Business incubation:
review of current situation and guidelines for government intervention in Estonia

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Foreword

The importance of business incubators is twofold. First, they favour the setting up of new companies and, secondly, provide the appropriate business support needed to increase the companies' chances of survival and growth. There are currently more than 800 business incubators in Europe which can be broadly divided into two segments: first, "Multi Purpose Incubators" – focused on general business support, and secondly, "Specialised Incubators" – focused on certain technological areas (information technology, biotechnology, etc) or the carrying out of goals of their founders (pre-incubation in case of educational institutions, development of innovative ideas in case of business entities).

Either a multi purpose or a specialised incubator, its main idea is to provide entrepreneurs with a supportive environment to help establish and develop their projects. By providing services on a "one-stop" basis and enabling overhead costs to be reduced by sharing facilities, business incubators can significantly improve the survival and growth prospects of start-ups and small firms at an early stage of development.

The goal of the current report is to give an independent assessment of the Estonian incubator/incubation landscape, compare it internationally and provide government with ideas how to support the creation and development of successful business and technology incubators. We fully agree that business incubation is only one of the many ways to foster entrepreneurship and business development in general, a broad policy area that may consist of a whole battery of instruments ranging from support for trade fair participation to grants, credit guarantees, training, consulting and infrastructure. And therefore, the creation of a vast number of incubators is not a goal in itself. The idea is to influence the (read: incubation) business in a most beneficial way in order to support the creation of progressive business environments, where basic initial conditions such as market need and managerial leadership are in place.

This report will be an input to the development of state support framework for business incubation. We would like to thank all of the experts involved in this analyse, and especially the existing and potential incubators and their managers in Estonia, who found the time and motivation to fill out the questionnaire and give an interview.

Ott Pärna
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1 Introduction

1.1 Innovation and incubation

There is a clear link between the research and development/intellectual activities and national economic growth: Those countries which invest more in R&D more frequently apply and commercialise technologies, resulting in an accelerated economic development.[1] Recent figures clearly show that Estonia is lagging behind in innovation expenditure in comparison to the EU.[2] Meanwhile however the EU itself recognises that in relation to the US (2.7%) and Japan (3%), it clearly lags behind in national expenditure on RDTI and within a decade the percentage of GDP spent on this is to increase from 1.9% to 3%.[3]

There is therefore a strong case for Estonia to assess its current RDTI policy. As part of this exercise, and in view of possible future EU-funding, this paper takes a closer look at business incubators in Estonia. The paper not only focuses on technology incubators, but deals with generic business incubators and pre-incubators also, for two reasons:

- Non-technology business incubators have been developing also, as one way of addressing the decline of old industries together with the need for small and growing firms to take their place in new economic development.
- To a large extent the principles of running technology business incubators apply to non-technology business incubators (and even pre-incubators) also.

1.2 Is there a need for incubators in Estonia?

In Estonia there are already incubators in operation and new initiatives are underway. But is there really a need for incubators in Estonia? This question is hard to answer in the framework of the (time-wise) limited assignment of which this report is the result, that would require more time and effort (e.g. a major survey and especially interviews among fast growing companies, start-ups and pre-start-ups). Some sources of information may uncover part of a preliminary answer however.

- First, the birth and survival rate of companies in Estonian is rather low, particularly in some regions, and so are some estimates for the number of research spin-offs.[4]
- Secondly, the marketing plans that are part of the business plans of the incubators and new incubator initiatives should moreover give us some information about the needs of specific (sector, regional, innovation etc.) target groups that these incubators are focusing on. We will have a closer look at that in the part of the report where the results of our incubator survey among Estonian incubators and new incubator initiatives.

1.3 About this report

This report aims to outline the concepts of incubators, to identify the characteristics of Estonian incubators and compare these as far as possible with some European data, and to indicate the need of and criteria for incubator support.

As the technology incubators are usually more complex institutions the report's description of incubator operations and functions etc concentrates more on these types of organisations (see Chapter 3).

1.4 About the Estonian incubators

The Estonian incubators, especially the ones that participated in the survey, will be dealt with in detail at the end of the report. However, before that, there may already be elements that are worthwhile commenting on from perspective of the Estonian incubation situation.

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1 *Otto C.C. Lin (2000) National Innovation System and the Success of High Technology Business.*
2 *Silja Kurik et al. (2002) Innovation in Estonian Enterprises 1998–2002.*
3 *Commission of the European Communities (2002) Communication from the Commission. More Research for Europe. Towards 3% of GDP. Brussels.*
4 *Alasdair Reid (2002) Venture Capital Policy paper.*

- There are at present four incubation centres in operation:
- Tallinn Technology Park Incubation Centre
- Jõhvi Business Incubation Centre
- Räpina Business Incubation Centre
- Tartu Science Park, which provides some incubation services

- And there are plans to establish in addition the following incubators:
- Tartu Biotechnology Incubation and Development Centre
- Narva Pre-incubator (did not fill out and return the survey)
- Sillamäe Business Incubator (did not fill out and return the survey)
- Tallinn College of Engineering (pre-)Incubator

2 What are incubators?

2.1 Evolution of incubators

The concept of business incubation has evolved in the last 30 years. The *first generation* of business incubators (1980s) were essentially offering affordable space and shared facilities to carefully selected entrepreneurial groups**.** Thereafter, the incubators started varying widely in key respects such as objectives, sectoral focus, and business modes etc. In some countries the incubators were set up for empowerment, while in other for technology commercialisation. Incubators were mixed type, focused on technology and in some places even kitchen and arts incubators were set up.

In the 1990s the need was recognised for supplementing workspace with counselling, skills enhancement and networking services to access professional support and seed capital, for tenants within the facility and affiliates outside. This led to the *second generation* of business incubators, although most are still stuck in the original mode.

Starting in 1998, with the moves toward globalisation, a new *third generation* incubation model is emerging. A shift has also been experienced in the business model of the incubators from the *not-for-profit* incubators to *for-profit* incubators. The for-profit incubators are predominantly intended to mobilise Information & Communication Technology (ICT) and provide a convergence of support, towards creating knowledge-based ventures; some of these in turn can expand rapidly and contribute towards economic growth. Virtual incubator or incubators without walls have also emerged recently.

It seems to us that the Jõhvi Business Incubation Centre is actually still an early first generation incubator, essentially offering office space. We think this is not enough for a business incubator nowadays.

Tartu Science Park Incubation services are rather limited with the offering office space and premises, which divides this centre to the first generation incubator. But they do provide some consulting services. We agree that they are actually not operating as an incubator, regardless of whether they want to be one. We do recommend the Science Park to properly define what is their core business however.

The Tallinn Technology Park Incubation Centre and the Räpina Business Incubator are both examples of second-generation incubators, for which rendering services are more important.

The Tartu Biotechnology Incubator could become a third generation incubator. It would already be a success if it manages to sustain as a second-generation incubator.

Sillamäe Business Incubator, as a corporate incubator linked to a company like AS Silmet might have third generation potential too, but the exact business model of that incubator isn't fully crystallised yet.

Apart from for example a Silicon Valley type of incubation centre in Tallinn for ICT (surrounded the Cybernetics Ltd, which is a part of Tallinn Technology Park Development Foundation close to Tallinn Technical University), there is probably no further place in Estonia for a third generation incubator.

2.2 Classification of incubators

Incubators can take many forms, but are primarily defined by their objectives.

Their key objectives are to encourage successful new start businesses and/or foster the growth of new and young businesses. Although there are several types of incubators there are some commonly assumed incubator characteristics. These include:

- an element of space provision[5]
- shared services
- on-site management with a business support function

[5] *This doesn't apply to 'incubators-without-walls' of course. This phenomenon will be discussed lateron.*

- a strong selection policy
- a focus on new start or young/small firms
- a supportive environment
- the objective of improving survival or growth.

Very common to the technology incubators is the provision of shared equipment or core equipment.

There are several aspects related to incubators, which determine its characteristics.

- The purpose or justification of incubators is one. Different incubators and incubation projects can be justified for economic, socio-economic, educational and/or corporate reasons. They can have aims ranging from technology transfer and the commercialisation of innovation, to regional economic development and/or empowerment of disadvantaged groups in the local community.
- A second classification can be based on the target user group. These can be SMEs in particular sectors or technology fields, start-ups, growing firms, or firms started by ethnic minorities or disadvantaged groups.
- A third classification concentrates on the emphasis placed on the property element in each project. Incubators may be operated predominantly by private sector companies, by public sector bodies, by education sector institutions, or by partnerships among these.
- And a fourth classification focuses on the profit element: projects may be primarily profit-oriented, or may be run on a non-profit basis.

Based on a mix of aspects a useful basic conceptualisation of the resulting diversity of form of incubators is the continuum that ranges between pure profit-motivated real-estate ventures and process-focused business or community development initiatives (Table 1). This enables the broader perspective of incubation to be considered as an option in the range of policy instruments.

Table 1. Characteristics of four incubator types

	Real estate		*Business*	*Development*
	For-profit property development	Non-profit development organisation	Academic incubators	For-profit seed capital
Primary objective	■ Real estate appreciation ■ Sell proprietary services to tenants	■ Job creation ■ Positive statement of entrepreneurial potential	■ Faculty-industry co-operation ■ Commercialise university research	■ Capitalise investment opportunities
Secondary objective	■ Create opportunity for technology transfer ■ Create investment opportunity	■ Generate sustainable income ■ Diversify economic base ■ Bolster tax base ■ Complement existing programmes ■ Utilise vacant facilities	■ Strengthen service and instructional mission ■ Capitalise investment opportunity ■ Create good will between institution and community	■ Product development
Stakeholders	■ Property developers ■ Economic development officials	■ Economic development officials ■ Politicians	■ University officials ■ Economic development officials ■ Politicians	■ Managing partners ■ Limited partners ■ Economic development officials
Admission policy	■ Ability to pay rent	■ Net jobs potential ■ New firms ■ Local ownership ■ Not retail, wholesale or personal services	■ University affiliation ■ Technology intensive ■ Net jobs potential ■ Complements university programmes	■ High growth potential ■ Harvest potential
Exit policy	■ None	■ Graduated rent ■ Time limit ■ None	■ Graduated rent ■ Time limit ■ None	■ Growth performance

Source: Allen and McCluskey, 1990

Of course these are 4 prototypical incubators, in practice there may be mixed forms. The point is however that the incubators should be coherent in terms of **what their main focus is** (property orientation versus – type of – business development orientation) **and the impact this has on its objectives, required type of stakeholders, and its admission and exit policy.**

On the basis of this typology the following observations can be made:

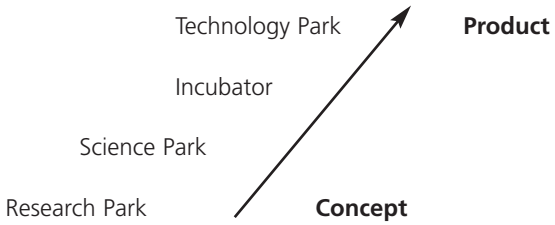
- Jõhvi Business Incubator was founded as a non-profit development organisation, but doesn't seem to pursue the related policies and objectives, but mainly confines itself to renting out office space.
- Räpina Business Incubator is a typical non-profit development organisation: although small they are actively pursuing the policies and objectives related to that role.
- Tallinn Technology Park Incubation Centre seems to be a mix of a non-profit development organisation and an academic incubator. This means that either just their imago is somewhat unclear, while their identity is clear. Or that their identity is unclear and that in the near future the centre may be forced 'to choose sides': either become a non-profit development organisation, or an academic incubator. Looking at the list of current tenants, there is in that respect not a very strong link with University.
- The same may more or less go for the future biotechnology incubator at Biotechnology Incubation and Development Centre: will it be an academic incubator or turn into a for-profit seed capital organisation? There is still enough time to shape that profile.
- Tartu Science Parks seems like wanting to be the academic incubator (and it does have elements of it), but right now it is working more likely as for-profit property development institution with no profit.

