



11 Setting-Up Virtual Services



Trainee Manual Part 2



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Introduction to the Training Program

INTRODUCTION TO THE TRAINING PROGRAM

This is the trainee manual for Module 11 Part 2 - out of 11 modules in total - of *infoDev*'s State-of-the-Art Business Incubation Training Program for Business Incubator Managers in Developing Countries.

infoDev (www.infodev.org) is a research, capacity building and advisory services program, coordinated and served by an expert Secretariat hosted by the World Bank Group. It helps developing countries and their international partners use innovation and information and communication technologies (ICT) effectively as tools for poverty reduction and sustainable social and economic development. *infoDev* is a leader in business incubation of technology-enabled enterprises. *infoDev*'s global business incubation network reaches close to 300 business incubators, more than 20,000 small and medium enterprises, and has helped create over 200,000 jobs across 87 developing countries.¹

infoDev has found that high quality leadership is a key factor determining the probability of success for an incubator. *infoDev* therefore seeks to increase the capacity of business incubation managers – and their stakeholders – through one-on-one technical assistance, regional and topical peer-to-peer networks, the bi-annual Global Forum on Innovation and Entrepreneurship, and its web-based networking and knowledge-sharing tool www.idisc.net. This training program was designed in direct response to repeated requests from *infoDev*'s technology entrepreneurship community for an in-depth business incubation training program relevant to the developing country context.

This training program is the first-of-its-kind, drawing from the lessons, models, and examples in business incubation from across Africa, East Asia and the Pacific, Europe and Central Asia, Latin America & the Caribbean, Middle East & North Africa, and South Asia. More than 30 experts contributed directly to the writing of the training modules, and the materials were tested with more than 300 professionals in developing countries all of whom provided inputs to the final design.

This training program is designed for business incubation managers and other business incubation stakeholders wishing to increase their understanding and know-how of the business incubation process. It consists of 11 training modules ranging from basic introductory topics designed for professionals new to business incubation, to specialized topics such as Technology Commercialization and Virtual Business Incubation Services.

¹ Source: *infoDev* activities from 2002 to 2009 - <http://www.infodev.org/en/Article.473.html>

The modules include:

SUITE 1 – BUSINESS INCUBATION BASICS

Module 1 – Business Incubation Definitions and Principles

This module provides an introduction to business incubation. It introduces key definitions and presents the main principles and good practices of business incubation. It aims to equip current and future incubator managers and policy makers with the knowledge, skills and understanding of the fundamentals of business incubation in order to effectively foster and encourage businesses.

Module 2 – Business Incubator Models, Including Success Factors

This module aims to illustrate various business incubator models based on practical examples of incubators from all over the world. The ultimate goal of this module is to empower current and future incubator managers with a thorough understanding of the various business incubator models and their critical success factors as well as to help them identify the best model to adopt for their own incubator to be successful.

SUITE 2 – BUSINESS INCUBATOR OPERATIONS

Module 3 – Planning an Incubator

This module, which divided in two parts, covers assessing the feasibility and designing the business model for an incubator. The first part is aimed at providing a thorough understanding of developing a feasibility study. This includes the steps to undertake a pre-feasibility study, the components that it should address, as well as how to gauge the market need and decide whether an incubator is the most appropriate solution. The second part of the module focuses on business planning to establish the incubator business model.

Module 4 – Marketing and Stakeholder Management

This module is designed to support efficient and effective communication of the incubator with key customers and other stakeholders based on a good understanding of the market place. This is important since it will help the incubator to establish and increase its reputation as a sustainable organization that fulfils its mission.

The first part of the module focuses on identifying, assessing, and reaching customers/ stakeholders, as well as potential ally organizations providing business support services to enterprises; while the second part is dedicated to defining the incubator's value proposition and engaging marketing channels.

Module 5 – Financing an Incubator

The first part of this module aims to guide current and future business incubator managers through mastering the incubator's financial data (such as costs and revenues) in order to enable them to identify the financing needs of the organization as well as to explore potential sources of financing.

Building on the first part, the second part of the module is dedicated to demonstrating, to current

and future business incubator managers, how to develop a fundraising strategy and to monitor the financial performance of an incubator.

Module 6 – Managing the Incubator

This module provides current and future business incubator managers with an overview of sound management practices for a successful incubator.

The first part addresses the topics of incubator policies and governance and the second part is dedicated to operations and human resources management.

Module 7 – Monitoring, Evaluation and Benchmarking

This module aims to provide incubator managers with the required information, skills and insights to develop their own monitoring and evaluation system and to carry out benchmarking activities.

The first part of the module is dedicated to helping the incubator manager understand the added value of monitoring and evaluating the performances of his/her incubator; defining relevant and adequate performance indicators; and exploring how to monitor and evaluate, notably by studying existing tools and methodologies.

The second part focuses on empowering the business incubator manager to use the data collected through monitoring and evaluation activities to compare the business incubator's performance with those of similar organizations.

SUITE 3 – ADVANCED INCUBATOR MANAGEMENT

Module 8 – Implementing a Mentoring Program

This module provides, in its first part, a conceptual framework for gaining a thorough understanding of the mentoring process and its purposes from three perspectives: that of the business incubator, the mentor, and the mentee.

The second part of the module focuses on how to implement a mentoring program.

Module 9 – Deals and Financing for Incubator Clients

This module aims to provide a thorough understanding of the alternative sources of financing for incubator clients by notably describing programs and processes that will enable the incubator manager to assist his/her clients in accessing financing.

The first part focuses on preparing incubatees to engage in the process of accessing financing while developing the capacity of the incubator to assist incubatees in accessing financing. The second part of the training module explores financing from the perspective of both the incubatees and the incubator.

Module 10 – Technology Commercialization through Incubation

This module describes technology commercialization divided in two parts. The first relating to

challenges and lessons learned associated with this process as well as how to manage expectations regarding the results of technology commercialization. This part also concerns the role of the incubator in facilitating technology commercialization in the pre-incubation phase.

The second part of this module focuses on the role of the incubator in technology commercialization in both the incubation and the growth phases.

Module 11 – Setting Up Virtual Services

The first part of this module provides a conceptual framework for understanding virtual services. It is designed for current and future business incubator managers who are considering virtual incubation either as a stand-alone business model or as part of their overall incubator service portfolio to extend their current service offering.

In its second part, the module aims to guide current and future business incubator managers and help them to decide if virtual incubation is the right solution for their incubator. The module then explores the most common challenges and how to address them.

Figure 1 groups the modules by preferred level of experience and suggested module sequence.

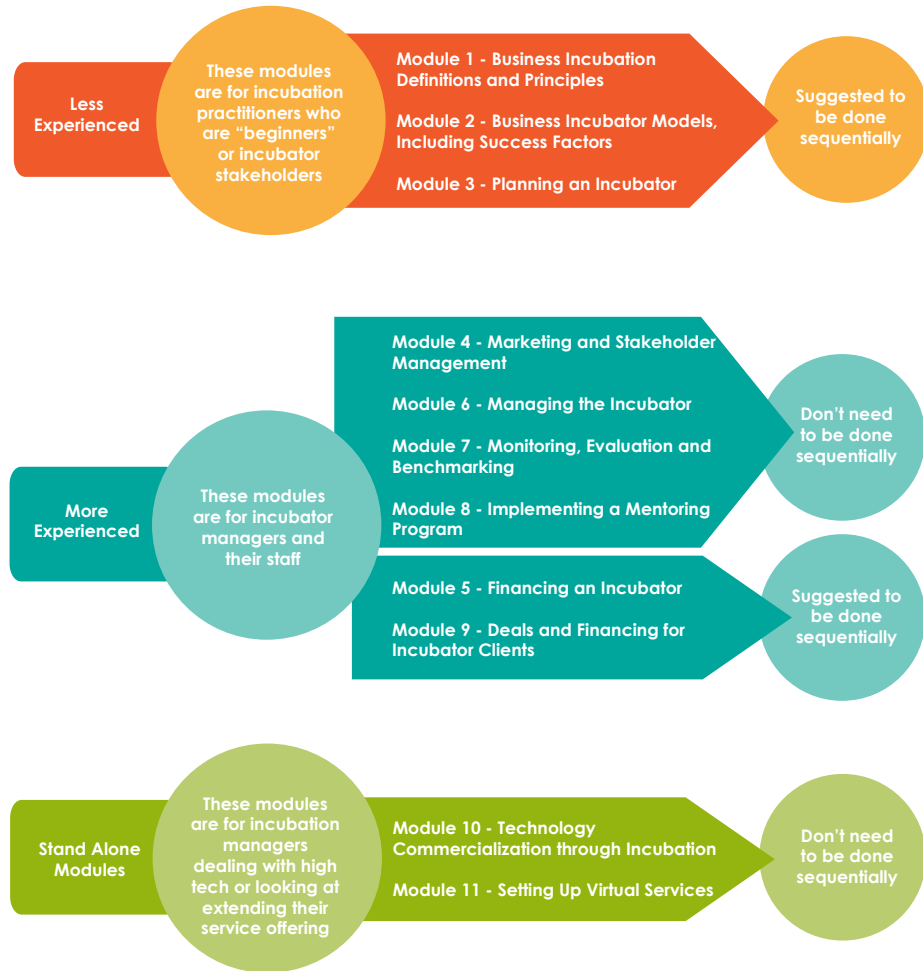


Figure 1 – Module Selection and Sequence



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Module Objectives



Module 11 on “Setting-up Virtual Services” has two overall objectives:

The first objective is to provide a thorough understanding of the fundamentals of virtual incubation. This module is designed for development teams who are considering virtual incubation either as a stand-alone business model or as part of their overall incubator service portfolio. Alternatively it is aimed at existing incubator managers who are considering extending their current service offering to include virtual services or complementing their existing range of virtual services. The module therefore aims to address first and foremost the following questions:

- What is virtual incubation and what are the pros and cons compared with traditional incubation?
- Why should an incubator provide virtual services? And to what type of client?
- What type of services should be delivered virtually?
- How to decide if virtual incubation is the right solution for your incubator?
- What virtual services should be provided and what resources and infrastructure are required to deliver them?

Secondly, the module aims to address, in detail, some of the major tasks and challenges faced in the set-up and delivery of virtual services. At the end of the training, the incubator manager should have completed and take away an action plan to implement virtual services which takes into account all considerations from marketing to operations. Some of the challenges addressed in this regard are:

- The relationship between incubator and client in virtual incubation:
 - How the relationship differs between traditional and virtual incubation;
 - Challenges faced including how to develop trust, foster peer learning, how to be proactive as opposed to reactive?; and
 - Understanding the important role of the ‘coach’ in adding value to virtual services.
- Assessing when it is best to ‘build new virtual services’ versus using existing tools and practices and a more detailed analysis on infrastructure challenges and solutions;
- Revenue models for virtual incubation; and
- Adapting incubator monitoring and evaluation procedures for virtual services.

TRAINEE TRAINING OBJECTIVES

This module is targeted at trainees who may be a member of an incubator development team, an incubator manager, a member of the incubator board of advisors or a staff member within an incubator. By the end of this training, the trainee will understand:

- The principles of virtual incubation, the different types of incubation services which can be provided and the optimal situation for delivering different types of virtual services;
- How to decide if the provision of virtual incubation services is a good strategy in their operating area and how to generate revenue from virtual services;
- How to assess when it is best to 'build new virtual services' versus using existing tools and practices;
- How to implement different types of virtual incubation services from administration services and facilities to added value services such as online coaching;
- The nature of the relationship between incubator and client in the delivery of virtual services;
- How to adapt monitoring and evaluation procedures to ensure optimal long term use of virtual services; and
- How to put together an action plan to deliver virtual services.

Introduction to this Module

The traditional view of business incubation has always been strongly focused on facilities such as the provision of office and/or lab space with access to additional central business support facilities. However, for some companies, particularly in the early phase of development, on-site space and facilities may not be required at all. For other types of companies such as high-tech companies operating in an international environment, physical incubation space may be important but access to virtual services may be equally necessary in terms of providing specialist knowledge which may not be available through their local business incubator. Therefore a paradigm shift has to be realized: incubation needs should be considered as a process rather than a place and incubation services, be they physical or virtual, should be tailored to meet client needs at the different stages of their business development.

With this in mind, virtual incubation services may be offered as part of a comprehensive suite of incubation services (which also include physical incubation space) or as a stand-alone solution providing access to incubation services in regions or parts of the community that would be otherwise unable to take advantage physical incubation facilities. In cases where geographical challenges or limited space availability restricts the number of clients that can be physically accommodated, virtual services means incubators can extend their reach to clients who require other types of incubation services. Virtual services are also more relevant in certain societies, for example in male-dominated societies where it may be difficult for women to leave the home to focus on their business projects.

In this module, the term 'virtual services' covers all above scenarios.

In each scenario, the advent of new technologies opens up new fields and networking opportunities. On-line resources and multimedia applications provide huge potential for offering virtual business creation tools and innovation management support, from the delivery of entrepreneurship training (via distance learning tools in remote geographical regions) to online networking forums connecting international high-tech communities.



