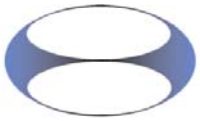
EXPLORING BEST PRACTICES IN INCUBATION IN EUROPE AND ISRAEL

Final Report

of the study for the Danish Agency of Science, Technology and Innovation to identify best practices in incubators in Europe and Israel, their incubation processes and the most important characteristics that these incubators have in common



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1. INTRODUCTION

1.1 Background

Incubators have developed strongly over the years – increasing its services, improving its processes and serving more and more different sorts of clients. Whereas in the early stages of incubation in Europe, the services provided consisted of offering office spaces for a reduced price, today the services are extended towards the so-called 'soft services' (networking, mentoring, advice, coaching) and financial services in addition to the more traditional services. Generally speaking the incubator has evolved towards a process organisation through which all aspects of new business creation are facilitated.

Together with the increasing variety of services offered by the incubator, the functionalities of incubation processes increase as well. Facilitating new business creation is evolved towards the inclusion of other services, including for example the attraction of risk capital financing for client firms, shaping an entrepreneurial culture and contributing to creating a synergy for regional economic or cluster development.

The Danish Agency of Science, Technology and Innovation, which is part of the Danish Ministry of Science, Technology and Innovation is interested to learn the latest developments in European best practice incubation processes. To this end the Agency has invited Science Alliance to perform a study to explore various international best practices in comparable economical systems – resulting in focusing on Western Europe and Israel. Through a variety of steps, eight incubators have been selected for further study and analysis. Based on the information obtained, possibilities to further strengthen incubation processes have been included in this report as well.

1.2 Aim of this study

The purpose of this study is to explore the following two questions:

1. What are the most important common characteristics of the explored best practice incubation processes in both Europe and Israel?
2. What lessons to further strengthen best practices in incubation processes can be learned from the visited best practice incubators in Europe and Israel?

1.3 Assumption and definition

For this report, a definition and assumptions are used. The used assumption and definition are formulated hereunder.

Definition of an incubator:

In this report, an incubator is considered to be:

- a process organisation
- organising the process of business creation through a variety of services
- aiming for knowledge intensive company creation
- having the availability to directly or indirectly provide for financial resources to be invested in client firms

Assumption for the incubator:

The implication of the incubator's availability to directly or indirectly provide for financial resources to be invested in client firms is that one of the functions of the incubators explored is to actively assess the business plans of (pre)starting companies.

2. METHODOLOGY

For this study, best practices incubators in Europe and Israel needed to be identified and explored in order to analyse their common features and identify opportunities to further strengthen incubation processes. In order to achieve this purpose, the methodology as described in this chapter has been used.

2.1 Quantitative research

Key performance indicators:
Considering the abovementioned definition of an incubator, a set of key performance indicators has been used to identify the best practices in incubation in Europe and Israel. The following key performance indicators have been used for this study:

- *The knowledge intensity of the client firms*
  The knowledge intensity of the client firms relates to for example the proportion of client firms that hold patents, possible entry criteria related to the knowledge intensity of the clients, or clients cooperating with universities on R&D. This indicator has been used to ensure that the incubator is working with client firms which operate relatively far from the marketplace rather than very close to the marketplace, in which new technologies or new technology applications are of importance.
- *Graduation rate*
  The graduation rate of an incubator related to the question of how many client firms over the years have used the services offered, and continued its operations after ceasing the use of the services offered. However during the analysis it appeared that there are many different interpretations of the way in which incubators calculate their graduation rate and what the incubators mean to indicate with this rate. Therefore, in selecting the best practice incubators, the data obtained on this key performance indicator were of less importance.
- *Ability to attract private equity*
  Both the proportion of client firms which obtain private equity as well as the total amount of risk capital financing play a role for this indicator. The ability to attract private equity is considered to be of great importance for this study.
- *Return on investment*
  If an incubator actively invests itself in client firms, this indicator examines the financial return on the investment made. Not many incubators have been able to provide data on their ROI.

The data obtained on various incubators in Europe and Israel provide us with valuable information on the abovementioned indicators. These specific data are not included in this report since some of the information obtained is considered to be confidential information.

Sources for identifying incubators
In order to obtain the information needed of incubators, Science Alliance has used data obtained through organising the annual competition for the *"Best Science Based Incubator Award"*. This competition has been organised by Science Alliance and CSES since 2002, resulting in a total of approximately 150 entries for the award over the years. The analysis of the data obtained through organising these competitions already provided for many examples of best practices in incubation in Europe and Israel.

In addition to the data obtained through the entries for the *"Best Science Based Incubator Award"*, the final report on *'Benchmarking of Business Incubators'*, which was produced for the European

Commission by CSES, provided for further data on European incubators as well. Since this report was published in 2002, the data obtained through this report have been updated by approaching a selection of these incubators again.

Finally, Science Alliance has made use of its international networks and contacts in the field of incubation, technology transfer and regional innovation to further identify best practice incubation in Europe which meet the definition of an incubator in this study.

Shortlist
The data obtained resulted in the production of a shortlist of fifteen best practice incubators in the context of the used definition of an incubator for this report. For this shortlist, please refer to appendix C of this report. All short listed incubators are located in Europe and one of the incubators is located in Israel. Based on the scores on the key performance indicators and the desired characteristics of the incubation processes (financial services, process organisations, assessing business plans) the following eight incubators have been selected for further analysis:

- Technion Incubator, Haifa, Israel
- Chalmers Innovation, Gothenburg, Sweden
- I3P Incubator, Turin, Italy
- Leuven Research & Development, Leuven, Belgium
- TU/e Innovation Lab, Eindhoven, The Netherlands
- DiagnOx, Oxford Innovation, Oxford, United Kingdom
- Genopole Enterprises, Evry Cédex, France
- Biocentiv, Jena, Germany

Desktop research
Next to the abovementioned steps, various other sources have been consulted for this report. This includes various earlier reports, documents and literature. A full overview of the sources used can be found in appendix D.

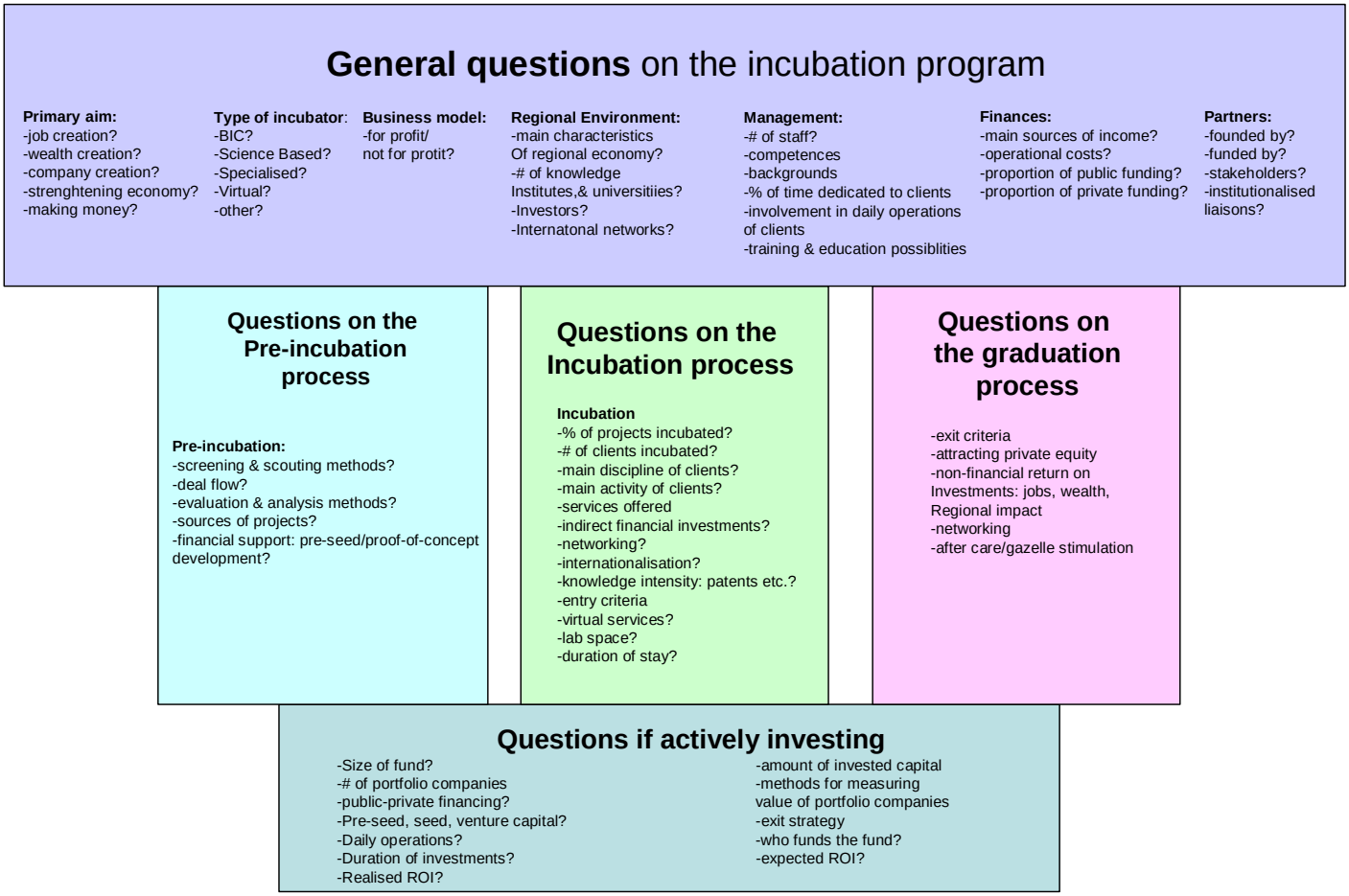
External Advisor
In order to identify the fifteen short listed best practice incubators, an external advisor has assisted in providing data on European incubators. The external advisor was Mr Jack Malan, Partner of the Centre for Strategy and Evaluation Services in the United Kingdom. Jack Malan also advised on the establishment of the interview framework for visiting the selected eight best practice incubators in Europe.

2.2 Qualitative research

Performing 8 interviews
For further analysing the selected best practice incubation processes in both Europe and Israel, the eight incubators have been visited for an in-depth interview to learn about all aspects of the organisation, its strategy and its processes. The outcomes of these interviews form the basis of this report.

Interview framework
In order to make sure that the visits to the incubators had a similar structure, an interview framework has been put together. For the entire overview of all possible questions resulting from this framework, please see appendix A. The figure on the next page illustrates the main points of interest for the interviews.

Figure 1: interview framework



The interview framework served to give the various visits a similar structure and to ensure that all incubation aspects were covered. The visits to the incubators generally lasted for half a day and included meetings with:

- the incubator manager
- some client firms
- the investment manager (if applicable).

Common characteristics, lessons to be learned and conclusions

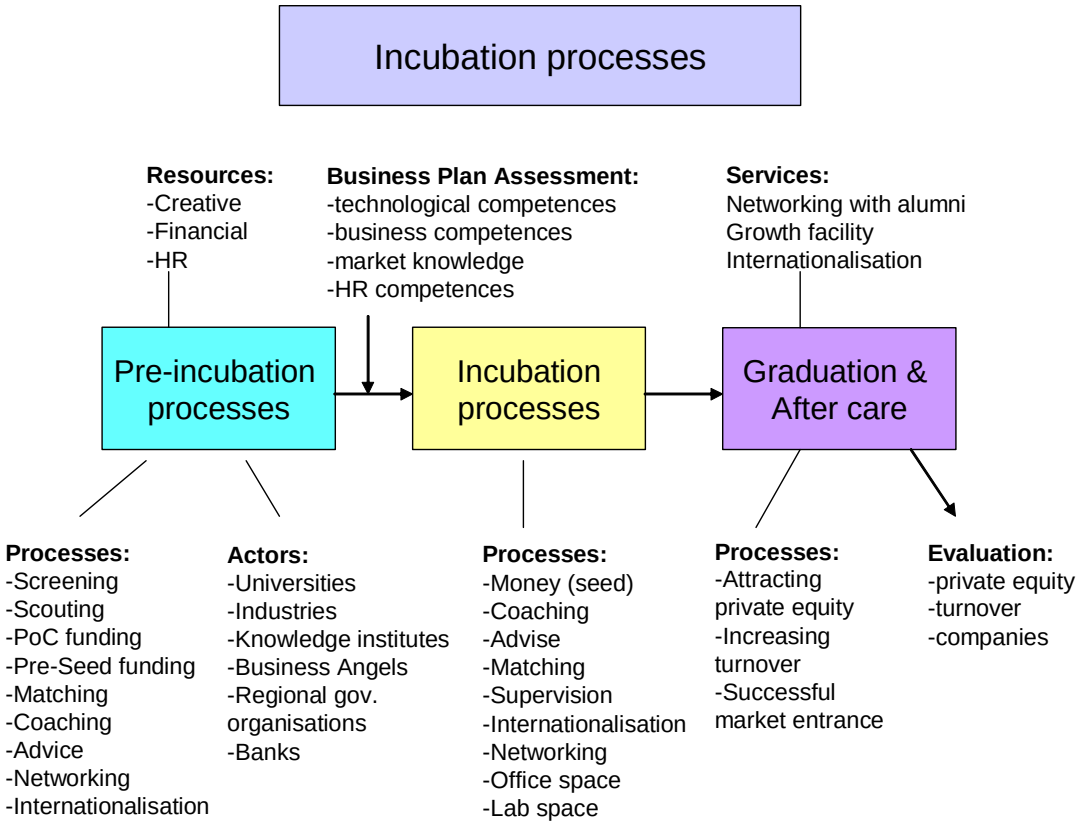
Based on the interviews, an analysis of what best practice incubation processes in Europe and Israel have in common has been made. These common characteristics of the visited incubators, then lead to identifying lessons which could be learned from the visited incubators. Both the common characteristics and the lessons which could be learned will lead to drawing the conclusions of this report.

3. DESCRIBING THE INCUBATION PROCESSES

In this chapter, an analysis of the most important of the incubation processes in general as we have been able to explore them for this report, will be provided. The described processes are not always all present at the explored incubators, but in general these processes are the most important ones as identified at the eight selected best practice incubators of this report. The processes to be described relate consecutively to:

- the pre-incubation processes
- the incubation processes
- the after care & graduation processes

Figure 2: incubation processes



This general description of the processes is based on the explored best practice incubators in Europe and Israel and serves as an introduction for the analysis and conclusions of the report. In the pre-incubation processes, the incubator needs to work with many different organisations and actors to generate the input needed. During the incubation processes and the graduation & after care processes, the incubator will work with the same actors as well, but less intensively since the input has already been generated. In these processes, the interaction with the actors mentioned under the pre-incubation processes depend more on the needs of the client firms rather than the needs of the incubator itself.