3 Technology based incubators

3.1 Linking R&D with companies

There are several ways to strengthen links between Universities and R&D institutions on the one hand and industries on the other. Hereinafter is described the one possible way[6].

Figure 1. From concept to product



Source: Senevi Kiridena (2001) The Concept and future of technology incubation

Research park

A research park differs from a science park in the sense that it prohibits all manufacturing except prototypes. Various companies are welcome to establish their research centres in the Park adjacent to a Higher Educational Institutions (HEI). The research personnel benefit most from interaction with each other and with the academicians in the HEI.

Science park

A science park is an industrial complex close to the place of learning (Higher Educational Institute). It is designed to encourage formation of knowledge-based industries in a high quality and pleasant environment.

According to the United Kingdom Science Park Association (UKSPA) a Science Park is a property based initiative which includes the following features:

- It has formal and operational links with a University, other Higher Education Institution or Research Centre
- It is designed to encourage the formation and growth of knowledge-based businesses and other organisations normally resident on site.
- It has a management function, which is actively engaged in the transfer of technology and business skills to the organisations on site.

Technology and business incubator

There is a notable difference between a technology park and an incubator, as the incubator incorporates a new feature 'graduation', which implies that a start-up firm attains a certain level of maturity after a specific period of probation. While the technology and business incubator can be considered akin to each other, another major distinction is that the latter may focus on a wide range of tenants that are not necessarily technology intensive firms.

Technology park

A technology park is an industrial complex where all types of facilities are provided for the growth and development of technology based small enterprises. However, a Technology Park need not to have formal links with an HEI and therefore the level of academic and entrepreneurial interaction is generally low.

6 *Senevi Kiridena (2001) The Concept and future of technology incubation.*

Also within the framework of this typology, it is still not quite clear to what category the Tartu Science Park belongs or wants to belong to. Reason enough to reassess its identity, develop a policy, define its target group and subsequently the related longer term as well as operational objectives.

Tallinn Technology Park seems to become a mixture of science and technology park, as it situates close to the Tallinn Technical University the rather strong links with the university researchers is foreseen.

3.2 Objectives of technology incubators

Technology incubators are aimed at achieving the following objectives: [7]

- Enterprise & Entrepreneurship development: An appropriate tool for economic development by promoting technology/knowledge-based businesses, culture of technopreneurship and creation of value added new jobs.
- Technology commercialisation: To provide a much needed platform for speedy commercialisation of the technologies developed in the academic and the R&D institutions to reach the clients and end-users.
- To provide an interfacing and networking mechanism between academic, R&D, industrial and financial institutions.
- To provide value addition through its services provided to its tenants as well as to the existing technology dominated SMEs.
- To provide R& D for industry: It also enables small industry to take up R&D activity and the technology up gradation activities.

The main objective of all kind of incubators (incl. simpler business incubators) is the contribution to the competitiveness of local economies and job creation.[8]

3.3 Services to be offered by technology incubators

A technology incubator is a managed workspace with shared office facilities with emphasis on business and professional services necessary for nurturing and supporting early stage growth of technologies and technology based enterprises. Services provided are:[9]

General services

General services may include common services such as a well-equipped workspace, communication facilities, phone, fax, Internet and other shared services including secretarial assistance.

Business support services

Business support services may include business skill development, business planning & development, business management and networking with stakeholders**.**

Specialised services

Specialised services may include engineering & design, research & development, testing, legal, IPR related etc. A Technology Incubator is also expected to assist the start-ups in getting access to financing such as venture capital support, funding from angel investors, other innovative financing mechanisms and equity participation.

General business incubators also provide their tenants the general services and business services. Some incubators give some support also accessing finances and partners.

Most of the technology and other business incubators provide also **pre-incubation services** 'on-site'. Pre-incubation is the term used to describe support services to would-be entrepreneurs before they launch their business. These services usually include proactive identification of would-be entrepreneurs, helping them to develop

7 *P.K.B.Menon (2001) Technology Business Incubation Systems in India.*
8 *CSES (2002) Benchmarking of Business Incubators. EC Enterprise DG.*
9 *Gerhard Raetz (2001) Technology incubation: An instrument to support new enterprises.*

a business plan, training and advice on forming a company. The pre-incubated entrepreneurs are typically offered desk space and other basic support (e.g. computer, telephone) for a period of time during which they are expected to prepare a business plan.[10]

3.4 Benefits from technology incubators

The benefits from technology incubators are not differing very much from the general incubator:[11]

For tenants

All incubators enhance their chances of success, help overcome market failures, and facilitate access to mentors, information and seed capital.

For research institutes and universities

Technology incubators help strengthen interactions between industries, promote research commercialisation, enable better use of lab facilities and give opportunities for faculty/graduate students to enhance their capabilities.

For corporate sponsor

Incubators can develop opportunities for acquiring innovations, supply chain management and spin-offs, and help them meet their social responsibilities.

For governments

Incubators serve as an economic development tool, promote regional development, and they generate jobs, incomes and taxes and they contribute to achieving the objectives of enhancing company birth rate and the level of innovation. The latter is more expected from technology incubators.

For the community

Incubators create self-esteem and an entrepreneurial culture, as a majority of graduating businesses stay within the area.

Few people would oppose to the benefits mentioned above, but the question here of course is whether and to what extent incubators are instrumental in generating these effect. Answering this question requires monitoring and measuring incubator performance. Measuring the outcomes of incubators can include economic development, technology diversification, job creation, company profits, taxation revenue, business creations, business survivals, the financial and corporate performance of the incubator itself, benefits to participating universities, and benefits to the local community.

Although the survey among Estonian incubators gives some clue as to their performance, little yet can be said of the 3 centres, that are all younger than 2 years. Some preliminary observations can be made however:

- After more than one and a half year, it seems that the additionality of the Jõhvi Business Incubator is negligible. Very few companies have profited from the main services (the core one being: delivering working space). The small size of the centre combined with the under-utilised working space and the fact that the centre is relatively isolated altogether create a peaceful atmosphere, not the atmosphere of a dynamic breeding place. With only 2 tenants in place on no turnover in tenants the benefits to the local community seem very limited indeed.
- Räpina Business Incubator seems to be doing well, this is a dynamic breeding place – albeit it a small one – from which tenants, (local/regional) government and the community can benefit.

[10] *CSES (2002) Benchmarking of Business Incubators. EC Enterprise DG.*
[11] *Rustam Lalkaka (2001) Technology Business Incubators: Characteristics, Potential benefits and Performance.*

- Tallinn Technology Park Incubation Centre only exists form some months now. All that can be said is that the start looks promising and that the monitoring and control mechanisms in place there are a sound basis for keeping the finger on the pulse.

- Tartu Science Park's main objective is not the incubation of the start-ups, although they provide some incubation services. They have worked over 10 years for now over 5% vacancy rate over years and recent years have expanded their space provision. Some tenant companies have grown fast and some not. Still they have problems of providing high quality services to the tenants. Also they need to work on exit criteria as some of the tenant companies are not fully compatible members of the TSP.

4 How to become a successful incubator

4.1 Steps for setting up an incubator

An analysis of best practice suggest that incubators should not be treated as standalone operations but rather integrated into a network of key stakeholders agencies and schemes that work together to promote innovation, competitiveness, technology transfer and other key public policy objectives.[12]

In order for general business incubators to become successful, the following steps are considered to be critical in setting up an incubator:[13]

- Specification of incubator goals
- Establishment of a local working group
- Assessment of available local business support
- Analysis of local economy
- Overall feasibility study
- Site identification
- Identification of financing resources – for incubator and tenants
- Creation of start-up plan (strategy and business plan)
- Marketing and publicising of the incubator

The first 7 bullet points set out the framework in which the incubator is to operate. The last two points in fact apply to any start-up. **Incubators should in other words be managed by a professional team and be run as a business itself.**

Very often the specific features to observe before setting up a technology incubator, in addition to the above-mentioned, should be the analysis of research community and the linkages with the universities and/or R&D institutions and their scope and role in the incubator.

4.2 Success factors

The successful performance of a business incubator depends on the performance of the client firms of the incubator. There are a number of factors that will influence the extent to which incubators are able to achieve best practice. These factors relate to[14]:

Setting up and operating incubators

1. **Number and type of stakeholders** – the role of stakeholders, in particular the backing of a broad public-private partnership, is critical to successful incubator operations and the wider role of incubators in contributing to regional strategies on competitiveness and technology transfer.

2. **Number and type of incubator staff** – this together with the location and type of incubator premises largely determines start-up costs and the capacity of an incubator to operate on a cost-effective basis and achieve economies of scale. There are a number of operational indicators (see below).

3. **Number and type of client companies** – the number and type of tenants provides a basis for classifying incubators (e.g. a technology centre will typically have more than 75% of its clients engaged in knowledge-intensive activities) whilst information on the performance of tenants provides the basis for assessing incubator effectiveness.

4. **Start up and operating costs/source of funding –** there are a large number of possible headline and operational indicators relating to incubator finance (e.g. extent to which breakeven is achieved) and, likewise, if linked to incubator outcomes, this enables efficiency and value for money issues to be assessed.

