Field Lab

Entrepreneurial Innovative Ventures

Microsoft

Local Software Economy

Ricardo Samuel Abecassis Empis da Cruz Alves

nº 326

Masters In Management

Supervisor:

Filipe Castro Soeiro
# Table of Contents

Executive Summary 3  
1. Introduction 6  
2. Business Description 8  
   Historic description 8  
   Value of proposition 9  
   Vision, Mission and Objectives 10  
3. Business environment 11  
   3.1 – Portuguese market analysis, dimension and trends 11  
   3.2. Incubator Market analysis, dimension and trends 12  
   3.3 Incubators in Portugal 12  
4. Market Specifics 13  
   4.1 Market Needs and segmentation –  
      Why Incubation, who for Incubators? 13  
      A. Entrepreneurs – Clients 13  
      B. type of business proposition – partners segment 15  
      C. Who are the valuable partners? 16  
   4.2 Market Potential –Portuguese prospects 16  
   4.3 Market Rivalry – Competition and Benchmarking 17  
   4.4 distribution channels and Purchase Policy 18  
   4.5 technological challenges/ opportunities 19  
   4.6 SWOT analysis 20  
5. Competitive Strategy 20  
6. Marketing and Sales strategy 21  
   6.1 Marketing strategy – P&S Positioning, price & communication 21  
   6.2 Sales Strategy – Distribution Channels, Sales Force,  
      Tactics and forecast 23  
7. Processes and Operations 24  
8. Organization Design 25  
10. Human Resources Management 26  
11. Risk Analysis 26
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Implementation Plan</td>
<td>27</td>
</tr>
<tr>
<td>13. Financial Analysis</td>
<td>27</td>
</tr>
<tr>
<td>14. Conclusions</td>
<td>28</td>
</tr>
<tr>
<td>15. Annexes</td>
<td>30</td>
</tr>
</tbody>
</table>
**EXECUTIVE SUMMARY**

The LSE Ecosystem model or LSE Incubator focuses in the structures and processes that are needed to support the solid development of ideas, start ups and SMEs into strong businesses, in the Portuguese software market.

In 2007 Portugal was one of the countries with lowest private equity funding on entrepreneurship, only 0.1% of GDP. Measures were taken to improve this and now Portugal has registered the highest increase in investment being made in the entrepreneurial ICT sector, increasing 143.1% in 2008, of which 30% were in ICT start ups. However this growth hasn’t been accompanied by an increase in business support. It lacks structures that can help to generate more efficient and productive results, especially in this sector where outcome of investments is still low.

Furthermore market studies conducted in Portuguese Computer Science Universities demonstrated that there are 27.8% IT students who have a business idea and want to become entrepreneurs, however only 6.4% do so. The other 21.4% are unused potential. Only 2.6% of IT students have any kind of support.

This has opened the opportunity to find a way to provide the missing element to Portuguese software market entrepreneurs – Increasing the quantity and quality of support to their businesses and ideas, to improve their performance.

With this in mind two structures were crafted to generate this strong growth – The Web Platform 2.0 and The Incubator – that work sequentially, with the first one focusing on quantity, and the second on quality of support.

Web Platform 2.0 was inspired in Facebook, and will bring the social web communities effect of exponential increase of users into the entrepreneurial market, by making a social web community where the profiles are businesses and ideas (instead of personalities like in Facebook). This will generate a large volume of users that can find here a space to network, create events, marketing and having basic support with webcasts and free downloads, having the capacity to host 6500 users by year 5.

The Incubator was designed by benchmarking the best Incubation models around the world. It selects the top 3% businesses out of the Web Platform 2.0, providing them strong support for their business development and establishment in the Portuguese and international markets. The support will be given both at a physical space and virtually in Lisbon, allowing having a countrywide reach of 250 businesses.
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

Besides these two main products there will also be 2 more products in the Web Platform 2.0 – web marketing and prime community membership, that provide better conditions for a fee, and 3 more products in the Incubator – SME consulting, InAccess fee and Incubator Stake, that will provide the same services of Incubator, charge a fee for Investors to have the opportunity of funding Incubator businesses and acquire a participation of 3% in each incubated business respectively. These are non core products that will enable to potentiate profits to the LSE Incubator.

Considering a 10 years frame, the LSE Incubator will have an impact of at least 4.6% (NPV value) in the software economy in Portugal, equivalent having one more company like Accenture.

The mission of this project is to enable this value generation to the software the economy to keep on growing sustainably, making Portugal a very competitive country in terms of software business production.

The Key drivers are therefore People – Clients, Workers and Partners. The LSE Incubator must be able to have many clients, of which some will be outstanding. Workers at the Incubator must have valuable business and IT experience to pass on to these elite clients. Thirdly are the partners who can provide the right tools for development of workers and clients.

