

# FIN-URB-ACT

## Thematic Paper XI

Work group on high-tech and innovative businesses



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FIN-URB-ACT meeting work group on high tech and innovative businesses /project detection  
Edinburgh: 9/10 February 2010

### **Presentation of main structures and actors in the field of innovative start-ups and businesses in Edinburgh.**

**Gerry Baker – Principal Officer, Enterprise & Innovation , City of Edinburgh**

Edinburgh as the capital of Scotland is usually regarded as one of the twin engines of the Scottish economy alongside Glasgow. It has been consistently one of the most prosperous parts of the country and has the strongest economy of any city in the UK outside London. Nevertheless, there are different fields of deprivation, social exclusion, poor quality housing and pockets of unemployment. The City is a major centre of education in the UK - with the University of Edinburgh, three other universities (over 50,000 students in total) and a further three major higher education institutions as well as a number of prestigious independent schools all located in the city. The economy of Edinburgh is largely based around the service sector, with finance, business and legal services, tourism, retail and health as well as education and high tech research as main employers. Specific sectors with a potential of clustering are life science, tourism and financial services. It is a leading international destination for scientific research and technology innovations. One key to the region's success in scientific research is a critical mass of world leading scientists.

Despite a normally stable economic situation, each key sector faces particular issues that need to be tackled. The cultural and creative industries show skills gaps, rapid technological changes and a lack of understanding of intellectual property rights. Meanwhile the science and technology sector is faced with skills shortages, long duration periods for projects to reach marketability combined with expensive research and development processes, and the tourism sector needs to focus on high levels of staff churn, and is high sensitivity to weather changes and skill shortages.

#### *Edinburgh Science Triangle*

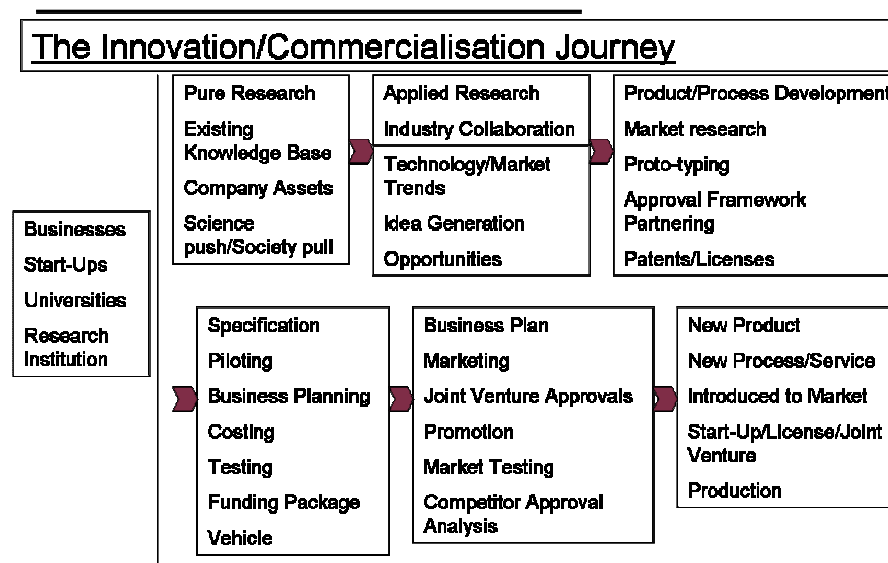
Edinburgh Science Triangle brings together the capital region's universities and research institutes, science parks, local government authorities and Scottish Enterprise. The partnership's twin economic development objectives are (1) to help attract new investment to the area and (2) to promote community and knowledge exchange between academic research and business. To support these shared goals, Edinburgh Science Triangle aims to progressively develop and promote the region's science parks as locations of choice for high growth technology business. The project is part-funded by European Structural Funds.