Component 3 (Part 2 Training):

Challenges and Solutions With Virtual Incubation

COMPONENT INDEX**Section 3.1: The Relationship Between Incubator Manager and Virtual Client****Section 3.1.1: The Difference Between Tacit and Explicit Knowledge****Section 3.1.2: The Importance of Face-to-Face Meetings Between the Incubator Manager and the Virtual Incubation Client****Section 3.1.3: What is the Role of the Incubator Manager and Where Does Virtual Incubation Fit In?****Section 3.2: Technical challenges****Section 3.2.1: Building New Virtual Services vs. Existing Practices, Some Considerations****Section 3.2.2: Key Steps in Deciding Whether to Build or Buy****Section 3.2.3: Overcoming ICT Limitations****Section 3.3: Revenue Models for Virtual Incubation****Section 3.3.1: Subscription or membership fees****Section 3.3.2: Control and Sale of Data****Section 3.3.3: On-Line Advertising****Section 3.3.4: Joint Procurement****Section 3.3.5: The Incubator as ISP****Section 3.3.6: How Much to Charge and How to Charge for Virtual Incubation Services?****Section 3.4: Monitoring and Evaluation of Virtual Services****Section 3.5: Building an Action Plan to Implement Virtual Services****Section 3.5.1: Background****Section 3.5.2: Marketing Plan****Section 3.5.3: Operational Plan****Section 3.5.4: Administration/Organization Plan****Section 3.5.5: Financial and Investment Plan**

COMPONENT OBJECTIVES

This component addresses, in more detail, some of the main challenges faced by incubator managers when they decide to implement virtual services.

At the end of this component, trainees should understand the following challenges and possible solutions to address them:

- The different nature of the relationship between the incubator and virtual client and how to address these differences effectively;
- Technical challenges which you may face when implementing virtual services such as when it is best to 'build new virtual services' versus using existing tools and practices or how to overcome ICT limitations in your region;
- The difficulties in pricing virtual services and the options for generating revenue; and
- How monitoring and evaluation procedures should be adapted to ensure optimal long term use of virtual services.

The component concludes by providing an action plan which incubator managers can use to plan and deliver virtual services in their region.

Section 3.1: The Relationship Between Incubator Manager and Virtual Client

Entrepreneurs are generally 'networked people' and are often seen as "do-ers and achievers." They are generally not individuals who spend long periods of time at their PC drawing up plans for months on end. Incubator managers should keep these attributes in mind when developing their virtual incubation service offering. The objective of virtual incubation is not to create complex virtual businesses which look great on PC's. The objective is to create real businesses with real growth trajectories managed by real people and support these businesses via virtual services.

Section 3.1.1: The Difference Between Tacit and Explicit Knowledge

The difference between tacit knowledge and explicit knowledge is important to understand when developing virtual services.

Tacit knowledge is knowledge that is difficult to transfer to another person by means of writing it down or verbalizing it.⁴² With tacit knowledge, people are not often aware of the knowledge they possess or how it can be valuable to others. On the other hand, knowledge that is easy to communicate is called explicit knowledge. Explicit knowledge can often be effectively communicated through virtual services. However, many aspects of the business incubation process require tacit knowledge which is often picked up through interactions with other entrepreneurs or with incubation staff or mentors.

Therefore virtual services need to be developed as a support mechanism and not as a replacement for the traditional business incubation process and must be anchored on a real client-incubator manager relationship based on trust and a shared vision of the success of the client company. Even in the case of virtual and online offerings that are not linked to a physical incubator, the client entrepreneur should be connected to the incubator manager through some kind of feedback mechanism or interactive forum so that they know they are going in the right direction. Virtual incubation services alone are inadequate in a very crowded marketplace and provide little added value to entrepreneurs. However virtual services can add considerable value to new businesses when used by an incubation manager to support the traditional incubation process and tailored to the specific needs of the individual client.

⁴² Source: http://en.wikipedia.org/wiki/Tacit_knowledge

Section 3.1.2: The Importance of Face-to-Face Meetings Between Incubator Manager and the Virtual Incubation Client

In keeping with the recommendation to use virtual incubation tools to support the traditional incubation process, a program of face to face meetings between the client and the incubator manager should be organized. In some countries, for example Saudi Arabia where an Australian coach counsels via video conferencing, he also visits clients 3-4 times a year for trust and relationship building (BADIR: www.badirict.com.sa). The importance of establishing trust between the incubator manager and client should not be underestimated and this is often difficult to achieve without face-to-face contact over a period of time.

The initial meeting between incubator manager and client is particularly important:

- To establish a personal rapport between the incubator manager and the client before engaging with them via virtual tools;
- To allow the incubator manager to assess the client's level of IT literacy, stage of business development and therefore which virtual tools will secure optimal results for both the coach and the client; and
- To agree an individualized program between incubator manager and client summarizing the responses to the following questions:
 - Where is the client now in terms of business development?
 - Where does the client want to be?
 - How the client is going to get there?
 - Which virtual tools could be employed? Why? What outputs are expected?
 - What follow up to expect from incubator manager?
 - What are the progress milestones?

Section 3.1.3: What is the Role of the Incubator Manager and Where Does Virtual Incubation Fit In?

As described in Module 8 "Implementing a Mentoring Program" of the current Training Program, the incubator manager can help entrepreneurs to develop their business in one of four ways:

- Training,
- Counseling,
- Coaching, and/or
- Mentoring.

In most incubation models where traditional incubation space and services are provided alongside virtual offerings, the incubator manager can provide a mix of these 4 training services as required.

The services offered can be made more interactive in a number of ways. For example:

- Video-streaming live training from another location or using pre-recorded training from a live training session.
- Using video-case studies or testimonials to bring the subject to life.
- Facilitating peer-learning by setting group assignments for online trainees. Groups can communicate through email, Skype or through shared workspace and software.
- Real-time 'ask the expert' support.

The characteristics of a good 'virtual' manager can be summarized as follows (CO-TEC):

- Convincing: Ability to communicate 'real-world' experience and case studies through virtual means
- Organized: Ability to multi-task and handle numerous clients at different stages of development and using multiple virtual tools.
- Technology-adopter: Understands and appreciates the value which virtual tools can deliver. Up-to-date with current trends.
- Experienced: With both offline and online business coaching.
- Communicator: Ability to communicate effectively via electronic means from e-mail to networking sites.

The level of input required from the incubator manager and the value of virtual incubation tools may vary considerably depending on a number of factors:

- The stage of development of clients: as clients move along the development path they require different types of information and support. There is a place for facilitation and advice as firms grow and their learning style changes and incubator managers need to be aware of and respond accordingly to these changes. The potential role of the incubator manager and the use of virtual services at different stages of the business incubation process are presented in Table 3.
- The human resources available will influence the policy of the incubator vis-à-vis virtual services. For incubators who have limited training resources, for example, virtual tools may be used more extensively for training purposes. Conversely incubators who have no shortage of human resources, but who may for example be limited in terms of physical incubation space or geographical reach, may use virtual services to extend their reach.
- In the case of off-site tenants and satellite incubation services, the role of the incubation manager is particularly important as they are often the only 'physical' connection with the incubator itself.

Finding the right balance between the use of incubator manager time and the use of virtual tools may be different therefore for each incubator and indeed for each incubator client.

Finally it is worth mentioning that the incubator management and coaching team should of course be consulted in the development and testing of virtual services and their ideas on how they should be used should be taken into account when developing the virtual service implementation policy.

Type of Virtual Service	Level of Coach Input	Role of Manager
Administration or 'Virtual Office' services:	Low	<p>Logistical aspects managed by administration staff.</p> <p>The manager may:</p> <ul style="list-style-type: none"> • Meet interested clients to see if they meet the overall entry criteria of the incubator. • Engage virtual office clients to participate in an overall incubation program.
Marketing and Networking:		
Promotion of 'virtual clients' through the incubator web site and related sites and higher value promotions by personal introductions, networks etc.	High	Ensuring the virtual client is well promoted and effectively networked to relevant communities to reach their target market.
Organization of face-to-face networking, access to internal and external networking events. Video-streaming of event content to increase access.	High	Promoting involvement of client in relevant events or ensuring knowledge transfer through virtual means.
Access to academic network of experts e.g. universities and research centers locally, nationally, and internationally as part of the business coaching process or online networking communities.	High	Ensuring the client is effectively networked to relevant communities.
Access to an approved network of professional service providers and mentors as part of the business coaching process or online networking communities.	High	Ensuring the client is connected with the relevant expertise to develop his/her business.

Suite 3

Advanced Incubator Management

Business Support and Coaching:	Level of Coach Input	Role of Manager
Pre-incubation:		
Entrepreneurship skill testing	High	The coach should interpret the results of virtual tools in this area and make recommendations based on results.
Entrepreneurship training	Medium	The theoretical elements of entrepreneurship training can effectively be delivered online. Exercises and discussions need coach animation either online or offline.
Idea assessment	High	The coach should interpret the results of virtual tools in this area and make recommendations based on results.
Business planning:		
Initial business review		
Online business planning tools incorporating market analysis, operational plans, organizational plans, financial and investment planning	High	A meeting with the coach to undertake an initial business review is recommended before business planning tools are used. Thereafter the role of the coach is to monitor progress in different areas of business plan development, answer queries and provide guidance and direction.
Team building		
Brainstorming/problem solving		
Financing:		
On-line investor-readiness tools and training	High	The theoretical elements of such finance training can be delivered virtually but the role of the coach is essential in ensuring valuations are realistic and preparing investor pitches and presentations.
Business valuation tools Support for SME grant applications	Medium	When such forms are available online, the coach can provide direction if required and support through direct representation if appropriate.

Business Support and Coaching:	Level of Coach Input	Role of Manager
Business operations:		
Training on business basics from marketing to accountancy	Low	The theoretical elements of many aspects of business basics training can effectively be delivered online. Exercises and discussions need coaching support either online or offline.
CRM data basing and training		
Book keeping software	Low	Most training on such tools is specific to proprietary software. The role of the coach may be to provide initial guidance on software selection.
HRM software		
Post-incubation support and monitoring		
On-line monitoring through e-questionnaires	Low	Automated annual surveys should require little coaching input on an ongoing basis apart from analysis of results to identify areas which may require attention.
Creation of online alumni networks and forums	High	The coach's extensive knowledge of former clients will help to create vibrant online connections and communities.
Facilities e.g. hot-desking, access to specialist lab etc:	Low	More efficiently coordinated by administration staff.

Table 3 - Role of the Business Incubator Manager ('coach') in Provision of Virtual Services

Section 3.2: Technical Challenges

Section 3.1.1: Building New Virtual Services vs. Existing Practices - Some Considerations

One area which can have a major impact on set-up and ongoing maintenance costs is the decision on either to build new virtual services customized to a particular incubator's requirement or to license existing tools which are already available in the marketplace. For some reason, many incubators seem to experience difficulties when it comes to putting together a virtual service offering.

Two scenarios commonly emerge:

- **Existing services mismatched together:** This scenario lacks proper planning and a number of different online services are randomly put together and made available through the incubator web-site. The tools are not always customized to the region. Staff are not properly trained on what the tools can deliver, how they are supposed to fit into the overall business planning process or how to use them and as a result the clients do not know either. Everyone muddles on by for a while but eventually it results in a situation with frustrated clients, overloaded staff and disillusioned management. An early monitoring and evaluation system may pick up on these problems in time to resolve them but very often this situation results in the complete abandonment of the virtual tools and a return to the "good old reliable" system that was employed before with everybody swearing never to go near virtual incubation ever again.
- **New solution developed from scratch:** This is the complete opposite scenario which sometimes occurs when all existing virtual incubation tools are rejected as being irrelevant to the local market on the grounds that they were not developed locally. This type of scenario often emerges if significant funding has been secured for the set up of virtual services. The word 'set up' of course means that emphasis is put on 'development' instead of 'delivery' and as a result, 2 years down the road, after the wheel has been completely re-invented by local IT developers, an amazing new virtual incubation tool complete with all the "bells and whistles" is launched on the market. The problem of course is that there is often no budget left over to implement the solution, train staff on how to use the tool or provide ongoing updates and training. As a result such 'grow your own' systems are often out of date even before they are launched but more importantly due to the lack of ongoing financial support they prove difficult to adapt to new and emerging incubation needs. However given the huge cost of development everyone doggedly sticks by then when there are far cheaper more up-to-date solutions available in the market. See Table 1 for details of some tools available in the market.

So to avoid either situation developing, common sense combined with good research is required to put together a customized but upgradeable virtual service solution for the operating area of the incubator.

Section 3.2.2: Key Steps in Deciding Whether to Build or Buy

Start with the feasibility study and market requirements. What are the priorities and what is the budget?

If the priority is to provide business planning support and guidance through distance learning techniques to remote communities, many suitable tools exist already. If the priority is to develop a customized online marketing platform, for example for a local business cluster of food companies, then it might make more sense to develop this specific tool but to ensure that such a platform is linked in with similar initiatives outside of the area.

What solutions are already available locally, nationally, and internationally?

Do the market research thoroughly – not just online but also through meeting with other incubator managers and seeing what tools they are using or attending incubation business conferences to see what are the latest tools and trends. Table 1 presents some of the solutions available in the market but given the speed of change in this marketplace it is advisable to attend incubation conferences and events to keep up to date with the latest developments.

Think long-term and consider upgradeable software in particular when preparing budgets. The set-up costs are often only one small element of the overall costs. Other elements should be considered such as ongoing license or maintenance fees, the cost of upgrades and non-IT related costs such as training staff and clients (on how to get the best use out of the virtual tools) and delivering accompanying value-added off-line coaching services to virtual clients.

If it is decided to invest in virtual services tools, then consider the following:

- Are existing solutions suitable for the incubator's operating area? Solutions oriented toward VC led incubators in the US are unlikely to be suitable for traditional incubation-space led incubators in developing countries. Can they be customized – to what level? What's involved in customization? How much will it cost?
- How much do the tools cost? Make sure to read the small print. What are the up front and ongoing license fees? Are there any user restrictions? What is provided for the license fee – helpdesk support, training, and customization?
- How often are the tools upgraded? When was the last upgrade? Clearly if a new upgrade is planned to be launched soon it might make more sense to wait for the next edition.
- What ICT infrastructure is required to get the optimum efficiency out of the tools – are the required hardware, platforms and broadband accessible?
- Reference sites in the country/location of the incubator. Talk to other users and see what they think.