3.1 PRE-INCUBATION PROCESSES

Pre-incubation processes organise the input for the incubation services later on in the entire incubation process. During the pre-incubation process, projects are identified which might eventually result in the creation of a new knowledge intensive company. To this end, the projects must not only be found, but also financed, guided assisted and matched with the right persons to start a new company. In the end, for any company creation, the following resources are needed:

- *Creative* resources: the ideas which form the basis for future business creation
- *Financial* resources: funding opportunities for the very early stage financing needed which are either pre-seed or proof-of-concept funds
- *Human* resources: the entrepreneurs who can make a new company a success and work alongside the scientist in its business creation

Matchting Scientists with Entrepreneurs

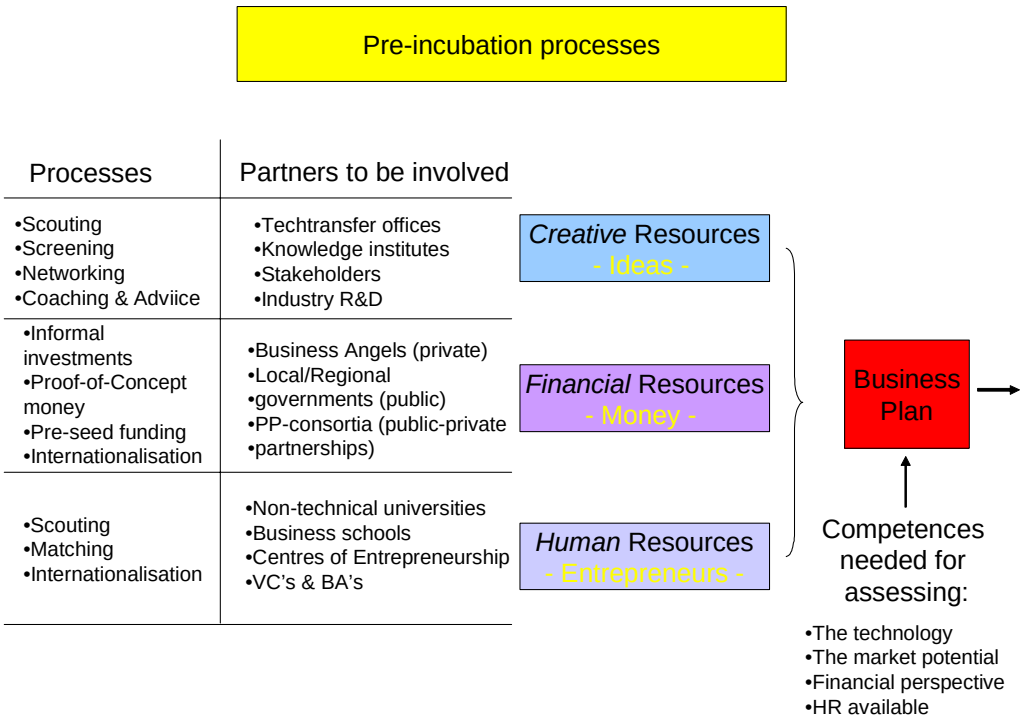
Since providing for access to (pre)seed funding is more and more considered to be of importance and included in the services provided by incubation processes, incubators increasingly focus on the quality of the management team of the (pre)starting company. To improve this quality, incubators often choose to try and match the scientist with an entrepreneur; the first then becomes a "Chief Scientific Officer" while the second will become the "Chief Financial or Executive Officer". For four of the visited incubators (Chalmers Innovation, TU/e Innovation Lab, Technion and Genopole Enterprises) this is already common practice. It does however add another challenge to the incubator, since finding these entrepreneurs is difficult.

In order to generate these resources, an incubator must organise the following processes:

- *Scouting:* finding the right ideas and finding sufficient ideas to be able to make a strict selection for the projects with the highest potential for success
- *Screening:* select the best ideas
- *Networking:* provide the entrepreneurs with access to all relevant persons who might be able to help and assist them in their first phases of company development
- *Informal Investments:* assist and advice in raising funds through informal investors
- *Proof-of-Concept funding mechanisms:* organise a mechanism through which the entrepreneurs can finance a Proof-of-Concept
- *Pre-seed funding mechanisms*: organise a mechanism through which the entrepreneurs can finance the production of a valid business plan
- *Matching:* form a team around the new business idea that includes both technological, business, market and Human Resources competences. A preferred way to realise this goal is to match a scientist with an entrepreneur
- *Coaching & Advice:* providing for advice on how to overcome typical challenges and problems in preparing for a valuable business plan, forming an excellent team, building a valuable network and other problems which might occur in the pre-starting phase
- *Internationalisation:* offering international contacts to the entrepreneurs which might be of added value for the business development, for example in the field of raising finance, building a network, finding new members of a future board or management team or further technology development.

These processes can only be organised if the incubator cooperates with many different parties, persons and organisations. These partners are mentioned in the figure on the next page.

Figure 3: pre-incubation processes



In this picture, 'coaching & advising' as well as 'internationalisation' are not mentioned. Coaching and advise will be offered by the staff members of the incubator itself. Internationalisation can be applied to attracting all resources needed: creative resources, financial resources and human resources. The partners to be involved remain the same but these partners are then located abroad.

As illustrated in the picture above, the pre-incubation process generally ends with an assessment of the business plan created. Usually a maximum of 50% of the scouted projects will eventually be assessed – not all of them will pass this assessment and enter the incubation processes. For assessing the business plan, the incubator must have a staff which either possesses the following competences, or can activate others who possess them:

- Technology competences
- Market knowledge
- Financial knowledge
- Human Resources knowledge

3.2 INCUBATION PROCESSES

The incubation process is the provision of services to the start-up company to facilitate successful business development. In general, incubators offer three different kind of services to their client firms: hard services, soft services and financial services.

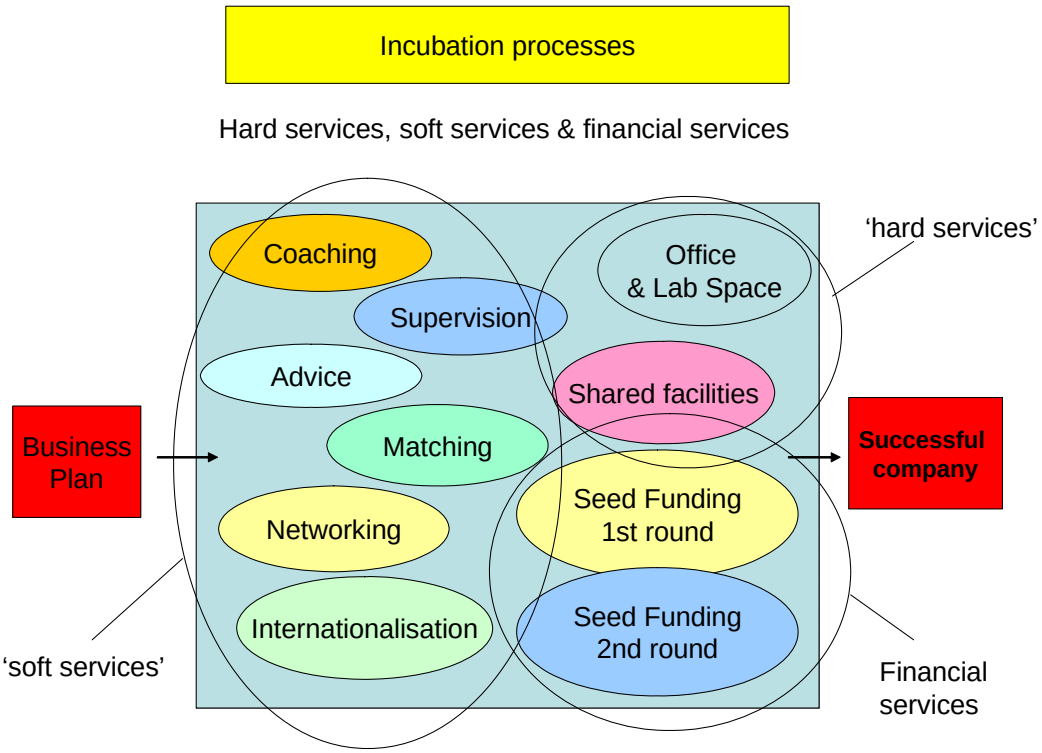
'Hard services'

The 'hard services' offered by an incubator are the most traditional and well-known services of any incubator around the world. It mostly refers to the provision of office space (and, if needed, lab space) for a reduced rental charge to the client firms. In most cases, the incubator has organised a mechanism through which the rental prices increase with the duration of stay of the client firm. By doing so, the incubator does not only create an incentive for the client firm to leave the incubator's space, but more importantly, the client firm is prepared for market prices which inevitably needs to be paid after leaving the incubator.

Next to the provision of office and lab space, the provision of hard services may relate to:

- shared reception services
- office equipment
- shared services such as internet, phone and fax
- shared meeting rooms.

Figure 4: Incubation processes



'Soft services'

The 'soft services' offered by an incubator relate to coaching and advising the client firms in their efforts to overcome the challenges of setting up a new company and make it successful. Depending on the extent to which the client firms and the incubator have agreed upon the incubator's involvement in the daily operations of the company, these services may vary from answering the client firm's questions in general, to a full supervision of the client firm's operations – for example through undertaking all the bookkeeping of a client firm and approving all its expenses. The differences between the amount of soft services offered relate to the question whether or not an incubator is actively investing in a client firm or not. If the incubator is investing itself in a client firm, the client firm is more a *portfolio company* than a *tenant*. The relation is shown in the table on the next page:

Relation between services and typology of client firm	
Type of client	Services
A general client firm	**Coaching** **General advice** **Networking** **Legal advice** **Administration services** **Involvement on request by client**
A portfolio company	**Board membership – supervision** **Approval of expenses** **Daily active involvement** **Bookkeeping by incubator** **Coaching** **General & Legal advice** **Networking**

Financial Services

The ability of an incubator to either directly invest in client firms itself, or to provide for the investments indirectly through a fund which the incubator either has a very close working relationship with or partly owns, is vital for the chances of success of knowledge intensive newly established companies. In this aspect, the following is of importance to be noticed here:

Credibility

Providing for early stage risk capital to client firms is not only of great importance for the direct development of the start-up company, but also indirectly it has an important function. It does create credibility to both the start-up company itself and, if the incubator did provide the financial resources for the investment, also to the incubator. This credibility relates on the one hand to the potential of the entrepreneurial initiative andon the other hand to the incubator who now can better convince other investors to invest as well.

"Genopole Premier Jour"

The purpose of adding credibility to client firms is well illustrated through the Pre-Seed fund of Genopole Enterprises. The incubator (a public body) has created and manages this fund, while the financial resources are entirely provided by private investors. While over the years, the client firms have raised a total of 8 mio. euro pre-seed money through G1J, they have been attracting 118 mio. euro in additional private equity. Various client firms have been interviewed for this study and all of them indicated that the investment of the pre-seed fund was crucial for convincing other investors to co-finance – especially considering the fact that the pre-seed investment consisted of private capital as well.

The financial gap – pre-seed & seed money

In financing new start-up companies, there is often a shortage of available private investment money for the very early stages of the (pre)starting company. At the very first phase of the idea for the company, and the very first small amounts of financial resources needed, often the initiator and owner of the idea can make some of his or her own savings available, and can address family, friends and fools to cover some expenses. During this very first phase, raising these sort of investments is not a major problem. However, directly after this phase, larger amounts of resources (which are still relatively small) are needed for the venture. These Proof-of-Concept resources and (pre) seed funding possibilities, are usually quite scarce in a regional innovation system.

The private investment industry is not likely to invest in very early stage and high risk ventures. Governmental financial resources are therefore often used to provide for very early stage, high risk, financing capital. However, in the end the investment in a company must come from private investors – governments generally do not consider it to be their task to be the financer of new entrepreneurial activities. In order to achieve a successful transformation of public investments to private investments, public private funding mechanisms are often realised in the financing scheme for start-up companies in which governmental resources are involved.

Public Private Funding Mechanisms

To persuade VC Funds and other private investors to take more risks in investing in early stage companies, public – private funding mechanisms are established. These mechanisms aim at raising private investment money at a more early phase of a new company development. These public private mechanisms are usually organised in such a way that the proportion of public money involved correlates with the risk of an investment – the higher the risk, the higher the proportion of public money will be. If the (pre)seed phase of a new venture is organised in more than one round, in the first round, the proportion of public money will be higher than in the second round, at the same time increasing the private proportion of investment money. An example is shown in the table below:

Proportions of a public private funding scheme		
	1st round	2nd round
Public money	75%	**40%**
Private money	**25%**	**60%**

The financial resources can be provided to a new venture in the following two ways:

- *Through a fund:* both public and private organisations can provide for the financial resources needed to a fund with the various proportions as described above. The fund then makes the investments to new ventures. In this construction, the fund receives the shares of the portfolio company and arranges the exits. The shareholders of the fund receive the ROI in correspondence with the proportions of their input in the fund.
- *Directly to the company:* the public money is directly invested to the new venture, most probably through the incubator, as soon as the client firm and the incubator have organised the private financial investments as well. Both public and private investors directly receive shares in the new venture and can decide their desired exit strategies on their own.

Industry backed VC Funds

Traditionally the perception is that Venture Capital Funds are the domain of banks and very rich individuals. However, the industry can provide for venture capital as well. Considering the fact that many incubator do signal a 'financial gap' and a shortage of early stage risk taking investment capital, industry backed venture capital might provide for an interesting additional source of funding. Especially for long-term, capital intensive venture creation with a specialisation in a specific discipline, industry backed venture capital might be attracted – for example for second round seed investments in a biotech company with a potential product of which the pharmaceutical industry might benefit.

Attracting industry backed private equity

Biocentiv in Germany has established very good and close working relationships with BMT, the company tht manages various investment funds. One of these funds is an Industry-backed VC Fund, through which Biocentiv could attract investments in its client firms. The incubator indicates that where banks and traditional VC Funds might be weaker in a region, industry backed VC Funds can be a valuable alternative. Involving the industry in the incubation processes is however than of importance.

Exit strategy
When investing, an exit strategy needs to be developed from the start. In incubation processes, there are quite often many parties involved in investing in new ventures. This might complicate the exit strategy. Therefore, when creating the possibility to invest in new companies, it is vital that before the first investment is made, a valuable exit strategy is developed in which the interests of *all* parties involved, are served. Specific attention needs to be paid to the public parties involved. The public involvement in investments in new start-up companies does only relate to the incubation process – facilitating new company creation. However private involvement in investments has a longer perspective: looking for the highest RoI. In public private investments mechanisms the balance between these contradictory interests need to be taken care of through agreeing on exit strategies which serve both involved investors.

3.3 AFTER CARE& GRADUATION PROCESSES

During the graduation & after care processes, the incubator stops offering its services to the client firm and the client firm now will have to continue its operations without support. The client firm is 'graduated'. However, for each incubator and for each client firm, the term 'graduated' might imply something different. The client firm leaving the incubation program does not necessarily mean that the client firm did not appreciate some services which it would still like to use while having to pay market prices for these services. It can very well be that the incubator still has a function to fulfil. These services are usually referred to as 'After care' services.

Graduation policies
Incubators differ in their policies of the so-called 'graduation' of client firms: the moment that the incubator stops offering its services and that the client firms will have to be able to continue its operations without further support from the incubator. The majority of the incubators explored tend to define the moment of graduation in a period of time, having for example the policy that client firms need to leave the incubation process after three years. However other incubators do not formulate a 'graduation' clearly – the client firm itself has a say in choosing this moment as well, or the graduation is related to the question whether or not private equity has been obtained.

A flexible duration of stay

Genopole Enterprises in France clearly indicates that a survival rate or graduation rate is a difficult concept which the incubator does not like to use. The philosophy of the incubator is that it continues to provide services to client firms for as long as it takes to successfully create a new company – which in some cases takes more time then in other cases. Naturally there must be good perspectives for the client firm to successfully enter the marketplace within a certain time frame; this timeframe however cannot be set without considering the specifics of the client firm.