#### *Edinburgh BioQuarter*

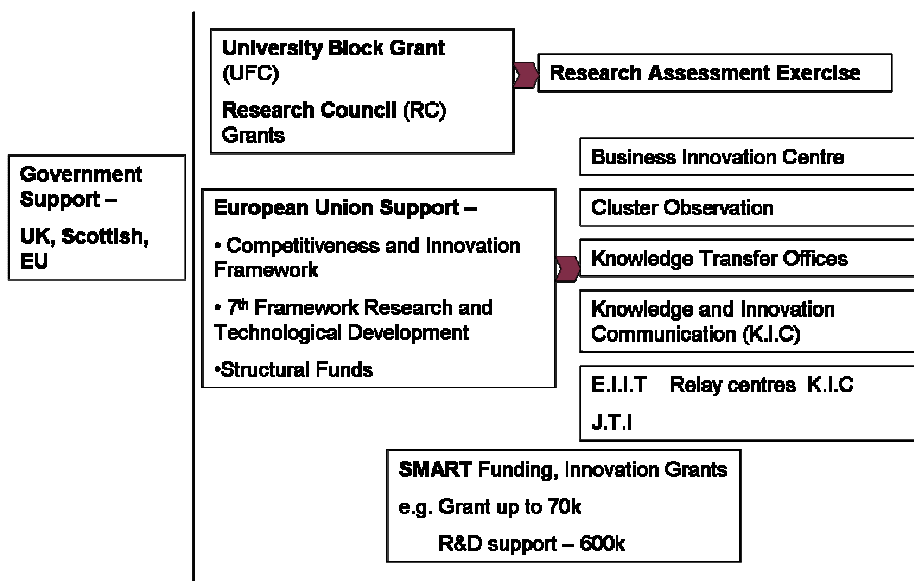
The Edinburgh BioQuarter is a collaboration project between the University of Edinburgh and Scottish Enterprise to consolidate Scotland's reputation as a world leader in biomedical science. The development will be a 100 acre site for biomedical research which is co-located alongside the University medical school, and the City's new Royal Infirmary at Little France. The development provides the environment to complement the significant advantages of co-locating so much expertise, know-how and technology in one place. It is a keystone investment of Scotland's national life science strategy. The BioQuarter brings together public healthcare, academic research and extensive commercial laboratory space in one location to accelerate translational medicine and facilitate large scale life science collaborations.

As stated a major benefit of BioQuarter is its co-location with the Royal Infirmary of Edinburgh, a state-of-the-art teaching hospital, the University of Edinburgh's Medical School and Research Institute, the Scottish Centre for Regenerative Medicine and a major new science park development. The 100-acre site at BioQuarter will ultimately provide more than 500,000 square feet of further academic research space and an additional 900,000 square feet of accommodation for commercial research-based companies. A choice of laboratory and office space will be available for commercial organisations, from start-up incubator units to flexible multi-user spaces and strategic individual sites for biomedical companies. A range of facilities will be shared between commercial, academic and health service related research organisations, providing a synergistic environment that encourages collaboration and networking. The BioQuarter's key stakeholders are: the University of Edinburgh, the National Health Service, Scottish Enterprise and Scottish Development International (Scotland's economic development agency and its international arm) and Alexandria Real Estate Equities, Inc., a pre-eminent international real estate developer specializing in laboratory and office space for the life science industry. Each partner contributes unique strengths to a synergistic environment where science is supported by a broad programme of commercialisation activity, and adjacent clinical trial facilities and business accommodations provide the components necessary for a successful life science cluster.

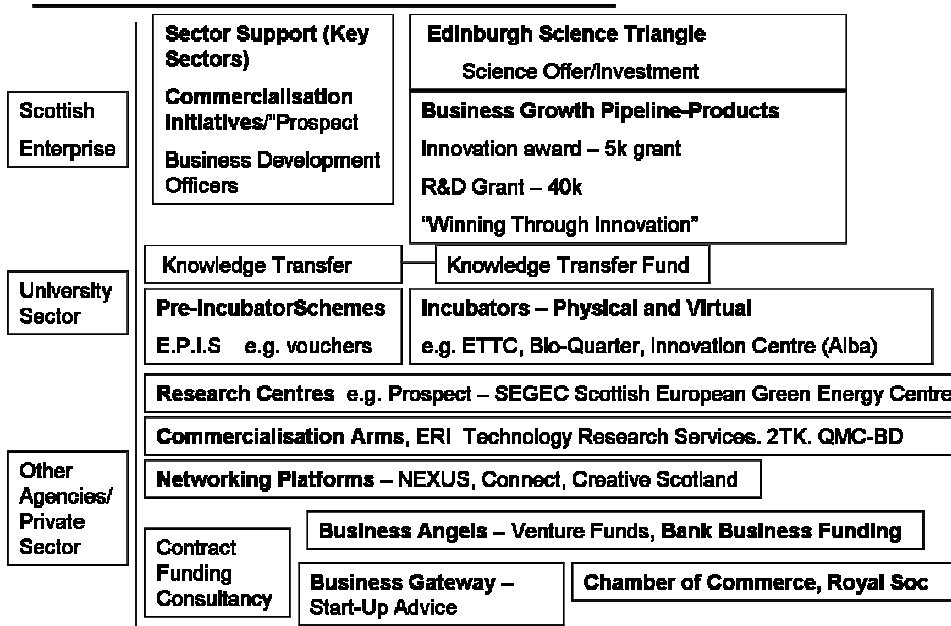
The following structure is mapping an comprehensive overview on business support Structures and actors in the field of innovative start-ups/ businesses in Edinburgh



