminars and other events).

GIS activities are focused on the improvement of SME's products. Importantly the GIS Centre can address appropriate governmental institutions requesting their help in solving any problems. It facilitates access to innovation funds and participation in working teams of governmental commissions that develop legal framework documents.

GIS maintains contacts and cooperates with similar Bulgarian and foreign organisations as well as scientists and specialists who deal with technology transfer. The centre also has contacts with governmental agencies and institutions supporting innovation activities in order to promote governmental policy and priorities in this field and propose solutions and norms. Apart from the coordination and realisation of technology transfer projects, GIS provides consultations and expertise for innovations and technology transfer.

The GIS Centre is responsible for the organisation and coordination of participation of Bulgarian scientists, teams and companies in projects sponsored by the EU Commission or other European institutions and programmes that are directly or indirectly linked with the GIS Foundation. GIS runs a database of research results of different Bulgarian institutions and monitors the needs of local SMEs looking for solutions in the field of new technologies.

The centre promotes the development of consultations and information exchange between representatives of companies and institutions interested in technology transfer processes. It is therefore easier for a company to find the right person who can handle specific technical issues or problems. Direct transfer

of technologies or information is the focus of the centre, optimising processes and systems that are part of already applied projects. The GIS strategy is to develop innovative pilot projects and prototypes or new market-oriented and competitive products.

GIS cooperates with national bodies including ASME (Agency for Small and Medium Enterprises) and Bulgarian Association of Agencies for Regional Development and Business Centres (BARDA). This cooperation covers activities leading to the development of national and international technological transfer services.

Other activities include the running of post-graduate studies, organisation of teaching courses, training activities focused on specialists and managers from all fields (especially hi-tech specialists) and elaboration of expertise and evaluation reports.

MONITORING AND EVALUATION

Monitoring activities of the GIS Transfer Centre refer to the evaluation of studies or consultations and recommendations for SMEs. Supports of transfer activities as well as implementation of new products and technologies are also subject to the monitoring process.

The development of evaluation activities should include the possibility of monitoring the interactions between technology 'givers' and technology 'receivers' – two parts of the technology transfer process. To find out the success rates of the transfer processes it is necessary to view how many solutions were implemented in the economic practise. This challenge, still to be introduced in the GIS activities, should help in the developmental process of this technology transfer centre.

SUSTAINABILITY

The sustainability of the GIS activities is linked with the growth of the number of institutions registered in the database run by the GIS Centre and also with the development of new initiatives with partners who have expressed a willingness to cooperate by making entries in the database system.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

Whilst still in development, 23 profiles are published on the website of the GIS. They range from small companies to research institutes and universities. A sample profile includes the following information: profile type, date of publication, information about the institution or company including the contact person data and the contact details, the year of setting up the body, turnover and activities that the institution or company is performing.

In addition, there were 19 technology offers obtained including information such as the following: technology offer title, reference number, website, date of publication, contact details, abstract of the technology, detailed description of the technology, innovative aspects of the technology, main

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advantages or special features of the technology, technology key-words, current stage of development, exploitation of R&D results, IPR, market application codes, collaboration type and comments.

There is one technical broker published on the platform and 22 technology source profiles published.

SUCCESS FACTORS

Success until now has been driven by proactive networking of business together with transfer centres, universities, laboratories, institutes and various research teams to all interested partners. The variety of programmes offered involving business and university personnel has also contributed to its success.

STRENGTHS AND WEAKNESSES

The database system mentioned before is actually an Internet-based client-server application (accessible by web-browser clients) and assembled by two basic functional modules. The first module is the exchange of technology and innovations. Gathering of supply and demand for the technology transfer is possible by pro-active mediators (brokers). All of the three main groups of users ('providers', 'receivers' and 'brokers' of innovation and technology transfer) have particular tools to express their interest in a given idea, development or problem. Access level to different system functions depends on the category the user represents.

The second module is the system for coordinating and managing technological transfer projects. This sub-system is closely integrated with the exchange services and gives the opportunity to a special category of users to define, coordinate and manage projects that have been initiated as a result of declaring participation/interest by a certain group of exchange members.

TRANSFERABILITY

The GIS activities aim to create conditions for knowledge and technology transfer. It provides examples of how to initiate, organise and manage the processes.

THEMES

Technology transfer, Knowledge transfer, Innovativeness, Exchange platform, Cooperation

INFORMATION SOURCES

www.gis-tc.org/ (accessed 11th August 2011)

PUBLIC CONTACT DETAILS

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Email: office@gis-tc.org

RESOURCES

DOCUMENTS AND PUBLICATIONS

www.vgtu.lt/leidiniai/leidykla/BUS_AND_MANA_2010/ High_Education/571-577_Taneva_Dimov.pdf

DATABASES AND WEBSITES

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EASTERN EUROPE

CASE 12 TTO PÉCS HUNGARY

CASE STUDY TITLE	TECHNOLOGY TRANSFER OFFICE (TTO) OF THE UNIVERSITY OF PÉCS (UP)
HEI / ORGANISATION NAME	UNIVERSITY OF PÉCS
COUNTRY	HUNGARY
DATE	JUNE 2011
NATURE OF INTERACTION WITH BUSINESS	COMMERCIALISATION OF R&D RESULTS
NATURE OF GOOD PRACTISE/PROJECT	STRUCTURAL INSTRUMENT OR APPROACH

PROFILE

SHORT DESCRIPTION

THE TTO AT PÉCS NAVIGATES WITH A KNOWLEDGE MAP TO GUIDE SCIENCE-SOCIETY LINKAGES

The Technology Transfer Office of the University of Pécs in Hungary was established in 2006. Its stated objective is to efficiently build linkages between science and research potential of the UP and different players within economy and society in general. The main aim behind these efforts is to strengthen innovative processes so that results of the research can be utilised as innovations.

This structure consists of PhD students and academic staff who act as departmental coordinators of academic entrepreneurship. It focuses on how to facilitate and strengthen communication between the TTO and a group of academics.

Other tasks of the TTO are, carrying out the knowledge map, generating R&D and innovation projects and acquiring of funding resources for the research groups and their partners. The Knowledge Map includes the internal and external information carriers of the organisation (e.g. experts, lecturers, databases, important internet links, etc.), the important characteristics of these (e.g. way of access, field of interest they can provide information on, etc.), relations among them and the flow of information. This tool facilitates contacts with academic staff in certain topics and areas of expertise.

BACKGROUND

TTO was originally begun by the UP in 2005 according to the regulations set up by the national government. The 'office' started with only two people at the beginning. Later on, the TTO started to grow. A grant (TÁMOP 4.2.1) that was awarded to the UP made it possible to set up the today's institution with a team of more than 20 people in 2009.

The UP is an excellent knowledge base of the South Transdanubian Region. Numerous high-level, internationally-acknowledged research projects are being created in its faculties and in the clinical centre. There is a wide spectrum of research activities from medical, technical and natural sciences to social sciences.

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CASE 12 TTO PÉCS HUNGARY

AIM AND TARGET

A team of prepared experts at the TTO awaits the researchers, who believe that with the help of their research achievements, they can contribute to the development of the knowledge-based society. Activities of TTO are also addressed at industrial, organisational and financial partners, with whom the TTO can realise innovative conceptions under joint auspices.

One of the main goals of the TTO is to take appropriate care of the protection of the intellectual products originated from the university, as an indispensable element of a successful technology transfer process. TTO is also focused on the development of innovative activities that align research activity with the needs of the economy, research cooperation and offering services. This, in turn, allows increase in revenue for the UP.

TTO at the UP undertakes various initiatives to increase and strengthen commercialisation of research and innovations. It assesses innovative and research potential of the UP on a regular basis. Another field of activity is the development and management of a research product portfolio. This also involves taking the necessary measures for the protection of industrial property utilisation and management of innovation and the database identifying intellectual products produced at the UP. The TTO offers analysis in the fields of innovation management and protection of industrial property and also provides administrative support for the innovation committee of the UP.

Various efforts of TTO are focused on building partnerships and making contacts of research output utilisation with Hungarian and foreign partners. This utilisation of individual intellectual products is also supported through the supervising of spin-off companies. TTO helps to shape research directions of the UP through assessing the innovation needs of the economy and transferring the assessment to the research community. This assessment is the basis for innovation marketing activity offering R&D or innovation services for external partners or companies. TTO also offers various training and forums or partner-meetings for the players of the research community and the economy alike.

FUNDING

TTO is a unit of the UP and its budget is linked with the budget of the university.

IMPLEMENTATION

STRATEGY AND ACTIONS

The TTO of the UP efficiently initiates the knowledge base into the innovative processes. Therefore, the results of the research development can be utilised as innovations representing real values for the economy and the society.

Activities of TTO are addressed towards researchers who believe that their scientific work can contribute to the development of the knowledge based society. Furthermore, the focus extends towards

industrial, business and other external partners who could act as partners in the processes of transferring research results into practice.

An integral part of TTO activities are training programmes organised to develop competence of the knowledge base forming teachers and researchers. This can help the expansion of the circle of experts responsible for the generation and support of technology transfer and innovative processes. Recent training courses of TTO has included:

- 'innovation management training'
- 'development and steps of GLP'
- 'good clinical practise'
- 'WIPO distant learning courses' (WIPO – World Intellectual Property Organisation)

TTO cooperates with the Innovation Committee of the UP which provides, inter alia, assistance for the Senate of the university in conducting tasks related to the management and utilisation of IP. The Director of the TTO is a member of this Innovation Committee.

MONITORING AND EVALUATION

Monitoring and evaluation of the activities of the TTO are based on the main goals of this unit. This process refers, for instance, to verification of the database of intellectual products produced at the UP, supervision of spin-off companies set up for the commercialisation of research output and monitoring contacts with companies and external partners.

SUSTAINABILITY

The South Transdanubian region, as a region of Europe, strongly needs innovative ideas as a basis to develop its economy. This means that cooperation between the R&D sector from one side (through activities of institutions like TTO) and businesses or industrial partners from the other side will be a prerequisite for the future success in that area.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

Since the establishment of the TTO in 2006, the number of IP applications has developed, where 50 out of 52 invention disclosures submitted to the TTO have been admitted by the UP. The necessary steps on behalf of protection and utilisation towards the market have been taken. The vast majority of the intellectual products are technical or medical invention.

SUCCESS FACTORS

Positive factors which facilitate successful achievements:

- Scientific potential and position of the UP in the South-Danube region
- Wide spectrum of researches at the UP - from medical, technical and natural sciences to social sciences
- Wide network of external partners of the TTO
- Innovation needs of economy

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CASE 12 TTO PÉCS HUNGARY

STRENGTHS AND WEAKNESSES	The present strong position of the TTO of the UP is the result of linking significant research potential of various faculties and departments of the university with the needs coming from business and industrial partners. The positive impact of TTO's activities is strengthened by cooperation with InnoPoints representatives at various university departments.
TRANSFERABILITY	This case is a good example of how to facilitate and stimulate transfer of innovative solutions from the R&D sector to entrepreneurs and different players of the economic sector. The idea is to match activities of the TTO, which is usually situated at the whole-university level, with the activities of these InnoPoints. This improves communication channels facilitates the flow of information and is a very practical solution. That is very important because it is the lack of information that often inhibits commercialisation of valuable innovative research results.
THEMES	Technology transfer, Innovation, Commercialisation of R&D results
INFORMATION SOURCEST	www.innovation.pte.hu (accessed 31st May 2011)
PUBLIC CONTACT DETAILS	Ms. Kata Dobay Office Head, TTO University of Pécs Pécs Hungary Phone: +36 72 501 500 2032 E-mail: dobayk@rektori.pte.hu

RESOURCES

DOCUMENTS AND PUBLICATIONS	www.innovation.pte.hu/menu/44/43 (accessed 31st May 2011)
DATABASES AND WEBSITES	www.innovation.pte.hu (accessed 31st May 2011)

EASTERN EUROPE

CASE 13 THE SCIENCE AND ECONOMY PROJECT POLAND

CASE STUDY TITLE	THE SCIENCE AND ECONOMY PROJECT
HEI / ORGANISATION NAME	CRACOW UNIVERSITY OF ECONOMICS (CUE)
COUNTRY	POLAND
DATE	JULY2011
NATURE OF INTERACTION WITH BUSINESS	COMMERCIALISATION OF R&D RESULTS
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

CUE HAS AN ONLINE PLATFORM AND QUARTERLY PUBLICATION FOR MATCHMAKING ACADEMICS TO INDUSTRY

The Science and Economy Project is the CUE initiative to bring academia and business closer together. This initiative aims to create a common platform for the exchange of information; The objective is, that researchers can offer a profile of their own research, and entrepreneurs can list their need for scientific solutions, to bring the research and entrepreneur together. The platform is materialised in the form of a website. There are records including scientific solutions to be implemented on the one hand and the records of demands for scientific solutions on the other hand.

BACKGROUND

Transition processes in economies of countries behind the former 'iron curtain' need innovative impulses to decrease the distance to most developed economies of the EU. This innovative boost should result from knowledge and technology transfer between R&D sector and business 'actors'. This idea is the basis for the Project 'Science and Economy' organised through the CUE.

The idea for the Science and Economy Project has emerged as a result of several years' experience in the fields of science and business. Initially, the project resulted in the promotion of young people in setting up businesses. Together with EU funding the project created 29 companies in the Malopolska region, whose activity was focused on e-commerce.

In parallel, direct cooperation with the business was opened up by offering unpaid interns for companies that were financed by EU funds. The reports, written by the trainees and their interactions with the CUE staff, have resulted in increased knowledge about the needs of the business sector. After developing projects relating to innovation and after studies on this very issue on cooperation as well as participation in the meetings with industry representatives during conferences and workshops, more knowledge and insights appeared. On the one hand, there is a need for scientists to show their research and achievements and to share this knowledge with a broader public, including representatives from business. On the other hand, there are

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entrepreneurs willing to cooperate with scientists and research centres (this statement is accompanied by business financial thinking, i.e. to co-operate to have measurable results but preferably without any costs.). These guidelines were starting points to create an idea for the juxtaposition of these two sectors in science and business.

AIM AND TARGET

The main objective of this EU-funded project is to take direct research conducted in the field of economics in Poland and implement this into business practices. In other words, emphasis is placed on bridging the gap between theoretical research and the needs of business.

The project is directed, primarily, to representatives of science and business sectors who are interested in the issues of commercialisation and the transfer of knowledge that is generated in research centres, to the economy. These people can present their profiles on the website naukaigospodarka.pl. They can also submit their articles, individually prepared for publication, in a quarterly magazine also titled identically with the project. The magazine is called Quarterly. But the most desirable process is the cooperation between the two environments so that the joint texts may be formed. Firstly, such effects would present the comprehensive approach to the problem and, secondly, it would be an expression of cooperation between the two environments.

OTHER REFERENCES

In order to obtain more comprehensive information on the concept presented in this material, it is advisable to refer to the guidelines contained in the Polish Human Capital Operational Programme (POKL).

FUNDING

The project is funded as follows:

- The Polish Human Capital Operational Programme (POKL) – 85% funding
- The Polish Ministry of Science and Higher Education grant – 15% funding

IMPLEMENTATION

STRATEGY AND ACTIONS

An appointed team of workers implements the intended objectives of the project. The organisational structure includes a team responsible for project management, administration in creating and collecting documentation, as well as issues relating to the technical and scientific editing of texts. In addition, three professors constitute the Scientific Committee, which decides which texts will be included in the edition to be published. The Quarterly magazine is managed by the editor in chief while the summary of texts published is prepared each time by an editor review. Technical Editors correct any formal or linguistic mistakes in the submissions. The Website Administrator ensures the proficient operation of the internet platform on which authors initially present their innovation ideas and where industry representatives are searching for innovative solutions. The News Editor is responsible for news publishing and the Articles Editor is

responsible for the web site content.
Procedures have been designed to ensure a high quality for the various stages of the project. The project also needs to comply with university internal regulations and national guidelines as outlined under the Human Capital Operational Programme POKL.

MONITORING AND EVALUATION

Monitoring of the project results is carried out every three months. This monitoring refers to both financial and substantial advancement of the project. The substantial advancement of the project is measured by assessing the results planned to be achieved against those already obtained. The results to be measured are:

- an increase in the level of science-business cooperation awareness among scientists and business representatives,
- the level of interest in events organised by the (CUE) within the project, and
- the level of interest in papers published in the Quarterly magazine.

The final evaluation is carried out by the Ministry of Science and Higher Education evaluators.

SUSTAINABILITY

The end of the project is scheduled for December 2011; however, it is likely to be continued owing to the very positive feedback from both the scientists and the business sector. In order to ensure the continuation of the project there have been several solutions suggested, among them, the following:

- Participating in the next call referring to raising awareness of employees in R&D of the importance of R&D for the economy and the importance of protecting industrial and IP for technology transfer
- Ensuring that an internet platform will operate for the period after the completion of funding from the grant. This means the ability to make more entries by representatives of both the science as well as business
- Obtaining external funding for the publication of a limited number of Quarterly magazine editions. Funds could be raised from private sponsors. Information about the financing measures of the company could be placed in the text of the editorial page. This would mean, however, that the work of the editorial board for the project would be on a volunteer basis.

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CASE 13 THE SCIENCE AND ECONOMY PROJECT POLAND

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

One of the project achievements is the creation of a database consisting of more than 270 records in total, created both by researchers as well as business representatives. There were a large number of ideas created but it also shows the interest represented by the companies. The big success of the project was the conference summarising the first phase of its realisation. Over 230 people attended this conference.

There were more than 80 articles published in the Quarterly magazine on topics related to science and business cooperation. The articles were sourced from both the Polish people, as well as foreigners. Another great benefit was the creation of joint articles, which described the achievement of cooperation between science and business. Within the platform, at least one implementation of the application of science to business sector was obtained. Moreover, one of the main achievements is the creation of a nationwide periodical, on this very important subject with a group of supporters. This shows the extent to which it was possible to find a niche and exploit it. Availability of Quarterly in both hard copy and electronic form provides convenience for the reader. Everyone benefits by having both versions available.

Bringing international knowledge into Poland is achieved through the 'guest texts' module that was introduced into the magazine. This means papers written by a specialist, preferably outside Poland, whose thoughts and ideas might be of use for the national (Polish) entrepreneurs or scientists. The additional value of the 'guest text' is adapting the author's ideas and knowledge for the purpose of strengthening science-business links in Poland. The guest paper's idea is to contribute to the transfer of knowledge processes in the international arena.

SUCCESS FACTORS

The project is widely distributed throughout Poland. The project met with very positive feedback from the environment to which it is addressed – many addresses were sent to the Project Bureau. According to the project cycle a successful two-day conference took place in Krakow summarising the halfway point of the project, which was patronized by Presidents of Krakow, Tarnow, Malopolska Voievode and Marshall. This attracted both press and TV which also underlines how the project realisation and the project itself were perceived.

Finally, 'Science and Economy' is a brand-new publication dealing with important issues in the field of science and economy. This is part of both national as well as European developments in the topic of economic development of Europe and European integration.

IMPACTS

The project is widely distributed throughout Poland. The project met with very positive feedback from the environment to which it is addressed – many addresses were sent to the Project

CASE 13 THE SCIENCE AND ECONOMY PROJECT POLAND

Bureau. According to the project cycle a successful two-day conference took place in Krakow summarising the halfway point of the project, which was patronized by Presidents of Krakow, Tarnow, Malopolska Voievode and Marshall. This attracted both press and TV which also underlines how the project realisation and the project itself were perceived.

Finally, 'Science and Economy' is a brand-new publication dealing with important issues in the field of science and economy. This is part of both national as well as European developments in the topic of economic development of Europe and European integration.

STRENGTHS AND WEAKNESSES

Both the magazine and the Internet platform have had a very positive image in the business and science environments. This is due to the proposed formula of openness and transparency, as was used in regard to participation in the project. Entries to the Internet platform can be made both by the management of large or medium-sized businesses, as well as very small companies including micro-enterprises.

Similarly, access to the Internet platform is easy for the R&D representatives. All users with an R&D membership may present new ideas on innovativeness.

The naukaigospodarka.pl webpage has a translation module for six different foreign languages. International users can browse its contents thereby making it easier to establish cooperation. The cooperation can be science with industry, as well as cooperation between scientists or between businesses.

A weakness of the project is that Quarterly is published in Polish; however, a summary of each article is offered in English. If an international user is interested in any of the texts contained in the magazine, they have the opportunity to use the translation module. This module can be obtained electronically from the naukaigospodarka.pl news portal.

Financing of the project continues to be a concern. Ensuring financing from EU funds means the project can continue to function properly but a lack of funding means a risk of restrictions within the project work packages.

TRANSFERABILITY

The ability to transfer elements of this case study is high owing to the use of common technology and common channels and structures available in most university environments.

THEMES

Science and economy, Commercialisation, Transfer of innovation, Knowledge transfer

INFORMATION SOURCES

www.naukaigospodarka.pl (accessed 31st May 2011)
info@naukaigospodarka.pl

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EASTERN EUROPE

CASE 13 THE SCIENCE AND ECONOMY PROJECT POLAND

PUBLIC CONTACT DETAILS	Uniwersytet Ekonomiczny w Krakowie Biuro Projektu Nauka i Gospodarka Ul. Rakowicka 27 31-510 Kraków Poland

RESOURCES

DOCUMENTS AND PUBLICATIONS	Project documentation Guidelines for POKL (Operational Programme Human Capital)
DATABASES AND WEBSITES	www.naukaigospodarka.pl (accessed 31st May 2011)

EASTERN EUROPE

CASE 14 WCTT POLAND

CASE STUDY TITLE	WROCLAW CENTRE FOR TECHNOLOGY TRANSFER (WCTT)
HEI / ORGANISATION NAME	WROCLAW UNIVERSITY OF TECHNOLOGY
COUNTRY	POLAND
DATE	JULY2011
NATURE OF INTERACTION WITH BUSINESS	COMMERCIALISATION OF R&D RESULTS ENTREPRENEURSHIP
NATURE OF GOOD PRACTISE/PROJECT	STRUCTURAL INSTRUMENT OR APPROACH

PROFILE

SHORT DESCRIPTION

WCTT IS THE BRIDGE LINKING SCIENTISTS WITH THE IDEAS AND CAPITAL COMING FROM ENTREPRENEURSHIP

Wroclaw Centre for Technology Transfer (WCTT) is a unit of the Wroclaw University of Technology (Politechnika Wrocławska). From its outset, WCTT aimed to become a bridge linking the unique knowledge and skills of scientists with the ideas and capital coming from entrepreneurship. Today, WCTT is one of the most renowned and esteemed technology transfer centres in Eastern Europe.

Since WCTT beginnings, the primary activity of WCTT has been concentrated on building connections between research potential of the Wroclaw University of Technology and companies' needs in the area of new technologies and innovations.

BACKGROUND

WCTT was set up in 1995 as a result of the PHARE TEMPUS JEP 1005-90 Project 'Bridging the Gap Between University and Industry'. This project was undertaken by the Wroclaw University of Technology, University of Stuttgart and Brunel University in London to enhance cooperation between science and business. The establishment of WCTT was possible thanks to the initiative of Professor Jan Koch from Wroclaw University of Technology.

Wroclaw University of Technology is one of the best technical universities in Poland. This university undertakes various joint research and implementation projects with different branches of the industrial sector. It is listed as one of the top technical HEIs in Poland.

