

## **FIN-URB-ACT thematic paper IV (Draft)**

### **Support to innovative and high tech projects and businesses**

Summary of the FIN-URB-ACT work group meeting (03./04.06.2009)

Within the work group on support to innovative and high-tech project and businesses the main idea is to learn from concrete activities presented in the host city – to point out interesting strategies and structures to provide support for innovative and high tech enterprises.

What became obvious after two work group sessions is, that the support structures in the single cities (and countries) differ a lot. And within this work group the task will not be to work out the one perfect structure and procedure but to point out single efficient and successful elements – even if they can not be applied everywhere. It is obvious, that a simple transfer of practices is not possible due to very different framework conditions or actor constellations.

The idea is to accept, that we have a European project, with diverse historic backgrounds, characteristics and traditions. And this diverse cultural context of the EU is also present in the fields of entrepreneurship and corporate finance. Differences can be seen in the degree of acceptance among business persons of third-party investment in their company and in the variety of funding sources available in a country. This was also pointed out by Christian Saublens in his essay on access to finance for SMEs [cp. Saublens 2004: 5].

This is for example an aspect which can be recognised in the FIN-URB-ACT network, already when comparing Aachen with Aveiro. The spirit in Aveiro in accepting Business Angels or further third-party investors (others than banks) and by this shareholders in their company seems to be more open than in other countries (e.g. Germany). However, in general the attitude towards corporate finance also differs in terms of seize and field of activities. Thus, small businesses rather tend to be sceptic about equity financing and mostly rely on traditional lending (or the three F – family, friends and fools). In contrary innovative businesses with a high growth potential need not only rather high amounts of equity funding but also respective access to expertise for developing their business. This is when credits and loans reach their limits and venture / risk capital comes is needed.

#### **Introduction/Structure**

During the workshop on support structures for innovative enterprises two aspects of the Aveiro support structure raised special interest for the FIN-URB-ACT work group:

- The support structures of the University of Aveiro and the University of Leipzig to support spin-offs from University
- the role of Business Angels as a financial source for start-ups in certain thematic fields.

#### **I. The role of Universities for supporting innovative and high-tech enterprises**

##### **Case study: The University of Aveiro and its support structures for spin-offs**

The University of Aveiro takes an important role in the system to support innovative enterprises. The University is quite interactive with the companies in the region, both to gather information, but also to get information. In this context the structure of INOVA-RIA will be outlined later on. First we concentrate on the activities in the University to support spin-offs.

**GrupUnave** is an institution founded in 1998 by the University of Aveiro. The enterprise is focussing on the connection between the University of Aveiro (students) and the economic tissue of the district: Its objective consists in easing the process of approximation between

the academic and business areas, spreading the themes of the industry of the region and supporting the dissemination of new areas of knowledge.

The University of Aveiro *has founded* an **incubator** centre coordinated by GrupNave, directly located at the University. In Portugal and the Aveiro region there is a lack of training for businesses. Therefore, the incubators take a crucial role, as they are the ones active in that field. Since 1999 the incubator offers space directly on the campus for young entrepreneurs starting their businesses. The entrepreneurs are able to use administrative and shared services like meeting rooms, secretariat, telecommunication etc. Additional to this, the incubator provides coaching, networking and transitions services and support.

While in the first years, the buildings offer spaces for around 40 employees in one building, the incubator grew and is now able to offer space for companies with altogether more than 100 employees in three buildings (Albergaria, Águeda and Estarreja). Before the incubator expanded there had to be a strong focus on high-tech companies. Now, as there is more space available the doors are open for other start-ups as well. But nevertheless, main parts of the start-ups are technology oriented or have a technological background, recently graduated from Aveiro University. Only few of them have a different focus (example during site visit: enterprise addressing tourism / regional development).. They have only little knowledge on management, which needs to be fostered in the incubator. During the last ten years the incubator was a starting platform for enterprises like 'sapo.pt'.