If it is decided to build virtual services tools, then consider the following:

- Put together a comprehensive technical specification document detailing budgets, priorities and timeframes for implementation. Developing a modular specification can be helpful if budget allocation is spread over a number of years.
- Identify a supplier to work with on a long-term basis and who has the resources to deliver solutions when needed. This may rule out smaller local IT providers in some cases but on the other hand sometimes it's better to be a 'big fish' to a local provider than a small customer (and potentially of low priority) to a big supplier. The set up of virtual incubation services should be viewed as the start up of a long-term relationship between the incubator and its supplier so take time to select the right supplier and not necessarily on the basis of cost alone. Chopping and changing suppliers, months or years down the road is likely to result in a lot of duplicated costs and wasted energy.
- Keep costs down by encouraging your IT provider to make use of open source software and solutions.



Note: In most cases a combination of 'buying' and 'building' virtual incubation tools will provide the best of both worlds.

3.2.3: Overcoming ICT Limitations

Facts and figures on ICT infrastructure presented at the 2nd Global Forum on Business Incubation⁴³ in November 2006 noted that for 56.5% of *infoDev* incubator grantees, ICT infrastructure was readily available to their client companies. Grantees reported that over 89% of clients deliver or intend to deliver some or part of their products or services via the Internet. 71.1% of grantees reported they have the ICT skills and knowledge to provide ICT support to clients, while 28.9% could address some but not all of their clients' ICT needs.

Access to connectivity varied by region. In some, especially rapidly developing countries in Asia, connectivity is no longer a major constraint, and the internet is fast becoming a widely used business development tool. However it was noted that in much of Africa, access to broadband remains a challenge to many businesses. Yet the example of BusyInternet⁴⁴, which provides broadband access to small businesses in Ghana, demonstrates that every challenge is an opportunity, and ICT does not need to be state of the art for it to be successfully deployed by an incubator.

⁴³ Source: *infoDev* - 2nd Global Forum on Business Incubation

⁴⁴ <http://www.busyinternet.com>

Some solutions used by incubators in developing countries to overcome ICT limitations and to extend their reach into distant locations are presented hereafter:

- Investment in hub and spoke networks: Video-conferencing is used extensively in many developing countries to extend incubator reach to wider audiences or to provide connectivity with international expertise. In some cases investment is made in a high level of ICT infrastructure for the incubator and this is used as a hub by local entrepreneurs. The ISTT and YSTP Semi Virtual incubator Pilot in Iran funded by *infoDev* is a good example. ICT infrastructure was set up in very remote villages and virtual services were combined with visiting support services (4 hours travel by car) Another example, the BADIR ICT incubator in Saudi Arabia⁴⁵ uses Polycom⁴⁶ video conferencing services to deliver coaching from Australia. The incubator itself has excellent ICT infrastructure so the clients come to the incubator to communicate with their international business coach via video-conference. Coaching via video-conferencing is not delivered as a stand-alone service however. The business coaches visit Saudi Arabia several times a year to develop relationships and build trust with their clients. Another example, Softstart BTI in South Africa uses a virtual incubation model, with services radiating out by video conferencing to satellite locations from a central hub.
- In other areas, wireless solutions are used to overcome poor fiber or cable connectivity. The Topic 64 project is a good example of the deployment of wireless connectivity to overcome lack of ICT infrastructure (see case study 3 for more detailed profile of the Topic 64 initiative) Another example in Africa, the Africa Incubator Network⁴⁷, uses videoconferencing over 3G mobile technologies to deliver solutions in areas of poor fiber connectivity.
- Some incubators use low technology tools such as Furntech⁴⁸, a South Africa- based manufacturing business incubator that has 300 clients and branches in 7 locations and uses phones and physical visits and NOT computer interaction.
- Use of television and radio: Rio ITCP⁴⁹ has established an internet portal that provides basic business information and news, but Rio also creates and disseminates TV and radio content, because it works extensively with illiterate people for whom audiovisual material is essential.
- Kharkov Technologies Virtual Business Incubator (VBI) in the Ukraine and Topica in Vietnam have many lessons for electronic support, involving chat, email, Skype, DVDs , phone, video, voice etc depending on peoples level of connectivity. VBI is equipped as follows:
 - A server backed up (Hardware - Case: Rack 4U 19"; CPU: Intel(R) Pentium(R) 4 CPU 2.80; Memory: 1Gb: 2x512 DDR1; HDD: RAID5 147Gb: 4x80Gb Ultra-160 SCSI, 70Gb Ultra-160 SCSI Backup.) and with open source applications, including anti-spam (OS: Linux Gentoo 10; WEB: Apache2; APP: PHP; DB: MySQL; MAIL: exim, cyrus-imap; ANTI-SPAM-WAILWARE: clamav, spamassassin.)

⁴⁵ For more information on BADIR ICT visit <http://www.badirict.com.sa/en/> or <http://www.idisc.net/en/Incubator.278.html>

⁴⁶ Polycom provides world-wide services in unified communication and collaboration, video conferencing, voice conferencing, data and Web communications solutions. More information at: <http://www.polycom.com>

⁴⁷ <http://www.ainportal.org>

⁴⁸ <http://www.furntech.org.za>

⁴⁹ <http://www.idisc.net/en/Incubator.46.html>

- o PC Software - Open Source: VBI uses Open Office, the leading open-source office software suite for word processing, spreadsheets, presentations, graphics, databases and so on. VBI PCs are equipped with Microsoft: Windows XP Home Edition, a line of operating systems produced by Microsoft for use on personal computers; Microsoft Office- an office suite of interrelated desktop applications and services for the Microsoft Windows operating systems, Adobe Acrobat - to create and distribute PDF documents and forms; and Adobe Creative Suite (CS), a collection of graphic design applications.
- o VBI allows communication through The Bat! - a popular email client that allows working with unlimited number of mailboxes, has powerful sorting filters, fully customizable message templates, Mail Dispatcher and so on. VBI also uses WinRAR is a powerful archive manager and Skype, the software application that allows users to make voice calls over the Internet. VBI makes available printers (Gestetner 1502 - Fast, easy digital copying of documents up to A3 in size; Epson Stylus Photo R300; Okidata C5300 Digital Color Printer).

Section 3.3: Revenue Models for Virtual Incubation

For a more detailed overview of the revenue models available for business incubators, it is advisable to study Module 5 of the current training program on “Financing an Incubator”.

Where there is sufficient scale, the following revenue models can apply to virtual services:

1. Subscription or membership fees.
2. Control and sale of data.
3. On-line advertising.
4. Joint procurement.
5. The incubator as an ISP (Internet Service Provider).

Section 3.3.1: Subscription or Membership Fees

Depending on the level of services being offered, a subscription or membership fee can be used to generate revenue. For example in the US, incubators charge an affiliate fee. Alternatively if the online services have a high profile, a subscription fee can be charged. Online business directories typically charge US\$300/annum (price for companies to be listed).

Section 3.3.2: Control and Sale of Data

The potential for control and sale of data on SMEs to corporates is a revenue generation model for virtual services such as the West Midlands Collaborative Commerce Marketplace (WMCCM). For more information on WMCCM please see the Case Study 1 at the end of the module.

Section 3.3.3: On-Line Advertising

On-line advertising is often the first revenue generation model cited for any type of virtual service. However generally speaking in order to generate advertising revenue the website in question must have scale i.e. 10,000 or more hits per month. Nonetheless even with a lower level of traffic, advertising may generate additional revenue, for example from local stakeholders.

Section 3.3.4: Joint Procurement

In some cases, joint procurement can generate discounts for incubator clients and a margin for the business incubator. Clearly such procurement processes should be conducted in an open and transparent manner in order to provide assurances of the independence and impartiality of the incubator in the selection of the best services for their client companies.

Section 3.3.5: The Incubator as ISP

The incubator can play the role of Internet Service Provider (ISP) if they have a sufficient number of users. This can be for example 1-2,000 small users or in the case of ICT incubators a smaller number of users requiring considerably higher levels of bandwidth. The incubator can use scale to negotiate far cheaper deals for both bandwidth and traditional voice traffic (especially for international charges) either directly or via an existing ISP sharing some of the charges.

BusyInternet in Ghana is a good example of an incubator taking on the role of ISP. BusyInternet offers different packages for a different monthly fee as described below:

Section 3.3.6: How Much to Charge and How to Charge for Virtual Incubation Services?

This is a challenging issue and perhaps is best considered when referring back to the typology of virtual incubation services presented in Component 1.

	Shared	Assured	Dedicated
BusyPro (128 kbps)	95	140	750
BusyMax (256 kbps)	175	230	1,190
BusyUltra (512 kbps)	350	440	2,100

All prices are quoted in USD\$, payable monthly Setup is \$200 with \$50 x 6 months (\$500 total)

Table 4 - Get Busy's Award Winning Service for Just \$200 Startup!⁵⁰

Virtual incubation: Describes the situation when all incubation services are delivered online. In the case of private for-profit incubators a long term view is taken on revenue generation through success sharing. Fully virtual services like JourneyPage⁵¹ rely on licensing or franchise models to generate revenue (please refer to the example in Annex 1). However for this approach to work a considerable upfront investment must be made in development and marketing of virtual services. This is not the raison d'être of most incubators who are concerned with individual business development and not virtual product development. Similarly with virtual services like online marketplaces, significant


⁵⁰ <http://www.busyinternet.com>

⁵¹ <http://www.journeypage.com>

upfront investment has to be made in creating a value proposition which clients are prepared to pay for. Therefore it can be concluded that for truly virtual incubators, success sharing is the only feasible revenue model.

Outreach virtual incubation: Can be described as incubation services delivered to nonresident clients or 'outside' clients. With outreach virtual incubation, there is a very strong physical element to the delivery of virtual incubation services. The business incubator manager meets with the client face to face and goes through the entire business incubation process with them using virtual incubation tools to facilitate the process. This can be described as a bundled offering. In this case an in-depth relationship is built between client and incubator and a strong value proposition is built up. It is acceptable to charge fees in this situation although the fee levels will depend to some extent on the ability of the client to pay. In most cases therefore outreach virtual incubation programs rely on donor funding to cover the shortfall until fee revenues are sufficient to cover virtual outreach incubation costs (if they ever do!).

Satellite/networked virtual incubation: Whereby nodes or satellites are linked to a hub incubator. Similar to outreach virtual incubation, with satellite or networked virtual incubation, a strong physical presence helps to create a better value proposition. In general following the old adage that 'time is money' the higher the level of real time invested by an incubator manager in a client the higher the value proposition. The converse is true for online services.



Note: In saying this there are some examples of virtual incubators with a physical presence which do generate profits. BusyInternet in Ghana is a superb example of this. They provide 200 flat screens (hot desks), training room, a restaurant, a business centre, incubation units and an ISP (critical for revenue). They have 90 staff and more than 2000+users a day. They are a private company which became self-sufficient in 2-3 years.

Section 3.4: Monitoring and Evaluation of Virtual Services

As explored in great detail in Module 7 “Monitoring, Evaluation and Benchmarking”, it is important to ensure that the institution that provides incubation services, as well as virtual incubation services, receives feedback on the impact of the services in their territory in order to be able to adapt them if necessary or to correct their accessibility. Therefore and as far as on-line services are concerned, when setting up the tools, performance monitoring data should be integrated as part of the back-office management system and the data collected should be analyzed on a periodic basis to ensure the maximum impact of the services.

Data collection may include the following real-time performance indicators:

- Number of users per tool/per month
- How the users access the tools (via Internet/phone etc)
- Age of users
- Sector of activity of the users of the tools
- Period of time during which users use the tool
- Number of questions to tutors
- Type of questions to tutors/webmaster
- Questions uncompleted / other stumbling blocks in the process
- Number of companies created per year by users of the tools
- Number of existing companies that adapted any aspect of their business after using the tools.


Such indicators will provide the managers of the incubators with feedback and indications of any modifications which need to be made to the virtual services.

Some examples:

- If the number of technical questions to the webmaster is high, a training course on ICT issues and use of Internet could be useful.
- If frequently asked questions arise which are related to the content of a particular section, either a FAQ guide or case study examples could be added online or offline training could be provided in this particular field to supplement the online tools.
- If there are an increasing number of companies using the tools from a specific industry sector, a specific sector-linked tool for these users could be useful for example an online discussion/forum or marketplace.

Incubator managers should anticipate teething problems with the introduction of virtual incubation tools and should ensure that there is adequate budget provision to make modifications or provide additional training.

In addition to measuring process data, it is perhaps more relevant in the long term to measure outcome and impact data related to virtual incubation services. For example how did virtual services contribute to a growth in annual revenues, investment, jobs etc? Monitoring and evaluation procedures need to balance processes with outcomes and of the two impact data is more important.



Note: For an in-depth study of how to monitor and evaluate an incubator's performances, notably in terms of virtual services offer, please refer to Module 7 of the current Training Program "Monitoring, Evaluation and Benchmarking".

Section 3.5: Building an action plan to implement virtual services

A good action plan for setting up virtual services is like a mini-business plan. It has two key objectives:

1. It should clearly show to key stakeholders how the set up and delivery of virtual incubation services fits within the overall incubator business plan. Virtual services should clearly fit with the overall strategic objectives and operational policies of the incubator.
2. It should spell out the marketing, operational and financial steps which are required to make the set up and subsequent delivery of virtual services an ongoing success. For each of the elements the action plan will help to systematize ideas, processes and techniques.

The key elements of the action plan are as follows:

- Background,
- Marketing Plan,
- Operational Plan,
- Administration/Organization Plan, and
- Financial and Investment Plan.



Unless an action plan is put together for a stand-alone virtual incubator, the action plan for virtual services should not be developed in isolation but should be examined in the context of the overall incubator business plan.⁵²

Section 3.5.1: Background

Based on the feasibility study results, this section should summarize:

- Why virtual services are being set-up?
- What services are envisaged?
- How these services fit within the overall strategy of the incubator?
- What are the expected costs and impact of such services?