In the past, WCTT was the leader of Innovation Relay Centres (IRC) consortium in West Poland that managed the activities of IRCs in Wroclaw, Poznan and Szczecin. The consortium has evolved today into a membership of nine and it continues the mission of the IRCs as a part of the Enterprise Europe Network (EEN). The network supports enterprises in international cooperation, technology transfer and access to research programmes and research results. The EEN was set up by the European Commission (EC) in 2008 and covers 48 countries with its activities providing a networking platform for almost 600 organisations and 4000 experts. WCTT coordinates activities of the Network in the Western Poland.

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WCTT is also a member of the biggest Polish business-supporting network called National SME Services Network (KSU). KSU groups approximately 200 non-commercial organisations cooperating with each other. KSU provide advice, information, training and financial services for micro, small and medium-sized entrepreneurs and entities undertaking business activity.

Taking part in the application of many European projects (4th, 5th, 6th and 7th Framework Programmes) has enabled WCTT to gain and exploit the invaluable experience that is continuously shared with clients through the activity of regional contact point for European framework programmes (NCP network). Since 1999, the NCP network helps the researchers and companies to participate in framework programmes through consultancies, specific trainings and conferences and also supports them in preparing proposals.

Additionally, WCTT is one of the main players in the process of regional innovation strategy elaboration and implementation (in the Lower Silesia region). Currently WCTT is responsible for actualisation of the Lower Silesia regional innovation strategy for 2011 – 2020 that was launched by the Lower Silesia marshall office.

Presently, WCTT is also a member in the biggest initiative regarding commercialisation in Poland called 'Effective Support for Innovative Business' from the Polish Agency for Entrepreneurship Development. The overall aim is to analyse and improve the commercialisation processes and procedures in Poland. This initiative aims at supporting development of centres of innovation, i.e. technological parks, centres of excellence, centres of technology transfer, academic enterprise incubators, technological incubators as well as networks of business angles and seed-venture funds.

Since 2004, all activities of the WCTT have been organised and run in accordance with the requirements of ISO regulations.

AIM AND TARGET

The main aim of WCTT's activities is to foster effectiveness and competitiveness of enterprises through innovations. WCTT operates as an intermediate between science and business, supporting both academic-based organisations and enterprises. WCTT supports technology transfer through promoting innovative technologies as well as, finding, acquiring and implementing the right solutions (from technology audits to the assistance in negotiating the agreements and also legal advisory).

Another important activity is assisting organisations in getting access to various R&D programmes and sources of research financing. The centre facilitates commercialisation of scientific results and development of academic entrepreneurship. Some of the WCTT's activities are focused on international cooperation, i.e. finding verified and reliable research, business and technology partners.

WCTT offers services that lead to internationalisation of the Polish SMEs and supports the technology transfer between companies and also between companies and researchers.

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IMPLEMENTATION

STRATEGY AND ACTIONS

WCTT's activities are oriented towards promotion of commercialisation of scientific research and stimulation and support of innovative entrepreneurship. WCTT services are offered both for entrepreneurs and for scientists.

One of the main areas of action is technology transfer. This transfer is focused on bringing together suppliers and buyers of new technologies and innovations and achieving agreements between the two parties. Actions of the WCTT include trainings and consultancy offered for scientists and entrepreneurs and carrying out technology audits within companies which can indicate any needs for new technologies. WCTT also assists in processes leading to agreements of international technology transfer.

The typical process of approaching a client is composed of the five main steps. The first is focused on the analysis of the client's needs and also on the specific characteristic and conditions of its activities. It is in most cases undertaken as a technology audit. It results in providing a client with a proposal of solutions and new services adapted to its specific situation. If the offer of support is accepted, the next phase starts, which is the realisation of services and implementation of solutions. Upon completion of this phase WCTT, together with the client, evaluates effectiveness of the implemented services and their impact on the client's activities. Follow-up meetings then occur and WCTT concentrates on periodical monitoring of client activities and, if needed, offers further support.

MONITORING AND EVALUATION

Control procedures are realised in the frame of the ISO 9001:2008 quality management system. Monitoring and evaluation concerning the level of realisation of objectives and targets are reached with the use of indicators while reporting particular projects' effects.

Moreover, every year all activities and their main outcomes are monitored and evaluated by the WCTT's scientific council.

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CASE 14 WCTT POLAND

SUSTAINABILITY

Future perspectives of the WCTT are connected with its present strong and stable position in Poland, in particular in the region of Lower Silesia. Another important factor is the high quality of WCTT's staff. There is a strong focus on innovations and technological development owing to the challenges faced by the Polish economy from one side and the R&D sector from the other side. The affiliation of the WCTT with the Wroclaw University of Technology is also important. It is one of the best technical universities in Poland, has a good reputation and there are strong, durable collaboration links with hundreds of enterprises, universities, chambers of commerce, business networks and public administration at a regional and national level. All of these factors build a strong, stable basis for the future activities of the WCTT.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

WCTT's main achievements:

- Over 30.000 people trained
- Over 15.000 consultancy hours
- Supported approximately 350 research proposals applied to the EC
- Over 300 technology audits completed
- 126 innovative start-ups supported
- 41 international technology transfer agreements signed

WCTT also participated in some national and international projects including the B2Europe 'Enterprise Europe Network' and IRC 'Innovation Relay Centres'.

One of the important initiatives in which WCTT has been involved in, was the establishment of the Wroclaw Technology Park (WTP). This was targeted at companies based on advanced technologies, laboratories and R&D centres.

SUCCESS FACTORS

The present success of the WCTT and its prestigious position is built on both external and internal factors. The first one is a strong institutional support provided by the Wroclaw University of Technology whose brand is broadly recognised in Poland and abroad. This university provides access to organisational facilities and financial liquidity (internal crediting of WCTT activities before receiving payments) enables contacts with scientists conducting research on a high quality global level and gives access to research infrastructure. Moreover, it gives access to talented students and graduates. WCTT, as the only one of all Polish TTOs, operates on a self-financing scheme. This is of course a challenge, but at the same time it is an incentive to be active and competitive. The on-going success of the WCTT would not be possible without its team: young educated, mobile people with strong language skills.

WCTT has developed a wide network of national and

international contacts and has a good cooperation with many local and regional organisations. WCTT's efforts and activities are supported by many trainers and experts from various disciplines. This is connected with hundreds of national and international projects in which WCTT has participated.

STRENGTHS AND WEAKNESSES

The case of WCTT provides various examples of successful and efficient methods of fostering and strengthening interactions between the research sector and business-industrial partners. In particular, the WCTT provides best practices in the field of supporting innovative processes in companies and fostering commercialisation of research. The WCTT established efficient methods of motivating scientists to build and develop links with external partners from business and the industrial sector. WCTT, throughout the years of its activity, organised countless seminars, trainings and workshops improving communication channels between science and business. WCTT's activity in assisting companies in processes of technology transfer at national and international levels facilitated the launch of many valuable initiatives.

Negative factors that could have prevented success are firstly linked with periodical problems with finding financial sources. For instance, own financial contributions are required in many national and international projects. The second problem is the lack of financial sustainability in the case of many valuable initiatives when external funding comes to an end. Apart from financial obstacles, there are also problems with mental and motivational barriers concerning UBC in Poland. Another factor is an insufficient level of staff with practical experience in commercialisation of research outputs.

TRANSFERABILITY

WCTT is a good example of how to be successful in building bridges between academic centres and business-industrial partners. The centre can be regarded as a model organisation for those institutions which begin and run activities in the field of technology transfer or plan to set up special units, offices etc. responsible for cooperation with business partners and external stakeholders.

THEMES

Technology transfer, Innovation, Commercialisation of research output, Academic entrepreneurship, Internationalisation of SMEs, Investment readiness, European research co-operation

INFORMATION SOURCES

www.wctt.pl
(accessed 31st May 2011)

PUBLIC CONTACT DETAILS

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CASE 14 WCTT POLAND

RESOURCES

DATABASES AND WEBSITES

www.wctt.pl
(accessed 31st May 2011)

EASTERN EUROPE

CASE 15 Q-PLANET ROMANIA

CASE STUDY TITLE	Q-PLANET – QUALITY PLACEMENTS NETWORK
HEI / ORGANISATION NAME	UNIVERSITY TRANSILVANIA OF BRASOV CONSORTIUM OF TEN PARTNERS
COUNTRY	ROMANIA (ALSO INVOLVES GERMANY, ESTONIA, LUXEMBOURG AND BELGIUM)
DATE	JUNE 2011
NATURE OF INTERACTION WITH BUSINESS	PERSONNEL MOBILITY
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

STRENGTHENING LINKS WITH BUSINESS THROUGH A MULTINATIONAL EUROPEAN QUALITY STUDENT PLACEMENT NETWORK

Q-PlaNet – the Quality Placement Network is the network of Quality Reference Centres (QRCs) for student placements. QRC offices act at a regional level to check the quality of placement and promote the mobility of students in practical training. The Q-PlaNet project sets up concrete standards and structures for quality assurance in order to provide students, host organisations and universities with a solid and secure basis for European-wide comparable placements.

The Q-PlaNet project is coordinated and run by a consortium of ten partners from Romania, Germany, Estonia, Luxembourg and Belgium that formed a mixed group of universities, enterprises, networks and associations. However, this case study focussed on the University Transilvania of Brasov and its role in the network.

BACKGROUND

Cooperation between HEIs and the business and industrial sector in the field of student placements is one of the most popular activities where business partners can strengthen links with HEIs. Looking from the point of view of learning outcomes, various schemes for this cooperation are in place to secure high quality placements. Moreover, year by year enterprises put greater importance on international practical experience of graduates when recruiting new employees. On the other hand, checking student placements in host enterprises is not an easy task in the various regions of the enlarged Europe. A clear common system has not yet been defined and accepted in Europe. In addition, standards and practices differ considerably from one member state to another.

The general ideas that lead to the Q-PlaNet project was to find a solution for the issue of student placements at various business partners by connecting regional quality reference centres with host institutions and enterprises, sending organisations and students.

Initially from 2008 to 2010, Q-PlaNet was a project funded by the EU. It was planned and organised as a sub-project of

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EUE-Net, the European University Enterprise network whose goal was to boost cooperation between industry and the education sector (see www.eue-net.org).

AIM AND TARGET

The main aims of the Q-PlaNet project were as follows:

- To set up quality standards for placements in industry, research or other institutions. This included curricula development, assessment and recognition of placements, communication with enterprises, quality control and student exchange programme synergies,
- To set up three new experimental QRCs in Brasov (Romania),Tallinn (Estonia) and Bucharest (Bucharest),
- To develop a European pilot network of QRCs.

The standards mentioned above are clear criteria for all involved parties in order to organise high quality placements. Quality Reference Centres are able to check and evaluate the quality of host organisations in their regions and confer on them the Q-PlaNet quality label.

FUNDING

From the beginning of 2008 up until 2010, the Q-PlaNet Project was funded by the EU lifelong learning Programme. The EC provided 75% of the resources for the total project budget. The benefitting members of the Q-PlaNet during the project lifetime were those from the Erasmus countries who receive so-called OM-funding ('organisation of mobility as part of Erasmus or Leonardo da Vinci grants').

IMPLEMENTATION

STRATEGY AND ACTIONS

The approach adopted by Q-PlaNet was mainly focused on how to make quality in placements more achievable and efficient.

The project strategy underlined the necessity of better integration of placements into curricula and study courses.

QRCs should collaborate as a wide contact network with the aim of increasing placement offers, promoting placements with regards to host organisations, integrating high quality placements in curricula and increasing interest from students. Achieving this goal requires cooperation with organisations and enterprises hosting students for placement (such as Chamber of Commerce grouping business partners).

EUE-Net has been focused, firstly, on the development of a quality standard for the practical placement in enterprises. Secondly, their goal is to increase the presence of entrepreneurs within university activities. Thirdly and finally, it aims to define generic entrepreneurial skills for students and best profile of teachers in order to enhance the entrepreneurial approach within the university sector.

Q-PlaNet tries to gather different HEIs from all over Europe to have one in each region of the EU. An institution could become a

QRC should they have contacts with local industry, research organisations and companies which offer placements for students. Tasks of this regional QRC are to visit the host organisations in the region and to give them a 'quality label' if they fulfil the Q-PlaNet quality criteria. Those quality approved host organisations are listed on the QRC's website and can also offer placement positions directly on the QRC website.

The student can apply individually to those placement offers if they wish to and at the same time they can be sure that it is a placement where they will learn something more mundane that 'making copies and coffee'. The student can review the existing QRCs on the Q-PlaNet website and choose the one in the region of their interest and view the placement on offer. On the relevant QRCs' websites they will find appropriate information, links etc.

A very important activity of QRCs is the assessing or 'labelling' of the organisation offering the placement. The QRC investigates the potential host organisation of interest and proposes to them the implementation of a quality framework in order to be approved to organise student placements. Once the host organisation agrees to the terms and conditions of labelling attestation, the labelling procedure starts by submitting a 'visit plan' to the host organisation which provides a proposed timetable for the conditions to be assessed. Any required improvement action identified in accordance with Q-PlaNet requirements will be notified in writing during, or immediately following, the assessment visit. The candidate host organisation is then asked to advise how it intends to address the Q-PlaNet criteria. Once the improvement action has been implemented the Q-PlaNet label will be granted.

The label will be confirmed through surveillance visits by the QRC, with a full reassessment periodically. The Network assesses the quality of host organisations in Europe through its member QRCs, while the labelling is realised by the member QRCs, not directly by the Network. It is important that one host organisation shall have exactly one QRC that is responsible for its certification.

MONITORING AND EVALUATION

An external evaluation report of the project was commissioned three months prior to the end of the project and submitted before the end of the project duration. Its main objectives were, above all, to assess as to whether the project's activities and products ('deliverables') were in line with the aims and objectives outlined in the original application, which forms an integral part of the grant agreement with the EU/EACEA.

SUSTAINABILITY

The website www.q-planet.org is used as a dissemination tool and for informing partners and interested institutions about upcoming events concerning Q-PlaNet. KOOR/BEST at Hochschule Karlsruhe (University of Applied Sciences) initially operated as the Project Coordinator and is now

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functioning in the role regarding the building of the network. Each QRC has its own web space, integrated mostly on the website of their HEI. This provides all information about the project, the host organisations in the region, placement opportunities and more.

After the submission of the final report in November 2010, the main focus was geared towards enlarging the Q-PlaNet Network and on starting to award labels to enterprises. In order to spread the Q-PlaNet spirit and, as a further goal, to invite further partners to join the network and to become a Quality Reference Centre, Q-PlaNet was presented at several conferences. Furthermore, ERASMUS Consortia were contacted individually and asked if they were interested in joining the Q-PlaNet Network.
It is one of the main tasks of Q-PlaNet to carry out the official recognition procedure for new partners that wish to join the network. Special seminars on reference centres and realisation of quality-checked placements could take place to assist other countries in adopting the system.
However, it needs more time and work to connect partners and to reach an EU-wide acceptance of the quality placements concept. To realise these ideas, time and work beyond the actual project period are necessary. The project partners are committed to create the Quality Reference Centres network within Europe, in order to cover most regions in all member states in the next three to five years.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

The project has been very successful. The final report has been approved by the EC and received at a global scale 10/10.
The EC were highly satisfied with the project, its results and its dissemination activities.

The list of achievements of the Q-PlaNet project include:

- Developing of quality standards for Quality Reference Centres and for the organisation and management of practical placements,
- Establishing the Quality Placements Network grouping Quality Reference Centres for student placements. The network currently consists of five Quality Reference Centres. These centres check host organisations in their region in line with the Q-PlaNet placement criteria. Career services, students, HEIs, etc. will be able to freely access these host organisations which have been categorised on www.q-planet.org as a guarantee for quality training periods abroad,
- Creating guidelines for the organisation of student placements (providing, inter alia, knowledge about setting up different entities acting in the field of students placement and practical training),
- Publishing 500 booklets with a detailed description about the project, the recognition procedure and the quality standard were published and spreading these to towards higher institutions.

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SUCCESS FACTORS	The key factor for the success of the project is to be found in, explained with the strong commitment of the initiators of the project (EUE-Net and University of Applied Sciences Karlsruhe) and also the partners involved. The importance of the project idea and its results is based on the fact that, despite increasing number of student placements all over Europe, we can observe the lack of standardisation regarding quality in this area. Students, universities and also future employers should be able to check whether particular placement opportunities are in line with necessary standards.
IMPACTS	Whilst it is too early yet to really see the full impact of the project, the results of this project could lay the basis of a new level in quality of mobility in European educational programmes and could easily lead to certified placements with a quality standard label for enterprises. As a result of building a European Quality Reference Network, a general standard for integrated practical training periods could be realised.
STRENGTHS AND WEAKNESSES	One of the key strengths of the programme is the strength of the Q-PlaNet network with the great personal commitment of all the partners involved. A further strength in the trans-national approach taken which allows good practice to be spread across different regions. One of the project weaknesses is in the further funding of the project which could reduce the ability to disseminate and further develop the initiatives to get the most impact. Additionally it takes a lot of time and effort to create the network and outreach is needed as well in order to reach an EU-wide acceptance of the quality placements concept.
TRANSFERABILITY	The result of the Q-PlaNet project is a new model for quality assurance for practical placements for a student that is based on a trans-national placement's network. The approach to the quality of student placements and the methodology of quality assurance in this field could be used by interested partners hosting students for placements and also by HEIs organising student placements. Moreover, the Quality Reference Centres of student placements are an efficient, flexible structure, especially for systems and regions with a high number of student placement motilities.
THEMES	Quality assurance, Student placements, Student mobility, Curricula development
INFORMATION SOURCES	www.q-planet.org/ (accessed 31st May 2011)

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CASE 15 Q-PLANET ROMANIA

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RESOURCES

DOCUMENTS AND PUBLICATIONS

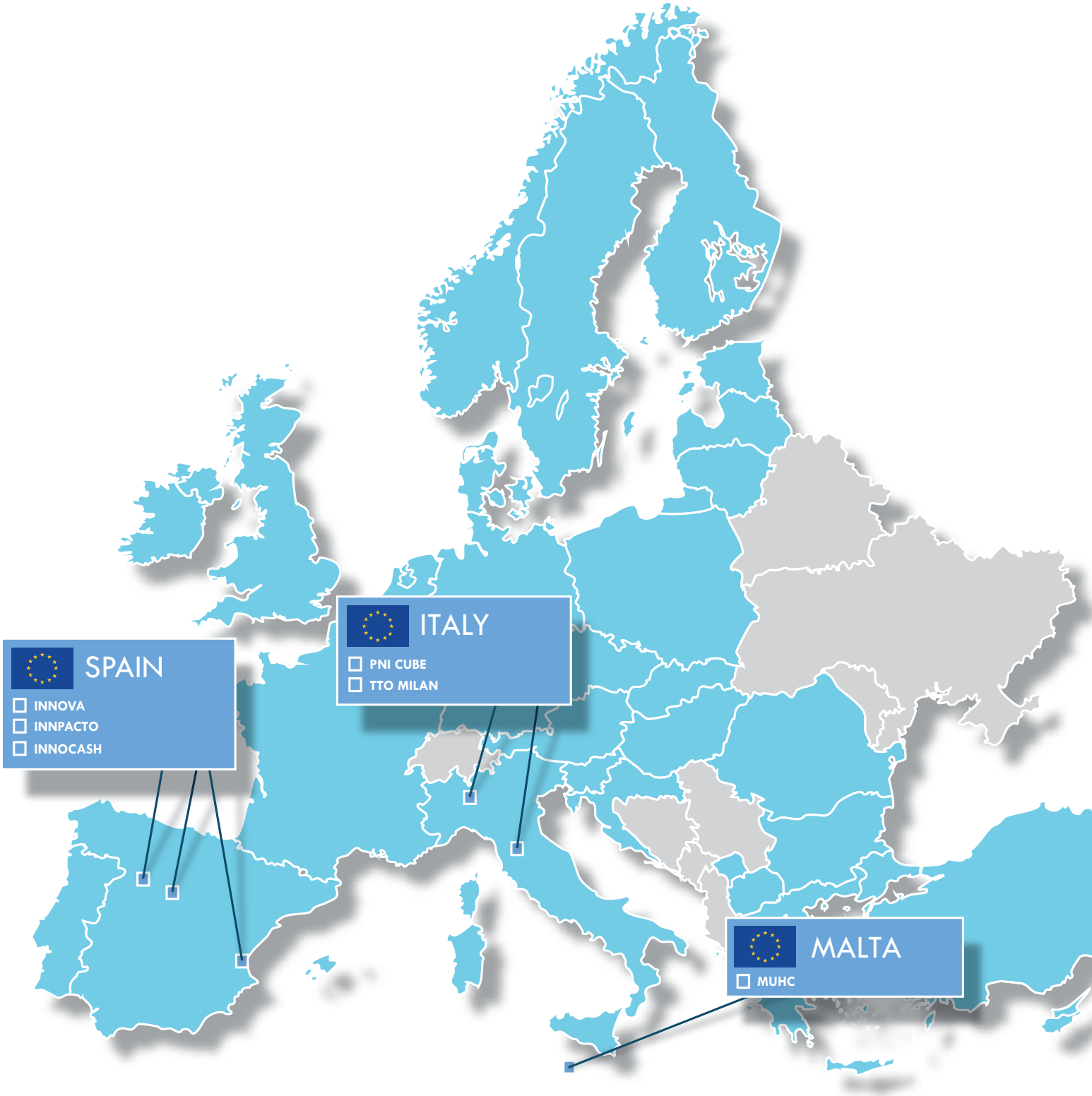
Quality standard for student placements
www.q-planet.org/D5.1.Q-PlaNet_quality_standard.pdf

Guidelines for organisation of student placements
www.q-planet.org/D4.1.Guidelines_for_organisation_of_student_placements.pdf

DATABASES AND WEBSITES

www.q-planet.org/, www.eue-net.org/
(accessed 31st May 2011)

SOUTHERN EUROPE CASE STUDIES



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SOUTHERN EUROPE

CASE 16 MUHC MALTA

CASE STUDY TITLE	THE MALTA UNIVERSITY HOLDING COMPANY (MUHC)
HEI / ORGANISATION NAME	MALTA UNIVERSITY
COUNTRY	MALTA
DATE	JUNE 2011
NATURE OF INTERACTION WITH BUSINESS	COMMERCIALISATION OF R&D RESULTS
NATURE OF GOOD PRACTISE/PROJECT	STRUCTURAL INSTRUMENT OR APPROACH

PROFILE

SHORT DESCRIPTION

STRADDLING BUSINESS AND HEI TO MAXIMISE COMMERCIAL POTENTIAL WITH THE MUHC

The MUHC was established to enable the marketing of the commercial side of the university. It is extremely intricate for an academic organisation to market itself. The holding is the interface between all university resources and the community. The MUHC can act as a business, but at the same time, it can act in the interests of the university. Moreover, the holding also wants to be a service for the community and businesses. It strives to include and offer different benefits to the wider community.

BACKGROUND

The MUHC Limited was registered on 17 July 1996, and registered on 2 August, 2007. The former name of MUHC was Malta University Services (MUS). MUHC Ltd was established on account of the fact that more and more services were being set up on the campus of the university.

The holding was created to embody the commercial interests of the University of Malta and the companies involved in the holding company. It also serves as the commercial interface between the University of Malta and the wider business community, brokering the resources and assets of the university to provide added value through commercial activity. The MUHC Limited provides strategic direction and corporate support to the companies within the group.

AIM AND TARGET

The MUHC was founded for several reasons, but most importantly, because of the commercial potential that it can offer to the university and the surrounding community. The holding has the freedom and the scope of a regular business organisation. This independence is regulated by the Education Act, Chapter 327 of the Laws of Malta. The holding has established a certain structure to reach out to all commercial elements within the university organisation.