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12 *CSES (2002) Benchmarking of Business Incubators. EC Enterprise DG.*
13 *Phare project No. Es0009-3-2 on Technical Assistance For Incubation Training & Networking Activities In Ida-Viru, Power Point presentation for Traing Seminar.*
14 *CSES (2002) Benchmarking of Business Incubators. EC Enterprise DG.*

Key incubator functions, management and promotion

5. **Incubator occupancy rates and turnover** – occupancy rates provide an indication of how successfully incubators attract clients. Occupancy rates are also for many incubators a key to financial viability. The turnover of tenants is a guide to operating efficiently.

6. **Range and pricing of business support services** – the provision of a comprehensive range of business support services is a defining characteristic of the incubator model. These can be grouped into four categories – entrepreneurship training, business advice, technology and innovation support, and financing of companies. In each case, there are a large number of possible operational indicators. Pricing of these services varies a lot, but mostly the general business development services are free or partly charged and specific services partly charged. The actual costs of the services correspond to the market prices.

7. **Admission and exit criteria** – again, the existence of formal admission and exit criteria are a defining characteristic of the incubator model and important in ensuring a turnover of tenant companies. Operational indicators include the length of time tenants remain in the incubator.

8. **Number and type of incubator personnel** – the ratio of incubator personnel to clients is another key indicator of efficiency. More fundamentally, the quality of the management team is clearly a major determinant of incubator performance.

9. **Criteria used to monitor incubator performance** – in addition to a formal set of performance indicators and quality standards, a key factor here is the extent to which incubators obtain feedback from their clients on the services being provided to them.

Evaluation of incubator services and impacts

10. **Performance of tenants, job and wealth creation** – the failure/success rate of incubator tenants is widely used as a short-term measure of their performance whilst job and wealth creation indicators provide an insight to longer-term impacts.

11. **Number of graduates/retention in local area –** monitoring the destination of graduates is a key to understanding the extent to which incubators achieve sustainable impacts that benefit the areas where they are located.

12. **Value added of incubator operations –** benchmarking the performance of incubators needs to be based on an assessment of the value added they demonstrate, i.e. the extent to which the performance of client companies can be attributed to the support obtained from an incubator.

These points should all be covered by the business plan of the incubators and are also part of the ongoing monitoring of incubator performance, be it on an annual or quarterly basis (the later as for as performance is concerned). The vast majority of these 12 points is covered in the incubator survey undertaken in the framework of writing this report. For a detailed presentation and evaluation of the survey results, see further on in this report.

4.3 Targeting for tenants

The success of any incubator is a derivative of the success of its tenants. A proper selection mechanisms that enables the incubator to pick out potentially fast growing companies is therefore vital. But how to identify such future companies?

In a study carried out by Smallbone, Leigh and North (1995) it was concluded that there are many company growth strategies that can work, but some generalisations can be made:

- Commitment to growth by the owner manager is one of the most important factors
- Most firms grow through active planning rather than by just being "pulled" along
- The best performing firms are those active in product and market development, they review production processes to change with market needs, and are above average investors in development
- To continue to grow firms need to develop their organisational structure, enabling the leader to become a strategist and delegator.

- Job generation is particularly concentrated in the high growth firms.
- Although empirical evidence in general is rather meagre on this point, these generalisations may help in identifying and screening potential attendees for incubators.

The study reveals that there are 4 key issues the incubator should keep in mind, as they are the main facilitators of company growth. As a process for supporting accelerated development in different types of firms and in different contexts, incubation policy and practice should focus on ***1) the removal of obstacles that inhibit accelerated development for the target clients***. Opportunities exist for emphasising the value of ***2) a demand-driven service design*** approach and ***3) a proper selection process*** that matches with appropriate target clients.

Similarly, they should assist those clients in recognising and ***4) introducing the practices and strategies that have been found to be identified with fast growth businesses.*** Generally these have been found to concern, among other things:

- Market orientation
- Building a management team
- A growth strategy
- Widening company equity ownership.

None of the 4 operational incubation centres are already in the position to be so selective that they can focus solely on fast growers. Yet this is what they should aim for in the future if after their start-up they are to deliver a significant and sustainable contribution to accelerating the growth of businesses. In addition to this, they should also up-front define a clearer exit-policy for tenants. Because with else there is the danger that they will be happy once the centre is fully occupied, and leave it that way (especially when it is a significant source of their income).
The purpose of provision of the incubation services to the tenants by the Tartu Science Park is somewhat different from the 'real' incubation centres, because the TSP supports its clients in order to get competitive and solvent clients for the park not to further their exit from the park.

4.4 Benchmarking

Unfortunately there is no proper research literature available that addresses related relevant questions, like:

- Would the businesses selected by incubator managements have done as well anyway wherever they chose to have premises and/or without the support provided by the incubator? (The net effect achieved by incubators here is called additionality)
- Exactly what inputs, how and why, and at what stages, have contributed to significant development of the tenant companies?
- Can the performance of incubator tenants be accurately measured against that of carefully matched non-incubator companies, rather than against the totality of small firms or new starts?
- Do incubators significantly increase the population of fast growth firms (however "fast growth" is defined)?
- How can we measure the less tangible benefits that incubators may deliver? Such benefits can include the attraction of inward investment, strengthening of the local entrepreneurial culture, improved prestige attaching to the locality, a contribution to the development of clusters, and other possible benefits to different stakeholders.

Table 2. Summary of key incubator performance statistics and suggested benchmarks

Setting Up and Operating	*Average*	*Range*	*Benchmark*
Average capital investment cost	€3.7 million	€1.5 to €22 m	Not available
Average operating costs	€480,000 p.a.	€50,000 to €1.8 m	Not available
% of revenue from public subsidies	37%	0% to 100%	25%
Incubator space	3,000 sq.m.	90–41,000 sq.m	2,000–4,000 sq.m
Number of incubator tenants	27 firms	1–120 firms	20–30
Incubator Functions	*Average*	*Range*	*Benchmark*
Incubator occupancy rates	85%	9%–100%	85%
Length of tenancy	35 months	6 months – no max	3 years
Number of management staff	2.3 managers	1–9 managers	2 managers min
Ratio of incubator staff: tenants	1:14	1:2–1:64	1:10–1:20
% of managers' time advising clients	39%	5%–80%	50%
Evaluating Services and Impacts	*Average*	*Range*	*Benchmark*
Survival rates of tenant firms	85%	65%–100%	85%
Average growth in client turnover	20% p.a. (2001)	5% to 100% p.a.	25%
Average jobs per tenant company	6.2 jobs per firm	1 to 120	Not available
New graduate jobs per incubator p.a.	41 jobs	7 to 197	Not available
Cost per job (gross)	€4,400	€124 to €29,600	€4,000 to €8,000

Source: SCEC (2002) Benchmarking of Business Incubators.

As the table above shows, in a recent European study some benchmarking indicators have become available however, that in the near future may give some guidance as to how the incubators in Estonia are and should be doing.[15]

A practical application of the table above, is to use it as a reference for not only evaluating the performance of the current incubators, but also to assess their business plans with, as well as those of future incubators.

[15] *CSES (2002) Benchmarking of Business Incubators. EC Enterprise DG.*

5 Incubation versus incubators

Incubation programmes outside incubator centres may cover a lot of elements essential to incubators, but at the same time not being an incubator.

An example of this are programmes in Business Schools for a strictly selected group of trainees, who receive a month of full time and intensive training, which immersed the trainees in the technical and social aspects of entrepreneurship. This is then followed by a three-month period during which they are funded and engaged full time to undertake the feasibility plan for their businesses. During the four months they are introduced to sources of finance, marketing and the whole range of professional and technical support. They are regularly monitored and advised by a team of business experts, and have full access to the facilities and staff of the Business Schools.

This concept of incubation attached to a business school is considered by the Tallinn College of Engineering and its upcoming incubation initiative. They foresee it as 4 stages programme: 1 – Preparation (clarification of would-be entrepreneurs skills and objectives); 2 – Training (Seminars on business development issues); 3 – Innovation (individual work with the consultant, writing a business plan and forming the enterprise); 4 – Monitoring (consulting on the entrepreneurial issues raised in business). First three stages would last for 3–4 months and the last one for 12 to 18 months.

In the Netherlands Philips encourages selected SMEs to take some of its products to the market. Although these have been developed in Philips' laboratories, they do not fit in with the company's own marketing strategy. They nevertheless have a market potential. The company invites entrepreneurs to submit business plans for marketing these products. If it approves of the plans it invests in the companies created and provides other ongoing support.