⁵² Note: Module 3 of the current Training Program “Planning an Incubator” explores in great detail what an incubator’s Business Plan should be.

Section 3.5.2: Marketing Plan ⁵³

The Marketing Plan is a core element of the Action Plan. Based on the feasibility study analysis which provided macro-environmental data and key market trends, the action plan should now clearly identify the target markets for virtual services, quantify the target market size and set targets for customer acquisition over time.

An important element of the marketing plan is the competitor analysis which identifies competing solutions both online and offline and gaps in service provision in the market. It should conclude by presenting the advantages of your virtual service offering (see table contained in the action plan checklist at the end of this section).

For virtual services it is important to clearly identify how the virtual market will be reached. Unless a satellite hub is being established from scratch, very often this will require the development of partnerships with service providers outside the primary location of the incubator e.g. university liaison officers. The marketing plan should identify such partners, the key steps in getting them on board and any legal or contractual requirements. The type of training and support provided to such third parties should be addressed in detail as this will have an important impact on the quality of delivery of the service.

Finally the 7 P's of the extended marketing mix should be addressed (in addition to the 4 P's of the original marketing mix Product, Price, Place, and Promotion, 3 additional P's are added: People, Process and Physical Evidence).

Although each of the 7 P's is important, paradoxically for virtual services 'people', 'physical evidence' and 'place' should be considered in particular.

- 'People' are one of the most important components of the promotional mix. 'People' add value to the virtual service offering. The manager makes the difference between a generic low value online business planning tool and a customized approach addressing individual entrepreneurs concerns and providing relevant virtual solutions to match.
- 'Physical Evidence' is very important for virtual services as efforts should be made to make a virtual service tangible be that through product support material or through monthly networking meetings.
- 'Place' of delivery is important to virtual services delivered through satellite or networked hubs. If third parties are being used to deliver virtual services like training, how can quality be assured? What aftercare support and follow up is provided?

Annex 3 provides a check-list to measure how the virtual incubation service offering will meet the needs of the client and where it is better than alternative competing offers.

⁵³ Note: For a more in depth study of the incubator's marketing plan, please refer to Module 4 of this Training Program, "Marketing and Stakeholder Management".

Section 3.5.3: Operational Plan

In the overall incubator business plan the operational plan defines the procedures for reaching the incubator's objectives. This prevents lack of coordination and makes the incubator's function coherent and avoids unnecessary expenditures. The Operational Plan provides detailed descriptions of tasks required to render the incubator services, their flow diagrams, the names of the people in charge, etc. Decisions are made about which technologies should be adopted to implement the procedures and processes of the incubator⁵⁴. For virtual services key considerations are as follows.

How are virtual services integrated into the overall operational policies of the incubator?

- Selection policy – Can virtual services be used to analyze entrepreneurial skills and contribute to decision making in the selection of clients?
- Entrepreneurial training – Can virtual services be used as an element of the existing training or as an extension of the training to new audiences?
- Business Plan coaching – How can virtual services be integrated into the overall business planning and coaching services?
- Monitoring and evaluation post-incubation – How can virtual services be integrated into post-incubation policies – E-questionnaires, online forums, mentoring on-line etc
- Networking and events – Virtual services used by events team to promote events, upload content, organize video-streaming of content to new audiences.

Accessibility: Consideration should be given to how users will access the services? Will the final users have free access to on-line tools or will a password be needed? What back-office staff follow up is required? What quality control systems are in place? Without password access, the system could be misused by some users e.g. "spamming" other users.

⁵⁴ Source: *infoDev* - Incubator Training Module: Business Plan

The following channels could be used to provide initial access to the tools:

- **On-site training session:** If the institution promoting on-line incubation tools is also providing on-site training to entrepreneurs, this could be a good opportunity to highlight to potential users the benefits of the tools, to provide basic training and to provide users with password access.
- **Downloadable through internet without quality control:** Following an on-site registration process using security encryption technologies, passwords could be given to users. Although basic data on the user may be recorded at this stage, the level of access and quality control is minimal and therefore the system is still open to misuse.
- **Available only in an entrepreneurship center:** If the tools are only available in certain facilities, the level of security protection might be high but the ease of access and use may be considerably reduced. Nevertheless virtual tools available in such centers may provide valuable time-saving tools to reinforce the on-site training sessions or to prepare for one-to-one coaching sessions.

Section 3.5.4: Administration/Organization Plan

In the overall incubator business plan, the administration/organization plan defines the resources required by the incubator (equipment, furniture etc.) and its control systems. This includes the legal documentation and standards for the incubator (statute, internal regulations, access rules etc.). The administration plan also charts the organizational staff requirements, their duties and responsibilities. It defines the Board of Directors structure and the role of each member, in addition to relationship links.⁵⁵

For virtual services key considerations:

- Equipment requirements, on-site and off-site if outreach centers are being used;
- Staff requirements at set up and related to ongoing service provision;
- Who is responsible for setting up the virtual services?
- Who is responsible for training, ongoing delivery of services, help-desk support, monitoring & evaluation, upgrades and maintenance?
- Is there one person responsible for the virtual services function or is it integrated into different functions?
- Updating of job descriptions to incorporate virtual services.

Note: To summarize this section, a check-list is provided in Annex 3 which incubator managers can use to develop their own action plan to set up virtual services.



⁵⁵ Source: *infoDev* - Incubator Training Module: Business Plan

Section 3.5.5: Financial and Investment Plan

This allows the anticipation of short and medium-term financial modeling and action. The initial investments required can be defined, as well as costs and expenditures, cash flow and so on.

For virtual services the following considerations should be taken into account:

- Set up costs related to internal staff, IT consultants, and IT development.
- Ongoing license fees, maintenance costs, cost of upgrades and further development.
- In the case of satellite or networking hubs, travel and other costs can add up when the incubator manager is required to go and visit clients e.g. in the case of island states.
- Hardware, software and networking costs.
- Outreach centers – building or adaption costs, accessibility and equipment costs.
- Sources of investment for virtual services – donor funding, private investment, grants?
- Ongoing revenue streams (pricing as part of bundled offering or stand alone virtual services)?



Note: To summarize this section, a check-list is provided in Annex 3 which incubator managers can use to develop their own action plan to set up virtual services.

COMPONENT CONCLUSIONS

At the end of this component the trainee should understand some of the major challenges they may face in implementing virtual services and how to overcome them. In the final section, trainees are encouraged to consider how to implement an action plan and provided with a check-list which can be used as a template to implement virtual services in their region.



Case Studies

Building Business Success by Bringing Businesses Together

Incubator Name: West Midlands Collaborative Commerce Marketplace

Sector: Engineering-based Incubator

This Case Study Examines: The West Midlands Collaborative Commerce Marketplace (WMCCM), United Kingdom

Date: November 2009

PART I

SUMMARY

Problem

Business incubators, as tools for local economical development, face 2 major issues:

- How to attract relevant businesses to carry out their activities in the incubator's operating area and how to meet the needs from and opportunities offered by this environment; and
- How to attract a critical mass of relevant businesses to generate adequate economic activities enabling the businesses to grow and benefit from networking.

Solution

An innovative answer to these issues is the creation of "a business ecosystem where the capabilities of individual organizations are showcased and within which virtual enterprise networks involving different businesses can come together in response to specific opportunities" available in their operating area. Hence, creating a marketplace where companies say what they "could do", instead of what they "currently do", helps to raise the visibility of each individual company, so that more business opportunities and partnerships are available to each company but in some cases as part of a virtual network.

PART II

BACKGROUND

In setting up the West Midlands Collaborative Commerce Marketplace (WMCCM), the team from the Warwick Manufacturing Group at the University of Warwick (UK) aimed to develop a dynamic virtual community based on the business skills and attributes of its members. This virtual community supports SMEs to identify and exploit new business potential, boost innovation, increase their knowledge and move from traditional product areas to new higher profit potential products and services⁵⁶. The

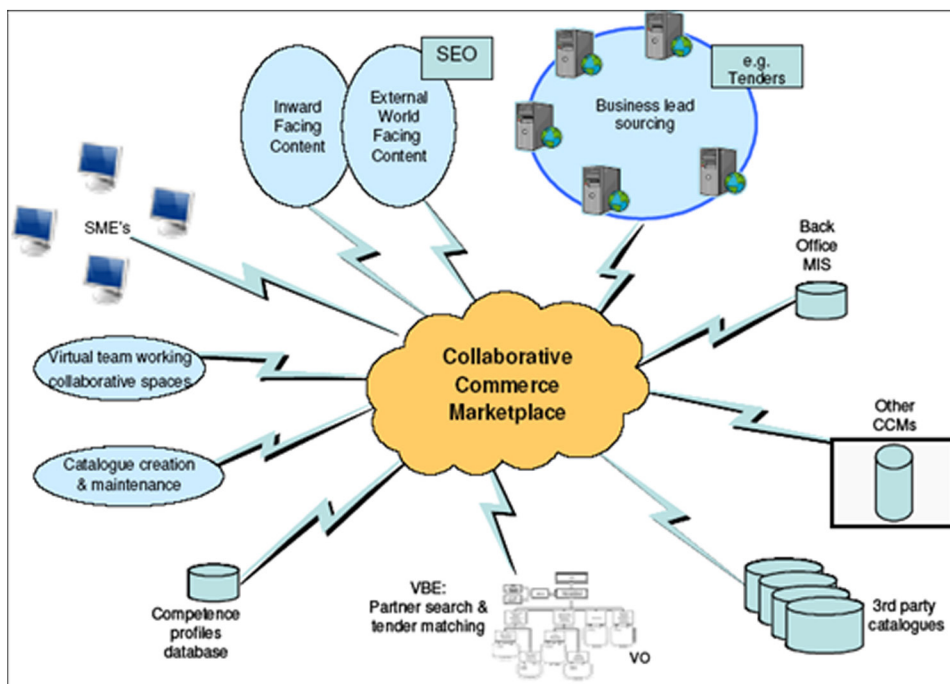
⁵⁶ Idem

initiators of the WMCCM refer to a “Virtual Enterprise Network” (VEN) enabling the SMEs to:

- Make new offers to their markets collectively which are more valuable (and more profitable) than the sum of their individual offers;
- Have better access through the network to marketing and innovation resources in order to conduct collaborative new product development and/or enhancement in order to develop higher value branded products and services; and
- Share expensive resources and infrastructure with the other network members and hence enjoy both lower costs and better quality of services⁵⁷.

The WMCCM was set up in 2004 thanks to European Fund for Regional Development (ERDF) funding of £250.000 as an “internet enabled business ecosystem focus[ing] on capturing what SMEs can do, providing a feed of demand driven opportunities (tenders), enabling the formation of virtual organizations to address the tender needs and providing on-line collaboration spaces to coordinate the design and delivery of the product or service.”⁵⁸

The system architecture for WMCCM is based around the Microsoft.Net Framework and was custom built in order to focus on needs of the regional ecosystem business processes. As WMCCM is a bespoke tool, there are low operating costs, which amount to £ 10.000 annually.



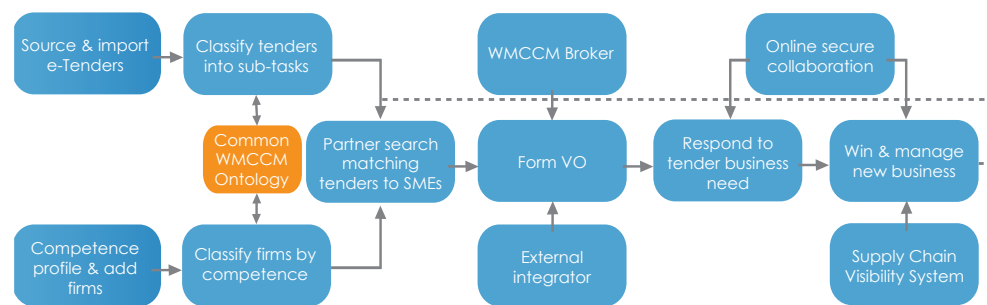
WMCCM architecture⁵⁹

⁵⁷ Idem

⁵⁸ Idem

⁵⁹ Idem

WMCCM is designed to support SMEs from the competence profiles database to find and win new business opportunities through the key workflow processes that are illustrated in the following figure:



WMCCM e-trade workflow⁶⁰

In more detail, the processes (as illustrated from left to right in the previous figure) are:

- Source and import new business enquires from various e-tender online sources including both public and private sector contracts. Members of the e-marketplace can also generate tenders for their own needs. Tenders are automatically analyzed and classified against a business ontology developed for the system. This classification process identifies the processes, skills, quality standards and geographical requirements for the tender.
- Competence Profiling of SMEs. This is a structured process that impartially measures the capabilities of firms using a formal standardized questionnaire with the objective of generating trust and generating easily comparable information. To enable this process, experts within the Warwick Manufacturing Group (WMG) at the University of Warwick capture competence profiles. A third party independent evaluation is important to build trust between partners. The focus of the questionnaire is on discovering what the firm could do, rather than what they are doing currently. For example, where skills and technology process can be used in different sectors, from automotive to military or in different applications (e.g. a company who manufactured car seat frames for the automotive industry. Key skills and process included the ability to “bend and join” wire precisely. They have now become the World’s leading provider of body piercing jewellery (A product that also requires the skills and capability to “bend and join” wire precisely). The profit margins are much higher and they judge the work as strategically more valuable.) The skill profile captures a range of “factors so that firms with similar cultures can be matched together when forming effective collaborations and virtual networks (e.g. if they are located in the same geographical area or have had experience working with the same customer.) A key advantage of the profiles is that they are easily comparable and matchable, as opposed to websites or brochures.