Part 2



Part 3



Examples:

1. *Cultural Enterprise Office: "Starter for 6"*: Starter for 6 is an enterprise training programme that supports up and coming creative entrepreneurs across Scotland. By helping to turn creative ideas into successful businesses, the programme not only contributes towards the success of the Scottish economy but also raises the awareness and profile of talented entrepreneurs in Scotland. Cultural Enterprise Office (CEO) is delivering Starter for 6 in 2010 and 2011 with funding provided by Creative Scotland's Innovation Fund (via Scottish Government) using a tried and tested model, that has supported participants for the past

three years. The Main programme runs once a year in Glasgow, Edinburgh, Aberdeen, Inverness, Dundee and South of Scotland, in order to reach as broad a spectrum of creative talent as possible. The programme contains comprehensive training services and session on basic business skills (costing, pricing marketing and presentation skills), mentoring by persons from the same branch having some years of experience ahead and also telephone coaching. Besides, Starter for 6 serves as networking platform providing the possibility for meeting people with similar ideas, objectives and problems. Moreover, there is the opportunity to receive grants up to £10,000 at the end of the training programme in order to take the business forward. This was seen as an interesting short term programme providing useful incentive and support to potential entrepreneurs in the creative sector.

2. *Edinburgh Technology Transfer Centre (ETTC)*: comprises collaboration among the university and Edinburgh Council The ETTC is a key component in the University's Company Creation and Development strategy - a grouping of teams and facilities that encourage and assist the creation of technology companies led by academics, researchers and students, and their subsequent growth and development through the University's incubators and on to one of its science parks. It provides specialist laboratories and high-spec office accommodation to spin-out and start-up companies and project teams involved in research and development programmes. The ETTC acts as a crucial contributor of the University's Company Creation and Development strategy, is committed to providing a bridge between the University's research labs and the business world. Crucially, the Edinburgh Technology Transfer Centre harnesses its relationship with the University, providing incubator tenants with a facilitated link to the University's laboratories, thus optimising research synergies and facilitating future collaborations. Along side this research and development agenda, the Edinburgh Technology Transfer Centre provides key business development support to incubatees, including access to business development professionals, workshops, networking opportunities and, perhaps most importantly, the chance to share experiences with other small technology companies. It provides flexible low-cost accommodation solution to allow tenants to progress to larger units over time, as they grow and also focused and progressive business development services, matching their' requirements as they grow. Due to strong network activities incubatees have the chance to contact business service providers, experienced executives and investors.
  
3. *Knowledge Transfer Partnerships Napier (KTP)*: Knowledge Transfer Partnerships (KTP) is Europe's leading programme (part funded by the UK government) helping businesses to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK knowledge base by encouraging partnerships between businesses and universities. Each partnership employs one or more high calibre Associates for a project lasting one to three years, transferring the knowledge the company is seeking into the business. Through contact with businesses, the knowledge base partner is also provided with a relevant and improved understanding of the challenges companies encounter, and their business requirements and operations. Knowledge Transfer Partnerships are jointly managed by the University and employer, supported by Government/industry funding (dependent on company size, grants of up to 66% are available). They enable a company to take on a suitable/high calibre graduate (recruited from any University, not just Edinburgh Napier) to undertake a piece of work that is of relevance to the strategic growth of the company. Programmes are typically two years long, during which time the graduate acts as the conduit for the knowledge from within the University to be implemented and developed within the company. Edinburgh Napier has a well-established track record in this area and generally has several Knowledge Transfer Partnerships underway at any time.