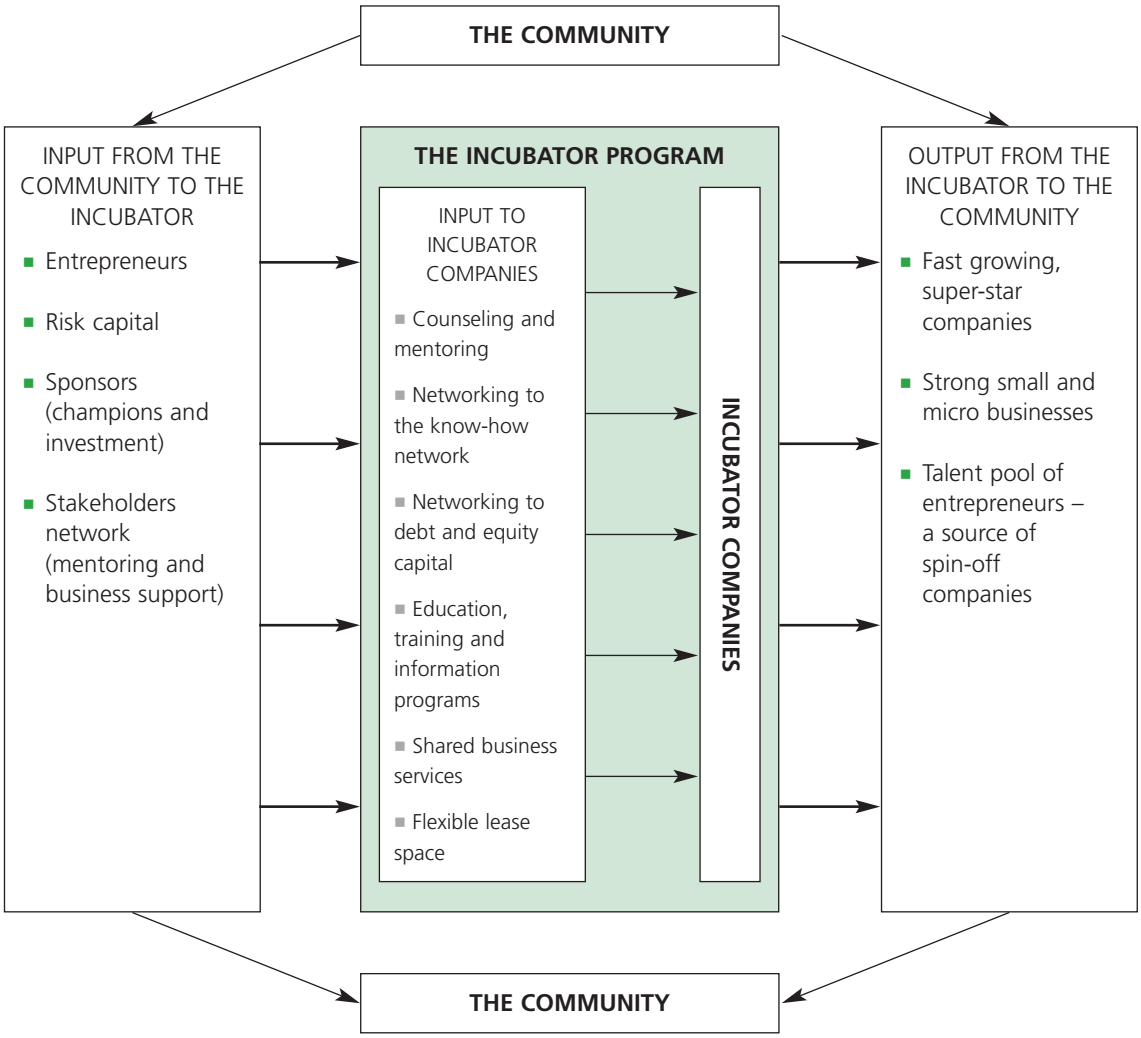
This concept of incubation attached to a large technological company might be worth considering in setting up the Sillamae business incubator.

These programmes are clearly incubational in nature, but they are also clearly distinct from what would be recognised as 'normal' incubators. The concepts of "incubation" and "incubator" are in other words closely overlapping but not synonymous.

Reasoning along the same line of thought, one could as a matter of fact consider part of the activities to be covered by Business Advisory Centres, especially the ones related to start-ups, as incubational by nature. Business Advisory Centres are in this view, at least partly, 'incubators without walls'. And taking it the other way around, a lot of the business development services offered by incubators make them as it were 'Business Advisory Centres with in addition some incubator walls'.

The Figure 2 below clearly shows that in terms of ambition (required output) and soft services to be delivers (i.e. training and business advice) incubators, incubators without walls and Business Advisory Centres have a lot in common.

Figure 2. The incubation process



Source: Rice and Matthews, 1995

There is in other words a very natural relation between incubators and Business Advisory Centres and founding business incubators is just one of the ways of incubating new businesses.

Nevertheless, in practice there seems to be no relation whatsoever between the two types of organisations in Estonia. There may well be practical reasons for that, but at least the potential of such a relation should be explored, both in the case of existing incubators, but especially with future initiatives. Especially public authorities that are in some way involved in both types of initiatives should take this integral view, in order to get a complete picture of business development requirements vis-à-vis available facilities.

In judging an incubator feasibility study, the question is not so much: Is there a need for an incubator? But the question should be: Is there a need for additional business development services, what is the relation with business services already offered and is there on top of that a need to expand those services by making available office space for tenants? As a result of this approach, the conclusion might in some instances very well be that the new centre should for example first set up its business development services, then become a pre-incubator and then an incubator. Government (be it local, regional or national) should therefore take this approach into account in evaluating requests for subsidising incubators. (This step-by-step approach doesn't apply to highly specialised technology incubators of course).

6 Survey of Estonian incubators

At the time of the survey (November 2002), there are three working incubation centres in Estonia:

- **Tallinn Technology Park Incubation Centre** (started September 2002);
- **Jõhvi Business Incubation Centre** (April 2001);
- **Räpina Business Incubation Centre** (end 2001);
- **Tartu Science Park**, which provides some incubation services.

In the next few years there are various plans, more or less advanced, to launch further incubators:

- Biotechnology Incubation and Development Centre near Estonian Biocentre (expected to be ready by 2005);
- Tallinn College of Engineering Incubator (plans to start services in Sept. 2003);
- Business Incubator in Sillamäe (?);
- Pre-/business incubator in Narva (?);
- Preincubator in Kohtla-Järve next to Tallinn Technical University Virumaa College (?).

The centres can be divided into three groups as presented in Table 3.

Table 3. Division of Estonian incubation centres

	Technology incubators	*Business incubators*	*Pre-incubators*
Names of incubators	Tallinn Technology Park Incubation Centre; Biotechnology Incubation and Development Centre; Tartu Science Park Incubation Services	Jõhvi Business Incubation Centre; Räpina Business Incubation Centre; Sillamäe Business Incubator	Tallinn College of Engineering Incubator; Pre-/business incubator in Narva; Preincubator in Kohtla-Järve next to Tallinn Technical University Virumaa College.
Focus	Technology based start-up companies; usually the spin-offs of universities and research institutes, also the spin-outs of the large companies.	To support start up companies (no necessary sectoral) with a good business ideas in early stages.	Situates close to universities or higher vocational schools to generate and test business ideas. In case of College of Engineering also the training and consulting of already existing enterprises is planned.
Objectives	Support New Technology Based Firms and therefore technological development. Increase commercialisation of university research.	Increase of entrepreneurial activity in the region, (regional importance)	To push and help students into the business; to raise the capacity of enterprises to manage, through consulting and additional training (also in specialised fields – mechanics, construction, etc).

The two technology incubators (Tallinn Technology Park Incubation Centre, Biotechnology Incubation and Development Centre) planned next to technology parks and science institutions are specialised on high-tech (mid-high-tech) start-ups. They have a similar place in a broader 'system' of support slowly developing for research spin-offs in Estonia. Tartu Science Park is specialised also to the technology intensive enterprises, but its linkages with universities in Tartu are rather weak right now. For better targeting the clients the park should be developed to be more complex and coherent to the whole 'system' of support (see Figure 3) following the one possible scheme like: Tartu University R&D Department and/or TU Technology Institute → Tartu Science Park Incubation Centre → Tartu Science Park → Normal business development. As there will already be the incubator and park for biotechnology firms, Tartu Science Park could focus at the other technology intensive enterprises.

[16] *Technology incubators and business incubators also provide the pre-incubation services (consulting on writing business plan and firm formation etc).*

Figure 3. The supporting infrastructure for university spin-offs

PRE-INCUBATION → INCUBATION → LARGER FACILITIES → NORMAL BUSINESS ENVIRONMENT

TTU R&D Department and Innovation Centre; TU R&D Department and TU Technology Institute; Biotechnology Incubation and Development Centre Identifies and assists researchers with business planning and generally promote entrepreneurship.	**Tallinn Technology Park Incubation Centre;** Biotechnology Incubation and Development Centre; **Tartu Science Park** Provides initial work-space and consulting to start-up firms (mostly university spin-offs, but not only).	**Tallinn Technology Park; Tartu Biotech Park Tartu Science Park** Step up from incubator. Larger facilities for full production/service provision. Aftercare programme for companies leaving incubator.	**Normal business Development** Enterprise may stay in technology park (but without aftercare).

The other business incubators have regional objectives not technology intensive ones. The purpose is to increase the entrepreneurial activity in the problem regions. While they do express a preference for companies with higher qualified labour use and production oriented, the activity fields are not specified. Jõhvi and Räpina Incubators act on project basis mostly. In Jõhvi the Enterprise Estonia start-up scheme is the base for the incubants, in Räpina also the project competition was made to choose the incubants.

The Tallinn College of Engineering Incubator will be specialised in the fields taught in the school (construction, architecture, car repair and mechanics). The idea is to provide incubator tenants (starting or existing enterprises) the business consultations and training, and also specialised training using the school labs and workshops.

6.1 Basic facts on Estonian incubators (I) – set-up & operations

- Incubators are a sub-critical size in terms of initial capital investment, operating budget, incubator space, etc. Initial capital investment not being supported sufficiently by public sector (national or local government) compared to EU averages – makes financial sustainability unlikely
- Incubator space ranges from a few classrooms to 215m² (well below minimum benchmark)
- Number of tenants: 3 to 6 (micro) firms
- Operating costs and revenue: very small operations: costs 0.5 MEEK to 1 MEEK (over 50% subsidised).
- Future Biotechnology Incubation and Development Centre is the only one to reach critical mass: investment, incubation space

6.2 Basic facts on Estonian incubators (II) – functions

- Occupancy rates : incubators likely to be full (+85%) by 2003;
- Basic marketing – lack of 'scouting';
- Some support through SPINNO in the pre-incubation stage;
- Staff: one to two people (full time job equivalent) with a ratio of staff/tenants staff: 1:20.
- Services: shared office services, basic business planning/mentoring, no real technology/laboratory support, no support on access to finance.

6.3 Basic facts on Estonian incubators (III) – income and sustainability

Likely impact/sustainability

- Survival rates tenants: Exit strategy – 2 years(+) after entry; Target 85% (TTU), Räpina 100% 'so far'.
- Job creation: Looking to 50–100% annually (+/–20 jobs on average p.a.); costs per job – low (but this is consistent with low capital costs and operating costs and cannot be considered an indicator of efficiency).
- Sustainability of incubator: Few indications of 'self-financing' capacity. However, subsidy ratios re consistent with EU average: 37% operating revenue from public subsidies / 70% of costs of establishing incubator.

Sources of funding

- Tallinn Technology Park Incubation Centre's main sources of income are subsidies from Tallinn city government, rent and services. TTU Incubator thought it could be possible to minimize the public sector's financial role after some years in the case of 100% utilisation rate. There is also possibility that the Technology Park subsidises the incubator partly, but the state and city's role is expected through different support schemes.
- Biotech wants to finance the maintenance and operating costs of the building (estimated 126 000 EUR annually) from incomes in running core facilities, rent, overhead costs from national and international R&D projects and programmes. Also from the national innovation support schemes (SPINNO, Competence Centres).
- Jõhvi incubator is related to Enterprise Estonia (EAS) Ida-Viru regional agency and is financed through EAS and provided services.
- Räpina gets income from projects (Phare), local governments, state reserve fund, and from rent and services.
- Tartu Science Park has not received any subsidies related to the incubation activities from any source. The main income comes from rent (which is partly subsidised), and it is not sufficient for services provision.
- Sillamäe expects financing from city government, from Silmet Group and EU. Phare support is foreseen to last for 10 years (!). City government would cover part of the rental costs for 2 years. The share of company Silmet is not clear yet.
- College incubator finances itself with school resources, provided services and consultations and probably some support from partner in Porvoo (Finland).