⁶⁰ Idem

- The classification of tender requirements and SME capabilities uses a common ontology. Tenders are automatically analyzed and classified against a business ontology developed for the system. This classification process identifies the processes, skills, quality standard and geographical requirements for the tender. SME profiles are also classified using the same set of keywords. Thus, when tender requirements and SME capabilities match, the SME can be automatically alerted by regular email giving details of the tender opportunity.
- How to match tenders to individuals or group of SMEs using WMCCM online Partner Search System. The Partnership Search System is used when a tender requires skills or services which one SME cannot provide independently. It is a two-stage search process. The first stage matches a manufacturing skill or technical factor. For example, skill/capability in laser cutting. The second stage is a preference or knowledge/experience of a sector or market (e.g. the preference to work with a partner with experience in the military sector, within a particular geographic area or with a specific quality standard.) The system scores matching marks for each eligible company and then suggests a “best fit” partnership based on the highest matched scores. This process can be driven by the SMEs or by a specialist business ecosystem broker.
- The results of the partner search suggest an initial “best fit” matching of SMEs who collectively have the potential capability to bid for the tender contract. At this stage the virtual network starts to take shape as members undergo a stage of team-forming through a number of initial face to face meetings. It is important that best practice virtual teaming principles are followed in order to ensure that good team performance is achieved. A number of virtual teaming methodologies can assist in this. The WMCCM broker may appoint an external Integrator who is typically a procurement specialist and can act as bid manager and eventual prime contractor.
- How to respond to a tender (or a business need) and collaborate online in secure project spaces. These can be generated within the portal by SMEs to support low cost and speedy collaboration. The core functionality includes document storage, simple project and task allocation management and discussion forums with associated knowledge management tools. SSL encryption is also available.
- If the bid is successful and the contract awarded, further collaboration tools can be utilized such as the integrated supply chain visibility facility that allows the composite organization to monitor the flow of materials and information between members of the consortium and the customer.

In summary, rather than just measuring current operational capability, Competence Profiling seeks to determine capabilities that can be applied in different applications. SMEs who are Competence Profiled are matched against a dynamic ontology which allows their capabilities to be matched against the tasks of any online tender. This is the matching of needs (tender requests) with resources (the SME’s capability) with the purpose of stimulating innovation.”⁶¹

⁶¹ Idem

TIMELINE OF EVENTS

2004: Launch of the WMCCM project.

June 2007: The project had over 4,000 registered SME organizations, covering a broad range of industrial competencies. Over 270 of WMCCM SME members had been Competence Profiled.

December 2008: End of EU funding, project becomes self-funding.

OUTCOME AND CONCLUSIONS

By adopting an open approach, i.e. to take into consideration the skills and competencies of the businesses to understand what they could do rather than capturing what they currently do, WMCCM enables the SMEs to move into more profitable businesses (e.g. a car seat frames manufacturer became a market leader in jewelry) using their skills and capabilities in more profitable ways. In the event that one supplier is not capable of providing a specific product or service, WMCCM enables the combination of individual skills from different SMEs to develop together a new product or service.

The impact of the WMCCM project resulted in:

- Over 11,400 active users;
- Over 9,000 active companies;
- A “skills profiled” company attracts between 2-5 times more enquiries for work from Google search;
- Over 70,000 tender business opportunities are published on the WMCCM project website (www.wmccm.co.uk) each year. This is a minimum of €8bn of tenders passing through the website each year and being distributed to SMEs in the West Midlands region in the UK;
- Approximately 1,000 individuals visiting the WMCCM project website each day;
- The reach of the WMCCM website is also highly significant with visitors from 155 countries and territories in the quarter; and
- The WMCCM project website features predominately in search engines for keywords areas such as tenders alerts, tender feeds, West Midlands, and various engineering processes.

The strength of WMCCM is its scalability:

- The WMCCM is run by itself as a self-managed community, which allows the tool to operate efficiently at low costs; and
- The services offered by WMCCM are ideal for start-up businesses which do not have customers yet and need to access markets and promote their offer to potential clients... WMCCM is a very helpful tool to tackle the core needs of new companies striving to develop new business.

A service like WMCCM is promoted as the electronic equivalent of having a road, port or airport in a region. It facilitates the flow of products and services and helps businesses to generate international e-trade.

WMCCM does not offer training, coaching, mentoring, or advice to client companies. WMCCM generates business opportunities for companies encouraging new collaborations, not more competition.

PART III

LINKS

WMCCM: www.wmccm.co.uk

REFERENCES

The material for this case study was contributed by Dr Jay Bal, one of the initiators of the WMCCM and the author of the “Whitepaper: Breeding demand driven virtual organizations from a Business Ecosystem” from which this case study has been largely inspired.

The information is based on first-hand experience and personal involvement in the development of the afore-mentioned system.

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Fostering an entrepreneurial culture in a dynamic and ICT enabled community

Incubator Name: BusyInternet

Sector: Mixed-Use Incubator

This Case Study Examines: BusyInternet, Internet centre based incubator in Accra, Ghana

Date: December 2009

PART I

SUMMARY

Problem

In many developing countries, the business environment has proved particularly difficult due to major challenges such as poor infrastructure, limited access to electricity and internet broadband access, and a traditional lack of entrepreneurial spirit.

Solution

When considering business incubation as a solution to overcome these challenges, a traditional incubation approach might not be the best solution to confront the local realities. A new and flexible concept may be needed to meet the commercial and social needs of the targeted area. An innovative approach is needed to create a central business hub as the one concentrated location that naturally makes people with common interests do business together and one that is acknowledged and used by the local community.

PART II

BACKGROUND

BusyInternet was set up in 2001 in Accra, Ghana, by 3 partners:

- Busy International, a limited partnership managed by a Welsh entrepreneur;
- Data Bank, based in Ghana; and
- Fidelity Capital Partners, a Ghana-based Investment fund.

The 3 partners contributed to the establishment of BusyInternet by providing:

- The initial capital of US\$ 1.7 million;
- An innovative concept for implementing a technology oriented initiative aiming to support new and young entrepreneurs;

- The business model for the initiative;
- A thorough knowledge of incubation, entrepreneurship and technology;
- Local ownership; and
- Local connections and networking contacts in order to leverage the resources required.

BusyInternet was first designed as an internet centre with 50 PC's providing direct access to a technology focused forum for young people and entrepreneurs interested in technology related matters and enabling them to find like-minded people, exchange their ideas and experiences and potentially do business together.

However, the Ghanaian market drove the initiators of this philanthropic action to rethink their concept and define a much larger enterprise program offering commercial services which could contribute to the area's social development.

BusyInternet is located in a 14,000 square foot former gas-bottling factory in the centre of Accra where 4 types of services were initially offered to entrepreneurs and young people:

- A large cyber café;
- A conference facility and several meeting rooms;
- A copy centre; and
- Office space available for entrepreneurs and software companies.

The key for success for BusyInternet has always been to find the right balance between social and financial returns, i.e. the offer of commercial services to generate income and profits for the incubator and the offer of an enabling environment for the community benefiting from the incubator's services.

By not receiving any public funding or government support but focusing on being profitable, the model of BusyInternet has proved to be more flexible, capable of evolving and better responding to emerging market needs.

The focus on internet service provision illustrates the concept best:

- On one hand, BusyInternet saw a business opportunity to set up directly the whole broadband internet access service for their clients who pay for this service and hence generate the majority of the incubator's income;
- On the other hand, setting up the broadband internet access also responded to the community's needs.
- In addition to internet service provision, the initial structure and offer has been redeveloped to propose a model that better suits the needs of the targeted clients of the incubator:

- The meetings rooms have been transformed into more ready-to-use fully IT equipped office spaces available on a very flexible renting basis;
- Internet is accessible by both Ethernet cables and wifi, notably in the Laptop Browsing Lounge; and
- The focus is on enabling networking between technology oriented people by providing them with one business environment where they can meet and do business informally together and attend networking events.

TIMELINE OF EVENTS

2001: Setting-up of Busy Internet

Note: The restructuring of the BusyInternet business model is ongoing.



OUTCOME AND CONCLUSIONS

Responding to the changing features of the Ghanaian market, the founders of BusyInternet took an innovative approach to set up an enabling environment bringing together technology oriented companies, young people and entrepreneurs to do business together.

By setting up an internet centre providing office space available on a very flexible basis, the initiators of BusyInternet designed a genuine business incubator providing financial and social returns to the community where it operates.

By supporting more than 1000 people on a daily basis with a stimulating environment, BusyInternet is a local driving force for innovation and entrepreneurship and has become the biggest privately owned and operated ICT centre in Africa.

PART III

LINKS

BusyInternet website: <http://www.busyinternet.com>

infoDev video on Busy Internet: <http://www.idisc.net/en/Article.38728.html>

ICT-Enabled Development Case Studies Series: BusyInternet (Accra):
http://www.bridges.org/case_studies/127

Article: http://www.busyinternet.com/old_sites/4.0/site/about/press.cfm

REFERENCES

The material for this case study was contributed by the founder and current Incubator Chief Executive Officer, Mr Mark Davies. The information is based on firsthand experience and personal involvement in the development of the incubator.

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The potential of virtual incubation

Incubator Name: TOPICA, Vietnam

Sector: ICT-based Incubator

This Case Study Examines: The diverse virtual services offered by TOPICA, Vietnam

Date: December 2009

PART I

SUMMARY

Problem

When an incubator is limited in terms of space, 2 critical issues have to be overcome:

- If renting office space to clients is not a possibility to generate income, what are the other sources of income a business incubator should explore?
- What are the ways a business incubator can provide more services to more clients if it cannot physically incubate them?

Solution

To overcome the challenge of limited space, offering services via virtual means has helped incubators to provide their clients with the support services they require while designing a sustainable business incubation model.

PART II

BACKGROUND

This solution has been illustrated by TOPICA, an online Academy which has been developed progressively through different project stages.

In 2004, thanks to an *infoDev* grant received to carry out the feasibility study, the CRC-TOPIC Technology Business Incubator was set up in Hanoi, Vietnam. Once established, the incubator focused on supporting high growth ICT businesses by providing them with common incubation services.

However, 2 major challenges had to be overcome:

- The space provided by the University of Hanoi was too small; and
- Due to their high growth nature of ICT companies, the tenants faced major cash flow issues preventing them from becoming sustainable and providing the incubator with a sustainable client base.

In 2006, the same team of 12 manager-entrepreneurs who set up the original incubator launched a national project TOPIC 64, aiming at incubating 64 virtual learning centers in 64 Vietnamese provinces. The project was initially supported by Microsoft (Qualcomm, HP and USAID contributed after the initial phase) which provided the provinces with the adequate equipment to train and build ICT capacity of 87.000 people. Although the space and income issues were overcome by this new approach, other issues emerged to deal with:

- The income generated by the fee paid from participating learning centers was too small to be efficiently managed and insufficient to ensure the self-sustainability of the program;
- Major intellectual property rights issues were faced (e.g. brand violation); and
- The added value for the learning centers was not obvious.

Nevertheless, 55 out of the 64 learning centers supported through the TOPIC 64 projects remained sustainable.

Building on the experience of TOPIC 64, the TOPICA Online Academy was launched in 2008 thanks to the financial support of a venture capital and a Vietnamese Foundation. TOPICA offers bachelor's degrees online training in business, accounting and ICT to 1000 students from the Open University of Hanoi.

Although the model seems successful generating \$ 1 million in revenue, employing 140 staff; and with 3000 to 5000 students expected to join the program in 2010; the negative cash flow issues generated by high growth programs is particularly challenging to deal with, especially in turbulent financial times.

TIMELINE OF EVENTS

2004: CRC-TOPIC incubator established

2006: Launch of the national project TOPIC 64

2008: Launch of the TOPICA Online Academy

OUTCOME AND CONCLUSIONS

By adopting an entrepreneurial approach, the TOPICA team adapted its business incubation model to meet the specific challenges they encountered in the development of expansion of virtual services.

As mentioned above, 55 out of the 64 learning centre supported by the TOPIC 64 project became sustainable and almost 15 of them turned themselves into business incubators.

PART III

LINKS

CRC- TOPIC website: <http://www.topic.edu.vn/english>

CRC-TOPIC Business Incubator video: <http://www.idisc.net/en/Article.38727.html>

CRC-TOPIC Business Incubator presentation: <http://www.idisc.net/en/Publication.135.html>

Asia Pacific Incubation Network (APIN) – online training course on Marketing for Incubator Managers and Entrepreneurs: http://www.incubationasia.com/newsevent_details.php?type=news&id=19

REFERENCES

The material for this case study was contributed by Dr Tuan M. Pham, Director of the TOPICA Online Academy and Dean of the Faculty of Banking and Finance of the Hanoi Open University.

The information is based on firsthand experience and personal involvement in the development of virtual tools.

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TOPICA, Vietnam – TOPIC 64 National Project

THE CHALLENGE

Over 70 percent of Vietnam's 82 million people live outside urban communities. At a time when Vietnam plans to reallocate hundreds of millions of dollars to expand information and communications technology industries, only 1.85 percent of its entire population uses the Internet. In rural areas traditionally dependent on agriculture and forestry, access to modern telecommunications remains scarce. Communities with little or no exposure to information and communications technologies (ICT) are not prepared to equip young workers with the technical skills they need to join an increasingly ICT-oriented workforce.



THE APPROACH

To meet Vietnam's IT goals, the Training Online Partnership in ICT for Community (TOPIC 64) Global Development Alliance seeks to create or upgrade one Community Technology Learning Center in each of Vietnam's 64 provinces. By using Qualcomm's wireless technology to build on Vietnam's fiber backbone, TOPIC 64 connects its learning centers through an extensive wireless network that brings broadband and voice access to the country's rural areas. TOPIC 64 employs Microsoft's Community Learning Curriculum to train students in basic computer skills, Internet skills and digital media, and software program lessons. The training, which includes Windows, the K-12 curriculum, and a range of other applications useful to local citizens, is available in Vietnamese.