Growth Facility
One of the services that incubators sometimes do offer to firms which have stopped using the actual incubation services, is a growth facility. In such a growth facility the client firm can use office and/or lab space for market prices, and continue to use some other soft services of the incubator as well (also for market prices). However the firm still may benefit from some of the networks of the incubator as well as the proximity of newly established start-up

3.4 PERFORMANCE MEASUREMENT

Not relating to only one processes of an incubator, but essentially to all processes combined, performance measurement is also relevant to this chapter. It appears that every incubator has a different way in measuring its performances. For measuring the incubator, one has to look back

to the initial purpose of the incubator. However, even when taking the different aims of the incubators into account, one still cannot identify a common way in which incubators measure their performances. The explored incubators in this study have mentioned the following indicators for measuring their performances:

- the amount of companies created
- the amount of jobs created
- the financial investment in the incubation program vs. the financial benefits of the incubation program
- client firm's turnover
- the amount of private equity attracted
- the way in which a technology reaches the marketplace
- the amount of companies that leave the incubator without ceasing its activities.

In chapter 6, further considerations on the performance measurement are offered.

4. THE INCUBATORS

The incubators explored in this study have formed the basis for the general description of incubation processes in chapter three. In this chapter (chapter four), a description will be provided of the eight visited incubators individually, which have formed the basis for this study. The interviewed incubators do have many characteristics in common, however important differences can be noted per incubator as well. The description of each incubator will be limited to providing for their most important characteristics and most distinctive features. Per incubator, the following structure for their description will be given:

1. A general introduction
2. Describing various distinctive features
3. Summarising remarks

The description of the incubation processes in chapter three, and the description of the individual incubators in this chapter, will lead to answering the to central questions for this report in the following two chapters. The next chapter (chapter five) will focus on what the most important common characteristics of the incubators described in this chapter are. In chapter six, further analysis will lead to an explanation of lessons which can be learned from all the data obtained on the eight visited incubators described here.

4.1 Genopole Enterprises, Evry Cédex, France

1. General Introduction

Genopole Enterprises is a French incubator, entirely publicly owned and managed. The purpose of the incubator is to strengthen the biotechnology cluster in the Paris Region. This region is a very powerful region in biotechnology, where 7,5% of the GDP is devoted to Research & Development. There are 8 bioparks located in this area and the region hosts almost 1000 companies active in the field of 'biosciences' (biotechnology, life sciences and pharmaceutical companies). The incubator started its activities in 1998.

2. Distinctive features:

The incubator

The strategic aim of the incubator is to increase the number and the competitiveness of biotech companies in Evry and in the Paris Region through:

- creation and incubation of new start-up companies until market acceptance
- relocation of existing companies
- supporting the development of Genopole companies.

The operational aim of the incubator is to have achieved the following objectives in 2010:

- to have facilitated the creation of 80 companies
- to have achieved 1 or 2 IPOs of client firms
- to have several products successfully reached the marketplace
- to reach the goal of the sales forecast of 90 Million Euro.

Genopole Enterprises does not own a building for its incubation activities; however client firms may use office and lab spaces which are available within the broader Science Park facilities. The Bio-Incubation Centre has 2700 square meters available for client firms and consists of mainly laboratory facilities. At this moment the incubator has assisted more than 50 client firms since its creation. The incubator now offers its services to 30 start-up companies.

Pre-incubation
The process of screening and scouting new client firms is managed by the incubator's staff. Genopole Enterprises has 6 multidisciplinary project managers with a background in IP, finance, valuations, business development, venture capital industry, and incubation processes. The leading staff of the incubator has an extensive network within the research disciplines corresponding with the focus of the incubator. The process of scouting new projects is therefore an active as well as passive process: the incubator actively approaches researchers and idea-holders for company creation through the incubator, and on the other hand, new projects find their ways to the incubator as well themselves. During the pre-incubation process, the staff of the incubator guides and helps the new project towards the production of a valid business plan which is needed for entering the incubation program of Genopole.

An expert committee makes the final decision on whether or not a new project will enter the incubation program. The expert committee consists of fifteen academic and industrial members and assesses the new project on the basis of its business plan, and a presentation in combination with an interview. If the Expert Committee approves a new project, this not only means that the client firm may physically enter the incubation buildings (using the 'hard' services), it also results in an approval of providing for a pre-seed investment in the start-up through the G1J – the pre-seed Capital Fund of the incubator (see below).

Incubation
Genopole, being a specialised incubator, offers within the range of the 'hard services' both office spaces as well as laboratory spaces to its client firms. Considering the disciplines of the client firms, Genopole has not defined a limited duration of stay – in these disciplines it can easily take ten years to develop from a first idea to achieving successful first sales. The duration for offering services is related to its business plan, its products and to the question whether or not they still need the services offered by the incubator. The soft services offered by the incubator include coaching, mentoring, and offering advice to client firms. Furthermore, the incubator can assist in financial and legal matters and offers a broad range of networking opportunities.

G1J: "Genopole Premier Jour"
The pre-seed fund is formally a separate legal entity, established through a cooperation of 16 distinctive shareholders. All the shareholders are private investors in this fund and the fund is managed by Genopole. The fund has a size of 2.1 Million Euros. Per project a maximum pre-seed investment between 50k€ and 100k€ is provided. The size of the fund seems relatively low, however it is of importance to notice that the French National Government has created the possibility for university professors to cover their salary costs when they try and start to explore the possibilities for commercialisation of their science through spin-off creation. The size of the pre-seed fund can thus remain relatively small since no personnel costs for the new projects need to be financed.
Genopole indicates that the pre-seed fund mainly serves to provide for credibility of projects for approaching other (private) investors rather than being a substantial financer for developing a new project. Providing this credibility to the client firms greatly contributes to the possibility of these firms and the incubator to attract private equity for start-up companies.

Internationalisation
Genopole has a strong international focus. On the one hand Genopole seeks to improve its own processes through internationalisation (through for example learning from experiences abroad). On the other hand, it uses international networking and international activities for expanding its services to client firms in attracting investments, exploring new markets, arranging international

cooperation agreements and finding entrepreneurs abroad to work with. Both the incubator itself as well as the client firms indicate that they benefit from this international orientation.

Staff
Genopole itself strongly underlines the importance of an excellent incubator staff to serve client firms during all processes of their development. A multidisciplinary team is deemed essential, covering various competences which have been mentioned earlier. Their capabilities in identifying new projects, assessing business plans and guiding & coaching start-up companies are essential for the success of the incubation processes.

3. Summarising remarks
Genopole is part of a large science park for companies, research institutes and universities in the field of 'biosciences'. The combination of the science park and the incubation services contributes to the incubator's success, especially since in the science park a huge concentration of excellent scientific knowledge is present as well. Furthermore, Genopole strongly underlines the importance of an excellent staff, covering all competences needed, and has an excellent international network. Last but not least, the launching of the G1J fund has greatly contributed to the success of the incubator.

4.2 Leuven Research & Development

1. General introduction
The incubation process of the University of Leuven is organised by a university department, called 'Leuven Research & Development' (LRD). LRD is an integral part of the university organisation, however it has the authority to operate independently to a large degree. LRD was founded in 1972 and at that time it was one of Europe's first technology transfer offices.

Within LRD, all university activities for the commercialisation of scientific knowledge are brought together. This includes technology transfer activities, contract research assignments, IPR activities, licensing deals, and spin-off creation. It is the goal of LRD to ensure that the university technologies will reach the marketplace in a satisfactory way, meaning that a financial profit is not the first goal of the commercialisation process: if LRD can create a very profitable exclusive license deal on a university technology which appeared to be a defensive deal where the technology is 'stalled' and not used any further, LRD considers this a failure although the deal might have generated a good financial profit.
The incubation process of LRD is entirely interwoven with the university organisation. Therefore, one cannot describe the incubation system without shortly describing the university organisation.

2. Distinctive features
Virtual Bank Accounts
Each researcher and professor at the university of Leuven has the obligation to call upon LRD for any activity they would like to undertake in cooperating with industry or to commercialise their scientific knowledge. When they call upon LRD, a *virtual bank account* is opened for the scientist. For each project or activity with 'the outside world', all expenses and incomes generated are administered in these virtual bank accounts. Generally speaking, the scientist can independently decide on the destinations of the incomes generated: it can be used for hiring more scientific staff, better facilities or be invested in spin-off creation.

Without describing this system to its full extensions, the system basically establishes *virtual companies* through which scientist can undertake cooperation and commercial activities with private partners. This may only relate to a public private joint research activity but it can also

relate to a very successful licensing deal or a new patent which is created. From a perspective of incubation processes, this system offers the following interesting characteristics:

- through the virtual bank accounts, virtual companies and new projects can be identified
- due to the obligation to call upon LRD for all activities in the field of commercialisation of scientific knowledge, LRD can easily identify projects which might develop towards spin-off creation
- LRD can, through the results of the virtual bank accounts, more easily assess the business competences of the scientist

Staff

LRD has approximately 40 employees, each with their own speciality, for example in IPR, legal issues, accounting, business development, financing, incubation and technology transfer in general. When LRD and a scientist decide to create a spin-off company, a team of approximately three of four LRD employees will be available to assist the scientist.

Incubation

LRD offers hard, soft and financial services in its incubation process. Naturally, office and lab spaces are offered to start-up companies. The incubator *building*, which is a separated legal entity and not an integral part of the university organisation, can provide for office spaces for a reduced fee. Furthermore, LRD will guide, coach and advice the client firm and, if LRD is a stakeholder in the new venture, supervise the client firm. Other 'soft services' include accounting services, legal advice, and a very broad and active network within the broader Leuven community as well as an international network. The most important feature of the financial services offered, is the Gemma Frisius Fund.

Gemma Frisius Fund

The Gemma Frisius Fund has been initiated by the university to create a facility for financing very early phases or research-based spin-off companies. The first 'version' of the fund was founded in 1997, followed-up in 2002 by the Gemma Frisius Fund II. The university has invested (and thus owns) 20% of the fund and two commercial banks each provided for 40%. It is important to note that the fund is not specialised in a certain technology or discipline: each opportunity coming out of the university can apply for funding. The Gemma Frisius Fund I had a total size of 12,5 million euro. All has been invested in portfolio companies. The fund invested up to a maximum of 500.000€ in a project. The Gemma Frisius Fund II has the same size, but invests up to 1 million euro per start-up. Until today a little less than ten investments have been made.

Leuven Inc.

For start-up companies, it is of great importance to be located in an environment which does not only include excellence in scientific knowledge, but also a vivid entrepreneurial culture in which a certain openness towards sharing knowledge, networking and assisting each other is created. The University of Leuven did recognise the importance of such a networking environment and initiated the creation of "Leuven Inc.". Leuven Inc. is a network organisation stimulating contacts between university, IMEC, high tech start-ups, innovation actors, support activities such as consulting agencies, venture capitalists and established companies in the Leuven area. The network is quite successful and 'a place to be', of which start-up companies can benefit.

Internationalisation
The incubation process organised by LRD includes clear strategies and policies on internationalisation processes which can contribute to the incubation processes in the following ways:

- to attract more private equity for its portfolio companies
- to scout for entrepreneurs or managers internationally, who are willing to join the management team or board of a new spin-off
- to assist the client firms in their efforts to successfully serve international markets and operate internationally
- to ensure a close link to the developments in the international venture market.

LRD is engaged to this end in, amongst others, the Eindhoven, Aachen, Leuven EU-region cooperation, is a member of the European Association for Technology Transfer Professionals, and has invested itself in a Californian venture capital fund.

3. Summarising remarks
LRD itself has indicated that the presence of critical mass in high quality research forms the basis of the success of its operations. The full integration of technology transfer, commercialisation and incubation activities creates a good working environment to better benefit from the high quality research. Therefore it has identified the integration of commercialisation activities (including spin-off creation & incubation) and the policy of the 'virtual bank accounts', as important key success factors. Based on the interview, we can add the clearly formulated philosophy on the importance of internationalisation processes to these factors as well.

4.3 DiagnOx & Oxford Innovation, Oxfordshire, United Kingdom

1. General introduction
Oxford Innovation
Oxford Innovation is a company which provides services to entrepreneurs, innovators and organisations that encourage innovative start-ups and spin-outs. The company manages 14 innovation centres through which business incubation facilities are offered. One of these incubators is DiagnOx

DiagnOx
DiagnOx is a small and highly specialised incubation program, offering services to very early stage prestarting companies – supporting and facilitating the possibilities to work on orphan IPR and new diagnostic product ideas. DiagnOx is managed by Oxford Innovation.

2. Distinctive features
Interconnected organisations
Oxford Innovation finds its origins in the Oxford Trust, a charitable foundation for the study and application of science and technology. This needs to be mentioned since the Oxford Trust has been created due to the success of the first university spin-off, created by Sir Martin Wood. Due to his success he initiated the Oxford Trust, which led to the creation of Oxford Innovation. This brief history is of importance to mention here since it greatly contributes to the fact that within the Oxfordshire region such a strong and active networking community has been taking shape – all the organisations involved in science, innovation and entrepreneurship share the same roots and are strongly interconnected.

Incubation
At the core of the services offered by the DiagnOx incubator to these (pre)starting companies, is the lab space which is offered to the clients. DiagnOx has been able to create a shared lab facility in a very cost-effective way, giving its clients the opportunity to rent the spaces offered at

attractive rates. Currently, six client firms are hosted in the office & lab spaces and the incubator is currently expanding its facilities. The incubator experiences that although it is a small and very specialised incubator, it has a large geographical reach: client firms from other regions (for example the Cambridge region) are coming to this incubator because of its specialisation and the lab facilities offered. Scouting of new projects is relatively easy: with a very small target audience and a high specialisation, the incubator is well-known.

The soft services offered within the DiagnOx incubation program include services such as business mentoring, support with technology assessment, technology transfer, IP management and protection and access to financial and other commercial expertise. To offer these services, the widespread knowledge, networks and expertise of Oxford Innovation is used as well. The entire range of activities of Oxford Innovation, which manages many incubators and innovation parks within the region, benefits both the incubators itself as well as the client firms. The incubator benefits due to the fact that best practice models and experiences in different centres managed by Oxford Innovation are transferred from centre to centre. The client firms benefit because they are better assisted than only one small incubator could ever achieve.

Business Angel Networks
Oxford Innovation has successfully initiated four different Business Angel Networks, of which OION (the Oxford Investment Opportunity Network) is probably the most well-known. The four networks unite more than 400 active informal investors who have invested more than 25 million euro in 91 firms since 2000. Only in 2006, more than 120 business presentations have been given to informal investors. A technology finance panel assesses the market potential of new technologies. The networks are:

- The Oxford Investment Opportunity Network
- The Silverstone Investment Network
- The Thames Valley Investment Network
- Oxford Early Investments

In September 2006, Oxford Innovation also launched IQ Capital, which is a 35 Million Euro co-investment enterprise capital fund, focusing on seed and early stage companies in high technology sectors, but also on fast growing companies in more traditional sectors.

The presence of these successful business angel networks first of all explain why the incubator itself does not offer financial services, own a fund or actively invests in client firms – there simply is no reason to do so. Where regions and incubation programs struggle with a gap in financing early stage companies, in Oxfordshire Oxford Innovation has managed to successfully achieve the gap to be bridges by informal investors.