None of the incubators said that it would be possible to cover the operating costs only by incomes from rents and services. It would seem reasonable to assume that the technology incubators may be able to reach self-sustainability in some (maybe 5 and more) years together with the technology park close to them, if both work successfully and support each other. At the very least, this system as a whole could be self-sustainable.

However, the more classic business incubators in Estonia are unlikely to reach the self-sustainability very easily, because they are situated in 'less-favoured' regions (North-East and South-East Estonia). There is little entrepreneurial activity, the rental prices have to be minimum, the provided services (also to region enterprises) have to be either free of charge or so cheap that the companies can afford them. In some respects, these incubators are caught in a vicious circle: On the one hand they are rather small so are unlikely to cover operating costs (notably salaries of incubator staff) from rent. While on the other hand, there is no need for them to be large, as demand for premises by incubating companies with growth potential is not likely to become significant.

In the case of Räpina, it seems that this incubator responds to a certain local demand (political and business stakeholders) and achieves a larger scale of activity by working as a business advisory centre as well.

6.4 Survey conclusions on existing incubators

Sub-critical size making sustainability more difficult

This problem is clearly related to the local market of incubating companies that these centres are operating in. So in Tallinn and Tartu for example it doesn't need to be a problem. In region with a more backward economic development however– which by the way may very well have been the reason to establish an incubator there – it is a problem. That's why in those regions there is an extra need to consider generic business incubators as part of business development as a whole. In other words: to integrate and not overlap or duplicate the activities of incubators and Business Advisory Centres.

Another problem of premises lies in the lack of laboratories and well-equipped workshops for tenant users.

Business models are unclear

The incubation activities in Estonia are rather new issue in general and there is no good local benchmark available. Most of the existing centres have problems with targeting the compatible clients. It is not quite clear: does the lack of a clear business model result in an opportunistic admission (and exit) policy? Or does the lack of a clear admission and exit policy result in a vague business model? Despite the fact that the short-term result of this might be a somewhat better occupancy rate, the long-term effect is that the incubator becomes of marginal interest to the target group it was intended for. Part of the problem could be solved with proper marketing plans, which most of the centres are lacking right now. Another problem is that in most cases the incubators seem to be stand-alone operations and therefore their capabilities are week. More linkages with different regional, local or state enterprise development strategies and more involvement of different stakeholders (especially private sector) could be useful for the success of incubators.

Business support services

- Only very basic service provision – little which entrepreneurs would pay hard cash to obtain.
- Few signs of links to network of service providers (technology, financial, mentoring, etc.).

It has already been said here, but we repeat it again: the core of incubation is about business development, of which providing premises is one of the elements.

- In terms of providing business development services. Tallinn Technology Park Incubation Centre does seem to have a clever scheme of a combination of free generic consulting hours and specialised consultancy at a discount rate delivered by the private sector. But again it seems very much stand alone, not well connected to other already existing business advisory centre activities in town.
- Tartu Science Park is active in arranging finances and helps to look for partners (nationally and internationally). It also provides some basic business development consultancy in house. But they have problems with charging for the services as most of the companies do not have buffer finances to pay. So they do not have the certain package of business services or consultancy services developed.
- The relation between the Räpina Incubation Centre and the Räpina Business Advisory Centre is unclear to us, but the incubator seems to be a sort of business advisory centre itself. Is this synergy or redundancy?
- And Jõhvi Incubation Centre has, both physically and operationally, been in a somewhat isolated position right from the start and never really started off as a regional provider of business development services.

7 Options for government support of incubators

The Table 4 below attempts to summarise a basic typology of needs with respect to current support possibilities. It clearly show that the vast majority of needs is related to business development services, like training and consultancy.

Table 4. Typology of needs and support possibilities of Estonian incubation centres

Types of incubators/ incubation	*Typology of needs*	*Current support possibilities*
Technology incubators	■ Equipped (labs + basic) workspace for prototyping, testing, etc.; ■ Technology advice services (in-house or outsourced to partners); ■ Trained staff able to provide basic business mentoring but also innovation management and IPR guidance; ■ Access to sophisticated capital	■ Case-by-case initial investment support (Government, Phare, business community); ■ ESTAG schemes & EE business grants; ■ SPINNO / Innovation Awareness (for service development); ■ Start-up grants from EE or Tallinn City; ■ Some limited early-stage venture capital
Business incubators	■ Minimum size/quality work-space with basic equipment (IT, broadband, etc.); ■ Trained staff able to provide business consultancy and advice (or to call on network of experts); ■ Business mentoring and training on specialised issues (accounting, human resources, etc.); ■ Access to financial instruments (and advice on finance) suited to growth companies'	■ Ad hoc investment support (Government, EE, local governments, Phare); ■ Through business Advisory Centres, Innovation Awareness programme; ■ EE advisory and training grants; ■ EE start-up grants, KREDEX loan guarantees, private banks, 'family and friends'
Pre-incubation services	■ Teaching staff with enough 'real' business experience; ■ Mentors (real entrepreneur); ■ Pre-seed funding for testing feasibility of business idea	■ SPINNO ■ Innovation Awareness programme; ■ EE advisory & training grants

7.1 Policy recommendations – by type of incubator

Technology incubators

The 'market' for further technology incubators is limited due to the size of the country and research base:

- Biotech sector (main technology sector in terms of producing start-ups in recent years) will be 'covered' by the establishment of Biotech Incubation and Development Centre and a basis for other technology specific incubators not evident today. An exception to this may be a 'Silicon Valley'-type of high-end ICT-centre in Tallinn to further concentrate and breed innovation and fast company growth.
- TTU Incubation Centre – need to develop stronger link with faculties and future Technology Park (see list of current clients: no significant technology focus).
- Tartu Science Park – could be 'home' to other than biotech spin-offs from universities of Tartu, but currently it is not meeting that role. There seems to be a need for a overhaul of its strategy – a full external evaluation might be appropriate to set Science Park back on course.

Business incubators

- Should in general be linked to Business Advisory Centres (if they are up to standard) and the community of consultants Enterprise Estonia is working with to maximise service provision and joint sustainability.

- Need for stronger partnership with (local) government investment in premises – through existing small infrastructure schemes, SPD measures.
- Jõhvi Business Incubator currently has only two tenants and their contracts expire in the spring of 2003. Urgent need to make an external evaluation and an assessment of its role and future. Either the centre has had an unfortunate and uninspired start and should be 'reset', or it is just not the type of facility for that location.
- Räpina Business Incubator seems to be doing OK, but both a Business Incubator and a Busines Advisory Centre seems redundant, although there may be particular historical reasons for that. External evaluation is required on what the best future structure should look like. One entity could be enough.

Pre-incubators

- Possibly funding for equipped incubator space in universities and colleges, staff training, national business plan competition ("Junior Achievers").
- Possible feasibility study and/or business plan grants.

All three types of incubators need initial public support for capital investment – on the basis of a serious business plan – to secure an enabling environment and achieve a minimum critical scale. Public support for covering partly operating costs for at least first 5–6 years would also be crucial to make the incubator work properly to attract the private sector investments.

7.2 Policy recommendations – instruments

Do not create additional subsidy scheme for incubators' tenants

- Incubator staff should be facilitators towards EE(ESTAG)/KREDEX grant/loan schemes.
- A more demand-driven support for stimulating the procurement of services by companies from incubators should not be separated from the business development instruments that are already in place and for which these companies are eligible.

Focus on improving quality/range of services provided by incubator staff and 'network' creation around incubator

- Through recruiting staff with relevant business expertise, and in particular sector expertise.
- Through participating in a network of business consultants to be made available for delivering business development instruments (training and consultancy).
- Through existing programmes such as SPINNO, Inno-Awareness, extension of training being given to Jõhvi incubator through Phare, etc.
- Raising perspective of increased own revenue from services (paying) to tenants).

Basic rule that some part of operating costs of incubators could be covered by public funds in return for performance targets on company incubation. These costs should relate to the size (number of tenants) and level of activity of the centre, as far as those activities are not financially covered by paid services (e.g. marketing and promotion). A state support could provide for instance a five-year funding agreement with annual payment, monitored by and conditional on key performance indicators.

Envisage support for business mentoring type scheme

Not really discussed but seems important – idea of twinning "business angels without the money" or large companies with smaller/start-up firms for mentoring (for instance PLATO scheme). Incubators can play an active matchmaking role here, bringing the supply and demand of especially seed capital together.[17]

The prime focus should be on services, not on premises

The request for incubator support should be considered as consisting of two separate questions.

- First: Is there a need for business development services (and is in view of that a request for building or renovating premises justified?)

[17] *Alasdair Reid (2002) Venture Capital Policy paper*

- Second: is there a need for additional working space for tenants and
  - would additional space just for pre-incubators be sufficient?
  - or is working space for tenant companies required?

This will force the applicants to focus on service development and to explicitly justify why services alone (a business advisory centre) but that additional working space for [future] companies is required (a pre-incubator or incubator).

8 The mechanism of incubator support

8.1 Feasibility

As far as the financial support for investigating the feasibility of incubator initiatives is concerned, for this also the scheme under the infrastructure measure could apply.

The eligibility criteria for the financial support to make a feasibility would then be, that the request for subsidising such a feasibility study should be submitted along with an outline of what the feasibility study would investigate and a letter of endorsement of the main stakeholder or 'owner'. Of course stakeholders (future owner, manager etc.) can be involved in making the feasibility study, but it should be made under the sole responsibility of a reputed outside consultant to be appointed by MKM or EE (in order to prevent any suspicion about the outcome of the study being biased).

We would like to stress the importance of outlining very clearly from the outset what exactly the incubator will be about (and whether it should become an incubator right from the start). Also it should be clear up-front who will be the 'owner', i.e. the authority responsible for the centre (in order to prevent the centre from becoming an 'orphan' once things don't go well).

- For pre-incubators this could be local/regional authorities and/or the (possibly educational) institute to which this pre-incubator would be linked.
- In the case of a business incubator the main stakeholders are probably the local and/or regional authorities and if possible the local/regional Business Advisory Centre
- For a technology incubator, the main stakeholder will probably be a university, a R&D institution or a large tech-company.