The companies within the group are: Malta University Consulting Ltd, Malta University Residence Ltd and Malta University Broadcasting Ltd. Before the holding existed, all these different enterprises had operated separately, and in most cases, not very economically. The holding brings all these different enterprises together, and moreover gives them a strategic direction and a corporate support facility. These various separate companies can fully concentrate on their manifold expertise and the holding

gives them the comfort and support of operating in an efficient, competent and economical manner. Firstly, the holding wants to offer all services from these numerous companies to the students of the Malta University. Secondly, the holding also wants to present all offers to the wider community. The holding has realised that the wider community is very interested in taking advantage of these special offers and facilities provided by the university. For example, the language school offers specialised training for those who wish to learn medical or legal English. Malta University Consulting is an example of an offer that is of special interest to companies that want to set up in Malta. It implements the vast knowledge of the various departments within the university, and therefore it is in a position to consult, advise and support companies in all sectors of management.

Another great advantage of the MUHC is that it can market all these companies under one name, and therefore reach out to the public as a much larger force. Since it operates in a more entrepreneurial way, the public understands that the services of the university are open to the public at large, and not just simply to students. Furthermore, the costs of marketing of all services are significantly lower under one name, and the recognition is much higher since all the different branches of the university operate under one name and logo.

Services offered by the holding company include the following:

- Organising student projects with business
- Coordinating student internships / work experience
- Coordinating student services
- Acting as a coordinating contact point between the university and business (internally and externally focussed)
- Monitoring and evaluating the various companies of the holding
- Marketing the university and its competencies.
- Managing tax responsibilities for the group and
- Consulting, advising and supporting companies

FUNDING

The MUHC finances itself. The holding is a group of several different companies and acts as a commercial centre and headquarters. One of the holding's main tasks is to make sure that all companies involved operate profitably to ensure their existence for the future. The holding's independence, and the fact that it does not rely on funding from the university, is one of its salient advantages. It can react directly and swiftly to the needs of and developments taking place in the market.

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CASE 16 MUHC MALTA

IMPLEMENTATION

STRATEGY AND ACTIONS

There are several strategies and actions of the MUHC concerning how to reach out to businesses and the wider community. Firstly, and most importantly, the establishment of one holding under which all branches and offers of the university can operate, was the first step towards more university to business interaction. The holding gives the university an identifiable commercial face that can be recognised by the wider community and businesses in Malta, and indeed, Europe.

Secondly, the fact that the holding commercialises knowledge and expertise from certain areas of the university ensures that the offer the customer is receiving corresponds to state-of-the-art educational standards. New techniques and innovations can be brought directly onto the market. The direct access to science is one of the clear advantages of the holding. Even though it acts in a commercial way, it can always provide its customers with the highest educational standards. For example, Malta University Labs Services can offer business clients up-to-date research work conducted by highly qualified staff from the university. This is another approach of the holding. On the one hand, of course it wants to offer services to the business sector and the community, but on the other hand, an additional aim is also to offer students the chance to work in a business environment directly on the campus. The work that is provided by various companies on the campus, supports, helps and facilitates the interaction between future employees and employers.

Thirdly, the services which the holding can offer are, in most cases, less expensive than typical offers of their industrial counterparts. Even though the holding acts as an enterprise, it can offer payment rates which are affordable. This is mainly due to the fact that certain services are performed primarily by students. The holding, of course, has to make a profit to be sustainable and to have the opportunity to grow. However, the profit margin is not as high as that of a normal business enterprise.

The fact that all companies now act under one holding makes it very easy to offer specialised packages with the corresponding facilities to companies.

The holding also presents itself at local and neighbouring countries' trade fairs in order to attract more potential customers. It also has the benefit of making businesses acquainted with the offers, services and facilities of the holding. The intention is to be recognised by the business world, and to show in a practical manner, what offers, services and facilities these companies could benefit from by choosing the holding. Furthermore, it is essential for the holding to also perform internationally, especially because the university has such a diverse and international background. Consequently, the holding also endeavours to attract international business and students to use their offers, services and facilities.

MONITORING AND EVALUATION

One of the main tasks of the holding is to monitor and evaluate the various companies of the holding. It checks and optimises the performance of all companies of the Malta University. It has direct access to all activities of every company and can intervene and offer support if one part is not performing as successfully as envisaged. Furthermore, it can take direct actions to adapt to current changes and demands in the market and optimise the different processes. One example to help illustrate this is when the holding realised that sufficient simple housing for students was lacking on the campus. It also identified a demand for a higher standard of housing. As a result, the university was able to react accordingly to solve the problem. In addition, the fact that all companies now function under one holding makes it easier to provide money to different parts as the need arises.

The best indicators of the success of the holding are the earnings and revenue generated by the companies. Moreover, the feedback from businesses and the wider community is also a good tool to measure the success and the acceptance of the operations of the holding and its companies.

SUSTAINABILITY

The sustainability of the holding is ensured through several measures. Firstly, the fact that the holding has control and an overview of all services gives it the power to react directly if specific problems with a business unit occur. Secondly, the fact that the holding aims to achieve a profitable margin with all services ensures the future and moreover helps the holding to grow and expand. Thirdly, and most importantly, the fact that the holding acts and functions in the name of the university and offers all services on the campus, ensures its own sustainability.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

The main achievement of the MUHC is that all the established companies have been made self-sustainable.

SUCCESS FACTORS

One of the great success factors of the holding is the brand name of the university. People and businesses within the wider community trust the name of the University of Malta. It stands for state-of-the-art scholarship and quality. A university name also represents and indicates a certain high standard. Consequently, one can find the name University of Malta in every name or logo of each company within the holding.

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CASE 16 MUHC MALTA

STRENGTHS AND WEAKNESSES	The holding has the clear advantage of being able to operate as a commercial business unit directly on the University of Malta campus. It can market itself through the university and can reach out to a variety of different customers. This includes students but also business enterprises which are attracted to the university on account of its distinguished name, success and reputation.
TRANSFERABILITY	In general terms, the MUHC is transferable to any other university environment. That is, it can operate at any university that offers services to business enterprises and the wider community. The fact that it is a holding, which includes all university companies, makes it easier for a university to reach out to these customers. Even though not every legal system allows such a university business to act so freely, it is essential that the holding can function as an independent commercial enterprise.
THEMES	Commercial interface, Holding, Malta University; Community; Strategic direction and corporate support
INFORMATION SOURCES	www.muhc.com.mt www.um.edu.mt/ (all accessed 31st May 2011)
PUBLIC CONTACT DETAILS	Malta University Holding Co Ltd Old University Building St. Paul's Street Valletta VLT 1216 Malta Phone: 21234121/2 Email: info@muhc.com.mt Website: www.muhc.com.mt

RESOURCES

DATABASES AND WEBSITES	www.muhc.com.mt www.um.edu.mt/ (all accessed 31st May 2011)

SOUTHERN EUROPE

CASE 17 PNICUBE ITALY

CASE STUDY TITLE	PREMIO NAZIONALE PER L'INNOVAZIONE (PNI) CUBE
HEI / ORGANISATION NAME	ASSOCIATION OF THE ITALIAN INCUBATORS AND ACADEMIC BUSINESS PLAN
COUNTRY	ITALY
DATE	MARCH 2011
NATURE OF INTERACTION WITH BUSINESS	ENTREPRENEURSHIP
NATURE OF GOOD PRACTISE/PROJECT	STRUCTURAL INSTRUMENT OR APPROACH

PROFILE

SHORT DESCRIPTION

THIS AWARD IS A SORT OF 'CHAMPIONS LEAGUE' FOR THE BEST ENTERPRISE PROJECTS ORIGINATING IN A UNIVERSITY ENVIRONMENT

PNICube is the association that groups together the academic incubators and the Italian Academic Business Plan competitions (called Start Cups). Today, it includes 34 associates between universities and incubators. It was founded with the purpose of stimulating the creation of new enterprises. University knowledge helps in subsequently introducing them to the market.

PNICube is a non-profit promoter of two important initiatives: the National Award for Innovation, which is a competition where the best innovative enterprise ideas are selected, and the event Start Up of the Year, which rewards the young high tech enterprise achieving the best market success.

BACKGROUND

In 2003, the Minister of Productive Activities financed the University Incubators Network (IUNet) project with the purpose of creating a connection network among the academic enterprise incubators. In the same year the first edition of the National Award for Innovation (PNI) was launched. This award is a sort of 'Champions League' for the best enterprise projects originating in a university environment and it is organised by five Start Cups. In order to take advantage of the experience given by IUNet and PNI, PNICube was created in 2004.

AIM AND TARGET

PNICube is organised as a non-profit association whose general purpose is to stimulate the creation of new enterprises with a high content of knowledge deriving from the university, and subsequently introducing them to the market. PNICube achieves this by bringing together university incubators, namely partnerships and consortiums with a university high participation, and universities and research centres developing activities related to the promotion of business creation.

As stated in its statutes, PNICube aims to achieve the following goals: to encourage the creation of academic incubators across the Italian territory; to exchange experiences among

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its members and promote their mutual cooperation; to promote the adoption of policies encouraging initiatives of enterprise incubation among the Italian governmental institutions; to achieve financial resources addressed to business creation activities of its members in connection and cooperation with other similar entities in an international cooperation framework; to encourage the dissemination of information of interest to operators through publications, conferences and educational activities; and to contribute to the organisation of the National Award for Innovation, the national final of the local business plan competition.

FUNDING

PNICube has the legal status of an association, which means that funding comes from the associates' fees.

Members of PNICube are universities, companies and consortiums with university participation, which manage or coordinate business incubators and local business plan competition. Members are required to pay an admission fee of €1,000, and an annual membership fee determined by the Board of Directors. The assembly may also decide on proposals from the Executive Council, which can include special contributions.

There are also private sponsors and public bodies that participate in the competitions supporting the cash awarding of each competition. Some of these supporters include Telecom Italia, Emilia Romana Region, Piemonte Region, CRT Foundation, Quantica (Innovation Venture Capital), among others.

PNICube's annual event, Start Up of the Year, provides €3,000 prize money, and additionally the opportunity to access a wide network of possible financial and industrial partners. The British Consulate also provides an extra premium for the potential regulation of internationalisation and there is recognition of the academic enterprise innovations by the President of the Republic.

The winners, selected by the local Start Cups participate in the final event, the National Award for Innovation (Working Capital), which provides a €100,000 cash award to the four best projects as well as the allocation of research grants for the 30 most innovative proposals.

IMPLEMENTATION

STRATEGY AND ACTIONS

The model followed by PNICube for the development of new entrepreneurial initiatives from the academic world, provides two steps for its implementation:

1. The first step is the local Start Cups held throughout the Italian universities each year. The most established university arranging this kind of competition is the University of Bologna. It launched the first business plan competition organised by a university in Italy in the year 2000. Start Cups provide participants with management training and assistance for the preparation of their business plan. These competitions have the two-fold objective of spreading the entrepreneurship culture among students and researchers of Italian universities and also enabling PNICube to select the best business ideas. These best business plans among the Start Cups will take part in the

National Award for Innovation (Premio Nazionale per l'innovazione).

2. The second step takes the business plans forward from a theoretical scenario to the area of real business management. For this step the incubators associated with PNI-Cube are at the disposal of the entrepreneurs in order to supply those tangible services (e.g. office accommodation, Internet connection) and intangible services (e.g. managerial consultancy, networking), which are necessary to run a new business.

MONITORING AND EVALUATION

The process of selection and evaluation of companies nominated for the competition is conducted by a panel consisting of investment funds experts, specialists in early-stage financing and business managers. The quantitative and qualitative parameters used in the assessment process are annually assessed and selected by the Association of Italian Incubators.

From the selected candidates of the Start Up of the Year, the winner will be chosen as follows: (a) the jury identifies a short list of finalists (minimum of 10, maximum of 15); (b) during the event each finalist will have an 'elevator pitch' for five minutes in front of a jury and the public; (c) a jury votes for the final winner.

Each year, monitoring activities of the winners of the local Start Cups are carried out. This survey provides information about the number of patents, employees, average sales per firm, total turnover, and also the survival rate of these start-ups.

SUSTAINABILITY

This association deals with technological transfer policies through the creation of innovative enterprises in the world of academic research. It benefits from a wide support among venture capital business, public bodies, foreign institutions and companies in general.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

The accomplishments achieved by the member Start Cups are highly significant. If we consider 2010 as an example, the 16 local business plan competitions taking part in the National Award for Innovation that took place in Palermo generated 786 business ideas, 2149 participants and 354 business plans collectively. It was significant that 29% of the total number of projects came from information technology and that 28% of the team members were female.

SUCCESS FACTORS

One of the main success factors of PNICube has been its capability to link common interests among different Italian organisations, such as universities with incubators but also private companies with regional administrations. Collaboration through this framework has created a strong network among its 34 associates (universities and incubators)

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and the rest of the partners.

Each one plays an important role facilitating the creation of new business based on knowledge from university, selecting the best projects, and offering financing and enhancing the entrepreneurial excellence in Italy.

IMPACTS

The increased focus on creating and developing business ideas amongst the associated organisation has been one of the major impacts as has concentrating the know-how of entrepreneurs into a programme.

As a result of the success achieved among the different competitions, the opportunity has emerged of giving support to some sectors that require special attention in terms of innovation. An example is the agricultural sector and the recently launched AgriStart Up competition.

STRENGTHS AND WEAKNESSES

The main strength of PNICube can be found in its associates, as it groups the major universities and incubators throughout Italy. Furthermore, PNICube has been capable of attracting the support of different kinds of organisations ranging from local and national bodies to international entities and companies.

A weakness is the low involvement in technological transfer policies nationwide (such as with the Minister of Education, university and research).

TRANSFERABILITY

The combination of different funding environments comprising entrepreneurial, academic and regional governments makes it transferable to any other country with no centralised systems.

It represents an original mixture of the regional and national environment well exemplified along the competition procedure, from the different local Start Cups to the national event Start Up of the Year.

THEMES

Incubators, Business competition, University, Enterprise.

INFORMATION SOURCES

www.pnicube.it
www.startcup.com/
www.palermo.pnicube.it/
www.workingcapital.telecomitalia.it/
(all accessed 31st May 2011)

PUBLIC CONTACT DETAILS

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RESOURCES

DATABASES AND WEBSITES

www.pnicube.it
www.startcup.com/
www.palermo.pnicube.it/
www.workingcapital.telecomitalia.it/
(all accessed 31st May 2011)

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SOUTHERN EUROPE

CASE 18 TTO MILANO ITALY

CASE STUDY TITLE	TECHNOLOGY TRANSFER OFFICE (TTO) OF MILAN POLYTECHNIC
HEI / ORGANISATION NAME	MILAN POLYTECHNIC
COUNTRY	ITALY
DATE	MARCH 2011
NATURE OF INTERACTION WITH BUSINESS	COMMERCIALISATION OF R&D RESULTS
NATURE OF GOOD PRACTISE/PROJECT	STRATEGY

PROFILE

SHORT DESCRIPTION

A PATENT-FOCUSSED TTO GIVES MILAN POLYTECHNIC A LEADING EDGE

The Technology Transfer Office (TTO) of the Milan Polytechnic is one of the first established TTOs in Italy as well as being one of the founders of Netval (TTO Network of Italian Universities) and Proton Europe.

In recent years it has achieved proven results in terms of IP management with a portfolio of 400 patents, half of which are in use in industry and trade. The TTO is the reference structure of the university for the support of technology transfer activities. The staff consists of a dynamic group of specialists who are highly motivated and result driven.

The office is always open and available to join the researcher at every stage of the process of technology transfer.

BACKGROUND

Milan Polytechnic is a technical university with about 1,150 researchers and professors and 40,000 students. Milan Polytechnic was one of the first universities in Italy to understand the importance of technology transfer issues and to establish an office dedicated to university IPR management.

During the period 1998-2000, the Polytechnic of Milan was involved in a European project (NEICO) with the main purpose of doing a feasibility study for the implementation of an IPR-dedicated structure within the university. The first structure supporting researchers in patent-filing activity was developed in 1999. This first service was enlarged in 2001 with the creation of a 'Patent Service' within a university structure not dedicated to technology transfer.

The TTO was established in 2002 as a technology transfer dedicated structure within the university.

AIM AND TARGET

The technological transfer process is a complex activity which involves different players not only from within the university, such as researchers, but also from outside the university such as companies, consumers, and the like. In a world where the need for innovation is increasingly evident, it is vital to know how to build a bridge between those who develop new knowledge and those who are able to bring the benefits of innovation to the final user.

In this sense, the main objective of the TTO is to improve the excellence of Milan Polytechnic in its relations with business, and moreover, with the world of production, promoting the exploitation of research results and playing an active and responsible role in the collaboration processes. Milan Polytechnic aims to be one of the leading universities in the field of technology transfer at an international level for the benefit of the national community favouring industrial and social impacts.

OTHER REFERENCES

According to Netval's 2009 report, TTOs of other Italian universities have stated that Milan Polytechnic's TTO is undoubtedly a point of reference and the model to follow in terms of research exploitation and Technology Transfer.

Moreover, Milan Polytechnic's TTO has turned out to be the programme with which the other Italian universities have the most frequent collaboration for the purpose of mutual learning and exchange of best practices.

FUNDING

Annually, Milan Polytechnic's central government allocates a budget for the operation of TTO (dedicated to the activities). Two-thirds of this budget is spent on the maintenance and management of patent portfolios, whereas a smaller sum is used for spin-offs.

In addition to this budget, the TTO self-finances its activities to a considerable extent. This self-financing comes from patent sales, royalties and fees, sale of shares in spin-offs, consulting and involvement in projects.

IMPLEMENTATION

STRATEGY AND ACTIONS

In a global market in which the industrialised countries are suffering from the relocation of their traditional manufacturing industries, the competitiveness is heavily dependent on research and innovation. The production and use of scientific and technological knowledge has become crucial in this new competitive knowledge society.

In this context, the mission of Milan Polytechnic, through its TTO, is to develop and encourage the technology transfer to help the economic regional development.
Technology transfer is a tool to enhance research and resolve the apparent conflict between industry and university. The TTO wants to be a common ground for collaboration between Milan Polytechnic and industry, and to contribute to the development.

The main actions undertaken by the TTO of the Milan Polytechnic are:

1. Valorisation of the university research: This includes the promotion and awareness of the IPR protection and the technology transfer tools

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2. Research protection: Expanding and diversifying the forms of protection of the university's research results
3. Registering patents: Based on research results highly examined through internal valorisation procedures
4. Supporting spin-offs: The generation and growth of this kind of knowledge transfer, which can have a great impact in helping to strengthen the regional economy
5. Communication: Increasing the outside and inside visibility of the TTO as a reference point, both for researchers and industry
6. Collaborative research with industry: providing feedback about the industry interests opening new research lines, but also revenue to be reinvested and
7. Growing revenue: Potentially generated through any technology transfer tool, but mostly intended through patent licensing.

MONITORING AND EVALUATION

Milan Polytechnic's TTO is trying to create a balance scorecard of indicators in order to evaluate the achievement of their goals and the effectiveness and the efficiency of the office.

Moreover, at the beginning of each year a series of short-term and specific objectives, consistent with and directly descending from the strategic goals, are discussed and established.

During the year, the degree of achievement of these objectives is periodically evaluated and corrective actions are established and implemented.

SUSTAINABILITY

Milan Polytechnic's TTO is one of the founders of NETVAL (the Network of Italian Universities TTOs) and of European Proton Europe, the European Knowledge Transfer Association.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

A patent portfolio consisting of approximately 500 patents and 20 spin-off companies created (average two per year), which in 2010 generated a total turnover of approximately €11m.

SUCCESS FACTORS

Firstly, a continuous look at external realities and the most successful cases at the national and international level in order to capture best practices for the improvement of internal procedures and the efficiency of the office on the whole. Additionally, the development of literature and theoretical models relating to technology transfer in order to find improved ways of research exploitation, more consistent with the evolution of the external context, and improving the effectiveness of the service provided.

IMPACTS

The TTO of the Milan Polytechnic is a young organisation that still needs adaptation in the institutional and socio-economic environment to develop it range of influence.

CASE 18 TTO MILANO ITALY

Despite this, it has already been involved in the creation of several networks, both at a national and international level.

STRENGTHS AND WEAKNESSES

The main strengths and weaknesses result from how Milan Polytechnic's TTO began its activities, i.e. a context characterised by no national references or best practices to follow and hence the need to adapt international references to its own case. In reality, it was not so straightforward because there are many differences in the environment and in the legislation of countries. Conversely, this allowed Milan Polytechnic's TTO to play a leading role in implementing technology transfer policies and strategies in our country. It was also recognised, at a national level, as a reference point and the model in technology transfer and research exploitation.

TRANSFERABILITY

The IPR methodology implemented and the large number of patents achieved in a short term, makes this TTO an example not only for the rest of Italian TTO, but also for any other similar organisations in Europe.

THEMES

Technology transfer, Spin-off, Patents, IPR, Researchers

INFORMATION SOURCES

www.polimi.it/tto
(accessed 31st May 2011)

PUBLIC CONTACT DETAILS

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Technology Transfer Office
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Email: info.tto@polimi.it

RESOURCES

DATABASES AND WEBSITES

www.polimi.it/tto
(accessed 31st May 2011)

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SOUTHERN EUROPE

CASE 19 INNOCASH SPAIN

CASE STUDY TITLE	INNOCASH PROGRAMME
HEI / ORGANISATION NAME	GENOMA ESPAÑA FOUNDATION, SPANISH MINISTRY OF SCIENCE AND INNOVATION (MICINN)
COUNTRY	SPAIN
DATE	MARCH 2011
NATURE OF INTERACTION WITH BUSINESS	COMMERCIALISATION OF R&D RESULTS
NATURE OF GOOD PRACTISE/PROJECT	FRAMEWORK CONDITION

PROFILE

SHORT DESCRIPTION

FILLING THE 'VALLEY OF DEATH' FOR INNOVATIVE R&D WITH SPANISH INNOCASH

The InnoCash programme was developed through the Spanish Government by the Ministry for Science and Innovation and is managed by Fundación Genoma España.

InnoCash's main task is identifying, valorising and nurturing R&D results and technologies, generated primarily by public research centres and universities. These innovation projects are subsequently taken to the market by business and financial investors.

BACKGROUND

Genoma España is a governmental foundation the leading trustee of which is the MICINN. Genoma España focuses on the transfer of intellectual assets, technology and innovation and entrepreneurship, particularly in biotechnology, to business. The Ministry for Health and Social Affairs (co-founder), the Ministry for Environment and Rural & Marine Environments and the Ministry for Industry, Tourism and Trade, as well as the regional governments of Navarre and Andalusia also support the activities of Genoma España.

The Spanish Government through the MICINN, has developed a series of measures and programmes designed to promote business competitiveness and stimulate national development. This is achieved through technological improvement of businesses and rewarding their increased efforts in R&D investment. These development programmes are supported through direct grants, repayable loans with long-term zero interest rates or other types of assistance. Public schemes are needed to help attract private investment to areas of R&D, particularly technology-based R&D. Otherwise investment tends to be directed to 'less-technological' initiatives, which are safer in the short-term but, generally, do not have the potential to generate both economically and socially high mid-and long-term returns.