Within the single stages of the enterprise development and growth, the incubator gives targeted support:

1. **Concept development Phase:** During the first phase, where the enterprise has to develop its concept and the preparatory phase to really start-up, the incubator offers assistance on the business plan development and promotes training programmes for entrepreneurs. A crucial element of this phase is also the filtering of ideas and projects with potentials: The incubator not blindly supports all projects, but decides within this first assessment if the business idea and structure has potential and get support or not.
2. **Start Up Phase:** In the second phase the incubator does not only offer space but also monitors the formation of the company, provides general services like assistance in marketing and financial services. The incubator gathers knowledge on all available financial sources to provide this information targeted to the enterprises.  
One general marketing activity, which becomes necessary in this phase, is the regular press contact. Therefore, the incubator tries to be in the media every week (articles and opinions), to promote their activities but also to promote the young entrepreneurs' ideas.  
The networking services become crucial as well in the start-up phase. The incubator eases the access to investors, strategic partners, support programmes or suppliers. Further, the incubator eases the link to coaching and mentoring by experienced managers.
3. **Growth and Maturation:** After the start-up phase, the incubator continues the support in the growth and maturation phase of the enterprise by a monitoring of management, further networking activities like the promotion of partnerships and marketing activities.

The enterprises are allowed to remain for three years in the incubator. The rents for the room are very low, but are rising every year by 25%. If all start-ups are in their second year, it would be possible for the incubator to cover all running costs. During years, in which there are many start-ups in their first years, the rents do not at all cover all costs, and there needs to be financial support from the University.

Among the partners of the incubator (which consists of municipal bodies, companies, former start-ups, financial institutions, business associations, etc.) are business angels and one bank (banco espirito santo). Besides its supportive task, this constellation of partners gives public recognition to the incubator and by this to the entrepreneurs located there.

When studying the financial data, it becomes obvious, that the incubator really offers the function of enterprise formation and start-up. When the enterprises got successful, most of them have already left the incubator. Usually the development of turnover of those companies needs some years and starts, when they have already left the incubator. All in all, the incubator is a low level offer, which provides 'cheap and easy' conditions for start-ups.

### **Financial sources**

When supporting the start-ups in financial matters, the incubator tries to provide targeted approach. Not all funding sources have the same objective, address different target groups and different stages in the business development. The incubator can build a link to different organisations offering financing opportunities, e.g. business angels, venture capitalists and banks. When doing so, the incubator tries to direct its start-ups to risk capital (like BA), but the also give a bridge to public funding. However, as it was seen by the visit in the incubator not all innovative start ups need high financial resources, as especially in the ICT sector often just some computers and a workplace are sufficient to start the business.

As it can be seen below, there are different institutions with their instruments offering access to finance. And it was not possible to say which of them is the most important one, it rather seems to be very individually, depending on the specific constellations of the entrepreneur.

- **University seed capital fund:** The University of Aveiro has set up a small seed-capital fund to support start-ups in the first phase. This fund is focussed on smaller financial support like 5.000 to 10.000 Euros and not a big overall volume.
- **Banks:** The Banco Espirito Santo, a partner of the incubator, is the first bank in Portugal which offers a venture capital fund for high tech enterprises. It is expected that other banks like the Caixa Geral also enter that field of venture capital for high-tech companies soon. Banco Espirito Santo was a pioneer in this field in Portugal.
- **National financial sources (IAPMEI):** see below.
- **Business Angels (BA):** Business Angels' associations are a further financial source for financing the technology oriented start-ups in the incubator in Aveiro. Two Business Angels organisations (BA: 'gestluz' and BA network 'invicta angels') are partners in the incubator. There are 10 or 12 BA networks in Portugal covering different regions.

Especially the University seed capital fund is an interesting tool, as it is a small financial source for those who do not get financial support elsewhere (mostly due to quite small amounts of funding). By getting access to a small amount of money, the next progress of the start-up is possible. The University seed capital fund raises interesting assessments: If specific funding sources and financial instruments are not available, the actors on local level (e.b. University) get active. This could be also seen during the meeting in Aachen where also the University in cooperation with the Chamber of Commerce set up a seed capital fund to be able to financially assist specific start ups not covered by existing funding.

### **Excurses: IAPMEI and Business Angels**

#### IAPMEI

The Institute of Support to the small and medium Enterprises and to the Innovation, IAPMEI, is the principal instrument of the economical politics directed for the micro and SMEs of the industrial, commercial sectors, of services and construction. It's main goal is to negotiate favourable conditions for the reinforcement of the spirit and of the business competitiveness. This institution has an office in Aveiro.

IAPMEI, established in 1975, is the national agency for SME and Innovation. Their idea is to support the design and implementation of integrated strategies for SME support. Therefore they address different elements of the entrepreneurial development chain. These elements are in detail entrepreneurship promotion; entrepreneur schools; technology transfer centres; contest of ideas; bank of ideas; business plan support, incubation support; mentoring/coaching; ideas venture fairs; simplifying the start-up process; financial solutions like venture capital, mutual guarantees, business angels, grants; benchmarking SMEs, distinguishing the best SMEs.