Networking opportunities
Another key success factor of the incubation program of Oxford Innovation, is the excellent network which has been created in the region. Evidence provided through recent studies has shown that already more than two thirds of the small enterprises in the region are an active member of one of the various networks and associations. More importantly, the study revealed that these entrepreneurs see their fellow entrepreneurs as an invaluable source of advice and support rather than competitors. Such strong and active networks are an important part of the incubation processes.

Challenge
It is interesting to notice that Oxford Innovation has grown to be a quite large organisation, offering its services to more than 300 in-house client firms and an additional 80 client firms outside the walls of the incubators. Furthermore it manages 4 large investment networks. The

size of the organisation is becoming a challenge – a cultural clash might appear between big organisations and starting entrepreneurs and innovators.

3. Summarising remarks

The most important key success factors of Oxford Innovation and its incubation processes are:

- a very active networking community with a very encouraging attitude towards entrepreneurship, innovation and new business creation
- successful activation of business angels and informal investors through the initiation of Business Angel Networks
- an excellent and large science base (University of Oxford & Oxford Brookes University)

4.4 Chalmers Innovation, Gothenburg, Sweden

1. General introduction

Chalmers Innovation was created through a large financial donation by Stan Allan Olsson, the founder of Stena AB – a big industry conglomerate. Through this donation, the university was able to set up Chalmers Innovation. Starting of as more or less a Science Park facility (only renting out spaces), today Chalmers Innovation runs pre-incubation processes, incubation processes, a growth facility and an investment fund.

Chalmers Innovation's mission was, and still is, to make use of the research in the academia for the commercialisation of scientific knowledge. It is the university's incubator but the incubation program is open for all projects, also those originating from outside the university.

The Chalmers university appoints the incubator's board, which consists of two university professors, a former high-tech entrepreneur, a biotech entrepreneur and a former industrialist.

2. Distinctive features

Pre-incubation

In order to create a proper dealflow, Chalmers organised annual Business Plan Contests ("VentureCap") which has grown to be a stand alone organisation with competitions in Sweden, Denmark, Norway and Finland.

Another initiative which contributes to scouting new projects is the organisation of a Researchers program called "Turning businesses out of science", consisting of 3 half-a-day seminars for researchers who might be interested in becoming entrepreneurs. The course teaches them entrepreneurial skills in the field of technology transfer, marketing and finance. To this end the incubator closely works with the "School of Entrepreneurship".

When a new project enters the pre-incubation process, Chalmers Innovation always matches the scientist with an entrepreneur to be combined into the (future) Management Team of the (pre)starting company. The incubator indicates that finding excellent entrepreneurs for the new projects is their biggest challenge at this point in time.

The focus of Chalmers Innovation during the pre-incubation process is to validate business ideas through pushing ideas towards the marketplace, assist in building an effective business model and a valid business plan. Chalmers assess 120 business ideas per year. At the end of the pre-incubation process, the incubator makes an assessment of the final business plan and approximately 10 to 12 business plans per year are approved to enter the incubation processes. The incubator takes equity in all client firms and sits in the Board of all client firms. The strategy for exiting the investment is set before starting the investment, but is always depending on the economic situation of that moment.

Early stage financing
Chalmers innovation considers itself to be a real expert in early stage financing. Through its financial resources which are provided to the incubator by the regional government, Chalmers provides for soft loans to projects in the pre-incubation phases up to 50% of the expenses and is usually 50.000 Euro. Chalmers itself can make an investment of no more than 30.000 Euro. Furthermore, in the incubation process, Chalmers works with "Innovations Bridge" which is a national state-owned program, financing both the incubators as well as its client firms. Innovation Bridge can take an equity position in client firms up to 100.000 Euro with a limit of 20% of the equity. Furthermore Chalmers Innovation owns an Investment Company (Chalmers Capital) which can make investments in client firms as well. This firm can invest up to 200.000 Euro in a start-up company.

Chalmers Innovation also created a Business Angel Network. Currently 30 to 35 informals are member of this network, who are quite active and already have invested large amounts of money into client firms.

Human Resources & Competences
Excellent human resources and coverage of all relevant competences is considered to be of great importance in relation to the incubator's staff. The key elements of the competence of the incubator's staff are:

- monitoring and follow-up
- creativity
- assessment of all parts in the process of business creation
- recruitment of BoD's, entrepreneurs, etc.
- shaping organisational structures
- legal & administrative processes and templates
- financial knowledge.

Therefore the incubator's staff has background in legal disciplines, financial disciplines, IPR disciplines and is excellent in networking. At this moment 7 business developers are part of the staff of the incubator. The incubator indicates that a certain critical mass in the size of the staff (and therefore the entire incubator) to be able to cover all necessary competences, is needed.

Performance Measurement
Chalmers Innovation very actively monitors its performances. It does this through measuring:

- the number of companies created
- the amount of private equity attracted through the incubator
- the amount of private equity attracted through others
- the turnover of the client firms
- the number of employees of client firms
- the profit generation (if applicable)

The incubator measures all this every six months to constantly evaluate its performances. In order to be able to assess their long-term impact as well, the measure includes companies who left the incubation process ('graduates'). The regular measurement is not only performed to further strengthen its own services, but also to prove their added value to the regional economy and to improve and develop the competences needed to serve the client firms.

Internationalisation
Chalmers Innovation recognises the importance of ensuring to have the right international contacts and networks of which their client firms may benefit. Since the majority of the client firms of the incubator are operating with an international focus from the first day of their

existence, this service is becoming increasingly important. However the incubator did not find a well functioning mechanism to have these internationalisation processes organised yet. Furthermore, the incubator identifies that the amount of private investments in client firms is hardly coming from investors outside Sweden; therefore internationalisation might provide for an opportunity to raise more foreign investment money for start-up companies.

3. Summarising remarks

The aspects of the Chalmers Innovation incubation system that attract most attention are a strong focus on the financial competences needed for financing very early stage companies, their excellent performance measurement philosophy and discipline, and the strong emphasis on developing the right competences within the incubator's staff.

4.5 Biocentiv, Jena, Germany

1. General introduction

Biocentiv finds its origins in a competition organised by the German government for the regions with the best plans for commercialisation of science based knowledge in the field of biotechnology. This competition, called "BioRegio Contest" was organised in 1996. The City of Jena is relatively small with only 100.000 inhabitants. However at the same time, the city hosts 25.000 students divided over 2 universities, and hosts 7 research institutes. Although the region of Jena did not win the competition, it was the trigger to establish a concept for a regional approach towards the commercialisation of scientific knowledge and indeed also the trigger to receive funding for this concept. However, for realising the concept, a state-of-the-art laboratory was needed as well for start-up companies in the field of biotechnology. The concept was called "Bioinstrumentations Centre Jena". In 1997 the implementation of the concept started, resulting in a large incubator building providing for both office and lab space to university spin-off companies. The incubator is called Biocentiv.

On a first impression, the Biocentiv incubator is a very traditional one, focusing on 'tenants' rather than 'client firms', with a business model that focuses on renting out space rather than offering a variety of incubation services. However, the incubator is only a part of the entire concept for the commercialisation of scientific knowledge in the field of biotechnology. Various organisations and instruments work together in the entire process, offering both hard services, soft services and financial services to clients in pre-incubation, incubation and post-incubation phases.

2. Distinctive features

Pre-incubation

The incubator's screening and scouting processes are realised through networking, meetings and connections of the incubator manager. The universities are really committed to creating spin-offs and the incubator and university work closely together. The two organisation have created a well organised network of people with a broader perspective than just their own jobs. The university offers for example seminars to researchers on how to write and manage a business plan. In this course, natural sciences and economics are combined. A first plan to create a business is needed to enter the course – this ensures a clear focus of the course which is thus a full part of the pre-incubation process. At the end of the course, the participants will have realised a valid business plan which then can be presented to the preseed fund of the regional bank or the incubator.

Exist Seed Fund

The Exist Seed Fund is part of the Exist Program which is a governmental program aiming at increasing the number of high tech company creations out of sciences. Since 1998, the program also established the Exist Seed Fund. Jena is one of the fifteen regions that participate in this

program and its fund. The Jena region participates in the program through the so-called "Get-up network" in which four universities are participating (the get-up unites the jena region with another region). The Exist Seed Fund has made 1 million euro of funding resources available for the "Get-up network" for a period of three years. The funding can be used for:

- financing staff within universities to promote company creation
- seed funding for entrepreneurs

In seed funding for entrepreneurs, the fund aims to facilitate the business plan creation for a maximum period of 1 year, through paying for facilities which are to be provided through the university to the entrepreneur. This includes infrastructural facilities (using university lab space) the writing of a business plan, developing a pilot product and attracting the next steps in financing.
The incubator is involved in this process as well since the financial resources provided (through the university) to the entrepreneur, are combined with the access to a coaching network. The coaching of the entrepreneur focuses on:

- coaching in technology development
- coaching in business financing
- coaching in accessing a market

The coaching is free-of-charge for the entrepreneur and the incubator manager will usually be one of the coaches; his costs are covered through the governmental money.

Within the Get-up network approximately 60 project ideas have been assessed for funding between 2000 and 2004. Roughly two thirds of these projects have been approved.

Lab space
The Biocentiv incubator focuses on biotechnology and engineering. To this end, a state-of-the-art incubation building has been realised. The total space which can be rented out to clients is more than 20.000 square meters, but this includes an 'accelerator'. For the clients of the incubator, 7.000 square meters are available. The lab space available has a great flexibility in possible applications in order to ensure that various different clients can use the facilities offered. This modern facility is a necessity for operating a successful incubator in the field of biotechnology and the incubator has a large geographical reach. The Accelerator is for clients who graduate from the incubator. The building offers them the opportunity to remain in the building but rent a larger unit, which includes enough space to have production engines installed.

Venture Capital
The Biocentiv incubator has a very close working relationship with the regional Venture Capital Funds. These funds are managed by a company called BMT (Beteiligungsmanagement Thüringen Gmbh). BMT representatives almost daily visit the incubator which is a good indication of the close working relationships. BMT is the venture capital and private equity company for the state of Thüringen. It manages:

- Thüringen Innovationsfonds (TI). This fund provides for risk capital in an early stage of the company creation (preseed money), typically through providing for a silent loan. The fund size is € 13,5 million euro and per investment a maximum of € 510.00 is provided. This can be raised to 1 million euro if co-investments are realised.
- Venture Capital Thüringen (VCT). This fund (size: 20 million euro) only takes minority interests (equity, shares)in high tech enterprises up to 2 million euro. A typical VC Fund.
- Private Equity Thüringen (PET). This is a newly established fund, started in June 2006. The fund aims at small and medium-sized business and has a size of € 70.8 million. The funds invests a maximum of 5 million euro per portfolio company (in 5 rounds).

BMT manages two more funds, which are of less relevance for start-up companies. However the

presence of these funds, united in 1 investment company which has very close working relationships with the incubator, is of great importance for facilitating successful biotech company creation.

3. Summarising remarks

The Biocentiv incubator is not just created since an incubator was needed – the Biocentiv incubator was created as part of a broader plan in which all aspects for excellent regional performances in commercialising scientific knowledge in the field of biotechnology were covered. Therefore, the Biocentiv incubator is part of a great regional synergy for new company creation. Furthermore it can offer state-of-the-art lab facilities to client firms and it benefit from a very large proportion of science bases within the City and the Region.

4.6 Technion Incubator, Haifa, Israel

1. General introduction

The Technion Incubator is located in Haifa, Israel. The incubator originally started in 1991 and at that time both financed and operated by the Israeli state. In 2002, the Israeli government started a program which initiated the privatisation of a part of the incubators in the country. The Technion Incubator was one of these. The overall purpose of the incubator is to bridge the financing gap for the creation of new high tech start-ups in Israel through providing for high risk investment resources for newly established companies.

Since the privatisation, the incubator constitutes its own legal entity: the Technion Incubator is a for-profit company with five stakeholders. Four of the stakeholders are Venture Capital Funds, the fifth stakeholder is the Technion University. The incubator operates on a for-profit basis, where the profits flow back to the stakeholders. The incubator does not own a building itself. The incubation process is run by a staff of 7 persons: two managers and five supporting staff members.

2. Distinctive features

Pre-incubation

The Technion Incubator does not need to very actively scout for new ventures; most of the new projects approach the incubator itself. The amount of projects approaching the incubator for investments is quite high (approximately 200-400 annual enquiries for investments by the incubator). The Incubator Manager of the Technion Incubator is also a member of the Patent Board of the Technion University. This position creates two advantages:

1. This organisational structure realises a very powerful scouting mechanism since the incubator manager automatically gets insights in the latest IPR generated at the university
2. It realises a structural and formally organised close cooperation between the university and the incubator in which both the technology transfer processes of the university as well as the incubation & commercialisation process are very well interlinked.

Screening

When the incubator receives a request to support a new venture or finds a possible new investment opportunity, the incubator is looking for the biggest promises – thereby very strictly selecting the various projects applying for funding. The consequence is however that out of the 200-400 projects applying for incubator support annually, only four or five per year are actually entering the incubation process and become a portfolio company. Leading in the assessment of the projects is the question whether or not firm will be able to achieve in a one to two year period such milestones that the VC Industry can be persuaded to invest millions in the venture.

The main challenge in selecting the most interesting projects to be facilitated by the incubator manager is in most cases finding the right management team. The incubator's philosophy is not to try and learn entrepreneurial or economic business skills to the scientist, but to try and find a good entrepreneur to work with the scientist in the new venture. The scientist becomes the Chief Scientific Officer, the attracted Entrepreneur becomes the Chief Executive or Financial Officer.

Incubation
At the Technion Incubator, the incubation process is first and foremost the investment period during which the client firm is a portfolio firm in which the incubator has invested. The portfolio company receives (for a maximum of three years) office space and, if needed, lab space in the incubator. This is however not a possibility or an opportunity for the portfolio company – it is an obligation. The incubator is the investor and therefore wants to have close contacts with the client firms – also through having them located in the incubator building, having a seat in the Board of the company, coaching them and approving all expenses.

Networking – also international
The incubator also makes sure to provide for the right networks for the newly established company. These networks are not limited to the regional or national business environment of the new company, but are very often also international – trying to assist in international sales and marketing activities, access foreign investors or achieving foreign expansion of the new businesses. Considering the investment focus of the incubator – high potential, high risks, high profits – internationalisation instruments in both the business output itself as well as financial input, are considered to be of great importance.

Financial services
The Technion Incubator can actively make preseed and seed investments in client companies. The funds available consists of both governmental money as well as VC Fund money. For investing in a client firm, a public-private investment cooperation is a condition for obtaining the governmental funds.

The governmental seed money has a limit of $ 400.000 per venture, and these resources may cover up to 85% of the expenses of a venture. Additional resources should be obtained from private funding opportunities – the Venture Capitalists.

The governmental financial input in the incubation programs, which is available for investments in client firms, is limited to a maximum of $ 30 million per year, to be divided amongst all incubators. However since the government is increasing the number of privatised incubators, the amount of investment capital needs to increase in the near future as well.

At this moment, the incubator has 6 active portfolio companies. Since 2002, the incubator has made 9 investments for approximately $ 6 million and by now, the first exit is scheduled for next year. With regards to the Return on Investments: usually Venture Capital Funds aim for a ROI of 20%-30% - this is however an incubation process in which more risk is taken than the usual VC Funds would do and therefore the financial return on investments is expected to be a bit lower – resulting in an estimated 15%-20%. However, it is stressed that one can only really tell the financial results of an investment fund after at least ten years of running investments.