CASE 19 INNOCASH SPAIN

AIM AND TARGET

With the aim of facilitating knowledge transfer and generating value from it, the InnoCash programme entails the following:

- Mobilising private money - from investment organisations and businesses for R&D development
- Accelerating technology transfer - by acquiring promoters and investors who are willing to develop, nurture and market products and/or innovative services. This also extends to purchasing or licensing results, technologies and/or IP that otherwise remain idle at Spanish public universities, research and technology centres and
- Stimulating business productivity and high-quality job creation - through projects resulting from an innovation

R&D valorisation involves the many activities that bring knowledge coming from universities to business, and transforming it into innovation in the form of processes, products and services that are used by society. The InnoCash programme facilitates the nurturing of R&D results and technologies from universities, which are still on-the-drawing-board for market placement and need additional resources (e.g. surveys, scaling, prototyping, business networks) to make the transfer possible.

FUNDING

The MICINN has set aside an annual budget of eight million Euros for Genoma España to finance public research institutions, technology centres and universities, other public R&D institutes and public and private non-profit R&D organisations, willing to transfer R&D to the private sector. The budget is intended to stimulate private investment in creating technology-based firms or economic interest groups (Spanish acronym, AIE) that participate in advanced R&D projects with clear marketing expectations arising from the former institutions.

The financial framework of InnoCash offers a wide range of advantages compared to other financing products. As an example, no guarantees are required for financing less than or equal to €450,000, and this also includes the existence of a three-year period of grace. The maximum financing offered by InnoCash to each project will not exceed €1m. This can represent up to a maximum of 50% of the overall project costs and must be equal to the minimum private capital investment.

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CASE 19 INNOCASH SPAIN

IMPLEMENTATION

STRATEGY AND ACTIONS

The InnoCash process is divided into two phases. Suppliers participate depending on the type of proposal or technology sent to the programme.

Valorisation Phase: This starts with the submission of a technology pre-offer by a supplier that, if validated by an IC reviewer, becomes an offer. Once an offer, a complete technology dossier is developed to help valorise the proposed technology. The valorised technology is given public outreach through the IC showcase. Therefore, the technology is made available in a much more favourable condition to capture the attention of potential investors than it was at the start of the process. In summary, this phase begins with a pre-offer and ends with its publication as an offer by the IC showcase.

Financing Phase: Once an offer is given public access, if any investors or promoters formalise their interest in financing and developing an innovative project from the technology presented, the offer becomes a nurturing project. It is then disseminated in the IC showcase to attract additional funds from other co-financing investors. If the nurturing project is attractive enough and gets additional financing, then the rest of the capital needed is provided by the IC programme. At this point, the nurturing project finally becomes an IC project.

MONITORING AND EVALUATION

The monitoring and evaluation process of the overall project progress is carried out using printed forms, issued in all cases on an annual basis. These reports discuss the current project progress with a planned schedule of work in terms of performance, time and budget to forecast the finishing date of the project.

Since awarded projects are still within the framework of the annual reporting period, the monitoring and evaluation is strictly limited to collecting the necessary project progress information and timely outcomes, by way of: (a) scientific and technological progress of the project; and (b) justification of project costs (e.g. personnel, expenses, equipment and instrumentation, outsourcing, consumables, travel and expenses, overheads) duly incurred and spent.

Additionally, companies involved in the projects must submit their annual accounts properly audited as expressed in the request for applications.

SUSTAINABILITY

With substantial private investment supported with public funds, the programme seems to be capable of being supported in the long-term.

CASE 19 INNOCASH SPAIN

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

Since the InnoCash programme is still a recently created initiative, little can be said about its real outcomes and impact. Nevertheless, the programme has been able to mobilise (generate) substantial private investment (€15.887.197) with public expenditure at €4.786.095.

Until now, 20 innovation projects have been financed and 70 valorised technologies are given public outreach by the InnoCash website.

SUCCESS FACTORS

The critical success factors for the InnoCash projects are as follows: quality of the selected projects in terms of scientific soundness; degree of market innovation and economic potential; agility in the process without compromising the rigour of the due diligence (whilst offering fast response to potential investors) and strength of the investment commitment on the side of the private investor.

IMPACTS

As a positive side effect of the programme, a network of consultant partners has developed, which extend the reach of the Foundation´s own promotion and divulgation efforts, using the programme's assistance to lure investors to individual projects, thus helping the overall success of the scheme.

InnoCash financing is only awarded to technologies or projects that demonstrate being applicable from the public R&D sector to business. Therefore, InnoCash projects are innovative in nature, commercially exploitable, aimed at clear market needs and competitively profitable.

STRENGTHS AND WEAKNESSES

The strengths of the InnoCash programme are a strong network of tech-oriented investors and business angels and the experience and qualifications of the team in both technological/scientific and business-planning issues. These are needed to fully assess the potential of a high-tech-based business initiative.

Weaknesses are viewed as an insufficient influence to have purely financial private investors and direct access is needed to improve success stories in qualitative terms (i.e. attracting 'fresh' funds for R&D).

TRANSFERABILITY

In terms of transferability, assuming there is government support, the programme could be transferred if there is a good mix or public sector R&D organisations (especially universities), local businesses willing to invest in R&D and some level of pre-existing venture capital activity.

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CASE 19 INNOCASH SPAIN

THEMES	Innovation projects, Market, Business, Financial investors, Technology transfer, High quality job creation
INFORMATION SOURCES	InnoCash Website www.innocash.es/Home.aspx (accessed 31st May 2011)
PUBLIC CONTACT DETAILS	Emilia Gómez Fundación Genoma España C/ Pedro Teixeira, 8 – 2ª Planta 28020 Madrid Spain Phone. 91 449 12 50 Email: innocash@innocash.es

RESOURCES

DATABASES AND WEBSITES	InnoCash Website www.innocash.es/Home.aspx (accessed 31st May 2011)

SOUTHERN EUROPE

CASE 20 INNOVA SPAIN

CASE STUDY TITLE	INNOVA PROGRAMME
HEI / ORGANISATION NAME	POLYTECHNIC UNIVERSITY OF VALENCIA (UPV)
COUNTRY	SPAIN
DATE	MARCH 2011
NATURE OF INTERACTION WITH BUSINESS	COMMERCIALISATION OF R&D RESULTS
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

FINANCING INNOVATIVE SCIENTIFIC PROOF-OF-CONCEPT PROJECTS THROUGH TO COMMERCIALISATION

The INNOVA programme is a basic instrument within the policy of the Vice-Chancellor for Research to promote knowledge transfer performance at the Polytechnic University of Valencia (UPV) The programme finances innovative scientific proof-of-concept projects through to commercialisation. The projects participating in the programme are based on research results, which go through a technical evaluation process with particular emphasis on the interest of exploitation of such results.

BACKGROUND

The programme was established in the year 2000 in order to support activities to promote innovation within the university. Initially, these actions were aimed at providing resources to groups and research structures within the university, for the dissemination and management of R&D, such as attending trade shows, promotional materials, web page development, etc.

Later in 2005, the programme evolved to encourage certain activities aimed at introducing the capabilities and research results from the UPV into the market, gradually giving greater weight to the actions related to proof-of-concept demonstration and valorisation of R&D, as a valuable tool to support innovation.

These 'proof-of-concept' projects, which are based on identified research results, are undertaken with a technical validation that determines the interest of the exploitation of these results.

AIM AND TARGET

The UPV was one of the first Spanish universities to be aware of the necessity of providing effective tools to researchers in order to place their research results into society. In response to this necessity, the UPV set up the INNOVA programme whose main goal is to facilitate the transfer of knowledge generated within the university towards the productive sector, and encourage the adoption of strategies aimed at the strengthening of the relationship between the R&D structures and their customers. This

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strategy is aimed at the research structures of the UPV: groups, research centres, institutes and staff assigned to them.

Activities under the INNOVA programme are frequently linked to regional companies and help to create an innovative environment within the different research groups and centres belonging to UPV. This feedback between the regional economy and the university has historically opened new cooperation lines, and for this reason it has been further encouraged by the University of Valencia.

OTHER REFERENCES

Since 2011, the programme is part of the VLC/CAMPUS Valencia International Campus of Excellence. The VLC/CAMPUS has been promoted and is composed of the three most important regional institutions in the production of knowledge: the University of Valencia, the UPV and the National Research Council.

As a result of this process of cooperation between the three sponsor institutions, VLC/CAMPUS is an integration of 32 schools, 63 research institutes, 135 university departments, 46 libraries and learning resource centres, two scientific parks and the services and resources of the three institutions required to support their activities.

FUNDING

The INNOVA programme is financed by funds from the Vice-Chancellor for Research with an annual funding of about €600,000. About half of this budget will be set aside to fund proof-of-concept projects.

IMPLEMENTATION

STRATEGY AND ACTIONS

The INNOVA programme offers the researchers a wide range of tools to start or reinforce agreements with the private sector. For this reason, researchers represent the key factor of the success of the programme with their capacity to develop and maintain long-term relationships and to introduce new research groups to their business contacts considered vital.

The financial grants included by the INNOVA programme are convened on an annual basis through an open public call. The support lines of the programme are:

1. Financing of proof-of-concept projects - aimed at validating the application of a technology through prototype or demonstrator. The maximum grant per application for this line is €35,000 and the duration must be no longer than 12 months. The aid is intended to cover the costs of those projects aimed at technical validation through prototypes, demonstrators or similar, patents or other kind of industrial property of the Spanish Patent and Trademark Office (SPTO) or a similar office, or registered software on which exploitation rights for the UPV have been established,

2. Grants for participating in design and innovation competitions - in which an award has been obtained or has passed a competitive selection process. The maximum grant per application for participating in this kind of competition is €10,000.

The aid is intended to reimburse the additional costs of the UPV from participating in a contest of innovation or ideas, designs or prototypes of a product related to an innovation process

3. Grants for the preparation of research and innovation projects in collaboration with other research institutes or companies, to the submission of public administration calls. The maximum grant per application for this line is €1,800, which covers travel and representation costs and other costs related to collaboration proposals,

4. Loyalty bonus - for supporting and / or increasing the ratio in R&D with companies and other third parties. The maximum grant per application for the loyalty bonuses is calculated using an equation about the turnover increase, and

5. Bonuses for recruiting doctors and technologists at companies - with whom there is an existing collaboration in R&D. The maximum grant per application for the endorsement of this kind of recruitment is €4,000 for doctors and €2,000 for technologists.

MONITORING AND EVALUATION

The UPV subcommittee on R&D is responsible for the evaluation of applications and the proposal of the aid distribution following the criteria established in the call and within the limits indicated therein. If necessary, the sub-commission may consider the necessity of seeking external assessment for the evaluation of the proposals. The commercial potential of each result-seeking financing for proof-of-concept projects is always evaluated by outside experts in the market at which the invention is directed. The rest of the activities are evaluated internally. The experts in the market are professionals working in the areas related to the proof-of-concept projects. They are paid €450 for their evaluation, and their feedback is much appreciated, not only by researchers, but also by the Knowledge Transfer Office professionals.

In addition to the on-going monitoring of the project's progress, at the end of the project a final report will be created, in which the results obtained and the marketing activities undertaken are described.

SUSTAINABILITY

The programme has been developed steadily over the past 11 years (since 2000). Since 2011, the programme has been part of the VLC/CAMPUS, Valencia International Campus of Excellence, launched by the public universities of the City of Valencia and the research centres belonging to the Spanish National Research Council (CSIC) from the autonomous region.

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IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

In the past five years nearly 80 proof-of-concept projects have been funded, of which 17 have turned into business plans and another nine are operating using licenses.

SUCCESS FACTORS

There are several features regarding the UPV that contribute to the success of the INNOVA programme. Each success is linked to the other, making it difficult to determine the importance of one upon another.

Firstly, we can observe that projects participating in the programme are based on research results clearly identified and subject to rigorous technical validation.

Furthermore, the technical characteristic of the UPV provides enough quality projects to the programme to arouse the entrepreneurial interest of businesses of the region.

The INNOVA programme has become a basic foundation within the policy of the Vice-Chancellor for Research. The experience accumulated during the past years has refined the identification and assessment processes and has increased the success rate of these projects in the market place.

IMPACTS

In addition to the results obtained, the INNOVA programme is a sign of interest within the UPV in developing an active policy to transform their research results in innovation for society.

Furthermore, it represents a cultural evolution among researchers who increasingly understand the importance of their research results in accordance with its application in the innovation process.

STRENGTHS AND WEAKNESSES

The UPV has a long experience as an active element in the regional innovation system. During the last years it has strengthened its two main policy lines; technological research and business collaboration. This entrepreneurial vision of the UPV governing body, and especially the Vice-Chancellor of Research, gives support not only for the INNOVA programme but also other different activities relating to the technology transfer endorsement and generating a successful breeding ground over the years.

To achieve the goals outlined in terms of research results transfer, the UPV relies on its Knowledge Transfer Office (Technology Transfer Centre). The Technology Transfer Centre provides researchers with advisory services in preparing their applications to the INNOVA programme.

In 2011 the INNOVA programme has tried to solve a recurring problem of past years. Some highly innovative activities related

	to areas of significant presence in the UPV remained uncovered by the programme. Industrial design was one of the areas not coming from scientific research results, which automatically excluded these innovations from the INNOVA programme.
TRANSFERABILITY	The combination of the different successful elements of the INNOVA programme, e.g. the entrepreneurial culture, the funding support the identification of clear research results, etc. make this strategy easily transferable in most of the universities.
THEMES	Proof of concept, Innovation, Knowledge transfer
INFORMATION SOURCES	www.upv.es/entidades/CTT/indexi.html www.vlc-campus.com/wp-ontent/documents/valorizacion.pdf (all accessed 31st May 2011)
PUBLIC CONTACT DETAILS	Cristina Alemany Lázaro Centro de Apoyo a la Innovación, la Investigación y la Transferencia de Tecnología UPV Valencia Spain Phone: +34 963877007 ext 74093 Email: calemany@ctt.upv.es

RESOURCES

DATABASES AND WEBSITES	www.upv.es/entidades/CTT/indexi.html (accessed 31st May 2011)

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SOUTHERN EUROPE

CASE 21 INNPACTO SPAIN

CASE STUDY TITLE	INNPACTO
HEI / ORGANISATION NAME	SPANISH MINISTRY OF SCIENCE AND INNOVATION (MICINN)
COUNTRY	SPAIN
DATE	MARCH 2011
NATURE OF INTERACTION WITH BUSINESS	COLLABORATION IN R&D
NATURE OF GOOD PRACTISE/PROJECT	FRAMEWORK CONDITION

PROFILE

SHORT DESCRIPTION

INNPACTO IS CREATING THE SPANISH FRAMEWORK FOR THE KNOWLEDGE ECONOMY

INNPACTO is one of the most important financial calls of the Spanish Innovation Plan ('INNOVACCION'), under the authority of the Spanish Ministry of Science and Innovation (MICINN) in the period 2009 to 2011. INNPACTO has been designed to support the financing of R&D initiatives capable of linking public-private cooperation and leading companies in the Spanish territory.

BACKGROUND

INNPACTO is one of seven competitive calls that make up the 'Innovation Plan (INNOVACCION)', developed by the Ministry of Science and Innovation and aligned with the state strategy of innovation. The other six calls that complete the Innovation Plan are;

1. INNPLANTA - promoting new infrastructures in scientific parks
2. INNOEUROPA - for the collaboration of the Spanish Technology Centres with partners in Europe
3. INNCIDE - fostering the development of Spanish knowledge transfer offices
4. INNFLUYE - for the development of technology platforms.
5. INNOCAMPUS-CEI - fostering the excellence among Spanish universities and
6. INNCORPORA - for the recruitment of technologists

This plan is one of the actions compounding the innovation strategy with which the Ministry of Science and Innovation wants to help create more stable jobs, form new innovative companies and a new Spanish economy, that operate more independently of the international economic fluctuations.

AIM AND TARGET

INNPACTO aims to develop innovative companies capable of guiding the activity of the existing industry towards innovative initiatives, mobilising private investment, generating quality employment and improving the Spanish technological balance.

The operational target of the call is to transfer knowledge from research groups to industry, in order to provide competitive advantages to the company (e.g. new products, new methodology, improvement of processes, etc.) or to provide solutions to concrete technical or competitive issues.

It is aimed at all agents of the Spanish science, technology and business sectors, which includes companies, public and private

universities, public and private research institutes, support centres for technological innovation, partnership businesses, public research organisations, etc.

FUNDING

INNPACTO is supported by the ERDF. These funds, contained in the Structural Funds, together with the Cohesion Funds promote greater social and economic cohesion within the EU, through the financing of public expenditure policies that are developed by member states and aimed at achieving this objective.

The main objective of INNPACTO is to foster public-private partnerships through concrete R&D projects, and therefore there are specific European regulations that regulate the financial aspects regarding the private partners. The 'community framework for state aid in the form of public service compensation' applied within this grant, allows only the finance of expenses directly related to the project, and they are incurred from the time of the grant application submission.

During 2010, the budget of INNPACTO reached €837m distributed into grants, loans and repayable advances. The budget for the 2011 period was increased by 14% and reached €941m.

IMPLEMENTATION

STRATEGY AND ACTIONS

INNPACTO has been conceived to respond to the current challenges of the Spanish economy. It has achieved a significant budget to support more ambitious projects, which are clearly market-oriented and carrying international components.

Projects within INNPACTO must be led by companies involving collaboration of public research centres. The minimum budget for projects is €700,000 and the minimum duration is 24 months. Each partner will be responsible for its' own budget. Furthermore, commitments described in the consortium agreement were submitted along with the application.

The financial aid is articulated through loans, grants and repayable advances. Loans have favourable conditions at 0% interest. They can be amortised during 11 years, with a three year grace period. The credit granted can cover up to 95% of the budget of the company. The beneficiaries of this grant may be groups of entities that decide to collaborate in the project. The representative of the group will be the applicant and interlocutor with the administration. In addition, a technical coordinator may be appointed, but these two cannot concur.

Additional guarantees will be needed when loans exceed €250,000 per beneficiary and per year. This guarantee must be provided by each beneficiary and not by the

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representative. It may be replaced by a credit report.
The selection criteria used by the evaluation commission carry the following level of importance: market orientation (20%); international impact (20%); socio-economic impact (15%); technical quality (15%); general interest of the project (15%); economical features (10%) and consortium features (5%).

MONITORING AND EVALUATION

Once the project has been completed, the beneficiaries must continue the economic and technical justification of the expenses incurred. The documentation received will be submitted to the relevant technical and economic verification departments. Following this, the corresponding authority will issue a report certifying compliance and justification of the grant.

SUSTAINABILITY

Since May 2011, a new regulation called the 'law of science, technology and innovation' has come into effect, driven by the Ministry of Science and Innovation. This legislation aims to regulate the relationship between the university, the productive sector and research centres. The main objective to be pursued in this new regulation is to increase the number of innovative companies across the Spanish productive sector. Support programmes to be implemented under this law will share the same objectives as the INNPACTO programme.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

The first call of the INNPACTO programme (2010) has distributed a total of €353m funding from 193 R&D projects of public-private collaboration. These projects are strongly market-oriented and are expected to have a sound impact on the Spanish economic development.

Projects approved in this first call will generate 1,189 highly qualified jobs directly and 4,280 indirect jobs by 2013. It is also expected that they will mobilise €332m of private investment and a fund return of around €38m coming from 'multi-regional operational programme - research, development and innovation for and by enterprises - technology fund' from the EU.

In addition, 64 new technology companies are expected to be created during the next years, and 226 existing companies will engage innovative activities. Concrete technological areas like energy, transport, bio-technology and ICT, will be boosted through the projects approved under the INNPACTO call. Other areas of special interest and high technological content, such as health, environment, climate change and nanotechnology, will also be specifically supported in the 2011 call.

SUCCESS FACTORS

The new sustainable economy proposed by the Ministry of Science and Innovation, requires the strong commitment of the private sector. During the 2010 call, 405 companies have participated of which 60% were SMEs, 39% were large companies and 1% were public companies.

Projects submitted under this grant are led by companies and must involve cooperation between productive sector and R&D agents.

In this sense, the minimum participation rate of companies is 60% and 20% in the case of R&D agents.
INNPACTO, unlike other public calls of funding, focuses on projects relating only to those areas where there is a certain competitive advantage for the Spanish economy. Through the INNPACTO call of 2011, the MICINN will specifically boost the energy and health areas. A special budget of €200m has been reserved for each one of these two areas.

Projects classified in the energy area should help improve energy security, diversify energy sources and promote environmental protection. They should aim to consolidate the Spanish technological leadership in this field, and improve the energy efficiency of the economy by reducing the geostrategic and economic dependency.

Projects classified in the health area must be innovative in technology, pharmaceuticals and healthcare, with a special awareness of medical prevention, diagnosis and treatment of diseases. They should also promote the competitiveness of companies in this sector, and general advances in the welfare of society.

IMPACTS

The main impact of this strategy during the next years is expected to be a doubling of the size of the Spanish economy by 2015. This is specified in the need to mobilise about 5 billion Euro of private investment (1.9% of GDP), double the scope of companies using innovation and increase the number of skilled jobs offered in the market.

STRENGTHS AND WEAKNESSES

The strengths and weaknesses underline the very nature of the grants themselves.

The MICINN has no longer established the financial aid as non-refundable grants, but it has articulated them through loans and repayable advances. This may be a barrier for universities and public research centres that are not familiar with applying for credits to finance their regular research activity. This is, in fact, quite the opposite as large companies are used to getting this kind of financing.

The increasing dynamism of these kinds of financial products which support research projects, generate a new investment culture through the Spanish society with the general objectives proposed by the state strategy of innovation.

Despite the great impact aimed with INNPACTO and the rest of the Ministry initiatives, the global amount of money mobilised may be insufficient to support the considerable challenge of transforming the Spanish economic model.

TRANSFERABILITY

INNPACTO's transferability would be particularly suited to economies in need of an injection of innovative components into their regular operation.

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CASE 21 INNPACTO SPAIN

Innovation must be the strategic component within the general policy of the country or region to be transferred, and will be the basis of the production model change.