In order to counteract shortcomings in knowledge exchange Edinburgh is on the way to develop an innovative milieu based on:

- the interface between academia and businesses being improved
- physical and virtual incubations centred around critical masses
- innovations around key societal challenges (renewable energy, sustainability and climate change).
- Innovation serving as a driver to business competitiveness and resilience.
- open innovation processes among private and public stakeholders with a high flow of tacit knowledge through various forms of cooperation ranging from loose networks up to contractual agreements of knowledge exchange among businesses, experts and educational facilities.
- more proto-typing support
- the development of growth sectoral and sub sectoral networks and platforms.

Audience comments included

- Interesting model of Scottish Enterprise: (public tasks outsourced to an quasi governmental facility, one stop shop model, applied to an “external” agency
- many strains of funding coming together by Scottish Enterprise
- variety of different funding sources but administered by one agency
- Targeted funding instruments for sectoral needs
- has the advantage to provide better expertise by the lenders on the sector (SMART, R&D resources, pooled venture capital)

## The Edinburgh Chamber of Commerce (ECC)

### John Hughes, High Growth Adviser

As the main deliverer of Business Gateway services and with its wider support facilities the Edinburgh Chamber of Commerce (ECC) has a crucial role in the SME support infrastructure for innovative and high tech projects in the city. In order to receive benefits of High Growth support a business must fulfil some basic criteria. It requires to project a minimum increase in turnover of 400.000 pounds in 3 years - without displacement of other similar businesses. It should be characterised by high export potentials and innovative technical products and services.

The business support activities for high growth companies comprise tasks like support in drafting the business plan and the financial analysis of the start-ups (in provision of templates, SE Investor Readiness support programme). The Chamber encourages clients to undertake constant market research executed by Scottish Enterprise Business Information Service in order to provide its members with necessary information on market prospects and potentials. Furthermore, networking events, strategic alliances and PR opportunities are provided.

#### *Internationalisation of Enterprises supported by the Chamber*

The majority of today's high-tech enterprises is active on international markets. However, the internationalisation of innovative and capital intensive SME bears many chances and risks. Thus, the Edinburgh Chamber of Commerce supports and provides a range of instruments in order to minimise the risks and obstacles within the process of internationalisation of high growth companies.

- *Scottish Development International (SDI)*: SDI is the international arm of Scottish Enterprise. It offers sector specific help and advice to companies looking for the ideal investment location for their business and provides a range of services for businesses thinking about entering the overseas market by e.g. assistance in international market research (international market overview and understanding), developing skills for international businesses. SDI also provides vice versa assistance for foreign companies seeking for settlements in Scotland and supports inward investment projects.
- *ECC International Division*: The Edinburgh Chamber of Commerce has an international desk with long and comprehensive experience in import and export law and is specialised in international trading documentation. ECC works closely with international chambers.
- *Enterprise Europe Scotland (EES)*: Enterprise Europe Scotland is the local branch of the Enterprise Europe Network (running under the CIP programme) providing assistance for small businesses in Europe and neighbouring countries. EES provides access to comprehensive market information covering a large variety of sectors in Europe and provides information to receive a clearer picture of another European market such as e.g. country profiles trade statistics, contacts in trade associations, company lists of potential partners and competitors and provides sector specific market opportunities of other European Regions. EES is not a funding source. However, it provides information on the type of European funding available to Scottish companies. Scottish companies can search through a free GRANTnet database of over 4000 UK and EU grants, loans, venture capital and advisory programmes.

## Funding possibilities supported and provided through ECC (not restricted to High Growth)

One of the chambers primary concerns is to provide a bridge for SMEs to public and private finance opportunities. Thereby, ECC regards its role as bridge to public and private finance possibilities to SMEs. The Chamber is a contact point for entrepreneurs that need funding possibilities for starting a business after an initial meeting, the clients and applicants will be submitted to Scottish Enterprise which is administering and assisting the funding procedures with entrepreneurs. Following there is an overview of some diverse funding instruments and initiatives available in Edinburgh that are supported by the Chamber (and which are not exclusively available to High Growth companies):