TOPIC 64 has also teamed up with other donors to distribute the curriculum to 300 vocational schools.

RESULTS

- TOPIC 64 trained 5,067 students in the first fifteen learning centers by
- March 2007: 1,723 students received free training.
- 474 ICT instructors have received training through TOPIC 64.
- 12,000 students will receive training in all 64 centers by the end of 2007.
- 70,692 students will receive training at affiliate learning centers in 2007.
- TOPIC 64 enables youth population to compete for better paying jobs across the country.
- By harnessing leading-edge technologies, Vietnam is positioning itself for expanding job creation and a more prosperous future.

PARTNERS

Microsoft, Qualcomm, Electricity of Vietnam, Source: USAID - <http://is.gd/cUIGF>

The “Local Entrepreneurial Network” of the VBI of Kharkov Technologies incubator

Incubator Name: Kharkov Technologies, Ukraine

Sector: Technology business incubator

This Case Study Examines: The experience of the Kharkov Technologies incubator in Ukraine in setting up virtual services as a new incubation method for supporting new companies.

Date: October 2009

PART I

SUMMARY

Problem

One of the major challenges faced by business incubators once set up and running is to have the capacity to evolve on a permanent basis to constantly meet the growing demand and various needs from their current and prospective client companies. To be able to carry on their activities, business incubators have to explore innovative ways of better supporting more companies.

Solution

Setting up a virtual incubator through a website may be the solution for a business incubator to provide more services to more companies, especially start-up companies.

PART II

BACKGROUND

Kharkov Technologies was established by Ukrainian scientific institutes in 1998 to offer incubation services to entrepreneurs based in Kharkov, notably technology-driven business projects. Kharkov was set-up and hosted within the premises of the founder institutes and aimed to foster technology-oriented entrepreneurship, to support the commercialization of science intensive products and processes and to enhance innovation in Kharkov.

Kharkov Technologies is the only incubator of the Ukrainian Academy of Sciences System. The incubator offers services to newly established small and medium sized technology and science driven enterprises including:

- Fully equipped offices (e.g. computer, access to internet, phone, printer etc.);
- Consultancy support (e.g. development of business plans and innovation projects, securing access to finance etc.);

- Training programs (e.g. innovation management, marketing, financial management etc.);
- Participation in international projects promoting entrepreneurship.

Since its creation, Kharkov Technologies has experienced an ever growing demand from companies to be supported.

Setting up new services to support more companies – the feasibility study:

In the early 2000's Kharkov Technologies ran a survey among its current and prospective client base to identify the needs of the companies in order to better support them.

The results of the survey demonstrated that the companies starting up in the Kharkov area could not easily use internet and its many opportunities for their businesses. Companies generally did not have a good working knowledge of internet applications and some had limited access to the internet. Consequently many companies could not easily set up internet websites to disseminate information related to their companies and create more business opportunities.

Kharkov Technologies ran a feasibility study to explore the establishment of a broadband internet system which would cover both the scientific institutes which hosted the physical incubator as well as a virtual incubator (set up as a website) which could better meet clients' needs as indicated in the survey results.

The feasibility study was the basis for the proposal that Kharkov Technologies submitted to *infoDev* in response to the call launched in 2003 which made up to \$ 250.000 available to support the set up a virtual incubator.

Setting-up virtual services - the implementation:

Kharkov Technologies was awarded the *infoDev* grant. With the additional support provided by the founders, the scientific institutes, Kharkov Technologies set up a complete internet broadband system for the institutes and the incubator.

In the meantime, Kharkov Technologies started to offer virtual services for free using other servers until their own server was ready. The offering was widely promoted within the area of Kharkov through different marketing channels including brochures, attendance at events, radio broadcasts and so on.

The Virtual Business Incubator (VBI) was set up through a website allowing Kharkov Technologies to meet several needs:

- The website is the tool which teaches entrepreneurs how to use the internet and how to set up their own company website;
- Client companies websites are hosted on the VBI website;
- Client companies are more visible to a wider target audience and hence improve their business activities; and

- The website is the connecting point of the “local business network” of Kharkov, bringing entrepreneurs together and creating more opportunities for them.

Virtual Business Incubator’s structure:

Kharkov Technologies website provides a direct link to the VBI website which is structured as follows:

- The “Management” section gives direct access to send a message to each of the key incubator staff (e.g. the director, the secretary, the business consultants...) in order to ask queries, request meetings, etc.
- The “Client companies” section gives direct access to the client companies’ website links.
- The “Showcase” and “Idea Show” sections provide detailed information on the products and processes of the client companies and business projects supported by the incubator.
- The “Education” section provides access to the different distance learning and training services offered by the incubator (e.g. “How to start your own business” training session). The completion of these educational programs gives the entrepreneurs priority access to loan programs.
- The “Library” section provides access to a comprehensive database of books, articles and manuals on key issues faced by entrepreneurs (e.g. assessment and management of innovation risks, drawing up a marketing plan etc.).
- The “Newsroom” section contains information about the Ukrainian business world (e.g. business events, economy-related news, etc.)
- The “Navigator” section provides an exhaustive list of links to relevant stakeholders’ websites (e.g. law firms, bank institutions, State institutions and departments and so on).
- The “Forum” section allows entrepreneurs to exchange and communicate with other entrepreneurs, the incubator staff and other relevant parties to maintain the added value of incubation, i.e. constant and informal exchange between entrepreneurs and their business partners.

TIMELINE OF EVENTS

1998: Setting up of Kharkov Technologies Incubator.

2003: Setting up of VBI thanks to an *infoDev* grant and the support of the scientific institutes’ founders and host of Kharkov Technologies incubator.

2005: *infoDev* Global Forum in India, funding launched to duplicate the Kharkov Technologies virtual experience in the Eastern Europe and Central Asia regional network.

OUTCOME AND CONCLUSIONS

Six years after the creation of VBI, Kharkov Technologies has achieved the following:

- 60 clients of Kharkov Technologies use VBI on a daily basis (60 visits/day recorded).
- VBI offers access to incubation services at prices which are 20% to 50% lower than market rates.
- A second grant has been awarded to Kharkov Technologies to extend its virtual offering to other incubators in the *infoDev* regional network of Eastern Europe and Central Asia.

PART III

LINKS

Kharkov Technologies website: <http://www.kt.kharkov.ua/English/>

VBI: <http://www.kt.kharkov.ua/English/VirtualBizInc.html>

infoDev Eastern Europe and Central Asia Network website: <http://www.idisc.net/en/Region.3.html>

Ecabit website: <http://www.ecabit.org/>

REFERENCES

The material for this case study was contributed by Kharkov Technologies Incubator staff.

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Creation of a market and needs oriented virtual incubation program

Incubator Name: IPN-INCUBADORA, Portugal

Sector: Generalist incubator

This Case Study Examines: The steps and impact of creation and implementation of a virtual incubation program for the IPN-INCUBADORA incubator in order to overcome space constraints and reduction in revenues

Date: October 2009

PART I

SUMMARY

Problem

Acting on the findings of a feasibility study, it was decided to build a new Incubation Centre and develop its technology transfer activities by investing in new labs and supporting new fields of research in the existing labs. However, this development took time and meanwhile the incubator had a regular waiting list of 3-4 companies. Promotional activities were kept at a minimum level during this transition period because no office/lab space available and the incubator was already experiencing a “demand exceeds supply situation” from potential incubatees. Two questions had to be answered:

1. How could the increased deal flow be handled and managed when space was so limited?
2. In what way could virtual incubation be the solution?

Solution

The Virtual Incubation program did not solve all space constraints, but it offered an alternative which met the immediate needs of many entrepreneurs and helped the Incubator to address the potential loss of income due to the lack of availability of rental space. It also contributed to an improved business model by reducing the dependency on income from renting space.

PART II

BACKGROUND

The University of Coimbra is one of the oldest universities in Europe, founded in 1290. It is the most important in the Centro Region in Portugal and has around 22,000 students.

Instituto Pedro Nunes (IPN) was created in 1991 as a Technology Transfer Organization (non profit private association) promoted mainly by the UC Faculty of Science and Technology. It provides 3 types of activities:

- Technology Transfer (by means of in-house applied research laboratories and networks of competences)
- Professional Training (management and technologies)
- Business Incubation (science-based and advanced services companies).

The Incubation activities started in 1996. At the end of this year the incubator had 6 companies. In 1997 there were 9; in 1998 12 and in 1999 13. During these years the Incubator started gaining some regional and national recognition and status due to some very successful cases of incubated companies (mainly academic spin-offs). As a result, the flow of applications kept increasing and, in 2000, the Incubator reached a total of 18 incubated start-ups which occupied a total area of 1030 m², the maximum capacity of the facilities.

In early 2002 some minor modifications were made to the incubator building to create 2 extra spaces for new-arrivals and/or to facilitate the expansion of existing incubatees'. However this did not solve the overall problem of excess demand.

In the summer of 2002, a new "Virtual incubation Program" was launched with two functions:

- Virtual Incubation Start: Aimed at supporting new projects from teaching staff, students and other potential entrepreneurs who had ideas for creating a new knowledge-based business.
- Virtual Incubation Follow-up: Aimed at companies who leave the incubator after the incubation period (3-4 years).

Virtual Incubation provides the same package of services as Physical Incubation except for the office space, so the entrepreneurs/companies in this program (who pay a monthly fee of only 35€ +VAT) can benefit from:

- Support for Business Plan writing and feasibility study;
- mail-box and company address;
- fixed phone number; free access to meeting rooms;
- preferential access to training programs for the entrepreneurs and their staff;
- space in server for web-site hosting and e-mail accounts;
- presence in the IPN web-site with a project/company profile and link to their own web-site;
- free access to the basic technical advice service of the incubator;
- networking and promotion at national and international level
- Important discounts in specialized services provided by the incubator such as: applications for EU and national grants or subsidies programs, accountancy, etc.

Some of the services provided are supported by a web application (myIPN) where the entrepreneurs,

staff and other representatives of the projects or companies incubated (after registration and log-in) can, for example:

- Book meeting rooms and audiovisual equipment;
- Ask for maintenance in their offices or for ICT equipment;
- Receive news and other mailing-list services with important information for their businesses;
- Upload their own news and events on the IPN web-site; and/or
- Fill in the annual financial report of their companies (Balance sheet and Earnings demonstrations) and have feedback in terms of financial and economic indicators in order to evaluate their performance.

TIMELINE OF EVENTS

The Program started in December 2002 with one company in Virtual Incubation Follow-Up. In 2003 there were 3 projects in Virtual Incubation Start and 6 companies in Virtual Incubation Follow-up.

OUTCOME AND CONCLUSIONS

The Virtual Incubation Program was very well received by the new entrepreneurs and by the former incubatees. Shortly after the implementation stage, there were 18 projects in Virtual Incubation Start and 9 companies in Virtual Incubation. This corresponds to 1000€ /month extra revenue in Virtual Incubation fees alone allowing IPN to:

- Provide an alternative solution to the constant influx of new applications for physical incubation services;
- Handle the limitation and reduction of space available for incubation since 2002. In 2010 the total space available is around 650 m², because the new labs have already been accommodated;
- Maintain and even reinforce the positive image of the Incubator as an active organization that is always looking for solutions for entrepreneurs and their incubation needs;
- Give the customers (entrepreneurs) the added value of belonging to the IPN Incubation Program as this adds prestige and credibility to their projects/companies;
- Demonstrate to the national authorities that the new Incubator Centre was really needed;
- Outreach to some entrepreneurs projects in cities around Coimbra where no incubation services are available;
- Create a critical mass to hire new staff and develop more income generating services such as: accountancy; feasibility studies; applications to funding schemes; participation in European projects, etc. mainly addressed to the community of Physical and Virtual Incubatees. These

specialized services generate between 40 to 60 thousand Euros additionally per year and contribute to the self-sustainability of the incubator;

- Create an important pool of start-up projects ready to enter in the New Incubation Centre as soon it is finished and ready to start;

The Incubator has since grown to 4 full time staff members (compared to 2 in 2002). In 2002, IPN-Incubadora was a department of IPN, but in 2003, a new Institution called IPN-INCUBADORA was created, with 2 associates: IPN and University of Coimbra, and this new institution will run the new Incubation Centre.

A Virtual Incubation program did not solve the space constraints problem of IPN, but it offered an alternative which met the immediate needs of many entrepreneurs. The program helped the incubator to achieve revenue growth, even though there was a lack of additional rental space. It also contributed to an improved business model by reducing the dependency on income from renting space.

PART III

LINKS

<https://www.ipn.pt/si/event/allNews.do;jsessionid=D6B840E47FF391C9439B6121252F1DB5?themeId=2>

<https://www.ipn.pt/si/event/dataNews.do%3Bjsessionid=B770A23A7B40DFFBBD2170FF6475E2D6?elementId=538>

<https://www.ipn-incubadora.pt/si/initapplication.do>

REFERENCES

The material for this case study was contributed by Oxford Innovation Ltd. through its Good Practice Handbook for Incubator Managers – Final Report – commissioned by the Gate2Growth incubator Forum

Contact details:

www.gate2growth.com

Netactiva, the virtual incubator of Barcelona Activa

Incubator Name: Netactiva, Spain

Sector: Generalist but with a focus on innovative companies

This Case Study Examines: Netactiva, an example of virtual incubation

Date: January 2010

PART I

SUMMARY

Problem

Public administrations are committed to facilitating the widest possible access to their services across the general population and to serving as many businesses as possible. In the case of Barcelona Activa, the targets for a virtual incubator are potential entrepreneurs and companies. When Barcelona Activa was created as the local development agency of the city council of Barcelona, local authorities realized that there was a need to build a critical mass of people willing to set up a company or to run a company. It was recognized that supporting such company start-ups could contribute significantly to the development of the economy. By broadening its service offering Barcelona Activa could facilitate access to its services from individuals who had limited access to resources (lack of education, limited mobility, lack of time, etc). Consequently, Barcelona Activa sought to overcome the time, space and cost barriers that could prevent 'would-be' entrepreneurs from accessing the skills, resources and education needed to start a company. The solution also had to be affordable in terms of economic resources since it was launched by a public administration.