THEMES

Innovation public call, Grant, R&D support, Innovative companies, Qualified jobs, Private investment, ERDF

INFORMATION SOURCES

www.micinn.es
(accessed 31st May 2011)

PUBLIC CONTACT DETAILS

Ministerio de Ciencia e Innovación (MICINN)
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28027 Madrid,
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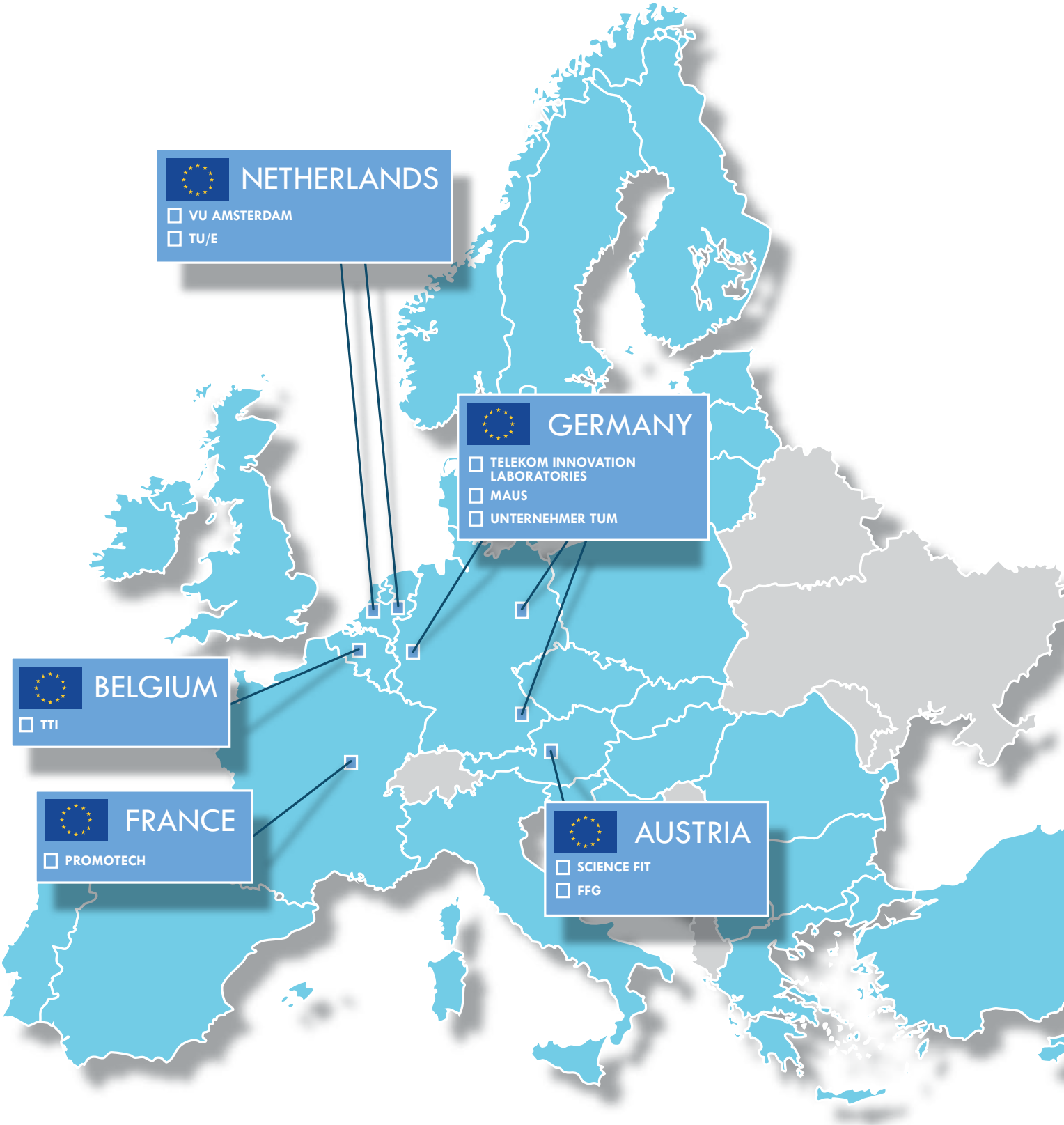
RESOURCES

DATABASES AND WEBSITES

www.micinn.es
(accessed 31st May 2011)

WESTERN EUROPE CASE STUDIES



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WESTERN EUROPE

CASE 22 SCIENCE FIT AUSTRIA

CASE STUDY TITLE	SCIENCE FIT PROGRAMME
HEI / ORGANISATION NAME	GRAZ UNIVERSITY OF TECHNOLOGY MONTAN UNIVERSITY LEOBEN KARL FRANZENS UNIVERSITY GRAZ JOANNEUM RESEARCH
COUNTRY	AUSTRIA
DATE	JUNE 2011
NATURE OF INTERACTION WITH BUSINESS	COLLABORATION IN R&D
NATURE OF GOOD PRACTISE/PROJECT	STRUCTURAL INSTRUMENT OR APPROACH

PROFILE

SHORT DESCRIPTION

SCIENCE FIT IN GRAZ IS USING SCIENCE TO MAKE THE ECONOMY FIT

The Science Fit programme has been launched as a joint venture of three universities (Graz University of Technology, Montan University Leoben, Karl Franzens University Graz) and one research institute (Joanneum Research). The funding is provided by the EU, the Government of Styria and the Municipality of Graz.

The programme's aim is to help small and medium sized businesses to use academic institutions more frequently to solve problems, and to provide access to students and graduates of the Styrian universities. Moreover, the programme especially aims to facilitate technology and knowledge transfer from universities to SMEs in Styria. The project team members directly approach regional companies and by addressing certain problems and several different topics they demonstrate how companies can collaborate with the scientific partners which act together within the Science Fit programme. An important feature is that the Science Fit team acts as an intermediate between companies and the academic world. Therefore, the team mainly consist of well-qualified academics from universities and research institutes. The slogan 'science makes the economy fit' demonstrates very clearly that the programme wants to improve university business cooperation for the benefit of both sides.

BACKGROUND

This approach of 'active knowledge transfer' has been implemented with great success since the 90's. Since 1993, the Graz University of Technology has developed an electronic research documentation tool whereby each professor and academic researcher documents what kind of research he or she has undertaken and which projects are currently been carried out.

Subsequently, they decided to take this knowledge which had been gathered within the university and present it to interested parties for practical use. Large corporate businesses which are based in the Styria area already had a close relationship with universities. However, SMEs did not have close ties with universities and more importantly did not even know what advantages a relationship with a university could provide. Consequently in 1993 and 1994 the University of Graz actively tried to approach regional SMEs.

CASE 22 SCIENCE FIT AUSTRIA

Up until 2000 this active knowledge transfer was only provided by the Graz University of Technology. Later in 2000 they expanded and worked closely together with the Karl Franzens University of Graz. In 2003 and 2004, with the help of the EU regional funds, the team consisting of the three universities and a major R&D institute was created. Since 2005 the whole team has been working together to enlarge the knowledge transfer between universities and SMEs, as well as with start-ups.

Up until 2007 the programme was called Technofit Pro. This programme was nominated for the RegioStars Award in 2008 and it is presented by the EC for good practice in regional development and for original and innovative projects which could be attractive and inspiring to other regions. Based on this programme a new programme called Science Fit was created in 2008 and will continue until 2011. It was named Science Fit to emphasise that the programme does not just focus on a technical approach but is interested in all aspects of science.

An important feature concerning the background of the team is that each member has successfully worked within his or her own organisation with partners from the industry and therefore has outstanding expertise and a well-established network to facilitate active knowledge transfer between universities and business, regardless of the size of the business. The team consists of 11 members who work permanently or as a large part of their employment for Science Fit.

AIM AND TARGET

This programme aims to facilitate technology and knowledge transfer from universities to SMEs in the Styria region. SMEs seem to have problems cooperating with external partners in general and with R&D institutions in particular. Because of their limited internal resources it is essential for them to tap external knowledge sources. However, in most cases SMEs do not have the contacts or in some cases are not even aware that the knowledge and assistance from universities can indeed boost their enterprise. Therefore, Science Fit aims to facilitate knowledge transfer between SMEs and R&D institutions in the Styrian region with financial support from the local and regional government.

The team around Science Fit targets approaching at least 50 to 70 new companies each year besides the actual contacts they have already established. This should result in 20 to 25 projects each year for which the company provides funding or applies for public R&D funding with the institutes.

Besides the aim of locating SMEs and promoting their use of university knowledge, Science Fit also wants to give bachelor and master students the possibility of working closely together with companies and perhaps also creating new business and jobs for students. Science Fit has always had an extensive documentation tool which helps them to locate every specialist in a particular area. The use of clusters and networks is one the leading benefits of Science Fit.

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A further aim of the programme is to demonstrate the knowledge of Science Fit and its actual practical application to other regions in Austria (e.g. Carinthia, Salzburg, and Vienna). This emphasises how well-recognized and well-regarded the programme is in Austria.

FUNDING

Science Fit is funded by the EU Regional Development Fund, the Styrian Government and the City of Graz. The City of Graz has been a generous sponsor since 1994 and has always been of great assistance, regardless which government was in power.

Funding is given for programmes which either have a short lifespan or which are long-term projects such as Science Fit. Before money is provided to Science Fit, an analysis is conducted regarding how high the personnel costs from the different transfer institutes are, secondly how the individual team is set up and finally the actual period of the particular project.

As the Science Fit programme only facilitates and utilises the different funding instruments the personnel costs are higher than material costs. The only material costs are the marketing costs of the project although these are usually very low. The funding of the programme is generous because the main task of Science Fit is to facilitate universities with SMEs which have a practical need and it also points out to the different institutes and companies the potential of different existing R&D funding programmes and projects. Therefore it has a high leverage effect.

IMPLEMENTATION

STRATEGY AND ACTIONS

There are several different strategies and activities of the Science Fit programme. With high targets set, those being to approach up to 70 new potential companies every year, the Science Fit Team approaches companies in the Styria area. By contacting the companies directly and providing them with individual solutions for their problems and presenting them with similar successful projects, an increasing number of new companies have been attracted to the programme.

The Science Fit team has realised firstly, that SMEs are often not aware of what they actually need, and secondly, they do not have the knowledge of what a university and the programme can provide them with. As soon as a contact has been established the team analyses the problems which are presented by the company and following that, takes the issues back to the universities. It then sources and sets up the best team to deal with this problem. This is one of the great advantages of the programme because it consists of three universities and a renowned research institute and therefore can source an individual team from a large pool of experts. This ensures that there is a well-qualified and highly motivated team on hand which will deal with the individual problem. Furthermore, this method can even put students in contact with new potential employers.

An important element which makes this programme so successful is that the Science Fit team does not just facilitate between academia and companies, it also monitors and stays involved during the whole process. This ensures that the team can directly intervene if there are complications and it keeps in touch with all companies and can build up a mutually beneficial close relationship in this manner. The past has shown that a lot of companies which have worked together with the programme now even directly approach the Science Fit team if they are looking for innovation support and solutions for certain specific problems. Another manner in which the programme catches the attention of companies is a recruiting fair for SMEs. This is an excellent opportunity for SMEs to present themselves in front of an audience which they normally would not be able to access. The Science Fit programme delivers an outstanding platform for interaction between academia and SMEs. This process, further down the line, frequently results in job opportunities for students.

The process the Science Fit programme can be organised into several distinct steps:

- Approaching local SMEs and interacting with them
- Understanding the companies' need and problems;
- Approaching the universities and accessing a group of specialists out of their pool of experts
- An assembled team of researchers (and/or students) goes back into the company and develops a solution with the help of the Science Fit team and
- Science Fit constantly monitors the project and also stays in contact after the project has ended

This process is typical for a company that is working with the Science Fit team for the first time. Companies that have experience of the programme or other programmes take a different approach simply because of the fact that they have already built up close relationships with certain researchers and students.

MONITORING AND EVALUATION

All current projects are continuously monitored and evaluated by the team. Firstly, all four partners involved in the programme have to have a clear and broad documentation of the current projects. Secondly, every year, and sometimes also within the year, reports have to be presented to the funding agencies of the programme. A variety of activity charts outline what was set out to be achieved with the company and where the activities currently stand. Besides this, there are regular meetings which are held with the project partners. Here diverse elements of the actual project can be discussed and evaluated.

The whole monitoring and evaluating process is extremely accommodating because of the close and intense relationships with the project partners. If the partners need more help or more resources these can easily be provided through the Science Fit network.

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CASE 22 SCIENCE FIT AUSTRIA

Evaluating the success of the programme and the older programme can be very clearly shown through the awareness level of the programme. Today companies directly approach the four partners involved in the Science Fit programme. Even though they still try to approach up 70 companies each year, the need to actually go out to acquire new potential companies has decreased. This is a clear indicator that the programme has established itself in this area for SMEs.

SUSTAINABILITY

A growing catalogue of case studies i.e. testimonial projects' contributes to an ever growing awareness of the benefits of science-collaboration within regional SMEs. As the landscape of SMEs is in constant change (new firms, changing ownership, new technologies) and as the recognition of the programmes value for 'hands-on' regional technology transfer and innovation is there also at the funding agencies' side there is a good chance that Science Fit activities will continue.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

There are several achievements which can be named. Firstly, the fact that the precursor of Science Fit has been nominated for the RegioStars Award in 2008 which is presented by the EC for good practice in regional development and for original and innovative projects could be attractive and inspiring to other regions.

Secondly, a case study of the programme was published by the EU in a brochure of good practice regarding regional projects. Thirdly, companies which worked together with the project partners several years ago have now experienced a growth rate that has taken them above the status of an SME.

Fourthly, the programme is regarded as a role model for other regions and very often the project officials of Science Fit are recruited as experts and present their expertise to other regions.

SUCCESS FACTORS

KEY FACTORS LEADING TO SUCCESS

Proactive approach, 'honest broker approach' (provision of best available R&D information), signposting for innovation funding opportunities, collaboration between regional intermediaries, availability of graduates within SMEs, trust built through earlier contacts and projects

KEY FACTORS PREVENTING SUCCESS

SMEs may tend to address too many ideas for innovations parallel, researchers may have limited time resources to devote to 'small' problems

IMPACTS

A few years ago the close collaboration between the Karl Franzens University and the business promotion agency in Styria has resulted in the establishment of a business incubator and start up centre called Science Park Graz. The main reason for this is that all three parties had already been working closely together on other projects and therefore it was feasible to write the application for the funding of the project. Furthermore, the

CASE 22 SCIENCE FIT AUSTRIA

cluster and network of Science Fit has become a significant platform for various business interactions in Styria.

STRENGTHS AND WEAKNESSES

The programme has demonstrated that an interdisciplinary team of transfer intermediaries with the mission of a proactive 'honest broker approach' will lead to additional science-SME collaborations which otherwise would not have been started. A weakness may be that the additional income for the universities may not be substantial in the short-term but most of the institutes acknowledge the long-term benefit of a wider scope of partners and R&D issues.

TRANSFERABILITY

The approach has already transferred to one other region in Austria and two others have been advised on how to set up a proactive knowledge and technology transfer service. The Science Fit approach can be transferred into any region which is endowed with good HEI institutions with an applied R&D focus, sufficient human resources and the willingness to collaborate with regional SMEs

THEMES

Science Fit, Active knowledge transfer university – SMEs, Intermediate, Platform

INFORMATION SOURCES

www.sciencefit.at
(accessed 31st May 2011)

PUBLIC CONTACT DETAILS

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CASE 22 SCIENCE FIT AUSTRIA

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RESOURCES

DATABASES AND WEBSITES

Research & Technology House of TU Graz
http://portal.tugraz.at/portal/page/portal/FTH

Main website of Science Fit:
www.sciencefit.at

YouTube example:
www.youtube.com/watch?v=hISKN0IlkSM
(all accessed 31st May 2011)

European regional policy:
http://ec.europa.eu/regional_policy/sources/docgener/presenta/projectbook/dg_regio_project_book_en.pdf
(accessed 18th August 2011)

WESTERN EUROPE

CASE 23 FFG AUSTRIA

CASE STUDY TITLE	AUSTRIAN RESEARCH PROMOTION AGENCY (FFG)
HEI / ORGANISATION NAME	MINISTRY OF ECONOMY, FAMILY AND YOUTH (BMWFJ)
COUNTRY	AUSTRIA
DATE	MAY 2011
NATURE OF INTERACTION WITH BUSINESS	COMMERCIALISATION OF R&D RESULTS COLLABORATION IN R&D
NATURE OF GOOD PRACTISE/PROJECT	FRAMEWORK CONDITION

PROFILE

SHORT DESCRIPTION

MIND THE GAP! FFG CLOSING THE GAP BETWEEN SCIENCE AND MARKETING WITH A FUNDING INITIATIVE IN AUSTRIA

The Austrian Research Promotion Agency (FFG) delivers a good practical example of what the framework of a funding programme can look like. The main two objectives of FFG are, firstly, the improvement of applied science in Austria and, secondly, the transfer of applied science to the market by creating contract research and spin-offs. A further focus is efficient time management to accelerate the innovation process and therefore enlarge the competitiveness of the Austrian market. The funding programme, which is provided by FFG, has a clear timeline and regulations which make the programme straightforward, easy and transferable. This case study demonstrates very clearly how universities or businesses can use this framework to fund programmes of their own.

BACKGROUND

The origin of the current programme of the FFG was developed by a department of an Austrian research institute which was then directly funded by the Austrian government. This research institute is called 'AIT' (at that time 'Austrian Research Centre GmbH'), which is a research institution beyond university walls. The department was a central body that coordinated the research work. Furthermore, it also took over the administrative work and even dealt with acquisition and marketing tasks. Between 2002 and 2008 the Austrian Research Centre GmbH had developed so-called research studios that were financed by the Federal Ministry of Economy, Family and Youth of Austria. These research studios had, in cooperation with university institutes, as its objective the gathering of knowledge of academic research and taking it to the market. For this purpose, research studios were developed for selective research subjects. At this point, the focus was already on applied science. However, it is of great importance to the Federal Ministry of Economy, Family and Youth that the whole research process is sufficient to accelerate the innovation process and enhance the competitiveness of the Austrian market.

As a result, the ministry organised an evaluation of the research studios in 2006 in cooperation with a German

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research institute for economic research. Based on this research, it was decided by the Austrian Council for Research and Technology Development to realign the research studios. It was decided that the research studios should become an independent programme, based on the guidelines for research and technology development. Furthermore, the programme was now able to give away funding based on competition. This competition is clearly defined and has a transparent process for the selection, monitoring and adjustment of the studios of the programme. Consequently, in 2008 a new research programme 'Research Studios Austria (RSA) 2008-2013' was developed and promoted by FFG.

AIM AND TARGET

The main aim and target of the Austrian government is the generation and acceleration of the innovation process, especially for relevant markets in Austria. To achieve this objective, the programme of FFG has two objectives which have to be realised.

1. The funding of applied Austrian research - The knowledge, which has been generated in the basic research institutions, has to be located and made efficiently marketable, especially research topics that are extremely complex and expensive. These topics then have to find an implementation on a wide scale.

2. The transfer of applied science to the economy - By means of contract research and spin-offs this transfer has to be ensured, and furthermore, the whole process should be enhanced and promoted so that the innovations find their way quickly into the market.

The programme is open to all academic and non-academic institutions. However, it specifically has the aim of enlarging basic-research and business cooperation. As a result of the funding, researchers should become more interested and actively involved in finding business partners for their research and also developing collaborations in R&D and bringing their ideas to the market. The projects which are funded come from different industrial sectors. There are sectors where businesses collaborate very quickly with universities and 'buy' expertise and knowledge, although there are also sectors where businesses only get involved at the end of the development process. This programme wants to minimise this problem by providing a special funding programme. Thematically, the programme is open to all sectors; nevertheless the government directs a certain part of the funding to a contemporary topic (e.g. energy technology).

FUNDING

The main sponsor of the programme is the Federal Ministry of Economics, Family and Youth. The actual distribution and decision-making processes are given to FFG. Between 15 December 2010 and 18 March 2011, FFG received forty-nine applications from projects that were seeking funding. Universities, Universities of Applied Science, non-academic research institutes and spin-offs of research studios were able to apply for funding. The total funding for this second call was €10.4m. An individual project can receive a maximum funding of €1.04m. The projects do not receive the total amount of money immediately in one sum. The programme is split up over a three year period during which the projects receive

money each year. The maximum funding of each year for the first two years is €400,000.

The third year is a critical point, where FFG wants applied research to develop into a contract research or into a spin-off. Therefore, the project leaders have to decide whether their project is ready to be marketed or they have to show that they have a follow-up order for contract research from the market. In the first case, they have to start with the marketing of a prototype at the beginning of the third funding year.

In addition, should it be a relevant spin-off candidate, it must be undertaken with an Austrian business partner. If the project leaders choose to find a partner from the market for contract research, then the partner has to contribute at least 20% of the total costs. Neither the spin-off nor the contract research are funded through the programme. Another important element of the programme is that only 70% of the projects are financed by FFG. The whole funding programme has strict rules and regulations which ensure that the projects are brought to the market quickly.

IMPLEMENTATION

STRATEGY AND ACTIONS

A major strategy of the FFG for the programme is a strict time schedule. It ensures that the projects are speedily brought to the market. This is due to the fact that the project official is from the FFG and has several different approaches concerning how to reach potential project partners. Firstly, FFG has a wide network and it is therefore easier for them to reach out to a lot of potential candidates for the programme in Austria. The current programme is promoted over their homepage and in newsletters which are sent out to all their contacts across Austria. Furthermore, presentations are given to interested candidates at the FFG. If requested, FFG also gives presentations directly at universities. An important point is that the funding programme is open to all sectors and every organisation mentioned above.

After the announcement of the programme, interested organisations can submit their online application. All projects are then analysed by a specialist committee. This committee consists of at least five specialists for every project. This ensures that every project is well analysed and evaluated by specialists who have the knowledge to decide whether a project is worth being funded. As soon as the committee approves a project's funding, the FFG and the project officials agree on a contract in which all details and regulations are set out for a three-year period.

The research studio's programme has another budget of €500,000 that supports the projects in their sales and marketing activities. This budget was added because the programme does not provide funding for sales and marketing activities. This budget is not used for direct

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funding but rather it is also used for seminars, workshops, training and consulting services. The FFG provides the project's partners with information and skills for these activities.

MONITORING AND EVALUATION

Throughout the whole three-year period, there are special monitoring and evaluation tools which are used to ensure that the project is operating correctly and going in the right direction. Firstly, the projects have to hand in a yearly report, which is checked by the FFG.

Furthermore, after two years the FFG, accompanied by an expert, checks on-site if the project is going into contract research or if a spin-off already exists or is being created. Funding is only provided if the project is either already working together with partners out of the business world or if they can prove that they have contracts to work together with the business world. In both cases the amount of money from partner and contracts has to be at least 20% of the eligible costs of the funded projects. If the project leaders cannot provide the necessary requirements in full, the project will not receive full additional funding for the third year. If the requirements are not met at all, no funding is provided for the third year. However, they do not have to pay back the funding of the first two years.

The success rate of how many projects actually receive funding and contracts from the market is a good measuring tool for evaluating the success of a programme. The fact that 65% of all applications from the last call of the programme came from universities illustrates clearly that universities are aware of the programme and, indeed, use it for their projects.

SUSTAINABILITY

FFG is fully financed by the Austrian government. This ensures that future programmes can be funded. The government of Austria wants to ensure that the innovation process is constantly being advanced. On account of its size, Austria is a country which needs innovative ideas to remain a powerful player on the world market. However, the government has only specific limited budgets. In addition, it always depends on the present government's specific focus.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

13 of the 14 projects of the last initiated call successfully completed all the required tasks for the third funding year, and have been provided with funding for the last period. This means that 13 projects have either created spin-offs or have found partners in the market for contract research.

SUCCESS FACTORS

The fact that funding for the third year is only granted if there is contract research for a certain amount at the end of the second year leads to a high success rate. The products and services that are developed need to be requested by the market and meet an existing demand. The time from project start to the evaluation of the project at the end of the second year is quite short and not appropriate for extensive research topics.