One interesting approach to strengthen the financial support structures is INOFIN (Financial Innovation Programme) which fosters a stronger diversification of financial sources for SMEs like VC, mutual guarantee or credit securitisation. The idea is, not to focus on direct public schemes such as grant schemes, but to stimulate the efficiency of the bank intermediation process and the range of segments worked by capital market operators. The public incentive mechanisms, together with regulation functions must act upon the two market subsystems which are the basis of the economy's financing model: debt and equity instruments, risk sharing and transaction costs reduction leading to the allocation of business investment saving. IAPMEI works on three pillars within this INOFIN programme

- start up support (FINICA),
- growth support (FINCRESCE) and
- business transfer support (FINTRANS).

Within the start-up support FINICA, IAPMEI addresses high innovative projects, micro business start-ups or regional business initiatives. The high innovative projects can be supported with up to 85% venture capital financing. They have to make sure, that they obtain by themselves (or with support of Business Angels) a minimum of 15% of the investment capital needed. Micro business start-ups can get up to 100% financing of the investment needed. This loan is offering up to 25.000 or 100.000 Euro, which has to be repaid within three years (five years for amounts up to 100.000 euros). This financing is a normal bank loan with special advantages guarantees from 75% mutual guarantee with an 80% counter guarantee given by the Public Counter guarantee fund. For getting access to these financial sources, the small enterprises have to join a *Mutual Guarantee Society* (there are four of them in Portugal).

A special VC fund is designed for innovative start-ups and university spin-offs – offering 90% venture capital financing with a maximum of 45.000 Euro. To apply for this, the start-ups have to present their business idea at one of the 12 FINICA platforms available in Portugal (*the University of Aveiro is one of the platforms*). The platforms have an important role in the system. If an SME is approved, IAPMEI gives financial support. The main idea of the platforms as intermediaries at local level is that start-up support is much easier on local or regional than on national level, as they have a better knowledge on the circumstances and the concrete SME. This backs the main working theses of the FIN-URB-ACT network, that there is a need for regionally and locally embedded support structures. In Aveiro such a regional / local network is in place and can work as an intermediary to support structures available on national and European level.

With FINCRESCE, the IAPMEI supports those companies, that want to grow and reinforce their competitive base with interventions like risk profile assessment, communication with the market and differentiated financial products and services. The idea behind FINCRESCE is to support those SME that have a promising development and promising expectations in a way that they become '*Leader SMEs*'. This label is highly valuable for the SMEs as it eases their access to financial sources necessary for further growth. Within this programme 5.000 companies were joining the selection process to become a Leader SME, from which 2.700 were finally labelled to be '*Leader SME*'. The initial selection of these 5.000 companies was handled together with the five big banks of Portugal, on the basis of their risk profile. This risk

profile of the company is a crucial criterion not only to become a '*Leader SME*' but also need to be carefully managed to keep this label. However, by giving this label the ability of getting access to finance is influenced which makes the IAPMEI acting as a sort of rating agency. In this context it can be questioned in how far the conditions in terms of access to finance for those companies not labelled are made more difficult.

### Business Angels and Business Angel Networks

During the working group session, a Business Angel (BA) active in the Aveiro region presented its activities, selection criteria etc. Business Angels – private individuals, who invest in start-ups – offer informal venture capital and contribute with their personal managerial expertise. [cp. Saublens 2004: 6]. For pooling and matching different BAs and innovative and prospective start up entrepreneurs there are Business Angels Networks. The matching of an appropriate entrepreneur and the BA is not only depending on quantitative numbers on the expected success rate but depends on various aspects like the thematic field, the entrepreneurial vision and spirit etc. and different business angels invest in different businesses. Therefore, BAs organised in a network offer the advantage that the candidate can be passed among the BA according to their interests and specifications. As funding through BAs is a quite costly source of funding they normally concentrate on businesses with a great growth potentials and are not interested in small business projects. On the other hand especially small businesses are often not very keen on involving BAs in their company as shareholders as they might loose control and are forced to reach high returns on investment. However, innovative and high-tech businesses with a huge capital need on the one hand and high risks on the other often see their only source of finance in BAs or other forms of venture capital. Moreover, MAs have the advantage to bring in needed expertise to develop the business.