Monitoring/evaluating performances
The Technion Incubator does carefully monitor its performances. The performances are measured through assessing the number of portfolio companies that raise private equity for their operations, or the number of portfolio companies that continue to grow after leaving the incubator. Since many of the investments made in client firms are still relatively shortly running,

and the first exit still has to be made, it is at this time too soon to give an indication for the success of the process.

3. Summarising remarks
The Technion Incubator has first of all excellent financial services to offer to client firms. Furthermore it has very clear ambitions on not just creating new companies, but creating excellent performing and fast growing companies. This high ambition is also reflected to the very powerful guidance and supervision the incubator offers to client firms.

4.7 TU/e Innovation Lab, Eindhoven, the Netherlands

1. General introduction:
The TU/e Innovation Lab as it is today was established in 2003. Within the Innovation Lab, all activities for knowledge valorisation at the Technical University of Eindhoven are bundled, including the incubation processes. These activities also include the technology transfer activities, legal services, contract research offices and IPR activities. The incubation program is open to all regional projects – not just university projects.

In general, the purpose of the incubation process at the TU/e Innovation Lab is to stimulate and facilitate technology start-ups to increase the number of successful high-tech start-ups in the region of Eindhoven. The incubator has formulated clear operational targets as well for 2008:
-screening 300 projects which are potential start-up companies
-of which 50% will actually start a new company
-of which 45 will be healthy new companies (90 companies will be called 'the walking dead')
-and 15 will be 'gazelles', with more than 25 full time employees and more than 5 million euro turnover in four years.

Innovation Lab is a fully integrated university department. Apart from this university body, there is a separate legal entity called *Innovation Lab Ltd.* which is owned for 100% by the University Holding. Separately, the university has worked together with 8 regional partners in establishing the *Incubator 3*+, a foundation for the actual incubation activities for university start-ups and regional start-ups. The management of these two different legal entities is the same person – and this manager is also the director of the Incubator 3+ Foundation.

2. Distinctive features
Scouting process
It is an obligation for university employees to call upon the Innovation Lab in any aspect which might be of importance to a commercialisation process. This obligation is of great importance for the screening process of the organisation and therefore for its incubator as well. Furthermore, the Innovation Lab has representatives in each of the nine university's departments. Their task is to screen new projects and identify potential even before the researchers themselves become aware of the potential. Furthermore, the benefits of the creation of a spin-off company, are returned to the department itself, which is an important incentive for the department's effort to scout new projects.

Screening process
In order to be able to apply for funding from either the available pre-seed funding, or the available seed funding, the incubator assesses the business plan of the company on:

- a valid business plan
- a good perspective to enter a significant market
- an excellent management team

- a good perspective to reach significant and clear milestones towards attracting private equity and successful sales
- the client firm owns a patent for its technology.

The incubator annually scouts 75 projects. 50% of these projects originate from one of the university departments and the other 50% originate from outside the university – mostly through industry R&D activities. An estimated 30% of the projects do start a company without achieving big success and usually after a couple of years, the start-up company ceases to exist. Fifteen percent of the projects is active in a niche, operating a healthy business with a small staff, consisting typically of CTO (Chief Technology Officers) who operate very research focused and do not want to grow too much. The last 5 % of the annually scouted project might actually turn into a 'gazelle' – generating more than € 5 million euro turnover and hiring more than 25 employees after approximately five years. The incubator has the strong conviction that scientists are usually not very talented and solid entrepreneurs, and vice-versa. Therefore, when assisting in a new pre-starting company, the incubator is often working on matching the scientist with an entrepreneur.

Incubation & Financial services
The incubator offers hard services, soft services and financial services. The staff of the incubator has the following competences for assisting client firms: technological, mentoring, business, and fiscal & legal competences.

Business Angels
The most important regional bank in the direct surroundings of the incubator – the Rabobank – has activated a network of Business Angels who are willing to make investments in high tech start-ups. This bank is one of the stakeholders of the Incubator 3+, ensuring close working relationships with the incubator manager.

Technospurt
Technospurt is the pre-seed facility offered to client firms who are part of the Incubator 3+ program. The Technospurt program has a budget of € 5 million euro in cash, matched with € 5 million euro in kind from its partners, for the 2005-2008 period. The pre-seed money covers a maximum of 60% of the costs of a prestarting company. The money will be provided through a soft loan to these companies, with a maximum amount of € 35.000 to € 50.000 per client firm. The Technospurt pre-seed fund aims to be a self-revolving fund where all returns on investments generated will be re-invested to other ventures.

Technostars
This fund is created by the Ministry of Economic Affairs and a consortium of the Technical University of Eindhoven, its Innovation Lab, the Province, two regional banks, the development agency, and others. The fund has a size of € 12 mio. The Technostars funding program will usually invest a maximum of € 200.000 in a portfolio company, receiving 10% -49% shares in exchange – always a minority interest. In addition to the shares, the seed fund will take a board seat – through membership of the advisory board of the venture, the fund can have an influence in the undertakings of the client firm.

Monitoring/Evaluating performances
The TU/e Innovation Lab actively and regularly monitors and evaluates its performances and output. The incubator looks at:
- Have client firms obtained some sort of private financing?
- What is the turnover generated with the client firms?

- How many of the client firms do have reached the phase in which the first sales are delivered?

3. Summarising remarks
It is interesting to note the very clear operational ambitions of the incubator – which not many incubators do actually have. Furthermore, the concept to have incubator representatives in each university department seems to be a powerful screening and scouting instrument. The integration of techtransfer activities and incubation activities in one organisation further contribute to the excellent performance of the incubator. Last but not least the incubator has been able to unite virtually all stakeholders in the regional economy in its incubation processes.

4.8 I3P Incubator, Turin, Italy

1. General introduction:
The I3P Incubator in Turin, Italy was established in 1999 by the Polytechnic of Turin, the Province of Turin, the Chamber of Commerce, Finpiemonte, Torino Wireless Foundation and the Turin Municipality. The region is specialised in telecommunication, electronics and ICT. The aim of the incubator is to help the start-up of new innovative knowledge based companies. However, indirectly the incubator finds it of great importance to make an impact on the regional entrepreneurial culture. The incubator targets at the university audience (students, researchers and professors) from the technical university, but is also open for entrepreneurs outside the university.

2. Distinctive features
Pre-incubation
The I3P incubator and its main regional partners have a very active attitude towards screening and scouting new projects which may lead to new business creations. To this end, the incubator has initiated

- *A regional business plan competition*. This regional business plan competition, called "StartCup", leads to the generation of approximately 100 new business plans per year, assessed by an expert committee.

- *An important financial incentive*. The incubator has managed to create an important financial incentive for the regional business plan competition, ensuring the willingness of the regional Venture Capital Fund (PiemonTech) to invest € 50.000 in the winning business plan of the competition. This has not only boosted the number of competitors, but also the quality of the plans competing for the award.

- *Training courses on Entrepreneurial Competences*. The I3P incubator has worked closely together with many regional partners to create courses on entrepreneurial competences for scientists and research who might consider to create a start-up company.

- *Pre-incubation working teams*. I3P has created a structure during the pre-incubation phases of prestarting companies, where working teams are created to further work on a business idea and transform this idea into a valid business plan and the realisation of the creation of a new company. To this end, the incubator works with many regional partners to match idea owners with selected business experts. These working teams are supervised by tutors involved with the I3P incubator.

Incubation
The following incubation services are offered to client firms:

- *Hard services*, such as office space, a computer lab, shared secretarial services and shared meeting rooms
- *Soft services*, which include tutoring and mentoring, fiscal, legal and administrative services, support by a senior manager, and a broad horizon of networking opportunities
- *Financial services,* including access to a Venture Capital Funds which is partly owned by, and initiated by, the I3P incubator. Furthermore, these services include access to regional pre-seed and microcredit facilities, very close working relationships with banks and connectivity to regional Business Angels.

Internationalisation services
Internationalisation services are considered to be an effective instrument for client firms as well as for the incubator itself. The incubator offers three important services to its client firms:

- *Euro Office Network*. In this program, the client firms or the incubator can be hosted by European partner incubators on the same terms and conditions as the local enterprises have. This program therefore encourages new start-up companies to try and start-up foreign company settlements or at least the exploration of its chances for success abroad
- *Business plan for internationalisation*. The incubator works with the UCLA in Los Angeles, USA, to offer guidance to client firms in drawing up a business plan for internationalisation. This program is called GAP: Global Access Program
- *International networking opportunities*. I3P is involved in various other international projects and partnerships through which the incubator can offer its client firms an extensive international network, mostly in other European countries.

Other international programs and networks in which the incubator is involved, are:

- '*Newcom*', offering amongst other things Winterschool courses and business plan competitions
- '*Incubate*', enabling small companies to better access European Research and Technology Development programs
- *PAXIS* network, a European network of excellence in entrepreneurship
- *Gate2Growth Incubator Forum,* a European network of incubators
- *ET-Net,* a European Leonordo da Vinci project

Financial services
I3P has initiated the creation of Piemontech, the regional risk capital investor. The incubator owns 20% of its shares. Piemontech is more an institutional angel investor than a traditional VC Fund – it aims at investing in the very first stages of company creation, thus taking far more risk then traditional VC Funds. The size of the fund is € 5 million euro. It takes an equity position in new companies but only minority interest. The usual investment is 20.000 euros. The maximum amount is 200.000 euros. The fund uses a regional approach; it only limits its investment to companies within the Province of Piemonte. Until today it has invested in 13 companies, aiming at a portfolio size of 30 companies.

Monitoring/evaluating performances
The I3P incubator very actively monitors and evaluates its performances. The following output of the incubation program is measured:

- the number of projects and business ideas scouted by the incubator
- the proportion of ideas and business plan assessed by the incubator
- the number of client firms using the services of the incubator per year
- the number of client firms leaving the incubator without ceasing its activities
- the number of 'drop-outs' from the incubator (failures)

- the Return on Public Investment (measured by the number of jobs and turnover created by client firms and the tax revenues this generates for the government).

3. Summarising remarks

The I3P incubator is very active in the field of screening and scouting activities. Furthermore it has ensured a very strong embedment in the network of all stakeholders of the regional economy. It has very clear ambitions in the field of internationalisation services and has developed some interesting tools in this field. It's initiative to create a fund through which regional Business Angels are institutionalised has strengthened the incubation processes significantly.

5. COMMON CHARACTERISTICS

5.1 INTRODUCTION

Based on the general description of incubation processes in chapter 3 and the description of each of the visited best practice incubators individually, further analysis can be made of what these incubators have in common – both in organisational set-up, strategy and incubation processes. This chapter offers an analysis of these common characteristics, focusing on:

- the functionalities of the incubators
- strategy and organisational set-up
- aim, size & focus
- relationship between organisational set-up & aim
- critical mass
- competences

The common characteristics will further lead towards identifying lessons to be learned on the basis of the visited incubators, which will be discussed in chapter 6. The common characteristics will be described below:

5.2 THREE FUNCTIONALITIES OF INCUBATION PROCESSES

Considering the previously described incubation processes, we can identify three different functionalities of these processes as we have seen them throughout Europe and Israel. The explored incubators combine these functionalities rather than striving for the realisation of only one of these functionalities. The various functionalities are, at random:

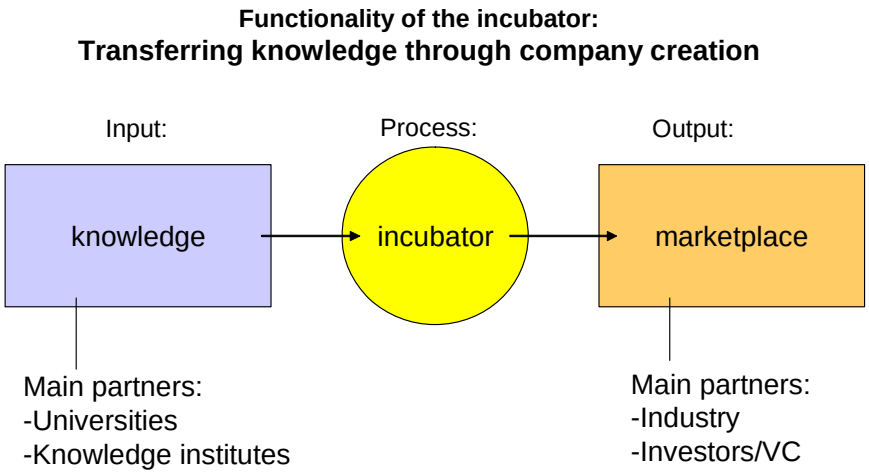
- Transferring knowledge
- Creating synergy
- Promoting entrepreneurship

In order to realise these various functionalities, an incubator needs to organise different processes, work with various partners and achieve different results, as elaborated below:

5.2.1 Transferring knowledge

Incubators are the interface between knowledge creation and the marketplace, through facilitating and organizing the process of new company creation, as shown in the figure below:

Figure 5: transferring knowledge

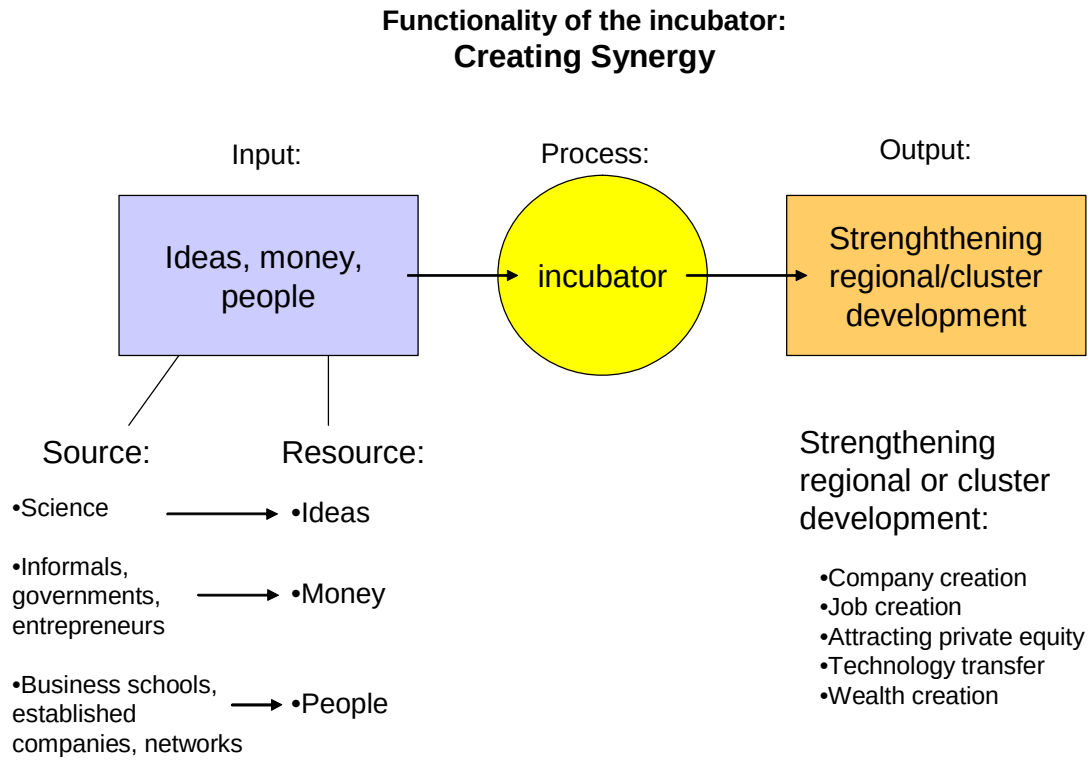


For this functionality, the main input for the incubator is knowledge and ideas. In order for knowledge to reach the marketplace, the incubator itself offers services to facilitate new company creation. Furthermore the incubators works with industry and investors such as the Venture Capital industry to achieve the result that the knowledge has reached the marketplace through a newly established company which no longer needs to be supported by the incubator. Hence, the incubator is an interface between knowledge and the marketplace, working with both public and private partners.