Solution

A blended or hybrid model was developed. This hybrid model could be defined as a combination of on-line and on-site services dedicated to promoting entrepreneurship and business growth. Barcelona Activa's hybrid model consists of a combination of the following resources:

- Flexible personal coaching combined with self-use environments fitted with IT equipment;
- On-line content and tools to support start ups; and
- Executive training for entrepreneurs.

PART II

BACKGROUND

Origins:

The 1980's was a changing decade for the Spanish state, Catalonia and Barcelona. As well as the shift

in the political framework after the end of the Franco's dictatorship in 1975, the decline of traditional industry sectors such as the textile, food processing, chemicals and machinery sectors caused important economic imbalances. Given this situation local authorities designed a strategy to put Barcelona in the right position to become an important location in terms of innovation and economic growth.

Founding Barcelona Activa in 1986 as the local development agency of the City Council of Barcelona was part of this strategy. The agency had two main areas of action, the first one was devoted to foster entrepreneurship and business growth and the second one was focused on stimulating jobs creation and increasing the quality of the jobs in the city of Barcelona.

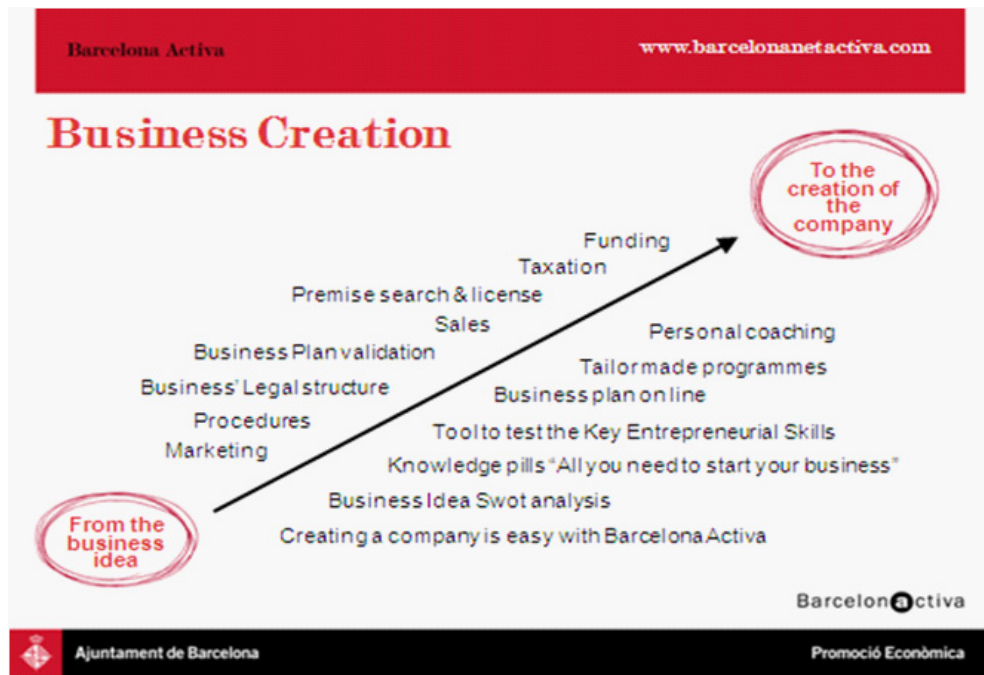
At the end of the eighties, local authorities considered that the city needed amenities to host recently created companies and therefore to reinforce its strategies to foster businesses in the city. This is the reason why in 1988 Barcelona Activa was provided with an incubator that hosted 16 companies at the beginning. At the beginning of 2010, 51 companies were incubated in the incubator premises. In 1995 the Technological Park, focused on technological companies, was founded. In 2010 it hosted 37 companies. Both the Technological Park and the incubator belong to Barcelona Activa and are run and managed by its staff.

Barcelonanetactiva

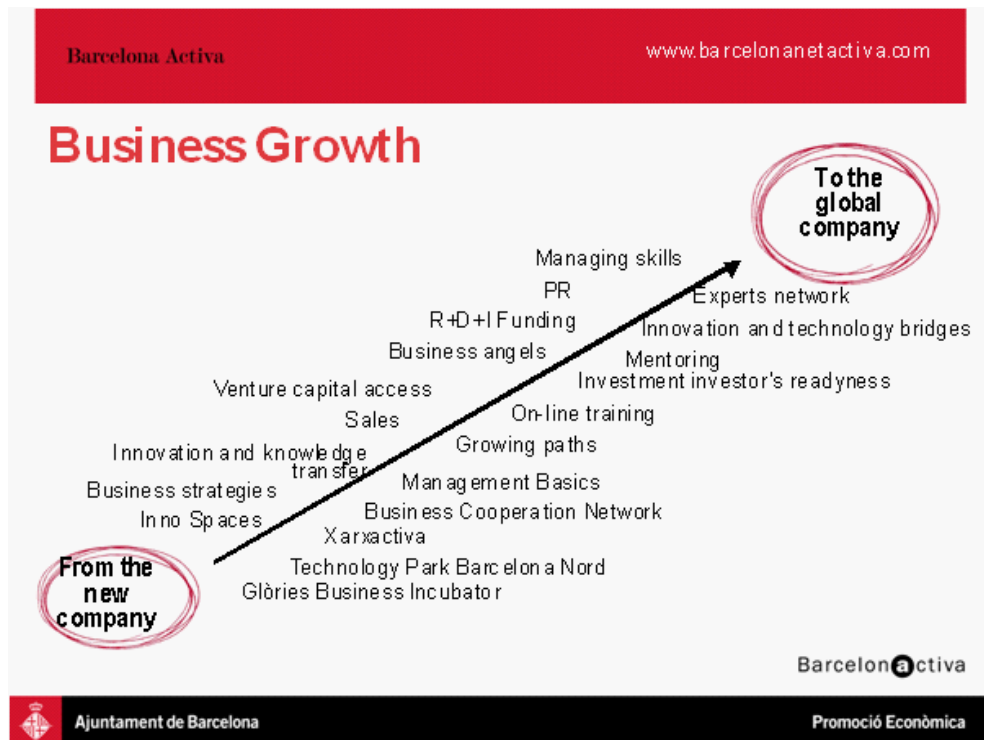
In 1999, after 13 years of experience training entrepreneurs, employees and unemployed workers and coaching business, the virtual incubator was launched. This virtual incubator was created based on the wide experience and background of the physical incubator and on-site training courses which had been comprehensively tested.

A new incubation model was created. The model follows a scheme that leads the entrepreneur from the business idea stage to the business consolidation and growth stage.

First step: Business creation



Second step: Business growth



Based on the expertise of Barcelona Activa and as part of a strategy to offer entrepreneurial skills and coaching to as many entrepreneurs as possible (and to overcome the time and spaces barriers involved in setting up a company) the virtual incubator was launched in 1999. New technologies and the internet revolution made it possible to provide efficient virtual services to entrepreneurs.

On-line tools

A complete set of on-line tools was created from 1999 onwards. . These on-line tools are divided into two groups. The first group focuses on business creation and the second one on business development:

Tools for business creation:

Test idea (now available in Catalan, Spanish, English, Chinese and Arabic), is aimed at assessing the potential of a business idea in the market. It facilitates the process of maturation of the business idea, explores how it is possible to enrich it and to avoid failure factors.

The evaluation of a business idea is based on three main criteria:

1. Profile of the entrepreneur,
2. Market in which the company will operate, and
3. Features of the business idea.
 - Regarding the idea, it is important to assess if it is a mature idea, that has been sufficiently evaluated or if it is an idea which has only recently emerged, for example, because of an urgent need for self-employment.
 - Regarding the market, it is important to be aware of all aspects concerning potential competitors, clients and also the level of innovation that the business brings.
 - Regarding the entrepreneur, the following features need to be analyzed: Capability, skills, know-how, leadership, enthusiasm, commitment.

As 'Test Idea' is an on-line tool, its goal is to encourage the entrepreneur to think strategically. Strategic thinking is facilitated through a short and simple process, adapted to a wide range of entrepreneurs' profiles. Features include simulations and impressions and the process uses filters to submit appropriate questions. The tool allows good interaction with the user providing constant guidance and feedback. A strategic SWOT is provided as an outcome of the 'Test Idea' process.

Since the entrepreneurial skills are especially significant when analyzing the potential of a company to succeed in the market, part of the 'Test Idea' tool is dedicated to analyzing personality traits such as the background, the skills and the education of the entrepreneur. A questionnaire is sent to the entrepreneur aimed at analyzing all these aspects. Depending on the answers, the tool will provide the user with a complete professional profile focused on the skills needed to run a company.

• **The keys to start-up.** This tool is devoted to evaluating the entrepreneur's profile. The keys to start up are divided into three steps:

- Definition: The entrepreneur is asked to choose the group that matches his/her chosen area of activity to find out what skill level it will demand from him/her as an entrepreneur.
- Diagnosis: the tool places the entrepreneur in front of ten scenarios and he/she is evaluated on the basis of his/her level of attainment in the skills every entrepreneur should have.
- Analysis: provides the entrepreneur with the results he/she scored according to the answers he/she provided beforehand.

• **Online Business Plan to write your business project:** this application coaches the entrepreneur in the analysis of the business project by allowing him/her to write his/her own business plan from home or using the ICT resources of an Entrepreneurship Centre. The on-line adviser is an optional role since the tool is designed to work automatically. The entrepreneur is encouraged to think of the final user of their product or service when writing the business plan.

• **Guide to legal entities and procedures:** provides entrepreneurs with the information needed to learn about existing legal entities and decide which entity suits their business project best.

• **Guide to raise funds:** This guide is divided into four major sections:

1. Funding: financial instruments such as preferential bank loans featuring low interest rates, without fees or guarantees.
2. Public grants and subsidies: most entrepreneurs or new businesses can apply for certain public aids to help them to start-up.
3. Contests and awards: innovative business ideas might qualify for contests and awards that reward best business projects.
4. Tax incentives: once a business is started, the public administration provides them with some tax incentives that will allow these companies to improve their financial situation.
5. Online business incorporation (48 hours for "PLC express" and 1 week for "standard PLC").

Tools for business growth:

• **Strategic Growth Plan:** This strategic growth plan is composed of:

- An analysis and diagnosis of the situation and current management of the company.
- Identification of opportunities for improvement.
- Setting growth targets and action plans.

• **Entrepreneurs' virtual school:** The Virtual School provides Entrepreneurs with thematic advice

under the supervision of an expert in the field concerned. This tool offers entrepreneurs the possibility to learn, be coached and network with relevant people in their business area. The themes of these virtual areas are specially designed to fulfill the needs of the entrepreneurs: finance for non-financial people, marketing for start-up companies and so on.

- **Assessment of investment readiness:** This program includes the cycle of seminars called Ready4Growth. These intensive seminars, that normally last two days, provide participants with the tools and contacts that facilitate their access to funding and innovation through private investment.

- **Newsletter with key information:** distributed periodically.

- **Ad-hoc reports:** on significant themes for entrepreneurs.

- **Business Classifieds** on business opportunities.

On-site part of the hybrid model:

Even though the virtual tools provide significant help to entrepreneurs to set up and grow their companies, Barcelona Activa nonetheless recommends a hybrid model that combines virtual tools and on-site coaching and assessment.

Barcelona Activa
www.barcelonanetactiva.com


A Blended model to promote Business Creation & Growth

Innovative environments

- Latest technologies
- Personal expert advice
- Where things happens

On line Contents


- On line tools & comprehensive contents to start up and grow




Events and programs

- Executive training and coaches
- Networking events

Results + Impact + Cost Efficiency


Ajuntament de Barcelona



 Promoció Econòmica

Therefore, in addition to the on-line tools, the following services, facilities and resources are provided by Barcelona Activa to entrepreneurs:

- Open plan office modules with a wide range of sizes.
- Communal reception facilities and services.
- Fully fitted meeting rooms and training rooms.

Some of the features of the Technology Park are:

- Round-the-clock access, 365 days a year.
- No deadline for the hosting period.
- Technological environment.



Business Support Services are provided to companies that are incubated and also to members of the Barcelona Activa Business Network (this business network is composed of all the companies and entrepreneurs that are, or were, users of any of the services of Barcelona Activa.) These services include:

- Specific on-site business development plans focused on business strategy, funding, internationalization strategy and commercialization strategy.
- Business cooperation network: A space where entrepreneurs can exchange ideas, learn and do business in a setting which fosters networking and cooperation.

TIMELINE OF EVENTS

1986: Establishment of Barcelona Activa by the City Council of Barcelona. Barcelona Activa was created as the Barcelona development agency.

1988: Creation of the first physical incubator

1995: Founding of the Technological Park of Barcelona Activa

1999: Launch of Barcelonanetactiva, the virtual incubator of Barcelona Activa.