- *LINC Scotland*: In Scotland there was an enhanced growth of angel finance over the last decade. LINC Scotland is in forefront of this development. As Scotland's national association for business angels, LINC provides a network for angel investors. It is a non-profit trust and does not act as investment advisor, but rather plays an underlying "soft infrastructure" role in supporting the development of the Business Angel marketplace in Scotland. LINC is supported by membership and company fees, Scottish Enterprise, ERDF and Corporate Partners.
- *Prince's Scottish Youth Business Trust (PSYBT)*: PSYBT offers finance and support to young people (aged between 18 and 25 – or up to 30 if they have disability) living in Scotland to help them set up and run their own business and provides funding assistance if they are unable to get funding from anyone else. PSYBT provides a wide range of services including grants and low interest start-up loans, help and advice with business planning, and a business mentoring programme.
- *The Enterprise Finance Guarantee (EFG)*: The Enterprise Finance Guarantee Scheme aims to help smaller businesses, that struggling to secure finance during the financial crisis to get bank loans of up to £1 million. With the banks reluctant to extend loans in the current financial climate, the government has started the Enterprise Finance Guarantee Scheme (EFG), as part of an effort to stimulate bank lending to businesses. The scheme aims to help credit-worthy companies which might otherwise not be able to access the finance they need for working capital or investment finance due to the current lending conditions. Under the EFG scheme the government guarantees 75% of any loans made, with the bank covering the remaining 25%. The guarantees mean that the government, or taxpayers, will pick up three-quarters of the the tab for any bad loans. In total, the Enterprise Finance Guarantee Scheme will see the Government provide £1 billion of guarantees to support to £1.3 billion of bank lending. The Enterprise Finance Guarantee will apply to loans, and can also be used to convert existing overdrafts into loans to enable businesses to free up their current overdraft facilities to meet working capital demands. The Enterprise Finance Guarantee is available to businesses with an annual turnover of up to £25m. Firms can apply for loans of up to £1million and loans can be repaid over a period of up to 10 years. The guarantee will be available through the following high street banks; Barclays, Clydesdale/Yorkshire Bank, HBOS, HSBC, Lloyds TSB, RBS/Natwest and Northern Bank. It will become available from other lenders if they wish to apply. The Enterprise Finance Guarantee Scheme was open until 31 March 2010. Up to £700 million of new bank lending will be guaranteed between 1 April 2010 and 31 March 2011.
- *Edinburgh Business Loan Fund (EBLF)*: The fund is designed to provide loans to assist a new or expanding small business based in the City of Edinburgh. The fund provides unsecured interest free loans of up to 5.000 pounds for any one business may be made. The repayments shall be made in equal monthly instalments, normally over a two year term which may, upon exception, be extended to a term of three years. (EBLF will be replaced by the East of Scotland Investment Fund during 2010).

- *SMART Scotland/ R&D Grants*: SMART assists small and medium-sized enterprises to reach develop and exploit new technically innovative products with good commercial potential. The aim is to strengthen the scientific and technological bases of industry by providing grants on a discretionary basis for technical and commercial feasibility studies, research and development projects. R&D Grants provides grants for SMEs to help R&D projects that are novel to the business but not necessarily at a national level.

## **How to detect good projects:**

### **Havva Coskun AGIT Aachen:**

Within this session, it was intended to outline how to identify and select projects and business ideas that seems promising and potentially successful. The difficult aspect within this process is the lack of reputation, success stories or failings of new companies and start-ups which can be used as indicator for a secure evaluation. Thus, a right selection needs besides a good feeling, clear and easy criteria to analyse discerningly the submitted applications. The aim must be an effective allocation of capacities and resources in order to optimize investments and financial support and to create the ideal balance and number of projects for the long run time. Or in more easy words: to select today's projects that will become tomorrow's sustainable and successful businesses. The following examples describe two methods by the AGIT business support company from Aachen and the tech2b incubator in Linz. As a necessary precondition of the two stage process (selection and detection) examples of awareness and communication activities will be outlined.