Eligibility should not be an automatic right to be entitled to any grant scheme, but subject to approval by a committee formed by Ministry of Economic Affairs and Communications (MKM) or Enterprise Estonia (EE).

8.2 Instrumentation

Incubation is not an instrument by itself however, but can be considered as consisting of a bundle of already existing instruments. Instead of looking at the overall costs of Incubators, a clear distinction should in this view be made between expenses related to premises, staffing and services:

- Financial support for premises (capital investments) can be covered under the measure for infrastructure development, case by case.
- The cost of staffing (and operational costs of premises) for the incubators and for training them can be covered under the same budget by which the Business Advisory Centres are being funded.
- The financing of services to be delivered relate to training and to consultancy, for both of which business development grant schemes are already in place provided by EE.

This approach makes the financial support to Incubators more transparent and moreover justifies the observation made in this report that incubators are merely business advisory centres with in addition 'incubator walls', providing housing for companies as an extra service in addition to training and consultancy. For highly specialised incubators (like biotech) additional investments might be required, but these are unique exceptions to the rule and don't require some kind of separate incubators regulation scheme or programme.

8.3 Evaluation

There seems to be a lot of turbulence in the current Estonian business of incubators, but at the direction of it isn't always that clear. One of the reasons that some incubators (like Tartu Science Park and Jõhvi Incubation Centre) got off track – or maybe never really got on track – is that a proper monitor and control mechanism seems to be lacking. Introducing such a mechanism and linking performance to the level of financing could prevent such situations from emerging and from subsequently dragging on for years. Variable financing of services, depending on their take-up (as is proposed above) is one such a way of financing, where the amount of money earned by the Incubator depends on the volume of services delivered.

The sequence of evaluation moments then is:

Feasibility study

Focus: is there a market for additional support in that area for that specific target group, what would be the exact nature of the centre (business advice alone or incubator also, how many companies would be served, expected benefit, required resources including financial. The report (the external consultant) should conclusive about the feasibility. A committee formed by Ministry of Economic Affairs and Communications or Enterprise Estonia can always overrule this conclusion.

Start-up business plan

In case of a 'go'-decision after the feasibility study, a business plan has to be made by the future owner of the centre, but with the external support of a consultant to be appointed by MKM or EE. The business plan should set out the framework in which the centre is going to operate (ownership, board, target group etc.) but should moreover specify:[18]

- Number and type of stakeholders
- Number and type of incubator staff
- Number and type of client companies
- Start up and operating costs/source of funding
- Incubator occupancy rates and
- Range and pricing of business support services
- Admission and exit
- Number and type of incubator personnel
- Criteria used to monitor incubator performance
- Performance of tenants, job and wealth creation
- Number of graduates/retention in local area
- Value added of incubator operations

Monitoring

- After the start-up business plan there is another go/no-go by MKM/EE. In case of a 'go', making it eligible for applying for required grants, and the actual operational start-up regular reporting will have to take place.
- We would propose: quarterly or twice a year for operational performance and once a year on number of staff, etc.
- There are two options for the annual evaluation: either to have it done by EE, or by independent external auditors, to be appointed by MKM/EE.
- The results of the annual auditing are input for the annual work plan the centre is to submit.
- Financing of staffing and operational costs is fixed on an annual basis and dependent on the audit results and next years work plan.

[18] *See also paragraph 4.2*

Annex 1 | Examples of incubator funding support in the EU

During a workshop on Incubators in November 2002, the request came from the audience for concrete examples about Incubator funding programmes in other EU countries. We give two examples here, from Greece and from Ireland.

Greece

ELEFTHO Programme – Greece (Community Support Framework 2000–2006 = SPD)

What is it about?
During the 1st CSF the development of 4 parks/incubators was financed (Patras, Herakleio, Thessaloniki, Athens). The Lavrion Technology Park was created then in an industrially declining area, while the University of Ioannina and the EBETAM SA are constructing incubators too in two different regions of central Greece. The general estimate is that al these efforts are sub-optimal and were unable to prove a good return on investment for the regional economy. In order to change this situation, two open calls for proposals were launched in July 2001, one for incubators and one for S&T parks. The proposals are submitted to the GSRT on specific application forms. The translation of the proposal in English is mandatory. The proposals should also include:

- The statutes of the company and the balance sheets of the last three years, in case there is an agreements with financial organisations.
- The existing infrastructure (equipment, buildings, etc.) for the parks and incubators that have been established before 1999
- The existing personnel for administration and services provision to the established enterprises and to the external co-operations
- Business plan
- Approval of a bank loan
- A constructing license
- Proof of payment of own share.

After the proposal has been submitted, the evaluation process begins. The evaluation is implemented by a committee, which is established by a decision of the General Secretary of the GSRT.

What are the criteria for eligibility?

- The proposals are examined based on:
- The trustworthiness of the candidate that submits the proposal, meaning:
  - Not to be convicted or have committed a crime relevant to his professional activity,
  - Not to be in bankruptcy proceedings, liquidation or obligatory management, or another similar procedure
  - To be updated about his obligations regarding social security contributions and tax obligations
  - Not to have forged the submitted documents.
- The completeness of the proposal file.
- The compatibility of the proposed budget in relation to the goals of the project.
- The satisfaction of the participation requirements in the budget of the project
- The suitability of the regulation plan of service provision for those who are going to be installed in the incubator or the park.
- Expressed interest by enterprises for installation.
- The credibility of the development plan.
- The possible existence of a bank loan approval up to the percentage that is provided in the financing of the project.
- The inability to cover one of the above criteria leads to the rejection of the proposal.

What is the mode of delivery of the measure?
The measure is delivered as a grant. The Programme will support either existing incubators and S&T parks or the development of new incubators or S&T parks, for which a substantial participation of private funds can be demonstrated. The potential tenants are:

- New innovative enterprises
- Research activities by big enterprises
- Credit organizations
- Physical persons (only for the incubators)
- Incubators of high tech companies (only for the S&T parks)
- Activities directly related to the operation and needs of the incubators or of the S&T parks, as well as support units for entrepreneurial activities.

The tenants that are going to get installed in an incubator or S&T park must have signed an agreement with the undertaker of the project, where there will be mentioned the terms, conditions and duration of installation, the services that are going to be rendered and their cost, etc. The incubators and S&T parks activities that are eligible by the programme are the following:

- Construction or purchase or expanding and improvement of the building infrastructures, including all the appropriate equipment for the temporary or permanent installation of tenants and the access to them.
- The use of external consultants for the provision of services to the tenants
- The operation and the management of the incubators or parks
- The provision of stock capital to the companies or physical persons who would like to be installed
- The organisation of events for the publicity of the parks, the incubators and the established companies in them.

The above costs are eligible if they happened up to 12 months before the proposal submission. The terms for financing are different for the incubators and the S&T parks. More specifically:

- The total budget of each incubator project should be more than 1 mil. On the other hand, the total budget of each S&T Park project should not be under 3 mil. The maximum participation of the ELEFTHO in the S&T Park project is set to 7,337 thousands. The sources of financing for the project could be the ELEFTHO Program, the own participation of the undertaker, bank loans, etc.
- The co-financing percentage of the project by the ELEFTHO Program cannot exceed 50% of the approved budget of the project for the whole country, except Attica, where the percentage cannot exceed 47,4%.
- It is allowed the contracting of a bank loan for the financing of the project, under the condition that the loan will not exceed 20% of the total budget of the project.

Each project is considered completed, ready to be delivered and receives the final instalment when the companies and persons installed in the incubator and the S&T Park cover at least the 75% of the space designed for this purpose. This will be proved by the agreements between these entities and the incubator or the S&T Park. The duration of these agreements cannot be less than 3 years for the parks and 2 years for the incubators and with terms that are covered by the decisions of the Managerial Body of the incubator or the S&T Park.

Ireland

Business Incubation Centre programme
National Development Plan 2000–2006/www.enterprise-ireland.com

What is it about?
Within the existing Business Incubation Centre programme (aimed at expanding the base of high tech companies operating on college campuses through developing and expanding incubation space facilities) a new initiative has just been launched to support Regional Business Incubation and R&D Space in Institutes of Technology. Enterprise Ireland on behalf of the Office of Science and Technology will operate it under the authority of the Regional Assemblies as Managing Authorities for the two Regional Operational Programmes under the NDP 2000–2006

Starting Date: 1996

Expected Definitive Ending: 2006

Previous measure (name, date, links with the current measures): Business Incubator Centre Programme – 1996 – aimed at the universities only; 2001 – extended to institutes of technology, on a regional basis

Enterprise Ireland, an agency of the Department of Enterprise & Employment, devised and will implement the scheme.

What are the criteria for eligibility?
Support is available to all Institutes of Technology and equivalent 3rd level colleges in Ireland. Institutes can apply for assistance towards the development of new industrial incubation and R&D facilities or the expansion of existing operations. Ideally, the incubation and R&D space should be combined in Centres located on the campus of the Institute. Proposals will be assessed against the following general criteria:

- Eligibility – legislation, state
- Value for money
- Need for financial support
- Contribution to the development of aids, programme and measure objectives

- Cost
- Additionally accounted for by the project
- Institute infrastructure
- Impact on equality of opportunity, particularly gender equality
- Effectiveness
- Impact on Regional Development

In addition to these general criteria the level of Institute commitment to commercialising R&D will be taken into consideration. This will be expressed in its strategy for developing the Centre.

The extent of the tangible commitment of the Institution will include e.g.

- Extent to which the resources of the Institution will be linked to the development
- Range of business development services used to generate and support start-ups
- Staff expertise in business planning, management, finance,
- Information to be provided: marketing, regulation, legal, patenting etc.

What is the mode of delivery of the measure?
The measure will provide up to a maximum of €2.5m (£2m) towards the costs associated with the development of a campus incubation and commercial R&D Centre. A Committee appointed and chaired by Enterprise Ireland and comprising executive representatives of the Regional Assemblies, representatives of Government Departments and relevant Development Agencies, as well as appropriate experts, will select projects. The appropriate Enterprise Ireland Board or Committee will take decisions, on the recommendations of the above Committee.