5.2.2 Creating synergy

The functionality of an incubator is also to further strengthen the development of a regional economy or a cluster. In order to achieve this goal, the incubator needs to create a synergy between different processes and partners. The end result of creating the synergy may differ (creating jobs, attracting private equity, creating turnover, transferring knowledge) but it serves the regional economic or cluster development and can only be achieved by creating a synergy between all relevant public and private stakeholders. This functionality is shown in the figure on below:

Figure 6: Creating synergy

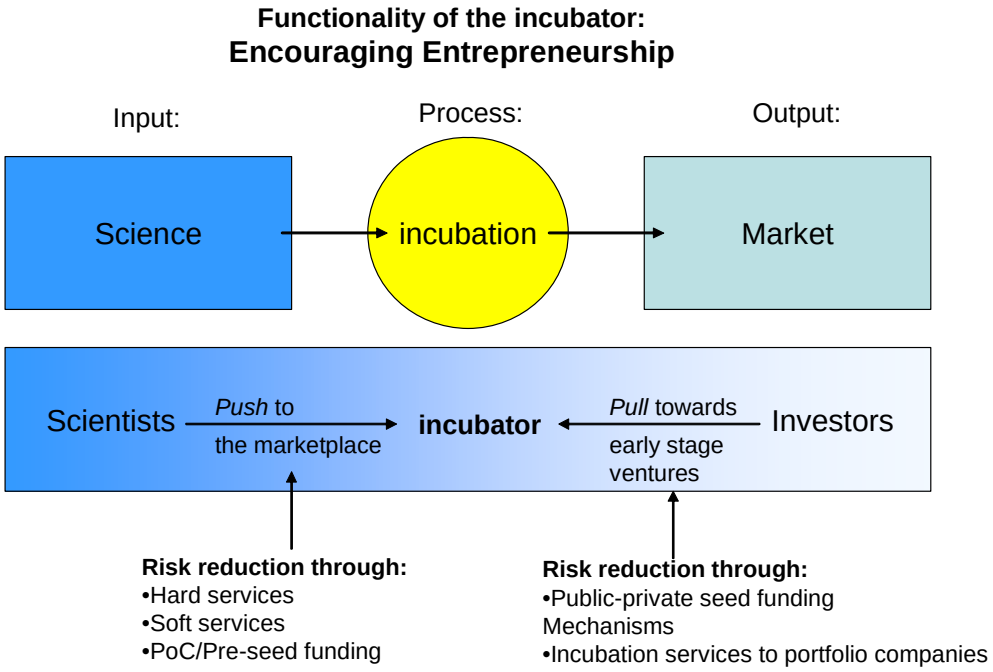


The creation of synergy relates to the entire process that an incubator needs to organise through and with other stakeholders in the regional economy. In addition to organising its own services (hard services, soft services and financial services) the incubator needs to have a holistic approach on all resources, sources, outputs and processes which need to be organised for strengthening the development of the cluster or the regional economy.

5.2.3 Encouraging Entrepreneurship (of scientists *and* investors)

An incubator serves to encourage entrepreneurship of scientists and investors. In this case the investors are not informals or business angels, but larger Venture Capital Investors and banks. To achieve this result, *reducing risk* is the core business of the incubator, thus being able to persuade scientists and investors to take actions they otherwise would not have taken.

Figure 7: Encouraging Entrepreneurship



Incubator & University cooperation in incubation services – encouraging the entrepreneurship of scientists

One of the services that the TU/e Innovation Lab in the Netherlands can offer during the pre-incubation phase, which encourages the entrepreneurship of a scientist, is to covering to a certain extent, the costs for filing a patent. This can be an important incentive for a professor or researcher to explore the possibilities of a spin-off creation.

Entrepreneurship of the scientist

The entrepreneurship of the scientist is encouraged through the various services offered by the incubator. The scientist can receive basic funding, receives assistance in writing a business plan, can use cheap office space, lab space and other hard services and will receive coaching, advice and access to all kinds of networks. If needed, the scientist will be matched with an entrepreneur or manager with the right business skills which the scientist may not possess. Through these services, the risks for the scientist to become an entrepreneur is strongly reduced and the scientist is 'pushed' towards the marketplace.

Entrepreneurship of the investor

Not only the scientist needs to be persuaded to undertake actions which he or she would otherwise not undertake, but the same applies to investors. All explored incubators indicated that the traditional supplies of financial investments in companies (VC Industry, Banks) are not interested in investing in very early stage start-up companies. The risks of investments in very early stage start-up companies were simply too high for these investors. Again, the incubator needs to realise risk-reduction in order to create incentives for the investors to take more risk and to provide for seed capital funding. To this end, many incubators have worked with regional or national governments to create

a public-private funding mechanism. Through such a mechanism, governments are willing to co-invest in start-up companies through providing for seed funding, which demands participation of private investors as well. Through these public private funding mechanisms, the risk of investing in the client firms of an incubator are strongly reduced for the investors.

Encouraging entrepreneurship of investors – Technion

The Technion Incubator provides for a public-private financing mechanism which encourages the VC Industry to make investments in much earlier phases of company creation than the otherwise would have done. The government provides for a soft loan to the client firm of the incubator, covering up to 80% of its expenses, on the condition that the rest of the financial investment needed is provided by private investors. Since their investment risks are reduced due to the fact that a governmental loan is provided *and* that the client firm can use incubation services, they are willing to accept investing in more early stages of company creation.

5.3 Strategy & Organisational set-up

5.3.1 The incubator is established through a cooperation of various organisations

The incubators explored are in majority initiated by various different cooperating organisations, very often in a public-private partnership. In the creation of an incubator, the following organisations are always involved, be it as direct co-founder and co-owner or through having a seat in a steering committee or advisory board:

- local government
- regional government (including regional development agencies/regional innovation organisations)
- national government
- university
- a financial organisation

The involvement of this great variety of organisations in the organisation of the incubation process is meaningful for a successful process since it not only *unites* the various organisations which are needed to organise a successful incubation process, but also *commits* these organisations to contribute to the success of the program.

5.3.2 The main interests of the organisations involved in incubation are similar in different countries

All explored incubators do have different 'founding fathers' with different aims, strategies and operations. However, when compared internationally, the most common and most important organisations involved in incubation in one country do tend to have similar objectives as these same organisations in another country. The following organisations have the motivations and interests as displayed in the table on the next page:

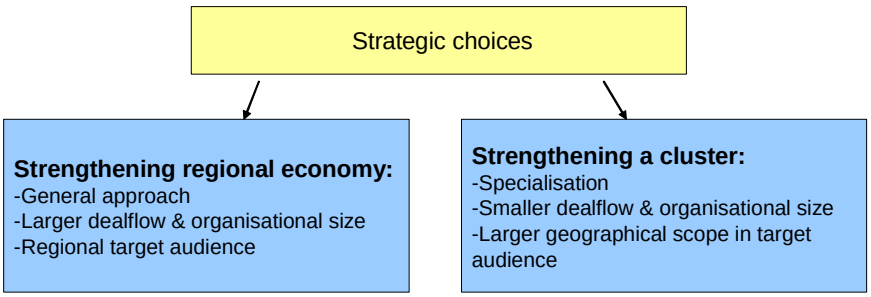
Organisations involved in incubation and their motivations	
Organisation	Motivation
Local government	**Stimulating local economy through:** **-job creation** **-company creation** **-wealth creation**
Regional government	**Stimulating regional economy through:** **company & job creation and perhaps cluster development** **-Marketing the region** **-Attracting other companies to the region** **-Attracting investments to the region** **-Attracting more Human Resources in Science & Technology (students, PhD's, researchers, etcetera)** **-Strengthening regional industries** **-Strengthening the regional science base**
National government	**- Attracting private investments into new business development** **-through providing for risk-capital with a public-private financing mechanism, thus:** **-striving for reducing investment risks** **- stimulating the national economic growth** **- and encouraging foreign business settlements towards an entrepreneurial area** **- aiming at the growth potential of high tech start-ups: gazelle creation.**
University	**-An instrument for the commercialisation of scientific knowledge** **-strengthening the valorisation of scientific knowledge** **-increasing the opportunities for contract research activities** **-attracting more students, PhD's & researchers** **-profit generation (through the ROI on shares in new start-up companies)** **-vitalising a successful scientific culture through strong scientific & entrepreneurial (cluster) development**
Financial organisation	**-an instrument to find high potential new investment opportunities** **-create a good ROI on investment (making profit)** **-risk reduction through assistance and guidance to portfolio companies** **-gaining access to governmental co-investment money**

These different sets of motivations explain for an important part the differences in aims, strategy, organisational set-up and incubation processes in relation to the question who had the lead in initiating the incubation process.

5.4 INTERRELATION BETWEEN AIM, SIZE, AND FOCUS

When looking at the explored best practices, an important distinction can be made between the underlying strategic purposes of two different types of incubation processes in both Europe and Israel which all aim to facilitate the creation of knowledge intensive start-up companies. These two distinct strategies for organising incubation processes strongly tend to interrelate with their size and the geographical reach of the incubation program.

Figure 8: Strategic choices



Incubation to strengthen the regional economy

An incubation process which aims at strengthening the regional economy tends to have a broader focus in its process, not concentrating on a single discipline. The targeted geographical area is the region itself, mostly the science based region centred around a university. It has a larger deal flow and a larger organisational size due to the larger potential in projects which might be screened and scouted for access to the incubation process. The underlying aim of the incubator is to create a vivid, knowledge intensive regional economy where excellent scientific research is combined with high potential start-ups, high technology gazelles and strong existing industry settlements. The creation of such a dynamic environment does also attract other companies and highly talented and well-educated people who want to be a part of the dynamic and inspiring environment.

Incubation to strengthen a cluster

An incubation process which aims to strengthen a cluster might create a similar dynamic environment but in that case, the focus is on one specific discipline (for example biotechnology or diagnostics). This automatically means that the pool of valuable projects is smaller, resulting in a smaller organisation and a lower deal flow. On the other hand, such an incubator tends to have a larger geographical area from which it attracts new ventures.

Strengthening a cluster or a regional economy: same processes, different focus

The two identified strategic purposes of an incubator, either contributing to the strength or a cluster, or contributing to the strength of a regional economy, do automatically have implications, as mentioned above, for the geographical scope of the incubator, the size of the incubator and its deal flow and the specialisations of its client firms. However, the processes which need to be organised by an incubator remain the same. The incubator still has to closely work with universities, organise its screening and scouting processes, match scientists with entrepreneurs, or a wide range of incubation services and organise all other processes which are mentioned in this report. However, the focus with which these processes are organised, has changed. In working with universities, the incubator will focus (for example) on the life sciences or biological departments rather than other departments, if its strategic purpose is to strengthen a biotechnology cluster. However it's important to notice that the processes to be organised, the networks to be creation and the services to be offered remain the same and of similar importance, but are implemented with a different focus.

5.5 INTERRELATION BETWEEN THE ORGANISATIONAL SET-UP AND THE AIM OF THE INCUBATOR

The studied incubators have three different ways in which the organisation is set-up. The organisational set-up, including its business model, reflect the strategic aim of the incubator and its main organisational partners. We can make a distinction between the following four organisational set-ups:

- *University organisation*
  The incubator is part of a university organisation. It is a not-for-profit organisation and focuses on the creation of university spin-off companies. Leuven Research & Development is a good example of an incubator with such an organisational set-up.
- *Governmental organisation*
  The incubator is set-up and run by the government with a specific purpose, for example to stimulate a cluster development, or – as we have learned as well – a better absorption of immigrants to the country. Genopole Enterprise is an example of such a governmental incubation process to strengthen the development of a biotechnology cluster.
- *A not-for-profit organisation with a separate legal entity*
  This is a very common organisational form for an incubator – the incubator is set-up through a cooperation of many stakeholders, both public and private, in the regional economy. Good examples are provided by I3P and TU/e Innovation Lab.
- *A for-profit company*
  In this case, the incubator is owned by private stakeholders aiming at making a profit. The Technion Incubator is a for-profit company.

These different types of organisational formats correspond in the following ways with different incubation aims:

Organisational format & aims of the incubator	
Organisational format	Aim
University organisation	**Successful commercialisation of scientific spin-off creation, cluster development, attracting students, phd's and researchers**
Governmental organisation	**Specific aim: for example strengthening a cluster development for which a long-term perspective is needed with large amounts of high risk financial resources**
Not-for-profit separate legal entity	**Mostly incubators aiming at strengthening the regional economy**
For-profit companies	**Generating a profit through financial return on investments**

5.6 CRITICAL MASS

Many different reports, analyses and studies have concluded already that a certain critical mass is needed to run a successful incubation process. However, often this related to for example the amount of square meters needed within an incubator building. Since in this study, an incubator is considered to be a process organisation which does not necessarily have a building – offering office space and/or lab spaces can just be one of many services – such aspects in relation to critical mass do not apply here. However, based on the various incubators studied, one can conclude that:

- critical mass refers to the presence of a 'science base' nearby the incubator, usually one or two universities and various knowledge institutes. If the science base is too small, there will not be enough potential business ideas for the scouting of new projects
- critical mass also refers to the *quality* of the 'science base' in the proximity of the incubator. Whether or not the knowledge institute or university is a big organisation, is of less importance than the quality of the knowledge institute or university
- critical mass refers to the incubator's staff; the staff of the incubator needs to possess all competences needed to effectively and efficiently organise all processes for facilitating new knowledge intensive company creation, or must be able to externally organise these competences.
- critical mass refers to the pool for scouting new projects available. Without enough potential for finding new business ideas, an incubation process does not have the ability to generate enough input in its processes. Obviously the size of the pool for new projects interrelates partly with the size and quality of the science base in the surroundings of the incubator, but there are more sources (for example industries and other research institutes) which influence the size of the pool for new projects.

Based on the explored best practice incubators, one can observe quite a lot of variety in size and critical mass in relation to for example the size of the organisation, the amount of client firms, the amount of screened business plan and other aspects. However, generally speaking one can, on the basis of the explored best practice incubators, assume that in order to have sufficient critical mass, an incubator:

- has a staff of at least seven persons to cover the majority of competences needed and provide for enough pre-incubation-, soft-, hard- and financial services for client firms
- makes sure to screen at least 100 new business plans a year for access to all the services provided by the incubator
- possess the ability to organise the presence of the following competences, skills and knowledge within the incubator's team:
    - business skills
    - market knowledge
    - technology competences
    - financial competences
    - HR competences
    - Networking skills
- offers services to at least fifteen client firms; not only financing there operations through pre-seed or seed capital provision, but also offering other incubation services to these firms such as for example coaching, advising, networking, and internationalisation services

There is however a possibility to successfully operate incubation services to client firms on a smaller scale, as we have seen with the explored best practice incubators as well. In such a case however, the critical mass needs to be obtained through interlinking the small incubation operation with another incubator elsewhere through sharing the management team and staff amongst the two organisations. We have seen a good example in Oxford where the staff of the DiagnOx incubator was also involved in operating other innovation centres as well. This example shows that very small incubators can be created and operated successfully if they are part of a larger organisation which covers the missing aspects of the critical mass needed. In case of DiagnOx in Oxfordshire, the incubator is managed by the large organisation Oxford Innovation, which adds many competences, contacts, networks and know-how to the small incubator.