### **Example and approach of AGIT - Aachen Company for Innovation and Technology Transfer**

#### *Basics of economic functionality that needs to be taken into consideration*

Ms Havva Coskun from AGIT Aachen outlined three crucial points which explain the function of the market in theory in order to provide a basic understanding in identifying promising and non promising projects:

- First it is important to recognise, that offerings have to answer demands (law of demand). Without demands projects will be out of use. Thus, good projects are oriented to the needs of customers and they usually solve problems in an innovative way. Innovative means, that technical constructions, processes or business services are easier, faster, more comfortable, more cost saving, more time efficient, more sustainable, non polluting or they satisfy luxury and image based needs.
- Second, demands will be satisfied by products and services that companies offer. Generally companies need money for investments to produce their goods for the needs of the market. An entrepreneur is acting according to the principle of "homo economicus". His first objective is to earn money and maximize the earnings. The entrepreneur can only realise this item, if the product hits the needs of his customers. In order to detect the needs of customers, complex and professional comprehensive marketing studies are needed.
- Third, the monetary connection needs to be regarded. The earnings of cities and local banks depend on the earnings of businesses. If there are enough successful enterprises, start-ups, growing existing companies, local banks have various investment possibilities. This lead to a potential collaboration of companies and the local banking sector. Cities need to design a favourable environment for banks through strengthening of entrepreneurship. The result is that local banks are more active.

#### *Selection and detection criteria of good projects of innovative businesses*

In order to recognise good and promising project, there are a variety of criteria of complex catalogue that needs to be applied in the selection process. In many cases, one of the main criteria is the quality of the acting persons (a single entrepreneur or a team). Surveys of US American VC

companies has shown, that this criteria has usually the highest weight during the due diligence process<sup>1</sup>. Therefore, soft skills like personal characteristics, first impression during the first meeting, educational background and technical skills (in particular with innovative projects) and also private circumstances (influencing factors in private environment should not be underestimated) can be seen as crucial factors for the evaluation procedure. The following overview provides an example on various indicators in this field:

Professional Expert	Social Competence	Mental Strengths
<ul style="list-style-type: none"> <li>• creativity</li> <li>• innovation capacity</li> <li>• learning disposition</li> <li>• endurance/ persistence</li> <li>• priority setting capacity</li> <li>• time management</li> </ul>	<ul style="list-style-type: none"> <li>• networking skills</li> <li>• ability to convince others</li> <li>• ability to motivate others</li> <li>• ability to compromise</li> <li>• ability to delegate work</li> </ul>	<ul style="list-style-type: none"> <li>• enough power</li> <li>• no fear of mistakes</li> <li>• stress resistant</li> <li>• fast recovery from set backs</li> <li>• healthy degree of self-confidence</li> <li>• open to criticism</li> </ul>

Besides the evaluation of personal characteristics of the potential entrepreneur a second criterion is the idea of the business. Following items should be analysed: Is there a customer benefit (e.g. is the customer willing to pay, satisfies the project the customers needs? Is it a basic innovation, process or product innovation or incorporates the project a new innovative or is it an improvement of an already existing product or service is there a market niche or a market gap? Is there a possible existing market for this product or service? What is about the technical state of the product? Are there suppliers or other supports available for the production process or implementation of the service? What about the intellectual property rights (e.g. patents, utility models, design etc.)? Also the ability and capability of the company to realize the production the logistics and the management need to be taken into consideration. A further criterion that is mostly underestimated by start-ups is the market situation. How is the situation with competitors, product life cycle, pirates and how is the access to necessary investments?

The third criteria catalogue concerns the business plan. It is an instrument to communicate the business concept and provides all necessary information on the project idea. It should include chances and risks and defines the future goals and must be seen as a necessary prerequisite to attract capital investors. As a business plan is the main tool for presentation purposes (to business partners, suppliers, customers, investors) it needs to be clear and understandable to everybody and should answers all questions. Furthermore, it must be paid attention to an up-to-date ness and business plan should be adjusted constantly. An ideal business plan includes an executive summary, a description of: legal form of the company, the products or service, an industry/market analysis marketing and sales concept, corporate management. Finally the entire selection procedure applied by AGIT comprises different stages. The first analysis takes about 15 minutes for about 80% of the applicants. 20% reach the second analysis round (3hours) and further 10% of the applicants will be invited to the first personal contact (1 day). The final due diligence process takes 30 days (5%), followed by negotiations with about cooperation with potential investors (almost 3%).

### **Example of project detection and selection by the city of Linz**

<sup>1</sup> Macmillan, I.C. (1988)/ Knight R.M. (1994).

### *Tech2be incubator Linz*

Within the second part of this session, Marcus Costabiei Managing Director of the Tech2b incubator introduced the process on how good projects are being detected in Linz.