Financing
Overall budget allocated to the measure: €6m

Annex 2 | Questionnaire

Incubator Survey Questionnaire

NOTE: some of the questions below apply to your track record. If your center is not operational yet, then indicate when it will be; instead of answering the questions about past performance then, please give the answer for next year

Background information

1. What was the year of foundation of the centre?
2. What was over the past years the equivalent of full time employees of the centre?
3. What was the average number of incubators located in the centre at a given moment over the past years?
4. What was the average utilisation rate then (e.g. annual average of percentage of rooms occupied)?
5. What is the percentage of companies that get support services from your centre (other then renting a room) in running their company (consultancy)
6. What is the percentage of companies that get incubator consultancy services from other organisations than your centre? With our without your mediating role?
7. What were over the past year your actual costs and revenues?
8. Specify your costs please (cost per cost-category).
9. What are your sources of income (subsidy, rent, fees for services etc.)?
10. What are the main donors? (amount per donor, please). What is their non-financial involvement in your centre?
11. What are the main stakeholders? What is their involvement?
12. What is THE added value for a starter to be located in your centre?
13. What are your marketing activities in order to promote your centre and reach your target groups?
14. Do you have a marketing plan? If so, attach it please.
15. How many new companies to you want to serve next year? How many of them have to be new in your centre?

The type of services provided by the centre

Please specify your answers

16. Provision of working space? (Size)
17. Use of office equipment?
18. Use of office services (reception, central telephone for incoming calls etc.)?
19. Business services (e.g. arranging financing, business twinning)?
20. Use of specialized low/medium tech equipment?
21. Use of high-tech equipment?
22. Use of specialized services like laboratories, research capacity (high tech)?
23. Basic training and consultancy (e.g. how to start your own company, making a business plan, book-keeping, Human Resource Development, marketing etc.)
24. Specialized non-high tech training (non high-tech)?
25. Advanced high tech related training (university or large company related)?
26. Do you also offer possibilities for training and advice to companies that are NOT provided by your centre?
27. Do you have a separate after-care programme for companies that left your centre?
28. Does the centre have a business plan? If so, attach it please.
29. How (criteria, frequency) does your board of directors / committee of stakeholders / sponsors determine whether you do a good job? Who DO you report to, who IS your 'boss'?

The target group (eligibility criteria)

Please specify your answers

30. Sector?
31. Regional?
32. By size?
33. By age?
34. Capital?
35. Innovative?
36. Potential for growth (e.g. employment creation)?
37. Any other criteria?

Profile of the incubating companies

38. Same as under target group, but then related to the companies actually in the centre, overview per year (total numbers).
39. Survival rate of the companies (in and after being in the centre!).
40. Growth in jobs (full time equivalent).
41. What is the percentage of companies that would NOT have been there without the centre?
42. What does your selection procedure for screening new companies to be in your centre look like?
43. How do you monitor your companies during their stay in your centre (procedure, frequency)

Exit

44. What are the criteria for having to leave the centre: company age, size, turnover, period stayed?
45. What is your "velocity of companies", i.e. what percentage of companies leave on an annual basis (this should tell us the average length of stay of a company in the centre)
46. If companies leave on a voluntary basis, what is usually the reason?

Note: stick to facts. If the centre lacks a proper track record, stick to procedures, criteria and the business plan of the centre.

Annex 3 | Overview of Estonian incubator survey results

Name of the incubator	*Tallinn Technology Park Incubation Centre*	*Jõhvi Business Incubation Centre*	*Räpina Business Incubation Centre*	*Biotechnology Incubation and Development Centre*	*Tartu Science Park*	*Tallinn College of Engineering Incubator*
Background information						
The year of foundation?	2002	April 2001	Dec, 1999 (Started 2001 end)	2005	The centre was founded in 1996	01.01.2003
The equivalent of full time employees?	2	Last year no-one	1 on contracts; accountant, 1 year was lawyer		2.5	2
The average number of incubators located in the centre?	6	3 starters + one supporting firm	6 (3 of them got the favoured rent; 3 has place of their own)		The smallest number has been 3 companies and the largest 9 companies.	20
Average utilisation rate?	50% (100% next year)	63%	100%		Vacancy rate has been near to zero or approx. 5% over the years.	–
% of companies that get support services from your centre?	17%		6+200 firms in the region	All tenants + …	Currently we work with 50% of the companies.	–
% of companies that get consultancy services from other organisations? With or without your mediating role?	Don't know		If needed the special consultancies are intermediated (food technology, timber houses)		We estimate that maybe one third can be such companies. Usually they find partners through our formal and informal networks.	?
What are your actual costs and revenues?	Costs: 830,000 kr; revenues: 310,000 kr; subsidies: 520,000 kr		Costs: 462,000 revenues: 458,000	Future maintenance and operating costs of the building – Annual costs: 128,000 EUR	Revenues come from the rents and different public and semi-public projects. Unfortunately, govern-mental support has been lacking for years.	
Specify your costs please (cost per cost-category)	Staff salaries: 450,000 kr; general costs: 380,000 kr		Salaries: 126,000 Activity costs: 336,000		The main costs are associat-ed with the maintenance of the incubation premises. Controlling system of the	

Name of the incubator	*Tallinn Technology Park Incubation Centre*	*Jõhvi Business Incubation Centre*	*Räpina Business Incubation Centre*	*Biotechnology Incubation and Development Centre*	*Tartu Science Park*	*Tallinn College of Engineering Incubator*
					TSP reveals that the actual costs for the maintenance of the premises of the TSP are around 45 EEK/sq.m per month. These costs includes costs for the maintenance staff, book-keeping and secretary services, etc. So far the contribution of the incubation manager cannot be remunerated, because of the lack of the funds. As his workload is at least 20 hours per month the additional costs for the proper functioning of the incubation centre would be around 5–6 thousand EEK higher in a month.	
What are your sources of income (subsidy, rent, fees for services etc.)?	Subsidy from Tallinn city government, rent, services		Government and local gov. funding + rent. Services	From running core facilities, rent from start-ups, overhead costs from national and international R&D projects and pro-grammes. National support schemes and programmes (SPINNO, Competence Centres) etc.	Main source of income is rent. Currently incubation companies occupy approx. 1400 sq.m. of space (average rent is 35 EEK/sq.m per month, which is well below the market par). Tartu Science Park has not received any subsidies related to the incubation activities from any source. TSP has to raise the rents in the near future to cover the costs, but that can be very	

Name of the incubator	*Tallinn Technology Park Incubation Centre*	*Jõhvi Business Incubation Centre*	*Räpina Business Incubation Centre*	*Biotechnology Incubation and Development Centre*	*Tartu Science Park*	*Tallinn College of Engineering Incubator*
					harmful for some of the companies in the pre-market phase. Some of the companies that are assisted on a regular basis cannot pay for the contribution at the present as they are in the pre-market phase. If everything goes according to the plans, these customers are going to pay for the assistance on a monthly basis by the second half of the 2003. Additional income of 5 th EEK per month is forecasted.	
What are the main donors? (Amount per donor please.) What is their non-financial involvement in your centre?			TTP project financing, Räpina city: 300,000 kr, local gov.: 50,000 kr, state gov. reserve fund 195,900 kr	EU, state budget, Biocentre	There are no regular non-project specific donors. Yet, property has been granted by founders upon the establishment of Tartu Science Park Foundation. Specific activities have been supported by few Estonian enterprises, Tartu City, Tartu County, Estonian state, and European Commission.	State budget
What are the main stakeholders? What is their involvement?	City government – financial support	Enterprise Estonia	Räpina city gov, & local gov. (rent free real estate)	Estonian biocentre? Financing	Main stakeholders are the people and entrepreneurs of Tartu County and City, as well as local universities. They are involved in the management of TSP	Schoolboard, state. Partner: EDUPOL, Porvoo, Finland

Name of the incubator	*Tallinn Technology Park Incubation Centre*	*Jõhvi Business Incubation Centre*	*Räpina Business Incubation Centre*	*Biotechnology Incubation and Development Centre*	*Tartu Science Park*	*Tallinn College of Engineering Incubator*
					via board members representing Tartu City, Tartu County, Estonian state, Tartu University, Estonian Agricultural University.	
What is THE added value for a starter to be located in your centre?	Less risk, consultancy how to start business and to prepare the business plan etc.	6 months without rent (afterwards 39 kr + 18% per m^2); consult., info	Support, consults, personal contacts, help dealing with institutions	Core facilities, specific biotech lab space, office equipment	Low rents, plug-in-and-work environment; Possibility to exchange know-how with other young companies – it has worked really well lately; Extensively networked incubation managers.	Consult and training services + use of school labs
What are your marketing activities in order to promote your centre and reach your target groups?	Web-site, advertisements in newspapers, PR in universities, personal contacts		Newspaper, e-mail, PR publications, web-site, personal contacts		There are mainly two tools: direct selling to growth-oriented companies (either university spin-offs or industry spin-outs) and incubation competitions that are publicly advertized.	
Do you have a marketing plan? If so, attach it please	No		Development stage			01.03.2003
How many new companies to you want to serve next year?	6–7		4–5 (the 200 in the region)	17 NTBF-s now, the number will raise 50% for 2005 (how many of them will be in the incubator, not known)	We have set the target of 5 new tenant companies and 10 new start-up companies as our customers next year. Those targets can only be met with the outside financing of around 250,000 EEK per year.	First year 20

Name of the incubator	*Tallinn Technology Park Incubation Centre*	*Jõhvi Business Incubation Centre*	*Räpina Business Incubation Centre*	*Biotechnology Incubation and Development Centre*	*Tartu Science Park*	*Tallinn College of Engineering Incubator*
The type of services provided by the centre. *Please specify your answers*						
Provision of working space? (Size)	187 m^2	215.6 m^2	80 m^2 (4 rooms) + bureau 74 m^2 with seminar room	3000m^2 (80% is usable area) – 8 small offices, 3 small meeting rooms, biotech lab space	Yes – there are plenty of options – incubation rooms can be 20 sq.m or can be up to 1000 sq.m.	School rooms and labs and workshops
Use of office equipment?	Furniture, one computer per company (old and used)	Furniture, computer, internet, telephone	Copy, printer, 4 computers, graphoprojector, video, TV, internet. Rent 10 kr/m^2	PC, internet, general office equipment	Yes, at a very low cost.	School's office equipment (might need some complementing)
Use of office services (reception, central telephone etc.)?	Reception, fax, coping, scanner, printer	Reception, central phone (of EAS regional agency)	No		Yes, secretary services are available, also fax, copy machine, etc	
Business services (e.g. arranging financing, business twinning)?	■ primary SWOT analysis and testing of entrepreneurial skills, this way the needed support measures are identified; ■ primary study course on enterprise, based on the above service; ■ help in drafting market and plausibility research and business plans (also in founding a company, if needed); ■ specialised training and study programs, especially incl. programs on value-adding IT and Internet applications;	Business development consult; basic counselling (partner seeking, credit and investor seeking, EU projects etc)	Juridical consult., business consult (accounting, business analyse, business plan, procuring, investment consult., credit seeking etc). Specialised consult., (food technologies, sewing technologies, food freezing technologies)	In-house consultancy will be worked out under bio-SPINNO programme of ESTAG	Yes, we are very active in arranging finances and esp. assisting in optimisation of funding. We have mediated 3 negotiations between our incubation companies and local business angels. We are also working towards finding ways to assist mergers of Estonian companies to raise their international competitiveness. We are seeking to establish certain path for that.	Economic, juridical, management, marketing, entrepreneurial, and specialised consults and training