5.7 THE COMPETENCES WITHIN THE INCUBATOR

An incubator is a process organisation in which the abovementioned functionalities are united. To this end the incubator initiates different processes at different phases in establishing new knowledge intensive companies: pre-incubation processes, incubation processes and graduation processes. The most important processes are:

Pre-incubation processes:	screening, scouting, assessment of the business plan
Incubation processes:	'hard' services (office space, lab space, meeting rooms, shared facilities), ' soft' services (coaching, advising, supervising, networking) and financial services (access to/providing for risk capital)
Graduation processes:	growth facilities, networking, performance measurement

Considering these processes, one can conclude that only the 'hard' services which are part of the incubation processes, are physical services. For all other services in each incubation phase, specific competences are needed. All incubators explored therefore indicated that an excellent staff for running the incubation process is vital for a successful operation. Multidisciplinary teams are needed in which at least the following skills, competences and knowledge are represented:

- business skills
- market knowledge
- technology competences
- financial competences
- HR competences
- Networking skills

Especially for smaller incubator organisations with less financial resources, it can be hard to have all these skills, competences and knowledge represented in the incubator's staff. The incubator does not necessarily need to have this all ' in-house', however if this is not the case, the incubator needs to have a well-functioning network of experts and professionals through which it can organise these competences.

Incubator's competences – Chalmers Innovation

Chalmers Innovation strongly underlines the importance of building and having excellent competences within its own staff. The importance of the qualifications and competences of the staff have also been strongly stressed by Genopole Enterprises, Leuven Research & Development, Oxford Innovation and I3P. Within Chalmers Innovation, the following competences have been identified as necessary for the incubator's staff:

- monitoring client firms and provide for follow-up
- creativity: defining the specific ideas, helping in developing a business plan
- Assessing all parts in the process of company creation
- Recruiting Board Members and members of the future Management Team
- Shaping and Forming organisational structures
- Providing for Legal & Administrative templates

Disciplines which, amongst others) can provide for these competences are:

- Legal disciplines
- Auditing
- Disciplines in the field of Intellectual Property Rights
- Business studies
- Marketing
- Finance

Chalmers Innovation even lets its business advisors and staff members occasionally join a new start-up firm on a temporary basis – naturally only if the client firm agrees. By doing so, the staff member expands its entrepreneurial skills and improves his or her service provision.

6. LESSONS TO BE LEARNED

Based on the description of the visited best practice incubators as offered in chapter 4, and the analysis of what the common characteristics are of these best practice incubators as described on chapter 5, now an analysis can be made on what the lessons which could be learned from the best practice incubators are. These lessons are described in this chapter and correspond with the second central questions of this study:

What lessons to further strengthen best practices in incubation processes could be learned from the visited best practice incubators in Europe and Israel?

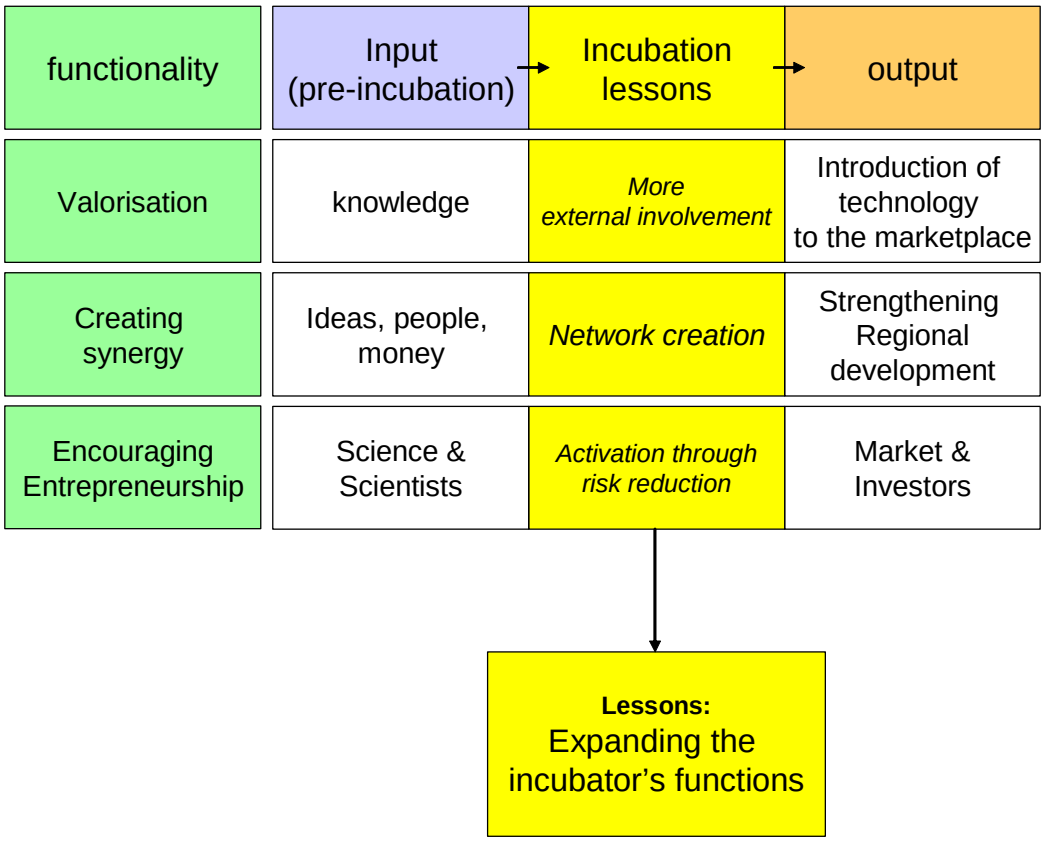
The lessons which could be learned are related to:

- the three processes within an incubator: pre-incubation, incubation and graduation
- the three functionalities of incubators: transferring knowledge to the marketplace through company creation ('valorisation'), creating synergy for regional development and promoting entrepreneurship of both scientist and investors.

Cross combining these processes and functionalities, results in the figure below:

Figure 9: identifying lessons to be learned

Combining functionalities with processes: identifying lessons to be learned



In this figure one can see that, for example, if the main functionality of the incubator is valorisation, then the main input is knowledge and the main output can be described as the introduction of a technology to the marketplace through new company creation. The lesson learned from the explored best practice incubators in this report is that more external involvement can further strengthen the processes which contribute the most to this functionality.

Generally speaking, the lessons which could be learned to further strengthening incubation processes are to be found in shaping, forming and managing various processes which serve both the (pre)incubation services as well as the functionalities of an incubator. On each of the processes one can identify clear opportunities and lessons which are shown in the table on the next page. These opportunities and lessons can overlap as well as form an addition to the processes described earlier in this report.

Lessons & Processes

Process	Opportunities & Lessons learned
1. Expanding external involvement	• ***establishing structural cooperation with universities*** • ***increase industry commitment***
2. Expanding the intermediary function	• ***activation of business angel networks*** • ***matching scientists with entrepreneurs*** • ***internationalisation processes***
3. Expanding entrepreneurship through risk reduction	• ***defining graduation*** • ***improving the incubator's performances through performance measurement/evaluations*** • ***facilitate gazelle development through a growth facility***

The lessons learned are further elaborated below in order of the incubation process to which they are most applicable.

6.1 Pre-incubation processes:

6.1.1 Establish structural cooperation with universities

Most of the interviewed incubators have very close contacts with universities. However, these contacts are often informally organised and thus depending on the key figures at the university and the incubator. University Technology Transfer Departments can be valuable and strong pools for new projects which might be incubated. Establishing formal working relationships with this university department can therefore further strengthen the pre-incubation process. A good example of such a formal cooperation is the Technion Incubator in Haifa, where the incubator manager is also a member of the Patent Application Board of the Technion Technical University. This provides the incubator with a 'first right of refusal' in the process of scouting new projects.

6.1.2 Increase industry commitment already in the pre-incubation process

By increasing the industry involvement already in the pre-incubation process, especially with industrial R&D organisations, the potential pool of projects for the incubator is broadened, now also including possible projects for *industry spin-off* creation. Furthermore, an early involvement of the industry will benefit the entire incubation process as well for, for example, the creation of licensing deals, assignments, joint technology development or, in a later stage, raising industry-backed Venture Capital. Good practices in this field can be found for example at the I3P incubator which has strong liaisons with FIAT research, or the TU/e Innovation Lab which has involved Philips and other industrial parties in the organisational set-up of the incubator.

6.2 Incubation processes

6.2.1 Business Angel Network

Not all of the visited incubators have in their regional environment a Business Angel Network which is involved in the incubation processes. Either the network does not exist, or the network is not activated for contributing the incubation processes. The example of the Oxfordshire region proves however that a well developed and strongly activated network of Business Angels can strengthen the incubation processes in a region.

Business Angels are important for incubation processes since they are willing to provide for very early stage high risk investment capital in (pre)starting companies. All other private investors are only willing to invest in later stages of company creation where the risks are already substantially lower. For activating a Business Angel Network, the incubator has to cooperate with the university and its municipality or regional government since these business angels are usually:

- Former Entrepreneurs and possessing 'old' money
- Willing to invest in new and starting companies
- Sensitive and keen for scientific prestige and regional affiliation.

These Business Angels therefore may be triggered by a combination of pure business arguments for their investments together with scientific prestige and affiliation with their region and its university.

Institutionalising Business Angels – I3P & Piemontech, Italy

The I3P incubator did identify a shortage of investment possibilities in very early stages of company creation – a shortage of Angel Investment possibilities. Therefore, I3P initiated and invested in "Piemontech". Piemontech is an angel investment fund with a size of 5 million euro aiming at young and innovative firms in the Piedmont region. Since the fund takes a minority share in the company if it decides to invest, it can also guide, coach and supervise the portfolio company through a Board membership. The fund has proven to be a success, leading towards the initiation of a second fund, called 'Innogest Capital' which will aim on seed investments (with a total investment size of 60 million euro).

6.2.2 Matching scientists with entrepreneurs

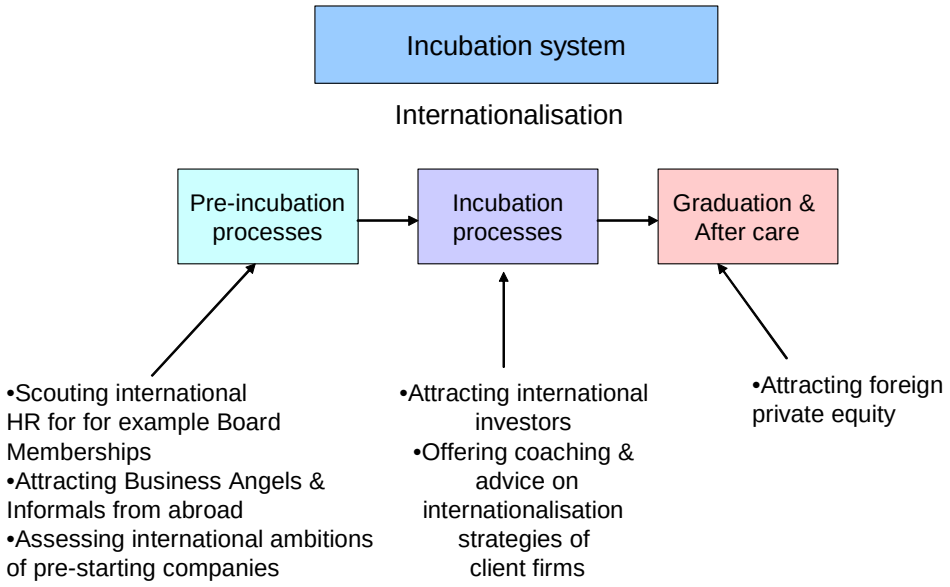
For successful company creation based on a new finding or technology, both scientific knowledge and business competences are needed. These two elements are rarely combined in one person alone. More and more, incubators are award that excellent scientists are in most cases not necessarily also excellent entrepreneurs. Where in the past, the scientists were given some business courses and courses on for example marketing or business administration, nowadays incubators more and more try to match the scientist with an entrepreneur and form a team around a business plan in which both the scientific knowledge and the entrepreneurial knowledge is united. This will trend will become of increasing importance and in order to realise these matching mechanisms, incubators do need to further extend their network and intermediary function to be able to not only scout for new business ideas, but also scout for entrepreneurs who are willing to be part of the management team of a new science based start-up company.

6.2.3 Internationalisation processes

Incubators should be strongly embedded within a regional economy and thus need to be organised regionally, uniting the most important stakeholders within the regional economy. In new company creation, proximity is of great importance to both organise and offer support for and to new starting companies. However, for further strengthening incubation processes, internationalisation can be a powerful instrument. The incubators interviewed for this study all agree on the importance of internationalisation and the potential it might offer, but not all of them have developed a clear focus and strategy in this aspect. Internationalisation can strengthen the incubation processes in three different ways, as shown in the figure on the next page as well:

- in the pre-incubation processes
- in incubation processes
- and in graduation & after care processes

Figure 10: Internationalisation in incubation



Internationalisation in pre-incubation

Pre-incubation processes can benefit from international networks in three ways:

- the incubator might be able to find international entrepreneurs with specific expertise and experience who are willing to, for example, join the board of a new company
- in case of a lack of active informal investors within a region, the incubator might consider to look abroad for finding informal investors for its client firms or try and commit business angels to its incubation process.
- pre-starting companies usually have a broad horizon for their products – in many cases they will have a product which can be sold internationally. When assessing the business plan of a pre-starting company, the incubator manager must be able to assess these international ambitions. Knowledge of internationalisation processes and markets abroad is needed and can be obtained through an international network around the incubator.

Internationalisation in incubation

Incubation processes can be strengthened through internationalisation in two different ways:

- investors in start-up companies do not necessarily have to come from within the incubator's region; many investors are internationally active which does not only increase the amount of financial resources available for investments, but also generate an international network as well.
- client firms in incubation processes often need advice on strategies to enter foreign markets, start business settlements abroad or undertake other sorts of international activities. The incubator needs to have a well-developed international network to be able to offer the right coaching, advice and contacts to its client firms

Exchange Entrepreneurs
Both the Biocentiv Incubator in Germany as well as the I3P Incubator in Italy are engaged in an initiative to provide for the possibility to entrepreneurs to explore their potential for entering a foreign market or creating a foreign business settlement. I3P participates in a European program which encourages such processes; Jena has created its own 'program' through its international contacts in Australia. In both cases, entrepreneurs can temporarily enter an incubation program abroad at the same conditions as the 'local' entrepreneurs. This spring, the Biocentiv incubator will host the first Australian entrepreneurs .

Internationalisation in graduation & after care
The process of attracting private equity for client firms can be strengthened through internationalisation: where client firms are increasingly internationally active directly from its start, private equity in a client firm can come from around the world as well. Incubators need to actively network internationally to be able to address these possibilities.