### **Examples of innovative businesses supported by the University and BAs:**

During the working group sessions, a University professor from Porto presented his business development, a high technology engineering company focussing on the development of new environmental technologies. During the following day FIN-URB-ACT visited the incubator centre at the University and took the chance to talk to single start-ups which presented their business idea and process done so far. From this, the network got the following impressions:

Companies in the innovative field can be very divers. From services companies with simple but innovative ideas that do not involve sophisticated new technology or research to real technology-oriented bigger start-up firms coming from the technological sphere, from research departments of the University or research centres. Their capital needs and also the suitable funding sources will considerably vary.

- *Technology oriented start-up company from research department of the University (the Professor)*

The long period of development and research necessary to set up the enterprise was funded by research funds, as the Professor and his collaborators still work at the University. For developing different technologies, there were different forms of public research grants. It took two years of transition from the research in the University / research institution to start up the company. During these years, the business plan needed to be prepared and investors needed to become involved. During this time, the start-up company got very different financial sources from own means of the founder and his collaborators, BAs, private Venture Capitalists and Public Risk Capital Funds.

What was interesting to see in this context is that the BAs have an interesting role in the financial structure: They acted on the one hand as a financial source but moreover, they are

also an intermediary, necessary to get access to the bigger financial sources. And they did this by contributing with two elements: First they gave the financial amount necessary to ask for further funding but at the same time they gave expertise, necessary to prepare the business plan in that way, that it became adequate for further financial sources. Moreover, the funding involved according to the different development steps is interesting. First there was mainly public funding e.g. from national and European research programs, which was used for basic research and for getting the product marketable. For the phase when the high-tech product is getting from the development phase to the market phase BAs and VC comes in. At this stage there is already a quite high volume of turnover and employees, which requires for high amounts of money – with the expectation of high returns on investment.

- *Small incubator start-up:*

When visiting the University incubator, one got the impression that those companies, located in the incubator were not in need of expensive high technology or research instruments to build up their business, but computers and staff to finance. Therefore, for most start-ups, there is not extremely high capital need in the beginning. From the visit in the incubator we recognised that most start-up companies there, just need technical equipment (e.g. computers) to start their businesses. Necessary finances are respectively lower than the above mentioned example. This is why the visited start-ups do not need to be in contact of high venture capital and BA financing. Some seem to have

- access to public research funding,
- University professors holding shares of the company,
- already had first clients

For the small high-tech start-ups from University the incubator seems to be an important link to financial institutions to get first money, as the incubator offers the knowledge on all relevant financial sources (esp. national funding) and provides reputation when contacting a financial source (the incubator has already pre-assessed and supported the enterprise)

### **INOVA-RIA – linking the University with companies of the region**

INOVA-RIA – an association of innovative companies – fosters the creation and consolidation of a telecommunication cluster in the region of Aveiro. One of the main fields of activity is therefore, to strengthen the linkage between on the one hand graduates and young entrepreneurs and on the other hand existing companies in the region of Aveiro. The idea is to keep the know-how developed at the university in the region, to attract know-how from other universities of Portugal, to minimise the brain-drain and to assure the innovation cycle of the region [Talento Programm]. In the field of telecommunications the Aveiro region has several bigger companies, both national and international, which might be attractive for young graduates.

The main idea behind this is, that in general research institutions and universities work on long term oriented topics. The companies on the market however, need to have a financial perspective and are not able to strongly work on long-term topics but focus on short-term, current topics. The role of INOVA-RIA is to build a bridge between these two groups to transfer talent from university to the companies and to transfer technology.

In a further step, INOVA-RIA fosters the cooperation amongst the companies and further relevant actors in the region like universities, research centres on issues like research and development, training, marketing and internationalisation.

This is supplemented by the promotion of investment capture for the region of Aveiro in the field of telecommunications.

### **Case study Leipzig: start-up support from the University of Leipzig**

During the meeting in Aveiro, one partner of the LSG of Leipzig presented a further model on how the University support start-ups in their city.

While the example in Aveiro clearly focuses on high-tech enterprises, the activities of the University of Leipzig show a broader approach and are open for all kinds of entrepreneurial ideas that come out of the University.

The International SEPT programme (Small enterprise promotion and training) is a research and training program which fosters both theoretical insight as well as practical experience in the promotion of small and medium-sized enterprises. It does not concentrate on Germany but lays strong focus on developing and transition countries.

SEPT uses the broad know-how on German SMEs, both good examples and experiences of SMEs as well as those institutions that foster and promote SME development.

The SEPT programme bundles the following activities:

Besides an MBA Programme in SME development, PhD programmes in the field of development and promotion of SMEs, Research in the field of SME promotion and training, SEPT also addresses local start-ups and offers different activities to promote and support them.