The incubator the academic Venture Centre was founded within the scope of the AplusB programme (academic business spin-off venture programme including 9 incubators), established by the Federal Ministry of Transport, Innovation and Technology (BMVIT). The centre's objective is to increase the dynamism of venture foundations within Upper Austria's scientific institution and thus support the business exploitation of R&D results. Since its beginning all incubators assisted about 1000 projects where 350 start-up where found. Tech2be founded 60 Start-ups.

#### *Acquisition and detection of new projects*

The overall detection process comprises at the incubator starts with a comprehensive awareness arrangement. This is a necessary precondition for a successful acquisition of projects in Linz. Therefore, various potential stakeholders belong to the target group. The target groups comprises universities, schools of applied science, research and development institutes, strategic partners like banks, the city of Linz, alumni with market experience and successfully companies. These groups are being addressed with different awareness activities like exhibitions and dialogues diverse platforms for founders like the "Gründercafe", regularly consultations and schools for applied science in order to attract a high quantity of potentials. Moreover target scouting with information events for professors and assistants, the participation in networking events and competition for ideas and business plans like the Edison Award. This award will be presented to a team from Upper Austria with the most innovative, creative and most technologically oriented idea for a product or service.

#### *Selection of good projects*

The entire selection process is divided into two stages, the pre-incubation and incubation phase. After the application of the project, tech2b arranges a first screening based on the submitted application form, where primarily the market prospect and degree of innovation and the project is going to enter the pre-incubation phase. This process is followed by a first casting, by the project expert board which is composed by members of the incubator and external experts from the university and research institutions. Innovative entrepreneurs can provide a first presentation on their project idea in order to receive valuable advice on their general concept, market possibilities and the final project presentation to the acceptance board which is composed by several external. Necessary application material will be accomplished with assistance of an assisted tutor in order to reach the incubation phase. Besides scientific and economic reports on the project, prepared by an independent committee, the incubator uses a particular tool to deeply prove and evaluate the project. Following the project is will be presented by the entrepreneur or the team to the approving committee. Is there a positive decision, the applicants attain an advisory contract and will be admitted to the incubator. Within this procedure for the preparation of the acceptance board, tech2be uses a special tool, which is the "Stage Gate Process". Mr Costabiei stated that the Stage Gate Process, which originally was developed for a process management as a conceptual and operational roadmap for moving a new-product project from idea to launch. As innovative high-tech projects needs to be regarded as projects to develop and not as simple start-up enterprises.

#### *The stage gate process:*

The Stage-Gate Process, developed in 1988 by Robert Cooper, is a conceptual and operational roadmap for moving a new project from idea to launch. Stage-Gate divides the effort into distinct

stages separated by “gates”, where the decision is taken on whether to go ahead or to exit. The project must successfully complete a prescribed set of related preconditions in each stage prior to obtaining management approval to proceed to the next stage of product development.<sup>2</sup> The Stage-Gate-Model also can be used to manage multiple projects, in order to extract the most promising projects and to cancel the risky projects. The goal is to concentrate resources on more promising projects. For this purpose the model was adapted and is applied by tech2b incubator with five different stages, to screen the projects that have been acquired and screened during the first selection process. After each stage, the project board evaluates different criteria like strategy, the marketing success (e.g. current competitive situation of the product on the market, market development), the technique (e.g. property rights, technical feasibility, degree of innovation), financial success (e.g. funding possibilities of the business, financial attractiveness) and finally soft skills like the composition and quality of the management team regarding the entrepreneurial attributes and character and his ability to implement ideas into a business. Having passed all five stage processes and gates the project has high potential.

### **Conclusions:**

Edinburgh's presentations describe existing instruments available locally but we have no data to assess the efficiency of these instruments

Aachen: the cities are not interested in making project evaluations but in supporting organisations that do these evaluations.

Linz presentation needs to give more indication on how efficient the method is.

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<sup>2</sup>

Cooper Robert, Winning at New Products – accelerating the process from idea to launch, Reading, 1993.

## URBACT II

**URBACT** is a European exchange and learning programme promoting sustainable urban development.

It enables cities to work together to develop solutions to major urban challenges, reaffirming the key role they play in facing increasingly complex societal challenges. It helps them to develop pragmatic solutions that are new and sustainable, and that integrate economic, social and environmental dimensions. It enables cities to share good practices and lessons learned with all professionals involved in urban policy throughout Europe. URBACT is 181 cities, 29 countries, and 5,000 active participants

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