CASE 23 FFG AUSTRIA

IMPACTS	The support of sales and marketing activities, especially training, provides researchers with marketing skills that they would not normally acquire.
STRENGTHS AND WEAKNESSES	According to the funded projects, one key factor for success is that the research institution receives funding for the applied research and it is not mandatory to have a fixed business consortium. The projects therefore own the IPR and are more flexible to choose business partners. For very advanced technologies, it is sometimes difficult to get into the market because the economical or societal problem they address is not yet well perceived by the market. As a consequence, projects doing excellent work might have to be cancelled because they cannot provide the contracts with partners from the market. This is requirement of the FFG by the end of the second funding year.
TRANSFERABILITY	Assuming government funding, the funding programme can be set up easily by other funding organisations.
THEMES	Closing the gap, Market-relevant research, Commercialisation
INFORMATION SOURCES	www.ffg.at/content/research-studios-austria-2-ausschreibung www.bmwfj.gv.at/ForschungUndInnovation/Foerderungen/Seiten/ResearchStudiosAustria.aspx
PUBLIC CONTACT DETAILS	www.ffg.at/content/research-studios-austria-2-ausschreibung

RESOURCES

DATABASES AND WEBSITES	www.ffg.at/content/research-studios-austria-2-ausschreibung www.bmwfj.gv.at/ForschungUndInnovation/Foerderungen/Seiten/ResearchStudiosAustria.aspx (all accessed 31st May 2011)

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WESTERN EUROPE

CASE 24 TTI BELGIUM

CASE STUDY TITLE	TECHNOLOGY TRANSFER INTERFACE (TTI)
HEI / ORGANISATION NAME	FREE UNIVERSITY BRUSSELS (VUB)
COUNTRY	BELGIUM
DATE	JULY 2011
NATURE OF INTERACTION WITH BUSINESS	COMMERCIALISATION OF R&D RESULTS
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

USING CONFUCIUS AND AN OPEN EXCHANGE PLATFORM TO GUIDE RESEARCHER RESEARCH VALORISATION EFFORTS, THE CASE OF TTI IN BRUSSELS

The Technology Transfer Interface (TTI) is a sub-division of the R&D Department of the Free University Brussels (VUB). The role of the TTI is to identify research results that are suitable for economic valorisation and turn them into licensing deals or spin-offs. TTI alerts researchers concerning the value of their research and guides them through every stage of their collaboration with industry. The multidisciplinary TTI is an efficient gateway between the university's research and industry. It does this by liaising with external organisations to identify collaboration opportunities.

With the philosophy 'Tell me and I'll forget. Show me and I'll remember. Involve me and I'll understand' (Confucius), the TTI encourages entrepreneurship, start-ups and contract research with the industry as well as interdisciplinary research, in addition to collaboration between institutes, knowledge centres, industrial and academic partnerships. A key part in their valorisation efforts is CROSSTALKS, an innovative open-exchange platform for contemporary thematic discussions.

BACKGROUND

The valorisation of research results implies that the knowledge gained from the results of scientific research and technology of the university are made available to society and to industry. These aspects are managed and coordinated by the TTI, which is part of the R&D Department of the VUB.

For more than 10 years, the TTI has been organising seminars to create more awareness within the university about entrepreneurship, start-ups and contract research with industry. The university generates a so-called 'deal flow' via the TTI: identifying research results that are suitable for economic valorisation and guiding technology transfer dossiers and spin-off projects. The TTI guides researchers through every stage of their collaboration with industry.

The interface conducts facilitating and motivating activities including:

- awareness campaigns for the research community,
- professional advice and support for industrial valorisation,
- assistance and control concerning agreements with companies,
- entrepreneurship training and courses,
- accompanying the creation of spin-off companies,

- know how and technology scouting within the university,
- permanent follow-up of the patent portfolio & IP strategy, and
- building an industrial and financial expert network.

AIM AND TARGET

The mission of the TTI of the Universitaire Associatie Brussel (UAB) is to stimulate and support the transfer of innovative knowledge and technology of the VUB and her association partners (the university hospital UZ Brussel and the Erasmus University College) to industry and society. As a link between research and society the TII supports researchers in every collaboration phase with industry and society. Besides, TTI proactively searches for interested partners to valorise research results.

It is the ambition of the VUB to play an increasingly prominent role in attracting and instigating new economic activity (entrepreneurship, start-ups and contract research with the industry) at and around the campuses in the Brussels Capital Region and in the Flanders Region. Interdisciplinary research as well as collaboration between institutes, knowledge centres, industrial and academic partnership are very much encouraged and considered to be crucial to obtain sustainable results.

FUNDING

Funding for the interface is sourced through the Flemish government, the university, through a contract with the Brussels region as well as from other third parties.

IMPLEMENTATION

STRATEGY AND ACTIONS

The services of TTI are offered in two primary ways:

1. ADVICE AND SUPPORT

- Contract research for the industry – TTI brings companies in contact with the expertise they are looking for. The resulting research agreements between the company and the researchers are then formalised in a contract by the legal experts of TTI. They support drawing up, negotiation and follow-up of all kinds of research related contracts. This implies taking care of aspects such as the right to publish, confidentiality of the research results and the protection and ownership of IPR, in coordination with the company
- Protection of knowledge – Management of IP starts with analysing research results to see if they can be patented or protected in another way. TTI manages the patent portfolio of the UAB and, together with the researchers, looks for interested licensees. TTI also negotiates and discusses possible license agreements
- Valorisation and creation of spin-offs – The advisors of TTI give support to the researchers of the VUB, UZ

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Brussel and the Erasmus University College when designing a valorisation strategy. If this results into a spin-off, TTI can offer assistance in drawing up a marketable business and financial plan. Furthermore TTI provides a range of practical support measures when creating a spin-off.

2. MANAGEMENT OF FINANCING CHANNELS

- Project design: The advisors of TTI offer concrete support for designing valorisation projects in Flemish, Brussels, federal and European research financing applications.
- Management of the IOF Fund: TTI supports the management and operation of the Industrial Research Fund (IOF) that controls the ways and means of applied and strategic research aiming at valorisation. An IOF-coach supports the IOF-core groups and growers.
- Management of the BI3 Fund: TTI is responsible for the daily management and organisation of the BI3 Fund, the risk capital fund of the VUB that not only provides in capital for the start-up phase of a spin-off but may also participate in the first follow-up financing.
- Technology Offers and Communication: TTI takes care of communicating the (protected) technology and knowledge that has been developed by researchers of the UAB to the outside world; through participating at exhibitions, composing publications concerning research, organising 'industry-technology' days, and actively following up the Flemish Innovation Network (VIN), etc.
- Starter Seminars: Together with the 'Technological Entrepreneurship' team of the department Business Economics and Strategic Management, TTI organises a yearly introductory course on entrepreneurship.
- Research Park and Incubation Centres: In order to provide a broad range of support and guidance for new business-oriented initiatives, the university co-manages the Research Park Zellik in Flanders, equipped with incubation facilities (Innovation & Incubation Centre Brussels). The 'Incubatiecentrum Arsenaal Brussel' (ICAB), a new incubator for ICT and engineering companies in collaboration with the Brussels Capital Region, became fully operational in October 2009. ICAB is located in a thriving neighbourhood near the VUBcampus Etterbeek.

One of the most innovative roles played by the TTI is the organisation of CROSSTALKS. Through thematic encounters such as congresses, workshops, publications and Pecha-Kucha Nights, CROSSTALKS aims at creating an open and constructive exchange between all stakeholders in society, beyond institutional and societal borders. Academics as well as CEO's, creative entrepreneurs, politicians, artists, architects and not for-profit organisations are engaging in the CROSSTALKS networking concept. CROSSTALKS encourages constructive dialogues on policy probing issues, engaging academic researchers, scientists, artists, corporate leaders, and creative entrepreneurs in the discussion. Current projects deal with smart logistics, energy efficiency,

sustainability and changeability, prosperity without growth, bridges over troubled water, cleantech and transparency in healthcare.

MONITORING AND EVALUATION

There is a yearly report to the Flemish government and to the university. Furthermore, there is a five- yearly external audit carried out on the programme's success.

SUSTAINABILITY

The activities of the VUB with respect to valorisation are not self-supporting; the activities need to be financed by the university itself and external parties (e.g. government).

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

Currently 21 university spin-off companies (19 plus the two incubators) are active in various sectors through the programme. In total, the VUB, through the initiative has created 25 spin-offs.

SUCCESS FACTORS

Some of the success factors, as experienced in the programme include:

- having a skilled TTI team (research and industrial background),
- working in proximity to researchers (assists in building trust and relationships),
- industrial networks between the researchers and TTI, and
- 'CROSSTALKS involving the university-industry network which helps to identify market problems and possible solutions that could come from research.

STRENGTHS AND WEAKNESSES

Strengths include the fact that there is a technology transfer network of (expert) consultants, covering various disciplines, excellence in the research groups (in 'niche' research domains) and close proximity to the research groups. The TTI has a good view of the valorisation pipeline

There are several weaknesses, e.g. there is a relatively small team of Technology Transfer Officers (9.5 FTE), meaning that not all the research domains of the university can be covered. Also, the creation of spin-offs takes up a great deal of resources (manpower and expertise).

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CASE 24 TTI BELGIUM

TRANSFERABILITY	The activities of the VUB are transferable taking into account the specific conditions.
THEMES	Knowledge valorisation, Spin-offs, Research commercialisation
INFORMATION SOURCES	www.vub.ac.be/english/infofor/researchers/technologytransfer.html (accessed 31st May 2011)
PUBLIC CONTACT DETAILS	www.vub.ac.be/english/infofor/researchers/technologytransfer.html (accessed 31st May 2011)

RESOURCES

DOCUMENTS AND PUBLICATIONS	Brochures: • Knowledge, Innovation & Technology Transfer at the VUB • Spin-offs VUB
DATABASES AND WEBSITES	www.vub.ac.be/english/infofor/researchers/technologytransfer.html (accessed 31st May 2011)

WESTERN EUROPE

CASE 25 PROMOTECH FRANCE

CASE STUDY TITLE	PROMOTECH
HEI / ORGANISATION NAME	PROMOTECH LIVING LAB
COUNTRY	FRANCE
DATE	JULY 2011
NATURE OF INTERACTION WITH BUSINESS	ENTREPRENEURSHIP
NATURE OF GOOD PRACTISE/PROJECT	STRUCTURAL INSTRUMENT OR APPROACH

PROFILE

SHORT DESCRIPTION

LIVING LAB IN FRANCE OFFERS AN OPEN INNOVATION PROCESS DRIVEN BY END-USERS TO CREATE A NEW TYPE OF ENTREPRENEUR

PROMOTECH is a European community business and innovative centre (EC-BIC). It develops an original process dedicated to the creation of new company ventures and / or the diversification of regional SMEs.

The activity is the living lab approach for start-up companies which aim to improve the support for start-up companies and boost and enhance their creation. It is a user-centric method designed to integrate users into the innovation process. PROMOTECH adopts a model of open innovation driven by end-users that integrates the market need early in the ideation process and ensures the concept in developed in line with the market need. Being driven by users, this process leads to a new type of entrepreneur who is coached, duly influenced and guided by his users.

BACKGROUND

PROMOTECH is a long-established centre founded in 1980 by two faculty members as a spin-off from the Department of Innovation Management of the National Polytechnical Institute in Lorraine. The original objective was to promote and transfer technology from the university to industry through the creation of new companies or diversification of regional SMEs. Nowadays, PROMOTECH has become a common instrument of the local government, the Chamber of Commerce and private companies. Since 1988, the centre carries on its activity within the framework of the Nancy Brabois Science Park. The park houses 2,500 researchers, 100 laboratories, 17,000 university students and 200 companies. In total, nearly 300 'ventures' employ just over 15,000 people there.

AIM AND TARGET

Initially, the approach of PROMOTECH to entrepreneurs included education around aspects concerning: awareness, training, coaching on Business Plan, market survey, marketing strategy, legal aspects, funding and elevator speech.

The new approach of PROMOTECH offers services oriented towards entrepreneurs-to-be, research units and companies. Implementing a digital concept, PROMOTECH adopts a

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model of open innovation driven by end-users. PROMOTECH has developed the Living lab approach for start-up companies. It aims to improve the support for start-up companies and boost and enhance their creation. PROMOTECH strives to set up new ventures addressing new applications. This is a new form for setting up a project that represents a unique type of venture organisation / model. The end-user is heavily integrated into the development process and becomes to all extents and purposes part of the company.

The end-user, in practical terms, assumes the role of entrepreneur or shareholder. This process involves a novel type of coaching based on new information, ICT - based support model for incubators, with all participants functioning and interacting together. The PROMOTECH CEI platform offers physical and virtual space where all participants can actively participate in industrial, urban or venture co-creation projects.

OTHER REFERENCES

In the framework of the DigiBIC Award Competition that took place in June 2011 in Toulon, PROMOTECH won an award for their digital creative solutions.

FUNDING

Funding is provided by the University (Polytechnical Institute in Lorraine) and local authorities in the region.

IMPLEMENTATION

STRATEGY AND ACTIONS

The entrepreneur first defines the type of potential end-user. After this PROMOTECH is responsible for gathering a panel and then organising a meeting at the entrepreneurs' location. Here the business creator presents his or her project and then questions the panel on precise topics.

The synthesis of the meeting is then placed online in a collaborative platform, a Wiki, in order to pursue discussions on the rhythm of the project evolution. PROMOTECH anticipates even more spontaneity on the Wiki. Equipped with a smart phone, the users will be able to publish regular contributions based on their actual experiences.

Processes are based on collaborative methodology and ICT tools:

- Collaborative space,
- Digital interactive white board,
- Mind map,
- Internet survey and
- Survey analysis software, among others.

The Wiki for each individual project accompanies the development of existing businesses and the implementation of new activities by the unfolding and implementation of specific coaching activities. It coaches entrepreneurs and other users to give support to business creation and to lead projects to a successful conclusion.

CASE 25 PROMOTECH FRANCE

MONITORING AND EVALUATION

There are several indicators with regard to how to measure the success of PROMOTECH. Firstly, the number of entrepreneurs interested by this method has been a good indicator of how much the market accepts this method. Secondly, the number of users involved in this model of open innovation shows the success. Finally, the success of the entrepreneurs who were guided by their users in the stages of the development of the business is a good measure of the success.

The monitoring and evaluation of the process is the responsibility of employees of PROMOTECH who are part of the whole process full-time and therefore can guide and fine-tune the whole process.

SUSTAINABILITY

Being driven by users, who become as important as the entrepreneurs themselves, this process leads to a new type of entrepreneur who is coached, duly influenced and guided by his or her users. Thus, the PROMOTECH structure proves to be sustainable in the economic (financial) sense as well as with respect to its activities.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

In 2010, PROMOTECH assisted 181 entrepreneurs and with the support of the Business and Innovative Centre (BIC) created 41 companies, thereby creating 80 new jobs. In its incubator there are currently 34 companies providing jobs for 460 employees.

SUCCESS FACTORS

As success factors of PROMOTECH the following points should be mentioned:

- The nature of the services: no other institution offers this kind of services to entrepreneurs and companies and other users.
- Continuous adaptation and improvement of tasks as a result of the continuous use of the Wiki application.
- Sustained and continuous support, guidance and practical advice from entrepreneurs and other users.

Furthermore, the new digital approach re-evaluates the business plan and prefers 'touchable effectuation' by:

- using virtual reality,
- undertaking user-driven projects, and
- promoting projects with social networks.

IMPACTS

Over the years the entrepreneurs that were supported by PROMOTECH have created more than 1000 jobs.

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CASE 25 PROMOTECH FRANCE

STRENGTHS AND WEAKNESSES	There are several strengths of the PROMOTECH Living Labs. Firstly the use of the cutting-edge technology, state-of-the-art smart phones and several more technical features. Secondly the possibility that the entrepreneurs receive the latest published information directly and fast via the Wiki from the panel is a unique advantage. It provides the entrepreneur with guidance concerning current projects and it accelerates the whole innovation and start up progress. A potential weakness of PROMOTECH Living Labs is that the advice, guidance and information which are provided by the panel must be constantly filtered and checked to meet a required process.
TRANSFERABILITY	The phenomenal steamroller effect and success of PROMOTECH speaks for itself. In addition, the practical use and application of successful projects of this user driven tool is its best advertisement. Moreover, PROMOTECH has a keen interest in transnational cooperation. The cooperation should have the focus on interregional groups of users.
THEMES	Living Lab, Open innovation, Entrepreneur, Panel, Wiki
INFORMATION SOURCES	www.promotech.fr (accessed 31st May 2011)
PUBLIC CONTACT DETAILS	PROMOTECH - Living Labs Pôle Technologique de Nancy Brabois 6, allée Pelletier Doisy CS 90144 54603 Villers les Nancy Cedex France Website: www.promotech.fr

RESOURCES

DOCUMENTS AND PUBLICATIONS	Cuhls, et al (no date) The science and technology base of the Provincia Autonoma di Trento: capabilities, trends and opportunities. Karlsruhe: Fraunhofer Institute. Quintero, N.D. (2009) Case Studies: a survey of 14 BICs in action. Brussels: EBN.
DATABASES AND WEBSITES	www.promotech.fr (accessed 31st May 2011)

WESTERN EUROPE

CASE 26 UNTERNEHMERTUM GERMANY

CASE STUDY TITLE	UNTERNEHMERTUM
HEI / ORGANISATION NAME	TECHNICAL UNIVERSITY MUNICH (TUM)
COUNTRY	GERMANY
DATE	MAY 2011
NATURE OF INTERACTION WITH BUSINESS	COLLABORATION IN R&D ENTREPRENEURSHIP
NATURE OF GOOD PRACTISE/PROJECT	STRUCTURAL INSTRUMENT OR APPROACH

PROFILE

SHORT DESCRIPTION

EDUCATING AND SUPPORTING ENTREPRENEURS IN GERMANY'S ENGINE ROOM

UnternehmerTUM, the Centre for Innovation and Business Creation, is an institute affiliated to the Technische Universität München. The centre comprises the UnternehmerTUM GmbH, established in 2002 as an institute of public interest and its subsidiary, UnternehmerTUM Projekt GmbH, established in 2010. The institute brings together two core competences in a unique manner; qualification as an entrepreneur and the initiation of innovations and new companies. UnternehmerTUM bridges the gap between the university and the world of business, making a decisive contribution in strengthening the culture of innovation and entrepreneurship in Germany.

BACKGROUND

The TUM is located in an environment where large key corporate companies such as BMW and Siemens and research institutes such as Fraunhofer and Max Planck Institute have their head offices. Not surprisingly and in keeping with their environment, alliances and partnerships have been developed between the university and these large enterprises. The most significant factor, however, which encouraged the university to use its neighbouring environs so powerfully, is its entrepreneurial approach. In the university, and also in the Bavarian region as a whole, there has been an increased focus on developing methods of working with businesses.

This process commenced in the late 1990's at the TUM with the arrival of a new university president. The new president had a vision of developing the university into an entrepreneurial university which was the catalyst for a greater focus on and cooperation with business. This development led to the establishment of UnternehmerTUM, the Centre for Innovation and Business Creation. Whilst the whole TUM provides an excellent example of cooperation between public and private organisations, the focus for this case study will be on UnternehmerTUM.

The UnternehmerTUM, established in 2002, is the main centre for innovation and business creation at TUM. It

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CASE 26 UNTERNEHMERTUM GERMANY

consists of the public institute UnternehmerTUM GmbH which was established in 2002 and its subsidiary UnternehmerTUM Project GmbH established in 2010. The development of UnternehmerTUM paved the way for TUM to become one of the leading university institutes for innovation and business creation in Europe. It is not just a platform for current students enrolled at TUM; it also presents outstanding chances for researchers, entrepreneurs and working professionals, as well as being an inspiration for companies from various business sectors. Every year over 1,000 participants take part in lectures, seminars and specially designed programmes.

AIM AND TARGET

One of the centre's main aims is to be an accelerator and hub for innovation and business creation for the university and the business environment. UnternehmerTUM, in a quest to achieve its goals, has divided itself into two different divisions. The primary objective of UnternehmerTUM GmbH, which is the main centre of UnternehmerTUM, is the qualification of students, scientists, entrepreneurs and business professionals. Participants are trained to learn skills of entrepreneurship and innovation management. TUM not only aspires to have their students be the best in their particular field of studies but also apply their knowledge in the business environment without depending on others. Furthermore, students should learn the key skills for the creation of their own business. Besides the qualification of their students, UnternehmerTUM also offers development programmes and seminars for postgraduates and PhD students. In addition, business professionals can participate and improve their innovation and entrepreneurial skills and knowledge.

The networking and interaction focus of UnternehmerTUM provides an outstanding networking platform for industry, students and research associates. The centre tries to facilitate all the different participants in collaborating and exchanging information and knowledge. It breaks down the typical boundaries between a university environment and the business world. The programme has successful entrepreneurs and managers as lecturers. Students are also given the opportunity to work directly with large corporate companies and this has created a unique working environment. This becomes obvious when reviewing UnternehmerTUM's homepage, which not only addresses students, but also researchers, entrepreneurs, professionals and companies. Additionally, the innovative style of the homepage, demonstrates the creativity and knowledge which is provided by UnternehmerTUM.

The UnternehmerTUM Project GmbH was established to be able to broaden and make use of the knowledge that is gained through UnternehmerTUM GmbH. One of the aims of this subsidiary is to coach and assist start-ups of entrepreneurial teams. Furthermore, companies can approach the centre for projects and research in order to commission studies and projects. Examples of this can be the development of new applications and, of course, market research. The division into two parts clearly demonstrates that the centre does not simply want to educate and guide their people but also help them to take their ideas to the market.

CASE 26 UNTERNEHMERTUM GERMANY

FUNDING

TUM remains a public university yet they are trying to become more independent from the state. In 2010, third party funding made up about 20% of the entire budget. This funding was mainly sourced from strategic partnerships (amounting to around 50% of this total) with the remainder coming from German and EU funding. With respect to UnternehmerTUM though, the centre is fully financed by third party funding.

IMPLEMENTATION

STRATEGY AND ACTIONS

UnternehmerTUM makes itself relevant for different target groups and, consequently, has different methods and programmes with regard to how to approach them. There are different seminars and lectures offered by UnternehmerTUM GmbH targeting over 600 students and scientists that work at the UnternehmerTUM GmbH.

Over 150 business plans are developed every year in special business plan seminars, where the participants receive feedback and learn presentation techniques. An important feature of these seminars is that the lecturers all work in the business sector and have an outstanding understanding and insight with regard to how to establish and manage a company. In addition, these managers and entrepreneurs deliver lectures to improve the understanding of the current market and how their own businesses have grown into large companies. UnternehmerTUM has also understood that successful entrepreneurs and managers have to be trained and prepared for an international market. International business professionals regularly give lectures and organise a special 'spring and summer school' for masters and PhD students creating an excellent platform for interaction and development of business creation.

A further programme designed especially for highly motivated PhD students is the Manage&More programme, offered in all thirteen faculties of TUM. Every year 40 students qualify for a scholarship for practical training with projects and workshops where they can train their soft skills and their teamwork. All this training is combined with the development of innovative business ideas. Furthermore, in 2008 UnternehmerTUM GmbH developed an Executive MBA in cooperation with the Leipzig Graduate School of Management (HHL). This one-year course offers 20 specialists and managers from industry, as well as entrepreneurs, the chance to achieve an academic education whilst also combining it with their own innovation project, or in some cases their own start-up company.

Regarding teaching, the centre has a philosophy that the programmes and lectures only function efficiently with

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well-established business partners. The centre has created a symbiosis between local and international business and TUM with businesses delivering some of the lectures and programmes. This relationship offers students access to a vast amount of experience and knowledge. In return, the collaboration offers the involved businesses access to new innovations, potential spin-offs and, most importantly, outstanding talent can be scouted through the different programmes.

A key to the centre's success lies in hiring professors with competence in knowledge transfer as well as actual experience and cooperation with industry. Many professors now employed have already worked in industry. The employment of professors from industry provides a flow-on of valuable experience and hands-on knowledge to students. As a result of this first-hand knowledge, students get acquainted with the methods, processes and actual thinking of industry.

UnternehmerTUM has a very holistic approach towards start-ups and innovation. It was for this reason a special 'business design' was developed to support students in creating their start-ups. This had the aim of helping entrepreneurs to establish their business swiftly by adopting an approach that is rooted in the world of design. At the centre, the word 'design' not only denotes the visual aspect of a product; it also refers to the creative approach towards dealing with the many success factors that surround a business. This includes a customer's needs, the product functionality and the commercial or technical feasibility. UnternehmerTUM offers one-to-one support on the journey from a business concept and development to the final market launch of the technology-oriented business idea.