Name of the incubator	*Tallinn Technology Park Incubation Centre*	*Jõhvi Business Incubation Centre*	*Räpina Business Incubation Centre*	*Biotechnology Incubation and Development Centre*	*Tartu Science Park*	*Tallinn College of Engineering Incubator*
	■ individual consultation and counselling cycles, incl. legal, managerial and financial counselling; ■ long-term mentoring program; ■ ongoing services of management and business developing, incl.: developing business plans, finding technological support, help in building test units/prototypes etc. ■ help in finding starting finances and ongoing financing sources					
Use of specialized low/medium tech equipment?	No	No	No	Biotech lab space to satisfy the needs: DNA sequencing capacity; custom-made DNA-chip preparation; P2 level facility to handle different vector DNA-s; Pre-industrial scale fermentation/ plasmid and protein purification; info-technology support in bio-informatics; imaging, labelling, sorting.	Not really.	School rooms and labs and workshops

Name of the incubator	*Tallinn Technology Park Incubation Centre*	*Jõhvi Business Incubation Centre*	*Räpina Business Incubation Centre*	*Biotechnology Incubation and Development Centre*	*Tartu Science Park*	*Tallinn College of Engineering Incubator*
Use of high-tech equipment?	No	No	No		Not really.	
Use of specialized services like laboratories, research capacity (high tech)?	No	No	No		Not really.	
Basic training and consultancy (e.g. how to start your own company, making a business plan, book-keeping, Human Resource Development, marketing etc.)	Making a business plan	Making business plan, how to develop the company, information sharing	Entrepreneurial basic training according to the needs & wishes of the company	Basic training and consultancy	We have rather strong in-house knowledge on that and our customers tend to use it. The problem is with charging for the services as most of the companies do not have buffer finances to pay. We try to play with payment deadlines and conditions to overcome the problem.	Yes
Specialized non-high-tech training?	No		If needed (restauration, sewing training)		Lately, we decided to drop this and put more emphasis on the face-to-face meetings between company managers. We believe that they face rather similar problems and therefore together can find ways to conquer these.	Yes
Advanced high tech related training (university or large company related)?	No		No		We work in close co-operation with the University of Tartu in the framework of SPINNO program.	No

Name of the incubator	*Tallinn Technology Park Incubation Centre*	*Jõhvi Business Incubation Centre*	*Räpina Business Incubation Centre*	*Biotechnology Incubation and Development Centre*	*Tartu Science Park*	*Tallinn College of Engineering Incubator*
Do you also offer possibilities for training and advice to companies that are NOT provided by your centre?	Yes, with co-operation with other centres or institutions		Yes, to the region firms. (depends on service – free or not)		Yes, we have extensive partners' network both domestically and internationally. It continues to evolve steadily.	Yes
Do you have a separate after-care programme for companies that left your centre?	We will		None has left	Incubated companies could go over to Biotechnology Park	No. Unfortunately.	
Does the centre have a business plan? If so, attach it please.	Yes, in Estonian	Order of the servicing	Action plan for annual basis	Feasibility Study together with initial business plan, Standard summary project fiche "Biotechnology Development and Incubation Centre"	Incubator does not have a separate business plan, but the Science Park has. It is available only in Estonian.	01.03.2003
How (criteria, frequency) does your board of directors / committee of stakeholders / sponsors determine whether do a good job? Who DO you report to, who IS your 'boss'?	I give report once a week to City in free form (discussion, talk); Raivo Tamkivi TTU Innovation Centre	Boss is Enterprise Estonia	Project funding according to the project plans. The report to the local government. Boss – fund direction (3 members) + council (5 members)		No specific performance indicators are in place. Performance is evaluated within specific projects, with respect to stated measurable project objectives. Evaluation is usually related to project funding requests, and is carried out by the organisations financing a specific project. General evaluation of TSP results is conducted by the board of directors as an open-ended discussion, and normally not more often than once per year.	Schoolboard

Name of the incubator	*Tallinn Technology Park Incubation Centre*	*Jõhvi Business Incubation Centre*	*Räpina Business Incubation Centre*	*Biotechnology Incubation and Development Centre*	*Tartu Science Park*	*Tallinn College of Engineering Incubator*
The target group (eligibility criteria). *Please specify your answers*						
Sector?	Technology	All	All	Biotechnology	We prefer companies from ICT, electronics, material technology, precision mechanics and biotechnology fields.	Construction, architecture, car stuff, mechanics
Regional?	Tallinn	Ida-Viru (North-East of Estonia)	Räpina and surrounding areas	Estonia	We are working with companies from Tartu county.	Estonia
By size?	Less than 10 employees	No limit	No limit		It does not matter very much.	No limits
By age?	Less than 2 years	Less than 2 years	Less than 2 years	Pre-incubated companies (stage of business plan making) can use the offices for 6–8 months; incubation stage up to three years.	Up to 3 years.	No limits
Capital?		Not state or local government owned	Not state or local government owned		It does not matter very much.	No limits
Innovative?	Technology involved	–	–	Technology involved	Yes, we prefer innovation-minded companies.	Not necessary
Potential for growth (e.g. employment creation)?			Independent firm with good business plan		Yes, that is important.	–
Any other criteria?		No tax debts; Not firms dealing with alcohol, tobacco, arms, gambling.	No tax debts		We prefer companies who have tangible products, because they are in a better position to start exporting their products. As the TSP is a participant in number of international networks, we can better serve the companies.	The specialties taught in the school

Name of the incubator	*Tallinn Technology Park Incubation Centre*	*Jõhvi Business Incubation Centre*	*Räpina Business Incubation Centre*	*Biotechnology Incubation and Development Centre*	*Tartu Science Park*	*Tallinn College of Engineering Incubator*
Profile of the incubating companies						
Same as under target group, but then related to the companies actually in the centre, overview per year (total numbers).	Arriba OÜ: 2 employees, 2 months old, 40,000 kroons capital, spedition services; DeltaT: 1 employee, 1 month, 40,000 kroons, freezing machines for medicine; Raumo Automaatika: 1 employee, 2 years, 40,000 kroons, automation; Estweb: 4 employees, 1 year, 40,000 kroons, web-solutions; Terviseportaal: 2 employees, 2 years, 40,000 kroons, Online Registration to Doctor (product); FIE Sirje Stalvel: 1 employee, 1 month, –, sewing	OÜ Ida-Virumaa.ee, IT; OÜ Kurepesa Holding, tourism;	Sewing, physical entrepreneur, 2001; Sewing, physical entrepreneur, 2002; Berry freezing, OÜ, 2001; Vegetable packing, OÜ, 2001; IT consult and services, 1999; All of them have been in the incubator for 8 months.			
Survival rate of the companies (in and after being in the centre!)	The plan is 85%		Seems 100% now		It is tough question as we do not monitor our companies very closely after they leave the Science Park.	
Growth in jobs (full time equivalent)	26 persons will be working in incubation companies		20 annually	50%	It is hard to estimate the average as the companies are very different in their background - some of them are growing fast, some are not.	

Name of the incubator	*Tallinn Technology Park Incubation Centre*	*Jõhvi Business Incubation Centre*	*Räpina Business Incubation Centre*	*Biotechnology Incubation and Development Centre*	*Tartu Science Park*	*Tallinn College of Engineering Incubator*
What is the percentage of companies that would NOT have been there without the centre?	33%		50%		One quarter of the current batch, it means two companies. We have helped to recruit the development staff for the one of our companies. We have helped to refine the business idea in another case to create start-up. Both of these companies will reach the market in the first half of 2003. So far they have created 6 new jobs, but they have really good growth perspectives.	
What does your selection procedure for screening new companies to be in your centre look like?	We look through their business plans, then we interview them and then make a decision	Business plan: impact of incubating to the business; nr of new jobs, higher qualification of workers favoured	Business plan: idea, people involved, production is favoured; shorter incubation period favoured		First, a business plan with the application must be handed over by a company. Then it is analysed by two project managers/experts and company's prospects are evaluated. Best prospects will be approached to become tenants.	
How do you monitor your companies during their stay in your centre (procedure, frequency)	Once a week we discuss about business and put next tasks (if necessary), once a month they give me a report (finance and overall business) and daily problems to be solved	Personal contacts + reports according to the Start-up grants conditions.	Continues personal contacts + quarterly reports		There are regular meetings twice a month. The meetings are informal and the main target for the TSP is to find ways to make the different networks useful for the companies. That strategy seems to be the best.	

Name of the incubator	*Tallinn Technology Park Incubation Centre*	*Jõhvi Business Incubation Centre*	*Räpina Business Incubation Centre*	*Biotechnology Incubation and Development Centre*	*Tartu Science Park*	*Tallinn College of Engineering Incubator*
Exit						
What are the criteria for having to leave the centre: company age, size, turn-over, period stayed?	They can stay for 2 years (plus 1 year with decision of commission	Until 2 years officially; it is not clear if the 2 companies, whose contracts will end in march 2003, could stay for longer	Until 2 years	Support period?	So far, companies have left the centre only on voluntary basis, as forcing exit has not been a priority. Consequently, there are also no exit criteria in place, yet the plan is to emphasize this aspect more, as not all companies currently in TSP are fully compatible members of target group.	Up to 18 months
What is your "velocity of companies", i.e. what percentage of companies leave on an annual basis (this should tell us the average length of stay of a company in the centre)	It depends of the starting period. For the next year we don't predict any movement, but in 2004, there will be new application stage and 50% of companies will leave. In the future the velocity could be about 25%.	–	Shorter period is favoured		Approximately 15%	
If companies leave on a voluntary basis, what is usually the reason?	No history yet	None has left	None has left		Typical reasons are lack of space in science park premises (mostly industrial companies) and moving closer to customers (IT companies).	