2003: Launch of the 'Plan Empresa' On Line (Business Plan On-Line)

2006: Launch of the 'Test Idea'

2006: Launch of the 'Keys to Start-up'

2008: Launch of the 'Plan Estratègic de Creixement', the Strategic Growth Plan

OUTCOME AND CONCLUSIONS

General figures of Barcelona Activa since 1986:

- 14,500 business projects coached
- An estimate of 8,000 Business founded, which have created more than 15,000 jobs
- More than 1.3 million participants in the Agency's programs

Some figures from 2008:

- 1,379 business projects coached.
- more than 700 companies created
- 72 companies incubated.
- 700,000€ average turnover of incubated companies at 4th year
- 7350 companies actively supported in their business growth process.

Some figures related to virtual incubator since its creation:

- 1,656,838 visits
- 110,310 different visitors
- 33% recurrent visitors
- 6.5 pages views per visit

PART III

LINKS

Barcelona Activa: www.barcelonactiva.cat

Barcelona Net Activa: www.barcelonanetactiva.com

Barcelona Business Growth department: <http://www.barcelonactiva.cat/barcelonactiva/cat/emprendre-i-innovar/creixement-empresarial/index.jsp>

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Wikipedia – Tacit Knowledge

http://en.wikipedia.org/wiki/Tacit_knowledge

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Wikipedia – Youtube

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Wikipedia – Web 2.0

http://en.wikipedia.org/wiki/Web_2.0



Annex 1: Profile of Virtual Incubator Tools

Journey Page

About JourneyPage (www.journeypage.com)

At its core, JourneyPage is a daily accountability tool that helps entrepreneurs stop procrastinating and achieve more than they ever thought possible with a dedicated coach, exclusive content, and a sophisticated technology back-end.

It is available for individuals starting a business or for licensing by colleges & universities, SBDCs, incubators, economic development organizations, and workforce development agencies. It is a safe, secure solution that's always available. To learn more about licensing, call or email Michael Simmons at 800-930-8021, ext. 704.

Benefits for Licensees

- **College & University Administrators & Faculty**
 - Build and publicize success stories, which attract donors, receive media attention, and market your program.
 - Provide incubator benefits at a fraction of the cost without the need for physical space.
 - Facilitate existing mentorship programs
 - Build lesson plans around action on student ideas.
- **Economic Development Organizations**
 - Create jobs and an entrepreneurial climate by retaining & supporting young entrepreneurial talent
 - Provide a community benefit that attracts entrepreneurs.
- **Small Business Development Centers (SBDCs)**
 - Supplement 'technical consulting' with 'accountability coaching'.
- **Incubators**
 - Increase business formation by providing clients with "emotional support" they need to take action.
 - Supplement 'technical consulting' with 'accountability coaching'.

Pricing

- **Individual**
 - Exclusive Content (\$1.00 upfront and \$9.95/month afterwards)
 - Personal Coaching (\$200/month)

- Colleges & Universities, SBDCs, Incubators, Economic Development Organizations, and Workforce Development Agencies:

# of Users	Yearly Fee
<=5	\$600
<=10	\$1,150
<=20	\$1,700
<=30	\$2,200
unlimited	\$3,000

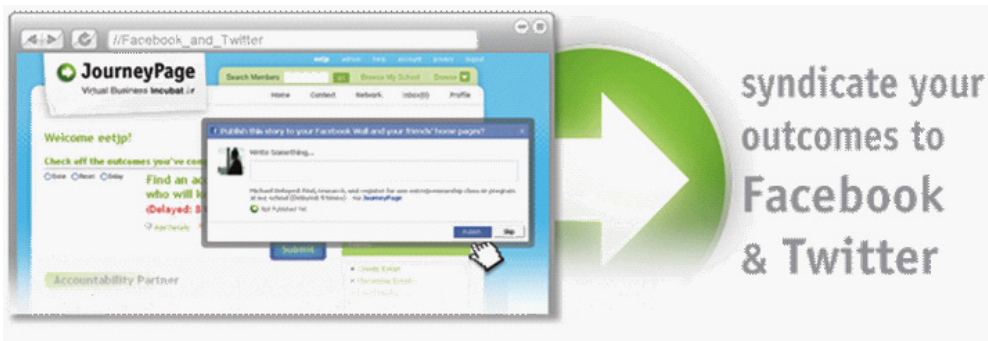
How It Works

Accountability

Every day members log in and mark off their three most important business outcomes for the day.

When marking off results, members choose from one of three options: complete, reset, or delay.

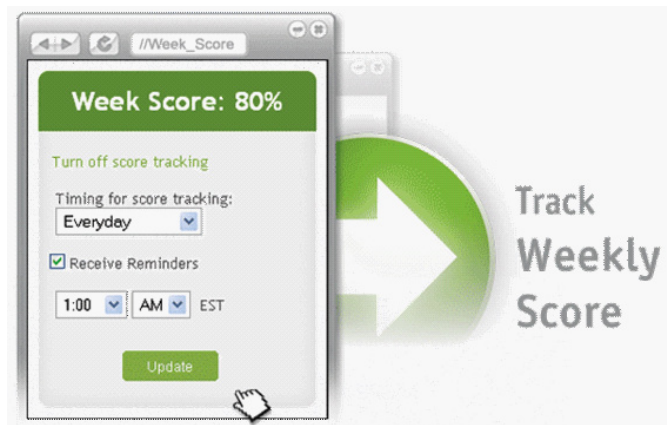
Publicly commit to and receive the support of your Twitter and Facebook network.



Your accountability partner and friends on JourneyPage can see daily progress and provide accountability. They see procrastination and provide targeted coaching.



As members use JourneyPage, their weekly score (outcomes completed/outcomes submitted) is tracked so that others can hold them accountable. Optional email reminders are available.



For more information on JourneyPage visit <http://journeypage.com/>

Annex 2: Profile of Incubator Using Virtual Tools



The Sri Lanka Technology Incubator (SLTI)

The Entrepreneur Portal: The Entrepreneur Portal (a future initiative) will allow ConceptNursery (CN) to aggregate and disseminate news that relates to entrepreneurship and emerging technology. One of the biggest problems for budding entrepreneurs in Sri Lanka is that they lack exposure and access to information. The Entrepreneur Portal will help to filter the mass of information available on the Internet and allow visitors to the site to access news and targeted information related to the incubator's areas of interest. The Entrepreneur Portal will be an outreach activity of CN, primarily intended to attract potential Tenants and partners. This portal is currently at the prototype stage and is going through final deployment stage.

Groupware and messaging platform: Although CN's activities and focus extends beyond the walls of their current building the need to engage and work closely with resident and virtual tenants, partners and various other stakeholders is still a key activity. A comprehensive CN Messaging and Groupware solution will allow the various stakeholders to communicate and share information more efficiently. In addition to email, calendar and contact management, the online document sharing facility, message board and chat conferencing facilities will allow the CN to facilitate an ongoing dialogue and conduct online mentoring sessions and seminars. The CN Messaging and Groupware solution is primarily intended to increase internal productivity as the incubator broadens its scope and focus.

CN proposes to deploy an online Project Management and Collaboration solution that will dovetail into the CN Messaging and Groupware platform. The Project Management and Collaboration solution will be used for CN's own activities as well as for CN Tenants, resident and virtual, who will manage their technology development process using this tool. The tenants will be able to use this facility to allow their customers, investors and other partners to track progress and monitor developments. The CN Project Management and Collaboration solution is primarily intended to infuse discipline and transparency from the very beginning of the CN Tenant's technology development process. Both these products are currently installed at the premises and going through a testing and fine tuning stage.

Technology and Investment Exchange Portal: To further compliment CN's Entrepreneur Portal, CN proposes to develop and deploy an online Technology and Investment Exchange for Tenants and Graduates. This facility will allow current and graduated Tenants, both resident and virtual, to market and deliver themselves, their products and solutions to customers and potential investors who may be anywhere in the world. The CN Technology and Investment Exchange will integrate functionality similar to that found on popular commercial sites like eLance, CDW, Amazon & eVentures. This facility will be used to generate revenue and build credibility that could subsequently be leveraged by the Tenants as they establish themselves in the market. This facility will also be integrated with the three other software modules so as to provide a seamless user experience. This portal is currently at the prototype stage.

Tenant portal: CN's growth beyond the confines of the current premises is crucial to its long-term success. It is clear, however, that growth cannot come from investment in brick and mortar incubators. To this end, the incubator has conceived a franchise program and a Virtual Tenant (VT) program. The

franchise program will be implemented through alliances with Universities and other institutions at the national levels. The VT program however, will aim to provide the relevant services to prospective tenants who will be incubated remotely. This portal is currently at the prototype stage.

<http://www.conceptnursery.com/>



Annex 3: Check-list for an Action Plan to Set-up Virtual Incubation Services

1. Preparation of Background/Summary

Action	Responsible for completing	Deadline
Why are virtual services being set-up?		
What services are planned?		
How do these services fit within the overall strategy of the incubator?		
Summary of the expected costs and impact of such services (using input from section 5 of check-list)		

2. Preparation of the Marketing Plan

Action	Source of market information	Responsible for completing	Deadline
What are the target market segments for virtual services?			
Quantify the size and growth trends of these target market segments.			
What are the targets for customer acquisition? Over what period?			
How will the market be reached?			
If third party distributors are planned, please provide details of acquisition, contractual and support plans:			

Competitor Analysis using Extended Marketing Mix

STRATEGY ELEMENT	TYPICAL VARIABLES OF VIRTUAL SERVICES	CUSTOMER NEEDS PROFILE	OTHER OFFERINGS	OUR OFFERING	OUR BEST LEVERAGE AREAS	COST IMPLICATIONS	RESPONSIBLE FOR COMPLETING	DEADLINE
1. Product / Service	<ul style="list-style-type: none"> Name Branding Bundled or stand-alone offering Online/offline elements Features / Attributes/Benefits Help-desk support User requirements (PC/Internet access) 							
2. Price	<ul style="list-style-type: none"> Should virtual services be priced on a stand-alone basis or as part of a package? What margin? Level of customization and impact on pricing Ongoing maintenance and support Terms & Conditions of Use Value customer places on virtual service 							

Suite 3

Advanced Incubator Management

STRATEGY ELEMENT	TYPICAL VARIABLES OF VIRTUAL SERVICES	CUSTOMER NEEDS PROFILE	OTHER OFFERINGS	OUR OFFERING	OUR BEST LEVERAGE AREAS	COST IMPLICATIONS	RESPONSIBLE FOR COMPLETING	DEADLINE
3. Place Where people can access the services...	<ul style="list-style-type: none"> Physical Location – hot-desks/on-site tenants/computer labs Third party channels – other incubators, universities, public bodies Geographic coverage – outreach centers Licensing/distribution agreements Training and support for third parties 							
4. Process Without delay...	<ul style="list-style-type: none"> Business processes compatibility (how to integrate virtual services into overall processes) Client involvement tools to measure usage Responsiveness? Timing? Ease of access/convenience Work/information flow? Self-help mechanisms 							

Suite 3

Advanced Incubator Management

STRATEGY ELEMENT	TYPICAL VARIABLES OF VIRTUAL SERVICES	CUSTOMER NEEDS PROFILE	OTHER OFFERINGS	OUR OFFERING	OUR BEST LEVERAGE AREAS	COST IMPLICATIONS	RESPONSIBLE FOR COMPLETING	DEADLINE
5. People	<p>Incubator personnel:</p> <ul style="list-style-type: none"> • Technical aptitude (technology adopter or lag behind) • Technical Competence • Involvement at all stages of development? <p>User:</p> <ul style="list-style-type: none"> • Knowledge/culture • Technical competence • Training • Commitment / motivation 							
6. Physical evidence Where physical aspects reinforce soft issues...	<ul style="list-style-type: none"> • Networking meetings / training • Website and virtual tools appearance • Supporting documentation • Facilities • Physical conditions <ul style="list-style-type: none"> • Visual clues / marketing aesthetics (logos, forms, etc.) 							

Suite 3

Advanced Incubator Management

STRATEGY ELEMENT	TYPICAL VARIABLES OF VIRTUAL SERVICES	CUSTOMER NEEDS PROFILE	OTHER OFFERINGS	OUR OFFERING	OUR BEST LEVERAGE AREAS	COST IMPLICATIONS	RESPONSIBLE FOR COMPLETING	DEADLINE
7. Promotion	<ul style="list-style-type: none"> • Marketing to existing clients • Publicity / 3rd party reference? • Shows / exhibitions • Events • Promotions • Advertising • Public Relations 							

3. Preparation of Operational Plan.

Action	Responsible for completing	Deadline
<p>Detail each of the incubator's major operational policies e.g.</p> <ul style="list-style-type: none"> • Selection/graduation policy • Service provision • HR Policy • Governance Policy <p>For each major operational policy explain where virtual services fit into the organizational process? Who is responsible? What are the performance and evaluation criteria?</p>		

4. Preparation of Administration/Organization Plan

Action	Cost implication	Responsible	Deadline
Equipment requirements – on-site and off-site if outreach centers are being used			
Staff requirements – at set up and related to ongoing service provision.			
Who is responsible for setting up the virtual services?			
<p>Who is responsible for</p> <ul style="list-style-type: none"> • Training, • Ongoing delivery of services, • Help-desk support, • Monitoring & evaluation, • Upgrades and maintenance? 			
Is there one person responsible for the virtual services function or is it integrated into individual functions?			
Updating of job descriptions to incorporate virtual services			

5. Financial and Investment Plan.

Action	Summary of Cost / Revenue implication	Responsible	Deadline
Set up costs related to internal staff, IT consultants, IT development.			
Ongoing license fees, maintenance costs, cost of upgrades and further development.			
Hardware, software and networking costs.			
Outreach centers – building or adaption costs, accessibility (including travel) and equipment costs.			
Sources of investment for virtual services – donor funding, private investment, grants?			
Ongoing revenue streams (should virtual services be priced as part of a bundled offering or as standalone virtual services)? What does the market research tell you about the value which clients associate with virtual services? Are they prepared to pay? How do you work out the cost of a virtual service? What margin can you add?			

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