MONITORING AND EVALUATION

There are several indicators measuring the success of TUM and especially UnternehmerTUM. Firstly, there is third party funding such as money earned through partners, IP and new firm creation and funding which is received for projects every year. Secondly, the number of start-ups can be a measure of how successfully UnternehmerTUM is operating. Other results cannot be measured accurately as they are often creating economic impact for the region. Examples include: R&D flowing back to the university from the new start-up, people employed by start-ups and the quality of inventions transferred through the strategic partnerships that find their way into finished products.

SUSTAINABILITY

Ever since the President of TUM was elected in the late 1990's, the university has set out to be an example of an entrepreneurial university. Initially, this approach was the main reason why UnternehmerTUM was developed and why it is heavily supported within the university. An underlying factor for the sustainability of TUM and UnternehmerTUM is the alliance and partnerships with large corporate companies such as BMW and Siemens. One such example was the establishment of a laboratory and offices in Ingolstadt in cooperation with Audi. Researchers and workers from the company have worked closely together there over a long period of time. These types of partnerships support

UnternehmerTUM with funding, but also give significant input and are, indeed, a catalyst for projects and innovations. In addition, the fact that representatives from industry are members of the board of trustees, for example the CEO of BMW, clearly helps to maintain and strengthen the vision and mission of an entrepreneurial university.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

TUM has developed itself to be one of the most renowned universities in Germany and Europe as a whole. TUM and UnternehmerTUM have effectively attracted large corporate companies to work together with the university. Furthermore, well known contributors and sponsors have been acquired for the university, for example, Susanne Klatten who owns 18% of BMW. Since the programme began, various awards and prizes have been won by TUM or UnternehmerTUM. In 2005, Berlinpolis and SAP Germany presented UnternehmerTUM with the award for 'Technology and Excellence'. In 2007, the German 'Arbeitgeberpreis für Bildung' (Employers' prize for education) was awarded to the programme. Finally in 2008, the EU selected UnternehmerTUM as good practice for University Business Cooperation.

SUCCESS FACTORS

UnternehmerTUM has access to some of the largest and most renowned companies in the world as well as some of the most famous institutes within the state of Bavaria. Whilst this access provides a certain advantage to TUM, their philosophy of being an entrepreneurial university enables successful interaction. Furthermore, UnternehmerTUM works extremely hard to create and maintain these collaborations as well as the networks vital to their success. This includes regularly inviting students, researchers and business partners to collaborate together on the university campus. Furthermore, the special business model that helps start-ups and innovations with the establishment of their idea is a further success factor of UnternehmerTUM.

TRANSFERABILITY

Many elements of the TUM programme are transferable to other universities and institutes from the programmes to the creation of networks. TUM's integration of these business partners into all aspects of the university is a highly transferable element.

THEMES

Entrepreneur, Education, Start-up, Business creation, Technology and research, Innovation, Knowledge transfer

INFORMATION SOURCES

UnternehmerTUM:
www.unternehmertum.de/index.html
http://portal.mytum.de/welcome/
(all accessed 31st May 2011)

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(all accessed 31st May 2011)

WESTERN EUROPE

CASE 27 THE PARTNERING UNIVERSITY APPROACH GERMANY

CASE STUDY TITLE	THE PARTNERING UNIVERSITY APPROACH
HEI / ORGANISATION NAME	MÜNSTER UNIVERSITY OF APPLIED SCIENCES (MUAS)
COUNTRY	GERMANY / NORTH RHINE WESTPHALIA
DATE	JUNE 2011
NATURE OF INTERACTION WITH BUSINESS	COMMERCIALISATION OF R&D RESULTS COLLABORATION IN R&D
NATURE OF GOOD PRACTISE/PROJECT	STRATEGY

PROFILE

SHORT DESCRIPTION

TOOLS AND MECHANISMS OF THE PARTNERING UNIVERSITY TO CREATE LONG TERM STRATEGIC PARTNERSHIPS WITH INDUSTRY

The example of the Münster University of Applied Sciences (MAUS) Germany depicts a university that developed a university-wide strategic partnering approach to cooperation with business. Faced with reduced state funding in the late 1990's, the university embraced the concept of long-term, 'early-stage' partnerships and collaboration at the highest level and, as a consequence has been recognised as best-practice nationally for their efforts. Now MUAS is the leading German university of applied science with regard to third-party money.

BACKGROUND

MUAS was founded in 1971 following mergers of several state-owned and private engineering and building schools. Since that time, MUAS has grown into one of the largest and most successful universities of applied sciences in Germany, with main campuses in the cities Münster and Steinfurt. The university has close to 10,000 students, supported by 800 employees of which 240 are professors who teach and do research in the fields of 12 different faculties and specialist divisions.

The university nowadays is an institute for applied education and research. However, over the last ten years it has acquired an outstanding reputation for its development of the university's 'third mission'. This process commenced in 1998 when a university professor with a background in technology marketing was appointed to the position of Vice-Rector for Research Affairs and Technology Transfer. It was the first time in Europe that such a vice-rector had been appointed and it was the start of the university's focus on increasing third-party money through marketing. A tenet of the newly appointed vice-rector was that if the university is to co-operate more with research partners from industry, and if it requests more money for its research performance, it finds itself in a market. The principle follows that if one wants to be successful in a market, one will necessarily need to undergo and conduct marketing and apply marketing models and instruments.

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AIM AND TARGET

Whilst the university has previously worked with industry, a 'redirection' was undertaken in 1998 to incorporate business more centrally in the university's activities in response to reduced state funding. The objective was to increase third-party money whilst also increasing the relevance of the research and teaching areas through a focus on establishing long-term and strategic partnerships with businesses.

FUNDING

Internal university resources were re-allocated and re-directed to support an organisation-wide approach to the new directive. The primary source of funding was sought from business in order to support the cooperation process as they were set to be the financial beneficiaries of the research projects and other cooperation types. State, Federal and European-level funding projects were also sought to supplement this cooperation with business.

IMPLEMENTATION

STRATEGY AND ACTIONS

The university implemented a number of pillars upon which the university was able to create a sustainable and long-term commitment to cooperation with business. These initiatives are described below.

The creation of the previously mentioned vice-rector position laid a firm basis for the increase of third-party funds. The aim of this appointment was to differentiate the university from other universities and institutions in the eyes of industry, and to promoted partnerships purposefully. In 2004, based on this successful experience, the vice-rector position was re-named Rector for Partnerships and Strategic Alliances.

In their search for information about working more closely with business, a general lack of knowledge around the topic within a European context was observed. As a result, a research centre dedicated to science marketing, The S2BMRC, was established in 2002. The centre is geared to developing international know-how, models, instruments and methods in science-to-business marketing and today numbers approximately 20 staff.

Another strategy and action which MUAS undertakes is an analysis of the awareness, market potential, customer satisfaction and the image (different to other HEIs) which is undertaken every few years. These analyses are there to improve the quality and performance level of MUAS. It also stimulates the university to segment markets based upon market needs and strategically approach targeted clients. The reasoning is that (potential) customers and (potential) partners in the market are not equal to each other. As an example, it was found that companies having their own R&D department perceive a university-industry relationship differently to those not having their own R&D activities. Further, it was discovered that family-owned SMEs are

different to shareholder-owned ones and companies having had previous experience in working with academia behave differently to those not having had this kind of experience. Thus companies differ in terms of some criteria and this segmentation forces the university to strategically approach and communicate with different segments in a different way. Therefore, the university has created different marketing and partnering strategies for these different 'markets'.

Additionally, a private transfer agency, Transferagentur Fachhochschule Münster GMBH, was created to manage these partnerships. The transfer agency is a privately owned company (49% by the university) which serves as a firm basis for strategic alliances and partnerships with many businesses. It has a total network of approximately 1800 companies, with a total number of 800 projects a year. This total can be divided into different levels of commitment and coordination.

Lastly, in recognising that educating and incentivising academics was essential in increasing cooperation with industry, a research offensive was launched within the university. The initiative had 12 building blocks designed to provide sufficient incentive for academics to get more involved in market-oriented research and transfer. Some of the building block include the following:

- Whoever manages to procure funds from industry receives a financial bonus of 8% (technical) or 12% (non-technical faculty), provided by the university and the state government.
- A 'space negotiating model' prescribes that a faculty receives 23 sq m of additional area if it raises €35,000 in third-party funds. As not all faculties have the same possibilities to raise large amounts of third-party funds, the threshold for the additional area also differs depending on the faculty.
- Other measures of research performance, besides third-party funds, such as publications, public presentations and attendance of conferences and symposia are assessed according to a defined point system. In these cases, those who undertake active research are able to reduce their teaching load and receive a salary increase.

As a basis for long-term success, MUAS have defined the following guidelines for research and transfer and anchored these in the university's strategic planning for 2006-2010:

- R&D is crucial for MUAS and serves to establish and cultivate long-time partnerships with (former) students, research institutions and businesses.
- Research and teaching are equal pillars of the university. Their quality is interdependent. R&D activities provide important impulses for teaching.
- The university seeks to establish long-term and strategic partnerships, which align with the university's strengths or complement deficiencies in the field of resources and offers.

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- Private as well as publicly-funded projects have the same value and appreciation in career planning. It is primarily third-party budget from industry, which is to be further enlarged.
- R&D is beneficial for researchers – through research reputation, better structures and personal advantages. Researchers developing their career by undertaking good research activities will directly benefit from this.

MONITORING AND EVALUATION

It probably would be the most comprehensible indicator for MUAS to measure the success according to the level of received third-party funds. However, even though this is measured, MUAS prefers to measure the effect of its transfer performances in the economy. Measurement categories include newly established and retained (difficult to measure) job positions, increase in turnover and growth in market share with their customers. Furthermore, MUAS monitors and evaluates the market by doing regular analysis on: 1) awareness of the university in their target groups, 2) image of the university, 3) market potential, 4) customer satisfaction. These analyses are the basis for improving the performance of MUAS and they help to improve the marketing and partnering strategies of MUAS. Additionally, the success of the partnering strategy is measured by new technologies, new clients, the greater market share of the partners, international partners and the number of jobs created.

SUSTAINABILITY

A long-term perspective to UBC was always a basic tenet in the move to a more market-facing university. However, it recognised the fact that changes needed to be made at a number of levels within the university. The success of the initiative was based upon a triangular approach for innovation and success in knowledge transfer as follows:

- It is strategically embedded and anchored with the university's board;
- It focuses at an analytical level through the S2BMRC tasked with the job of researching how to link the university better to business and how to improve the marketing competencies of academics, and
- at an operational level, through an agency for technology and knowledge transfer.

The corners of this strategic triangle 'cross-fertilize' and thus, jointly influence methods. In addition, they also influence the processes and projects of research and transfer promotion at the university. By operating and directing initiatives at these three levels, the university has ensured a sustainable shift in focus for the university and the academics who undertake it operationally.

CASE 27 THE PARTNERING UNIVERSITY APPROACH GERMANY

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

MUAS is the leading German university of applied science with regard to third-party money for industrial projects and collaboration and additional federal state funds for R&D. In fact, third-party money generates one-third of all university income. In 2010, MUAS created a total of more than €12m in third-party funds. This was the 12th year in succession that the university had an increase in its third-party funds since introducing the marketing approach.

Moreover, MUAS achievements in this area were recognised in 2007 when MUAS was named one of the Top Universities in Germany applying the best strategies of UB knowledge exchange and tech transfer by the German Federal Ministry of Education and Research and the Initiative of German foundations for the German Sciences (Stifterverband für die Deutsche Wissenschaft). Now MUAS generates the highest amount of 'third party' money (industry contribution) of all universities of applied sciences in Germany.

Whilst many academics believed that Universities-Business Cooperation could only be undertaken in faculties that are technology focused, MUAS puts no focus on technology. The university continues to stimulate UBC throughout all 12 faculties of which only seven of them are technology-oriented, whilst three are business and socially focused, and two of them are design and architectural. Even though one might expect that the technology faculties generate the largest amounts of third-party funding, this has not proven to be the case, with social science being a very high contributor to third-party funding in the university. Through the market research process initiated at the university, the social sciences department were able to identify new markets in working for, or together with, non-profit organisations, social bodies, governmental bodies, and ministerial bodies.

Lastly, the annual allocation of resources within the university towards UBC accounts for a systematic strengthening of research and transfer. When calculating the faculties' budgets, the research-related component contributed 7% on average in 2000, whereas in 2010 it already amounted to 33%. Around 45% of third party money made at the university is attributed to be money direct from companies.

SUCCESS FACTORS

High-level commitment to partnering with industry is a key success factor of MUAS.UBC is supported, starting at the strategic level of the organisation and flowing down to the operational level. The industry focus already starts in the job application, where potential employees who support UBC are favoured. The active implementation of strategies in structures such as the transfer agency and the research

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offensive operationalises an industry focus.

The university has developed a partner relationship management (PRM) system and Stairway Model which places every partner on the stepladder. The model allows for the strategic management of university partnerships as a set of norm strategies have been created for each level of UB relationship (each step in the ladder) to either maintain, increase or decrease the relationship.

At the academic level, the creation of incentives for academics to engage with business has been a further element of the initiative's success.

IMPACTS

In addition to previously mentioned results and achievement, some unintended impacts of the shift in focus of the university have also been documented.

For example, when the university create six academic committees to manage different objectives within the university they included in each committee two persons from industry. The main aim of this, was to stimulate innovation, to professionalise the decision making process and to get a new vision from outside the university. However, having been involved in the university's decision making process, those from industry then felt some ownership of the university and became advocates for the university within their external networks. In that sense, the university has acquired 12 ambassadors for the university.

Another unintended impact was the creation of positive UB role models which had the effect of further stimulating interest and motivation in other researchers. It was found that as academics were successful in their efforts to work with business, and thus received various incentives for their cooperation such as greater office space, other researchers observed this. This had the affect of influencing them to show more interest in interacting with business.

STRENGTHS AND WEAKNESSES

One of the key strengths of MUAS's approach is that it has proven to build a longer-term and more sustainable approach to cooperation with business. Furthermore, the approach allows for improvements not only in the area of third-party income but also in the other two aspects in the triple helix, teaching and research.

A perceived weakness could be found in the approach to IP management as this approach has still not been developed sufficiently; and indeed difficulties still occur with it. One of the reasons for this is that all companies are unique, and therefore it is challenging to apply just one system for managing IP. Moreover, sometimes the IP negotiations can also be difficult following joint discovery about who gets to use it, in what way and who earns what.

TRANSFERABILITY

The case of MUAS contains key learning points for all universities seeking to sustainably increase third-party income through the creation of longer term partnerships with business. Whilst the impact of this focus has not only been felt on the financial-side, greater interaction with business has also had substantial impact on the research and teaching sides. More specifically, there are key aspects of the case that are applicable for other universities

of applied science or very specifically, for universities that are not established in a main city.

THEMES

Increasing third-party Income, Early-stage partnerships, Partnering, Projects with business

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RESOURCES

DOCUMENTS AND PUBLICATIONS

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WESTERN EUROPE

CASE 28 TELEKOM INNOVATION LABORATORIES GERMANY

CASE STUDY TITLE	TELEKOM INNOVATION LABORATORIES
HEI / ORGANISATION NAME	DEUTSCHE TELEKOM INNOVATION LABORATORIES
COUNTRY	GERMANY
DATE	MAY 2011
NATURE OF INTERACTION WITH BUSINESS	COLLABORATION IN R&D
NATURE OF GOOD PRACTISE/PROJECT	STRUCTURAL INSTRUMENT OR APPROACH

PROFILE

SHORT DESCRIPTION

A RESEARCH CENTRE SHAPING TOMORROW'S WORLD BY COMBINING SCIENTIFIC KNOWLEDGE WITH THE INNOVATIVE DRIVE OF A GLOBAL CORPORATION

The Telekom Innovation Laboratories is an innovative R&D institute of Deutsche Telekom and the Technical University of Berlin (TU Berlin). It is the central R&D unit of Deutsche Telekom. The institute stands for international world-class research and the development of trend-setting products and services. Telekom Innovation Laboratories was established in 2005 with the aim of refocusing Deutsche Telekom's R&D activities. In doing so, Telekom Innovation Laboratories combines the scientific know-how of academia with the innovative drive of a global active corporation to develop ideas into marketable products. Moreover, the fact that the institute is located on the TU Berlin campus promotes close interaction. Furthermore, top scientists from around the world work on topics such as new customer-oriented products, services and solutions. In joint projects with the TU Berlin as well as other partner universities and business partners, the research centre is shaping tomorrow's world.

BACKGROUND

Deutsche Telekom has always engaged in doing basic research. In the beginning all research was done at Deutsche Telekom, and in most cases it was not open to the public. This research was extremely expensive and tedious. In spite of the intense in-house research that was performed, Deutsche Telekom struggled to establish a real advantage over its competitors through its innovation. Deutsche Telekom soon realised that new technology always has to emerge as a standard in the market, and that it is of no value to develop systems which can only be used by customers of Deutsche Telekom. The realisation that more basic research for the next generation of technologies was required and that universities were well placed to offer this support coincided with a global shift to more open innovation channels. For this reason, the research centre was established on the campus of the TU Berlin. Together with the university and other partners, the Telekom Innovation Laboratories began to create an open innovation process for new communication technology.
Since 2005, the Telekom Innovation Laboratories has been successfully operating as the core research unit of Deutsche Telekom and has won several awards for its innovative ideas.

AIM AND TARGET

The aims and targets of the Telekom Innovation Laboratories are closely tied to those of Deutsche Telekom. The market of Deutsche Telekom is one of the most competitive, challenging and dynamic

markets in the world today. In particular, the communication market has benefited immensely from new technologies, which provide the consumer with new methods of communication. For this reason, it follows that only companies which are continuously adapting to these changes, and are the first to provide their customers with new advanced methods of communication, can find a foothold and succeed in communication market.

Deutsche Telekom realised that it is essential to have a more in-depth knowledge of the scientific research, which is done in the academic world. Furthermore, the company needed a much larger innovative input. R&D is one of the core units of a communication company and has always been of great importance for Deutsche Telekom. They have understood that they have an enhanced advantage to stay competitive in the market if the research is conducted in a more open environment, where more interactive and scientific R&D is carried out.

Some of the world's leading scientists, who work at the TU Berlin, are included in the management team of the Telekom Innovation Laboratories. By including university scientists in the team and giving them space and funding for their research, Telekom Innovation Laboratories has direct access to the development of new technologies and, through this, a greater likelihood of creating a sustainable competitive advantage in the market.

Deutsche Telekom has the aim of creating an open dialogue with all technology providers and scientists in order to create and shape standards for the communication industry, which benefits directly from this information. Furthermore, Deutsche Telekom intends to be a leading driver for excellent, economically useful research and, more importantly, a core implementing company of new technologies. In short, they want to have the ability to lead the industry in the direction they desire. It is both a task and a responsibility of Deutsche Telekom, to continually improve the communications industry.

The Telekom Innovation Laboratories concentrates on five different fields of innovation. These were adopted from the corporate strategy of Deutsche Telekom. The first point is the field of intuitive usability, which focuses on making complex applications in telecommunications and information technology as easy to use as possible. The second field is the integrative service component which deals with modules in the area of multimedia, service intelligence, transaction services, media and process information technology. Thirdly, there is the field of intelligent access which is concerned with the linking of individual applications for users across all network platforms. The fourth field refers to infrastructure development which sets the course for high-performance networks and intelligent network technology to effectively manage data flow. Finally, the last field is inherent security which creates the conditions for reliable information processing and storage.

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Analysing and working on these innovative topics ensures that Telekom Innovation Laboratories can play a leading role in the communication market.

IMPLEMENTATION

STRATEGY AND ACTIONS

One of the main achievements of Telekom Innovation Laboratories was to move from in-house research, completed at the Deutsche Telekom, to an open research environment. The fact that the research is now conducted at Telekom Innovation Laboratories on the campus of TU Berlin in an open innovation process has enhanced the innovation process of Deutsche Telekom. The communication market can only function if each party involved operates with the same technology. Consequently, it is not an impediment that the research is carried out in an open environment. More importantly, Deutsche Telekom has a better and clearer understanding of where the communication market is heading, and can thus play both a decisive and a leading role in the development of this market.

Telekom Innovation Laboratories is based directly on the campus of the TU Berlin, which ensures direct access to highly gifted and talented students who show potential. By being in the students' environment, Telekom Innovation Laboratories ensures a high rate of interaction between the university and the research centre. Secondly, the funding of five professors at Telekom Innovation Laboratories provides the possibility of having direct access to the knowledge of the professors. The fact that the created IP within Telekom Innovation Laboratories is owned by Deutsche Telekom, gives the research centre a first mover advantage. Even though all research completed at the Telekom Innovation Laboratories is conducted in an open innovation process, it can directly act and take the newly-won information or technology and implement it into different sectors of Deutsche Telekom. Thirdly, the researchers can operate and research freely on their research topics. The only condition is that these topics have to be related to the communication sector. All projects support the objective of developing innovative products and services for Deutsche Telekom customers. The results of this R&D are primarily transferred to the group's strategic business units or are used to establish spin-off organisations.

An additional aspect of Telekom Innovation Laboratories is the fact that it also operates on an international level. It has subsidiaries in the USA and Israel and international contacts all over the world. These facilities work very closely together with university and research institutes which are based in these regions. It is an integral strategic approach by Telekom Innovation Laboratories to operate internationally. They realised that only a worldwide and standardised communication market can work efficiently and reliably, and that in order to achieve this status a worldwide dialogue is essential.

MONITORING AND EVALUATION

There are several methods of measuring the success of Telekom Innovation Laboratories. One of the most efficient measures is the number of innovations that return to the strategic business units of Deutsche Telekom. Furthermore, they have the goals of

publishing one paper a day, registering a patent per week and winning an award every month. This illustrates clearly how ambitious and innovative the research centre is, and how it operates. The awards demonstrate that the work is recognised and that there is a need for their innovative R&D at Telekom Innovation Laboratories. Furthermore, the professorships are only sponsored for a certain period of time. As soon as a contract ends, Telekom Innovation Laboratories analyses and evaluates whether it is feasible to renew the contract.

SUSTAINABILITY

Telekom Innovation Laboratories is clearly sustainable, mainly owing to the engagement of Deutsche Telekom. Having Deutsche Telekom as a main financial source and also the increased need for innovative products, places Telekom Innovation Laboratories in the enviable situation of being sustainable. Deutsche Telekom regards Telekom Innovation Laboratories as the main innovation centre of their whole international corporation. This makes the research centre one of the most important stakeholders of Deutsche Telekom. Furthermore, the enormous experience and the competence of the international team are valuable assets for the sustainability of the Telekom Innovation Laboratories.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

The Telekom Innovation Laboratories received various awards, despite having only been established in 2005. Here is a selection of the awards which Telekom Innovation Laboratories and its employees received: Gesche Joost secured the Berliner Science Prize in 2008, Sebastian Möller won the Johann-Phillip-Reis Prize in 2009 and Zhiyun Ren was named the Convergator of the Year 2009. The scientists researching at the laboratories have also been presented with the 'best paper award' at countless international conferences over the years for their innovative contributions. The T-Labs convincingly won the VOICE Award for 'smart service award' in customer contact technologies three times in 2005, 2008 and 2009 with other Telekom units. One of their award-winning solutions was a cutting-edge application for interactive voice response systems at Deutsche Telekom. The application enables a call centre to adapt the automated voice instructions according to the caller's age, gender and mood. This application is in use in several of the company's voice portals.