6.3 Graduation processes

6.3.1 Graduation & duration of stay

Most interviewed incubators do have a clear policy on when client firms have to leave the incubation processes. This moment is usually defined in a certain period of time; for example the maximum duration of stay is three years. Only a few incubators do have an 'open end' with regards to the duration of stay.
When it comes to the policies on 'graduation', there are no clear policies at all. This is surprising since the incubators all hope to achieve the creation of new companies which transform, with their help, from very early stage pre-starting companies to fast growing gazelles. Furthermore, incubators as discussed in this report do make an assessment of a business plan, thus making an estimation of the chances for success of the new company. However, ceasing to offer services to client firms is in most cases related to a period of time and not to the question whether or not the client firm still needs support for successfully reaching the marketplace, and whether or not the incubator manager still assesses that this goal will be realised.

Therefore, incubation processes can be further strengthened by introducing a *flexible duration of stay* for client firms. The length of this flexible duration of stay can be set when the incubator makes an assessment of the business plan of a client firm. Together with the management team of the start-up company, the incubator can decide which milestones the new venture needs to reach in which periods of time in order to stay in the incubation process. Furthermore, the incubator and the client firm can then agree on which milestone establishes the moment of graduation – the moment where support of the incubator is no longer necessary. If by any chance the client firm does not reach the milestones defined, the incubator manager can either decide that the client firm has to leave the process, or make a renewed assessment of the apparently changed situation. Naturally, in all cases, the incubator manager does have to take into account that its program is created to support new starting companies – client firms do have to leave the program as soon as possible.

If the incubator is not a general incubator which is open to all knowledge intensive projects, but a highly specialised incubator, it might be the case that the incubator manager knows from its earlier experiences after which period of time one can be almost certain that the chances of projects to become successful are simply too small. In that case, the duration of stay can be maximised to a limited period of time.

6.3.2 Facilitate the development of gazelle creation through a growth facility

When a client firm leaves the incubation process, a growth facility for graduated firms has proven to be of added value for both the graduated firm as well as the incubatees. Through a growth facility, the incubator can stay in close contact with its graduated firms thus maintaining a broader network, of which client firms might benefit. Having a mixture of existing and newly established companies within one building or park creates a more dynamic environment of which all can benefit. Furthermore it generates a more easy access to some of the services an incubator can still offer to graduated firms as well. The availability of a growth facility ensures a further integration of science park and incubators services and can serve to facilitate the growth of gazelles as well. Facilitating the development of gazelle creation is not only of importance to the

start-up companies, it also contributes to the incubator's function of encouraging entrepreneurship of both investors and scientists since it creates a more inspiring and challenging perspective for start-up creation in general.

6.4 PERFORMANCE MEASUREMENT

An important instrument through which incubation processes can be evaluated and further strengthened, is to measure its performances regularly. Four important groups can strongly benefit from measuring the incubator's performances:

- First of all, the incubator itself. Through regularly measuring the outputs and performance, the incubator can evaluate its activities and proactively try and achieve improvements in all its processes. Next to improving its processes it might be able to use the successful outcomes of performance measurements in the marketing of its own activities towards future clients and other involved organisations.

- Secondly, the owners and stakeholders of the incubator organisation. Since in general the incubator's set up costs are financed by public stakeholders (local, regional or national governments) it is of importance for them to gain insight in what the results of their input is. Secondly, public money is always needed for incubators in order to offer its client firms (access to) very early stage high risk investment capital. Therefore, the public organisations providing these resources need to receive feedback on the return (not only financially) on their investments.

- Thirdly, client firms and future client firms. Where the incubator uses entry criteria and assess a business plan of a (pre)starting company to decide whether or not the client firm can access the incubation process, client firms also need to carefully assess whether or not this specific incubator can facilitate the realisation of its goals in the best way. There seems to be a growing development that client firms are willing to look beyond the borders of their direct regional environment in choosing the best incubation processes for the realisation of their goals.

- Last but not least, the Venture Capital Industry. The attraction of private equity for client firms is a very important goal of incubators – transforming the public investments into private investments and by doing so, letting the market decide whether or not the incubation processes have delivered a valuable new company. Through performance measurement, incubators can continuously look for improvements of its processes, therefore increasing their credibility towards investors.

All incubators measure their performance in one way or another. However, the performance indicators greatly differ – and should differ since all incubators are initiated with their own goals and within their own specific regional economic constellation. However, generally speaking, two recommendations may be useful to further strengthen incubation processes through performance measurement:

1. Measure all output of the incubation processes. Measuring all output does not automatically mean that all different sort of output is valued equally, however it does generate interesting data of the effects of the incubator's activities.
2. The measurement should include data on the development of graduated firms and therefore have a long-term character
3. The measurement should be performed regularly. For constantly evaluating and improving incubation processes, regular measurements are needed.

4. Carefully choose the key performance indicators and closely link them to the initial goal for which the incubator has been set-up. However, key performance indicators should include at least:

   - the number of companies created

   Incubators are in the business of company creation. Without the creation of companies, there is no incubation process.

   - the amount of private equity attracted

   In the end, the market itself should decide whether or not the incubation process has resulted in the creation of a company with a good product and added value. The attraction of private equity, replacing the public investments, is an excellent indicator for these performances.

   - the turnover generated by client firms

   The attraction of private equity does give a good indication of how the market values the new company creation. However, this is only an indication of success – the company can still fail and in that case, the private equity represents no value anymore: the money is gone. Measuring the turnover generated by client firms gives a good indication of the actual incomes and expenses of the newly established company, its development and its contribution to the regional economy.

   These key performance indicators give a good impression of the performance of incubators. However, as mentioned earlier, other outputs, such as jobs, the costs per job, the amount of companies leaving the incubator without ceasing its activities and other outputs, need to be measured as well.

All the abovementioned lessons which could be learned to further strengthen incubation processes are identified on the bass of all research done to produce this final report. The applicability of these opportunities may differ for each individual incubator, however generally speaking these processes provide for opportunities to the continuation of the quality of incubation processes.

7. CONCLUSIONS

The following questions are the central questions for this report:

1. What are the most important common characteristics of the explored best practice incubation processes in Europe and Israel?
2. What lessons to further strengthen best practices in incubation processes could be learned from the visited best practice incubators in Europe and Israel?

In answering these questions, we make use of:
-The general description of the incubation processes in chapter three (which was already based on the explored best practice incubators in this report)
- The further detailed descriptions of the incubators as offered in chapter 4
- The further analysis and the formulation of common characteristics and lessons which could be learned in chapter 5 and 6.
All these chapters together now lead to drawing the following conclusions on these two questions.

1. What are the most important common characteristics of the explored best practice incubation processes in Europe and Israel?

- Incubators unite three different functionalities:
  -transferring knowledge to the market place through company creation
  -treating synergy for regional or cluster development
  -encouraging entrepreneurship of scientists and investors
- A variety of cooperating organisations are involved in the organisational set-up of incubators, be it as co-founder or co-owner or through for example having a seat in a steering committee or advisory board
- Best practices incubators are able to successfully unite the distinctive motivations of the various organisations involved in the incubator in one strategic goal
- The strategic goal of the incubators is either to strengthen the development of a specific economic cluster, such as the diagnostics industry or biotechnology, or to strengthen the regional economy at large. The choice which is made in this respect is reflected in the size of the incubator, its deal flow, its focus, and its geographical reach
- Incubators do have policies on when a client firm needs to leave the incubation process, but do not have clear definitions and clear policies on the question when a client firm has successfully *graduated* from the incubation processes
- The working relationship of an incubator with industry is concentrated on the last parts of the incubation process and the graduation process. The industry relationships are usually not formally organised. These relationships are considered to be of increasing importance for successful (pre)incubation processes
- Substantial attention is given to finding the right management team for a (pre)starting company; scouting entrepreneurs to be matched with the scientists is one of the most challenging aspects of the pre-incubation processes
- The best practice incubators do establish good working relationships with the venture capital industry and other investors in order to be able to attract private equity for the client firms – these incubators consider venture capitalists to be one of their main clients
- Not all incubators own a building through which they can rent out space to client firms but all do offer office space as part of there incubation services. The amount of client firms not renting space through the incubator is increasing, however all incubators indicate that proximity is of great importance for ensuring good service provision

- Graduation & After care processes need further development; this includes defining clear criteria for exiting/graduation from the incubator, the after care and networking activities for alumni companies and the measurement and evaluation of the incubator's performances.

2. What lessons to further strengthen best practices in incubation processes could be learned from the visited best practice incubators in Europe and Israel?

- A large and high-quality science base (universities, knowledge institutes) is needed in the proximity of the incubator
- The establishment of very close working relationships with universities is essential, and should be structurally organised rather than organised informally and build on mutual trust between key players
- The incubator needs to be managed by a multidisciplinary team of staff members in order to have the various competences needed for business plan assessment such as coaching, advising and (if applicable) supervision, available for client firms
- Increasing industry involvement in the pre-incubation process can broaden the pool of projects for the incubator, now including potential for industry spin-off creation, and can contribute to further strengthening all incubation processes
- Providing for (access to) Proof-of-Concept and Pre-seed funding possibilities for pre-starting companies during the pre-incubation processes is important. These services not only supply for the first financial needs of the project, but more importantly provide the client firm with credibility towards other investors, partners and potential customers later on in the incubation processes
- Public private financing mechanisms and other financial incentives are needed to attract private investors to invest in client firms in the incubation process
- Create active networks for business angels or informal investors for an increase of very early stage high risk investment capital
- Organise strong internationalisation processes in pre-incubation, incubation and after care processes
- Facilitate the development of gazelle creation through establishing a growth facility
- Clearly define what graduation is and develop clear policies on when a client firm has successfully graduation from the incubation processes.
- Measure the incubator's performances regularly, extensively and on a long term.

APPENDICES

APPENDIX A: INTERVIEW QUESTIONS

The questions below are a result of the interview framework (see page 5) used for visiting the incubators which formed a part of this study. However these questions where only used as guidelines for the areas which needed to be covered during the visit.

Interview Framework

Possible questions to be asked:

General questions:

- When was the incubation program established?
- What is the primary aim of the incubation program?
- Are you a Business- and Innovation Centre, a general business incubator, a specialised incubator (e.g. diagnostics), a virtual incubator, a university incubator?
- What is the legal status of the incubator?
- Does your business plan aim at making a profit or operating not-for-profit?
- What are the main characteristics of your regional environment & economy (lagging, growing, successful?)
- How many knowledge institutes and/or universities are located nearby the incubator?
- Do you have many investors (business angels, venture capitalists, banks, others) in your region?
- Are there international networks for business development in your region?
- How many staff is employed at the incubation program?
- What are their competences and backgrounds?
- What proportion of time do they spend on the management of the incubator and what proportion of time do they spend on the client firms?
- Is the incubator staff involved in the daily management of the client firms?
- Are there training & education possibilities for the staff of the incubation program?
- What are your main sources of income?
- Who covered the setting up costs?
- What are your annual operating costs?
- How do you cover your operating costs?
- What proportion of your program is covered by public money and what proportion is covered by private money?
- By which organisations has your program been founded?
- Who funded the foundation of your program?
- Who are your stakeholders?
- Do you have any further institutionalised liaisons with external organisations?

Questions on the Pre-incubation process:

- How do you scout new projects?
- What amount of projects are scouted annually?
- How do you organise the screening of these projects?
- Where do the projects mainly come from?
- Do you offer financial support to projects through pre-seed funding or a 'proof-of-concept fund'?

C. Questions on the Incubation process:

- How many client firms have you assisted since the creation of your organisation?
- How many client firms are currently in the incubator and how many clients firms are part of your incubation process but not occupying any space within your incubator?
- How many of the projects in the pre-incubation process do actually grow into the actual incubation process?
- What are the entry criteria for your incubation process?
- Where did your client firms originate from?
- In which disciplines are your clients mainly active?
- What sort of business do they undertake?
- Which 'hard services' do you offer?
- Which 'soft services' do you offer?
- Do you actively invest yourself in client firms?
- Do you indirect invest yourself in client firms?
- Which networking possibilities can you offer to client firms?
- Do you offer services for the internationalisation of client firms?
- Do you also offer virtual services to your client firms?
- What is the average duration of client firms in the incubation process?
- Do you have a maximum duration in the incubation process for client firms?

D. Questions on the Graduation process

- Do you have exit criteria for client firms?
- What proportion of your client firms is able to attract private equity?
- How do you assist your client firms in attracting private equity?
- What is total amount of *external* risk capital, obtained by your client firms over the last three years?
- What are your non-financial returns on investments in terms of job creation, wealth creation and the impact on your regional economy?
- How many client firms have successfully been established with help of your incubator program since you have started your activities?
- Do you actively keep in touch with the graduated client firms?
- Does your incubator offer any forms of 'after care' to former client firms?

E. Questions on the Investments (if applicable)

- What is the size of the investment fund?
- Is it a pre-seed, seed or venture capital fund?
- What is the amount of invested capital?
- How much portfolio companies do you currently have?
- Is public-private financing a condition for funding?
- Are you actively involved in the daily operations of your portfolio companies?
- What is the duration of your investments?
- How do you measure the value of your invested capital?
- What is your exit strategy?
- Who funds the fund?
- What is the expected ROI?
- What is the realised ROI?

APPENDIX B: INTERVIEWED INCUBATOR MANAGERS

The following incubator managers and other key figures in incubation processes have been visited and interviewed for this study:

Mr. Wim Bens, TU/e Innovation Lab, the Netherlands
Mr. Rob Verbakel, Investor, the Netherlands
Mr. Michele Patrissi, I3P Incubator, Italy
Mr. Federico Sarti, I3P Incubator, Italy
Mr. Marco Natoli, Piemontech, Italy
Mr. Moshe Katzenelson, Technion Incubator, Israel
Mr. Benny Soffer, Technion University, Israel
Mr. Olle Stenberg, Chalmers Innovation, Sweden
Mr. Colin Alexander, Oxford Innovation, United Kingdom
Ms. Lisa Mynheer, DiagnOx, United Kingdom
Ms. Lin Bateson, DiagnOx, United Kingdom
Mr. Klaus Ullrich, Biocentiv, Germany
Mrs. Katrine Uschmann, BM-T Investments, Germany
Mr. Gabriel Mergui, Genopole Enterprises, France
Ms. Véronique Dufey, Genopole Enterprises, France
Mr. Paul van Dun, Leuven Research & Development

APPENDIX C: SHORTLISTED INCUBATORS

Below all fifteen short listed incubators are mentioned. Out of these fifteen incubators, eight have been selected for further analysis.

- Technion Incubator, Haifa, Israel
- Chalmers Innovation, Gothenburg, Sweden
- I3P Incubator, Turin, Italy
- I4G, Thessaloniki, Greece
- Leuven Research & Development, Leuven, Belgium
- Mjärdevi Incubator, Linköping, Sweden
- St John's Innovation Centre, Cambridge, United Kingdom
- TU/e Innovation Lab, Eindhoven, the Netherlands
- DiagnOx, Oxford Innovation, United Kingdom
- Genopole Enterprises, Evry Cédex, France
- Sviluppo Italia FVG Spa, Trieste, Italy
- Biocentiv, Jena, Germany
- Taguspark, Oeiras, Portugal
- University of Warwick Science Park, Warwick, United Kingdom
- Technopolis Ventures, Helsinki, Finland

APPENDIX D: REFERENCES

The following literature, articles, reports and other resources have been consulted for this study:

- Final report *"Benchmarking of Business Incubators"*, February 2002, Centre for Strategy and Evaluation Services
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- *"Sustaining the Entrepreneurial Spirit over Time",* Maastricht School of Management, September 2005
- Website, handouts and presentations of the incubators.