One of these initiatives is **SMILE** (Self-Management Initiative Leipzig), a mentoring programme for start-ups, which addresses students and alumni from the Leipzig region. The initiative is developed in cooperation with the Chair of Marketing of the University of Leipzig, the Leipzig Graduate School of Management (HHL), the Development Bank of Saxony (SAB), and the European Social Fund (ESF). The initiative focuses on the development of entrepreneurial skills in current students and alumni.

SMILE offers seminars and workshops, which supports entrepreneurs and starters to discover and develop his/her potentials and abilities. Since its start in 2006 more than 3.000 persons joint the seminar and as a direct result from the initiative more than 250 businesses were founded.

In 2008 the small sister – **Smile.medibiz** – was founded. Smile.medibz is specialised in supporting start-ups and spin-offs in the area of biotechnology and medicine.

In praxis, the idea of Smile is not limited on coaching and capacity building. The Smile teams offers an overall assistance for the development of a company: They screen potential ideas on the expected demand and the entrepreneur' personality, they support the entrepreneur in developing his business plan, they assess the application on its market potential and verifiability and ease the access to finance, which might even include to accompany an entrepreneurs to the bank.

Furthermore, SEPT offers **consultancy** services for SMEs and promotion institutions in cooperation with private partners. 'INNOWAYS' (Connecting Innovators Worldwide) – founded in 2000 as a spin-off of the University of Leipzig – offers consultancy for SMEs in the area of exports and foreign trade. 'SIL' (Service Innovation Lab) – founded in 2008 and funded by the Federal Ministry for Economy and Technology – is specialised in the consultancy for innovation processes and the transfer of technologies in the crossroad of university and service companies. The focus of 'SIL' lies in the medical sector and creative industries. 'medipos', the third consultancy initiative, is a platform for the medical sector. Founded in 2008 and funded by the ESF and the Ministry for Economy and Labour in Saxony, 'medipos' offers interdisciplinary consultancy for SME for the medical sector in the area of process management and process analysis, communication and the management of data.

### **The role of the City:**

During the seminar in Aveiro there was a strong discussion on what cities or public authorities in general can do for supporting their innovative and high-tech businesses especially in

terms of financing. There was a strong opinion from the speakers in the seminar (BA, high tech company and incubator), that the cities should not build new institutions to support SMEs but rather support the existing structures, interlink actors and strengthen the existing network. In this context they should concentrate on their traditional roles and tasks and not directly get involved in the business themselves but ease the environment for business support. In this context the actors appreciate the activities of the City of Aveiro in setting up a LSG now in the FIN-URB-ACT context, as this gives the possibility to interlink different actors. The City of Aveiro follows this concept and does not want to get involved directly but facilitate the networking.

Some city representatives (e.g. Aachen) however pleaded for a stronger role of cities in a SME support structure.

## **Conclusions**

### **1- Start-ups need comprehensive support packages including:**

- non financial support mostly based on coaching/mentoring on technical (related to the business fields) and non technical subjects (legal, marketing, patents, sales,...) and administrative services,
- financial support covering all the development phases of the project but mostly the initial phase with small and flexible seed capital, a good connection with bank(s), with public support schemes (at national and regional levels) and with private investors (business angels, venture capital funds,...)

Business angels cover both dimensions of support: obviously financial support as they can consolidate equity (which is a funding source with a high leverage effect), but also non financial support as they very often are good specialists in their investment sector(s) and they have expertise in preparing acceptable business plans.

### **2- Universities can play a decisive role in fostering an entrepreneurial attitude with the students,**

They are in a position that enables them to teach the students and demonstrate to them that becoming an entrepreneur can be an option for their future. They also need to have the capacity to deliver basic comprehensive support packages (as mentioned in § 1) to their entrepreneur students. They are expected to be able to bring in technical expertise that is critical in high tech / technological projects. In this latter role, they often are the only source of expertise: that is the reason why their role is so important as they are in a position to support the new entrepreneurs in assessing their technical risk correctly and give them confidence in their projects.

One important condition for this to be possible is that some teachers be entrepreneurs themselves or at least are opened to entrepreneurship.

### **3- Not all “high tech” projects need highly sophisticated support instruments**

Apart from technical expertise (which can be complicated subjects but which is traditionally expected from technical Universities), many so called “high tech” projects only need basic support during their start-up phase: small premises with a cheap rent, administrative services, small initial funding, basic legal, accounting and financial advisory services...These projects generally form the majority of local start-ups.

Cities should make sure that these basic services that are also available locally, without useless (and expensive) sophistication.

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