During the centre's history, they have made 35 invention disclosures with 23 patents pending based on these disclosures. The initial applications were made in Germany, as well as other European countries, Israel and USA. These achievements are the result of work carried out by Deutsche Telekom experts, research done by Telekom Innovation Laboratories scientists (submitted via the TU Berlin) or contract work undertaken with partners such as Ben-Gurion University.

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CASE 28 TELEKOM INNOVATION LABORATORIES GERMANY

SUCCESS FACTORS

There are several success factors contributing to the success of Telekom Innovation Laboratories. Firstly, the move to an open innovation research has been one of the most effective accelerators for the innovation process at Deutsche Telekom.

Furthermore, the location directly on the campus of the TU Berlin serves to increase the knowledge transfer between academia and Telekom Innovation Laboratories. This lead to fewer barriers between the university and businesses. Telekom Innovation Laboratories created a platform where the business world and the academia can mix well together.

The fact that Telekom Innovation Laboratories are fully financed by Deutsche Telekom is a significant success factor because money and resources are provided.

Another great advantage of Telekom Innovation Laboratories is its high international standing. They have close links with universities and research institutes all over the world, and have established subsidiaries in Israel and the USA. This international dialogue accelerates the open innovation process significantly.

IMPACTS

TU Berlin has benefitted from Telekom Innovation Laboratories in a number of ways. Firstly, they have been able to attract five highly-qualified, fully-funded professors who are focussed on research excellence. Their scientific merit and discoveries serve to increase the reputation of the university. They also benefit from having a global telecommunications firm on their campus, exposing students to the world's leading technology and knowledge. Furthermore, the university is exposed to international partners in both business and research, making them much more globally-focussed.

For Deutsche Telekom, the impact has been to access leading-edge knowledge in communication with the effect of creating new products and services for the firm. Additionally, they have accessed a deep pool of talent through their interaction with students.

STRENGTHS AND WEAKNESSES

The major strength of the Telekom Innovation Laboratories is that it combines the scientific know-how of academia with the innovative drive of a globally-active corporation to develop ideas into marketable products. Moreover, the fact that the institute is located on the TU Berlin campus, promotes close interaction with researchers and students. Furthermore, top scientists from around the world work on topics such as new customer-oriented products, services and solutions.

The fact that research is undertaken in an open environment might first be seen as an issue because the innovation chain is open. However, the past has shown that it actually enlarged the innovative capabilities of the Deutsche Telekom and is one of the drivers of the success of Telekom Innovation Laboratories.

CASE 28 TELEKOM INNOVATION LABORATORIES GERMANY

TRANSFERABILITY	The Telekom Innovation Laboratories provides an excellent example of how a university can benefit from working closely with a company whilst allowing the company itself to profit with new insights, technologies and new products. This example provides key knowledge for not only companies in Germany, but also for UBC in Europe.
THEMES	Open innovation, International, transfer of knowledge, Standardised communication market, TU Berlin
INFORMATION SOURCES	Telekom Innovation Laboratories Website www.laboratories.telekom.com/ipws/Deutsch/Pages/Willkommen.aspx (accessed 31st March 2011)
PUBLIC CONTACT DETAILS	Deutsche Telekom AG LaboratoriesErnst-Reuter-Platz 7 10587 Berlin Germany Phone: +49 30 8353-58555 Acknowledgement: The support and input of Dr. Raimund Schmolze and the team of Telekom Innovation Laboratories in the construction of the case study were greatly appreciated.

RESOURCES

DATABASES AND WEBSITES	Telekom Innovation Laboratories Website (accessed in March 2011) www.laboratories.telekom.com/ipws/Deutsch/Pages/Willkommen.aspx (accessed 31st March 2011)

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WESTERN EUROPE

CASE 29 MINOR ENTREPRENEURSHIP NETHERLANDS

CASE STUDY TITLE	MINOR ENTREPRENEURSHIP
HEI / ORGANISATION NAME	FREE UNIVERSITY (VU) AMSTERDAM
COUNTRY	NETHERLANDS
DATE	MARCH 2011
NATURE OF INTERACTION WITH BUSINESS	ENTREPRENEURSHIP
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

A COURSE NOT JUST FOR THE ROLE OF ENTREPRENEUR BUT FOR THE FUTURE POLICY-MAKER, CONSULTANT AND RESEARCHER IN THE AREA OF ENTREPRENEURSHIP

The Entrepreneurship Minor, offered to students within all faculties at the Free University of Amsterdam (VU), presentss an introduction to the field of entrepreneurship research. This study option is relevant for students from all academic disciplines who are interested in understanding the role and functions of entrepreneurs and entrepreneurship as a socio-economic and cultural phenomenon.

The Minor Entrepreneurship is offered to all students of the VU as well as students of other Dutch and foreign universities. A unique aspect of the Minor Entrepreneurship is that the curriculum is offered by the Faculty of Social Sciences instead of the usual business school as is done in most universities. The programme aims to emphasise the social aspect of entrepreneurship by emphasising the role the student can play as a future professional in entrepreneurship, not just as an entrepreneur. This makes it ideal for a policy maker, consultant, researcher or (small) business owner.

BACKGROUND

The Entrepreneurship Minor is developed for students of all disciplinary backgrounds. In the first three years the Minor is taught in Dutch. At the beginning of the fourth year lessons are then taught in English and are also opened up to foreign students. The Minor was developed within the framework of the Amsterdam Centre for Entrepreneurship at the VU. The present minor is the VU's programme and it is managed and taught by the Department of Organisation Sciences from the Faculty of Social Sciences. This is rather different from other universities where 'entrepreneurship' is primarily taught in business schools and has the advantage of being able to explore the entrepreneurial concept to a further degree and allows greater understanding of entrepreneurial behaviour.

The course enables students to pursue a career in which they can contribute to the development of a better entrepreneurial culture, for instance as a policy-maker, consultant, researcher or (small) business owner. The programme emphasises the role the student can play as a future professional in entrepreneurship, not just as an entrepreneur. Entrepreneurship is defined in this minor as the process of the pursuit of opportunities, regardless of the available resources. The ultimate goal is to create a social and

economic value for the initiators (entrepreneurs), the market in which they operate and the community in which they are embedded. As such, entrepreneurship is seen as a socially embedded process. Strong emphasis is given to social responsibility, value creation and the societal impact of entrepreneurial activities.

The Entrepreneurship Minor consists of five courses, each one consisting of 6 ECTS:

1. Introduction in Entrepreneurship,
2. Entrepreneurship Industry,
3. Entrepreneurship and Networks,
4. Entrepreneurial Regions, and
5. Entrepreneuring in Amsterdam.

SHORT DESCRIPTION OF THE COURSES ARE AS FOLLOWS:

INTRODUCTION IN ENTREPRENEURSHIP

This course lays the theoretical foundation for the minor programme. Students are introduced to the basic concepts of entrepreneurship: opportunities, entrepreneurial process, role of the entrepreneur in the entrepreneurial process and different theoretical perspectives (for example, Schumpeter, Kirzner, Gartner, Zahra, Venkateraman, Shane). Students are also taught the more economical to more cognitive forms as well as behavioural and sociological aspects.

ENTREPRENEURSHIP INDUSTRY

The focus in this part of the course is on issues of entrepreneurship and innovation that different professionals encounter in their day-to-day interactions with entrepreneurs and entrepreneurship (business of science, commercialisation, [open] innovation, intrapreneurship, policy and funding issues).

ENTREPRENEURSHIP AND NETWORKS

The focus in this course is on the role and dynamics of social networks in the entrepreneurial process. Relevant theories are discussed (strong times versus weak times, generation legitimacy) and their effect on the entrepreneurial process. The concept 'social capital' is discussed in terms of both positive and negative effects for the entrepreneur. Using this knowledge, students will be challenged to conduct an ego-network analysis for an entrepreneur and to write an advice report for this entrepreneur.

ENTREPRENEURIAL REGIONS

This course focuses on the question of why some regions are more entrepreneurial than others. It also deals with topics such as transnational, migrant, social and ethnic entrepreneurship, clusters and science regions. In addition, attention is devoted to how entrepreneurship in a region is affected by critical events such as natural disasters, war or a major sports event. Students of different scientific backgrounds will, as a group, conduct a case study on specific domestic and/or international regions.

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ENTREPRENEURSHIP IN AMSTERDAM

The focus in this course is on entrepreneurship in Amsterdam. Students are acquainted with entrepreneurship issues in the context of a large city. This includes stimulation of entrepreneurship, urban entrepreneurship, creative economy, green city, and policy issues.

The minor also places emphasis on the development of students' skills through practical assignments and workshops. The Entrepreneurship minor is an example of best practice because it emphasises the use of the students' disciplinary background in the context of entrepreneurship.

AIM AND TARGET

It is the objective of the VU to introduce students to entrepreneurship. Furthermore, it is intended to make them consider a career in fostering entrepreneurship through various initiatives, including this entrepreneurship minor. The objective of the minor programme is to reach one hundred students annually.

OTHER REFERENCES

The Entrepreneurship Minor is a branch of the activities of Advance Certificate in Education (ACE), which is financed through the Ministry of Education of the Dutch Government. ACE is cooperation between two universities and two universities of applied sciences in Amsterdam. Each of the participating institutes of higher education developed an entrepreneurship minor for its students.

FUNDING

The development of the minor programme was made possible through a grant to ACE. The grant to ACE was made possible through the framework of the national programme 'centres of excellence'. Since its development is financed from regular teaching budgets (based on student ECTS), the minor programme is self-funded.

IMPLEMENTATION

STRATEGY AND ACTIONS

The programme is developed as a minor to widen the scope of students beyond their major discipline, regardless of their disciplinary background during one semester of their bachelor programme. Marketing efforts to make students aware of the minor are: participating in the minor 'market' of the school, promotional leaflets, special awareness sessions, a website and a linked-in group. Additionally, alumni of the minor programme advertise the benefits of the minor in entrepreneurship circles through word of mouth.

MONITORING AND EVALUATION

The students evaluate all courses as part of the normal evaluation routine at the VU. In addition, the teaching group plan regular meetings at the start of the start, during and at the end of the course to maintain cross-overs and synergetic effects across the five courses.

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SUSTAINABILITY

Several measures have been taken to sustain the Entrepreneurship Minor. The first is to promote the minor through the whole university. The second sustainability step is to teach the minor in English which opens the door for international students.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

The course achievements are best summarised in the number of students that have enrolled in the minor. In the first and second year 30 students participated; in the third year 75 students. The objective is to reach 100 students with the entrepreneurship minor annually.

SUCCESS FACTORS

A key success factor is that the minor is open for students from the university as a whole. The different viewpoints and skills that these students possess create an interesting dynamic that challenges students to reflect on their own world views. A success factor is the contact made with entrepreneurs and professionals in the entrepreneurship industry as well as the development of their entrepreneurial skills.

A positive factor is the enthusiastic lecturers involved and their working together with the students for a full semester. It not only enables VU to address a wide range of topics and to move beyond the introductory level, but as students and teachers get to know each other better, an actual community of learners can develop.

A final success factor is the fact that the programme works with the study/disciplinary background of the students and illustrates how that can be of use in/for entrepreneurship.

IMPACTS

Although there has not been much publicity for the minor outside the VU, there is interest in this programme from other universities. Students from the University of Amsterdam, Technical University of Eindhoven and the Technical University of Delft have been participating in the recent editions of the minor.

STRENGTHS AND WEAKNESSES

The strength of the minor is that it focuses upon the disciplinary background of the student and introduces the student to the role he or she can play in the entrepreneurship industry – the 'world' around entrepreneurs and enterprises. A second strength is that throughout the programme students are brought into contact with individuals that fulfil different

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CASE 29 MINOR ENTREPRENEURSHIP NETHERLANDS

	roles in this industry. This may include either assignments for which students have to make contact outside the university or through guest lecturers in the classroom environment. A weakness of the programme is that it is positioned in the bachelor programme and most students continue in a master which puts entrepreneurship to the back of the students' minds.
TRANSFERABILITY	The Entrepreneurship Minor is extremely transferable. Nevertheless, an important aspect is the educational philosophy behind the minor. This means not teaching students to start their own business, but to teach students about entrepreneurship and the context in which it is embedded and what might be beneficial in their future career as consultant, policymaker, policy advisor or entrepreneur.
THEMES	Entrepreneurship and students' disciplinary background; Embedded entrepreneurship
INFORMATION SOURCES	www.fsw.vu.nl/nl/opleidingen/minoren/entrepreneurship/index.asp (accessed 31st May 2011)
PUBLIC CONTACT DETAILS	www.fsw.vu.nl/nl/opleidingen/minoren/entrepreneurship/index.asp (accessed 31st May 2011)

RESOURCES

DOCUMENTS AND PUBLICATIONS	www.fsw.vu.nl/nl/opleidingen/minoren/entrepreneurship/index.asp; for each of the courses there is a study guide (in English) available. (accessed 31st May 2011)
DATABASES AND WEBSITES	www.fsw.vu.nl/nl/opleidingen/minoren/entrepreneurship/index.asp (accessed 31st May 2011)

WESTERN EUROPE

CASE 30
INNOVATION FOCUS THROUGH STRATEGIC PARTNERSHIPS NETHERLANDS

CASE STUDY TITLE	INNOVATION FOCUS THROUGH STRATEGIC PARTNERSHIPS
HEI / ORGANISATION NAME	TECHNICAL UNIVERSITY EINDHOVEN (TU/E)
COUNTRY	NETHERLANDS
DATE	JULY 2011
NATURE OF INTERACTION WITH BUSINESS	COMMERCIALISATION OF R&D RESULTS ENTREPRENEURSHIP
NATURE OF GOOD PRACTISE/PROJECT	OPERATIONAL ACTIVITY

PROFILE

SHORT DESCRIPTION

INTEGRATED APPROACH TO VALORISATION CREATES AN ECOSYSTEM WHERE INNOVATION STARTS

Innovation with the Technical University Eindhoven (TU/e) consists of a number of interlinked activities: strategic partnerships with industry and regional companies, technology transfer (licensing & spin-offs), entrepreneurship education and start-up support. Whilst these activities alone do not seem unique, what makes this case different is that all four areas are seamlessly integrated to support UBC creating benefit for all three missions (teaching, research, knowledge transfer) of the university. Furthermore, the nature of the technology transfer is such that the university works closely together with firms to create joint spin-offs, where the university brings in IP and industry brings in the management and finances.

BACKGROUND

The Technical University Eindhoven (TU/e) is one of three technical universities in the Netherlands. TU/e was founded in 1956 to give a boost to the economy in the south-east of the Netherlands. Over the years, close relations have been developed with global firms in the electronics and automotive industries such as Philips (that used to have its headquarter in Eindhoven) and DAF (later NedCar, a joint venture of Volvo, Mitsubishi and the Dutch government). In the international CWTS (2009) ranking, TU/e ranked first of 350 best performing universities worldwide with regard to scientific output in cooperation with industry.

The valorisation of knowledge is one of the focal areas of its policy. The university uses the following different modes of cooperation with industry:

1. innovation in partnerships;
2. technology transfer;
3. entrepreneurship education and
4. start-up support.

The philosophy of the TU/e is that all elements need to be integrated to achieve the valorisation mission of the university: strategy, structural elements such as science park, Incubator 3+ and TU/e Innovation Lab, activities such as entrepreneurship education and stakeholders such as SME, industry and starters. (www.identitaal.nl/temp/pdf/TUe%20Waardevolle%20Wetenschap.pdf)

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AIM AND TARGET

The overarching aims and targets for the diverse types of innovation activities is the 'valorisation of knowledge', or rather, turning research into economic activities. Through knowledge valorisation the university expresses the societal responsibility of its research and contributes to innovation activities in the region. The university uses the slogan 'where innovation starts' to emphasise its role in the initiation of innovation in the region and beyond.

Specifically the aims and targets are:

- to actively develop, strengthen and enlarge the cooperation with larger technology-driven companies and organisations on the regional, national and international level,
- to stimulate knowledge transfer and innovation projects with the regional SMEs, and
- to encourage entrepreneurship and innovation by identifying, supporting and providing guidance for potential high-tech start-ups and spin-off companies originating at TU/e.

OTHER REFERENCES

Recently (2011) the TU/e received a grant from the Dutch government to continue and extend its valorisation activities (including entrepreneurship education). In an evaluation by ScienceWorks (June 2011), Dutch universities were rated on their valorisation according to three dimensions: being entrepreneurial, cooperating with third parties and being communicative. On cooperation with third parties (industry, SME, institutions) the TU/e scored highest of Dutch universities (financial revenues); on the other dimensions it scored average.

FUNDING

The different activities are financed from multiple sources. Entrepreneurship education and technology transfer are financed through grants by the Dutch government; strategic partnerships by the partners, and cooperation in the region via the regional structural funds (ERDF and other regional funds). International cooperation is financed via Knowledge and Innovation Communities (imitative of the European Institute of Technology - EIT).

IMPLEMENTATION

STRATEGY AND ACTIONS

There are four areas of focus for the university's effort to cooperate with business.

(STRATEGIC) PARTNERSHIPS FOR VALORISATION

The TU/e has a number of strategic partnerships with large companies originating from years of cooperation. Three examples of this are the strategic partnership on light, the strategic partnership with ASML and the TU/e Innovation Lab.

STRATEGIC PARTNERSHIP ON LIGHT

The Intelligent Lighting Institute is a cooperation of six faculties

doing research on intelligent light applications. The companies involved in this partnership are: Philips, Scheuten Solar, NXP, Liandin, Cofely and BAM. The institute has four research programmes:

- intelligent streetlight,
- natural light in the home environment,
- effect of light on health and well-being, and
- new forms of interaction between man and light.

The aim is to explore and validate new light concepts and commercialise these in cooperation with industry.

STRATEGIC PARTNERSHIP WITH ASML

There are meetings on a regular basis with representatives of the R&D management of ASML, a stock market listed microchips manufacturer, to discuss on-going and new projects. One of these projects is on mathematical optimisation of chips. Additional cooperation between the university and the firm is highlighted in the fact that ASML has test equipment in the labs of the TU/e and it donates scholarships to students.

TU/E INNOVATION LAB

Via the Innovation Lab the university develops, strengthens and enlarges its cooperation with technology-driven companies, regionally, nationally and internationally. It strives to be the preferred R&D partner for networks, programmes and institutes in the south-east of the Netherlands. It provides industry, small businesses and academic entrepreneurs with a wide range of services, and supports them with the following:

- contract research and contract education,
- joint R&D projects within the TU/e research fields,
- R&d studies in the form of research or graduate trainee-ships,
- design assignments such as a twelve-month practical as-signment, and
- postgraduate design programme.

TECHNOLOGY TRANSFER

The university is actively engaged in marketing its knowledge though licences and via joint spin-off companies (TU/e with industry) for early stage technology. In the case of the joint spin-offs the university provides the science and technology (IP), while the industry is expected to provide management and finance. Since 2004, there have been 32 spin-offs created.

ENTREPRENEURSHIP EDUCATION

The TU/e offers a Minor Entrepreneurship to its bachelor students, a certificate programme in entrepreneurship to its master students and Ph.D. students can be involved in the valorisation activities of the TU/e. High-tech enterprises have easy access to TU/e researchers through seminars, expert meetings and personal contact. In turn, support is given to TU/e researchers, students and alumni in realising their business plans for the commercial exploitation of scientific research and applications by setting up high-tech

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startup ventures.

START-UP SUPPORT
The university offers start-up support (to students, graduates and others) through Technostars (www.technostars.nl; a 'seedfund') and Incubator 3+ (www.incubator3plus.nl; which consists of coaching by experienced coaches, consultancy, loans and accommodation). Meeting are organised on a regular basis, focusing on themes of particular interest for starting entrepreneurs.

MONITORING AND EVALUATION

For the monitoring and evaluation of its valorisation activities, the TU/e uses the guidelines prepared by the QANU (Quality Assurance Netherlands Universities). Quality assessment of education and research in Dutch universities was until recently carried out by the Quality Assurance department of the VSNU. Since 2004 the activities of this department were transferred to QANU, which assumes responsibility for completion of the VSNU activities initiated before 2004.

SUSTAINABILITY

The TU/e has been actively involved in valorisation activities since 2004. However, at this point it relies on government grants for a number of its activities. Other activities such as industry research projects are financed by the partners. Sustainability will depend on how the TU/e secures financial resources for its present and future activities.

The university also is part of an initiative of the VSNU (the Dutch organisation of universities) to include knowledge valorisation into the tasks of its scientific personnel.

IMPACT | RESULTS | OUTCOMES

ACHIEVEMENTS

According to the annual report from the year 2010, the TU/e created a total of 83 companies in the period 2006 to 2010. In the same period it applied for 64 patents and 42 licence agreements were made. For its research 11 valorisation grants were granted. With regard to the SMEs, the university completed 104 assignments subsidised via the Innovation Grants Regulation of the Dutch government.

SUCCESS FACTORS

The success factors of the TU/e originate from its history and the large multinationals in the vicinity including Philips. Another success factor is partnering with other knowledge providers in Brainport (www.brainport.nl), ELAT (www.elat.org) and other regional consortia. The university already cooperates with (large and knowledge-intensive) industries from a very early stage onwards by setting up (research) spin-offs in which both parties participate: the university brings in its IP, industry brings in finance and management.

IMPACTS

The TU/e has an impact on the regional economy via its partnerships: attracting 'brains' to the regions, and creating jobs via the spin-offs and support of start-ups. It intends to create future entrepreneurs with its entrepreneurship programmes

for students, to support SMEs (in collaboration with other educational institutes in the region) via United Brains, a large enterprise with joint ventures. The university impacts on the region via its varied mechanisms for technology transfers

STRENGTHS AND WEAKNESSES

There is a long history of working with industry, especially Philips and the automotive industry. This experience is extended and there are now active collaborations with large industry in the area (for some examples see above and the annual report). Further strengths are the current availability of (regional) funds as a result of the breakdown of the regional industry from which the university can benefit because they formulated their valorisation and entrepreneurial activities to fit in with the regional plans.

For universities it is always difficult to reach SMEs. To address this, the university entered into partnerships in the regions with Fontis (university of applied sciences), the regional development agency (BOM) and via United Brains (www.unitedbrains.nl). Also in cooperation with the Hightech Campus Eindhoven (www.hightechcampus.nl), instruments are created to open up the university for small (technology driven) companies.

TRANSFERABILITY

Transferability of the activities of the university is possible, but the necessary (financial) resources need to be in place. The regional circumstances and the profile of the TU/e have to be taken into account since these shaped the specific mechanisms.

Of special interest and a high(er) transferability, is the mechanism of joint spin-off creation in which the university brings in IP and industry management and finances.

THEMES

Knowledge and technology transfer, Entrepreneurship education, Knowledge valorisation

INFORMATION SOURCES

www.tue.nl/en/innovation
(accessed 31st May 2011)

PUBLIC CONTACT DETAILS

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RESOURCES

DOCUMENTS AND PUBLICATIONS

General information:
www.tue.nl/en/innovation
Facts and Figures Edition 2010: www.tue.nl/uploads/media/ID-power_of_innovation_06.pdf
(accessed 11th August 2011)

Annual report 2010 (in Dutch):
www.tue.nl/uploads/media/TUE_Jaarverslag_2010_LR.pdf
(accessed 31st May 2011)

DATABASES AND WEBSITES

www.fsw.vu.nl/nl/opleidingen/minoren/entrepreneurship/index.asp
(accessed 31st May 2011)

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