The Clients will be IT university students, start ups and SMEs, as well as start ups and SMEs from other sectors that want to develop an IT activity.

The Workers will be IT and economics related graduates, trained by the best entrepreneurs and consultants in the market. The CEO will have to be an experienced IT entrepreneur.

The Main Partner will be a Business Angel association, and other will be from the areas of hardware, software, training, universities, consulting, logistics web host/design, law and capital.

Two features clearly distinguish this project from any other nationally or worldwide:
None of the world incubators seriously focuses on marketing, while this one does, through the Web Platform 2.0. The second special characteristic is seizing the opportunity of the bologna agreement, making universities more practical oriented, by incorporating university students and teachers in the client businesses development, reducing greatly the time spent by workers with each client.
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

The LSE Incubator is medium to long term profit oriented, starting to showing good results only in year 3 with total sales reaching 1,731,938€. However the major value of this model is the businesses opportunities it will generate to its shareholders.

Development costs will need an initial funding of 350,000€, to cover the development costs of the Web Platform 2.0 in the beginning and of the establishment of the Incubator in month 6.

The NPV is 804,151€, with a payback period of 2 years and 9 months.
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

1. Introduction

The Local Software Economy (LSE) consists in finding ways to develop locally, country by country, the software market, by engaging in multiple initiatives that enable the development of software. It has been one of Microsoft’s ambitions worldwide, as well as in Portugal, and it has mostly been done by getting large companies, government and ISVs as Microsoft’s partners, co-developing projects to support Start Up, University students and SMEs.

This business plan consists in redefining the LSE project in the function where Microsoft has been underperforming in Portugal— the incubation phase — enabling the creation of new competitive businesses in the software sector.

The **LSE Ecosystem Model** or **LSE Incubator** is designed specifically for Incubation, being the sole focus of this Field Lab. It addresses a solution to this opportunity by the creation of a business model that enables the geometrical development of the Software economy in Portugal through software Start Ups and SMEs businesses development, making it become much more competitive worldwide, analyzing the structural, operational and financial needs to implement such project. To do so, there will be 2 structures supporting 7 products: **1. Web Platform 2.0**, providing 3 products – web platform access, Web Marketing and Prime Community Membership; **2. Incubator** providing both the other 4 products – SME consulting, Incubator Services, Incubator InAccess Fee and Incubator Stake. These structures and products strongly enable the transformation of a software business idea into a solid business operating both nationally and internationally, increasing drastically the businesses chances of success and business volume. Here is an introductory depiction of the model:

This figure shows the integration of support in the creation of businesses.
1. The Web Platform 2.0 will focus on capturing university students and Start ups through the creation of a strong community. The way to do so will be through a web site somewhat like Facebook where entrepreneurs can create business profiles (instead of personal as in Facebook), having access to a network of other businesses to interact with, promoting events, networking or conjointly developing projects, upgrading their business image as well as downloading tools that will upgrade their businesses. The other two products - web marketing and prime community membership – are profit oriented and will provide privileged conditions of marketing and performance respectively.

The Web Platform 2.0 is follows a Blue Ocean strategy, by joining the Social web 2.0 communities business with entrepreneurship. The core of this platform it to bring a viral marketing effect into the entrepreneurial market, encouraging entrepreneurs to explore their business ideas development and inviting their networks to join. This will enable reaching many businesses and ideas, generating a large pool of users.

2. The Incubator will focus on the nurturing, development and creation of strong businesses or developing a software channel in current businesses, selected out of top projects from the Web Platform 2.0 offered both physically and virtually. The setback of the physical incubator is that it will be located in Lisbon, not allowing reaching the rest of the country, the virtual Incubator will address this by providing the same products via virtual interfaces (Skype and conference calls), except offices, to the rest of the country and abroad. All this will be done through the Incubator Services (Consulting, Managerial, Financial, juridical, accounting and marketing support, office & basic services, access to studies and training) and SME consulting products. The Incubator InAccess fee will be charged to Investors wanting to finance clients and the Incubator Stake will be a share (1-5%) in each client business.

The core competence lies in its People – clients and workers – Incubator must be able to select the best projects from the Web Platform 2.0 as well as valuably training and developing their workers, for them to offer the best business and IT experience to clients.

The ownership of the LSE ecosystem Model will mutually belong to Microsoft and its strategic Partners, who’ll become Board of directors’ member. The main controller will be ANJE or APBA (Business Angels). Partners will participate with capital, goods or both.

With this clarification of the Business Model now it will be shown what has been made so far to develop the software market by Microsoft.
2. Business Description

Historic description

Since 2001 Microsoft has been creating many initiatives that help on the development of the software economy, in 2008 it was decided that an alignment of these initiatives should be done and the BOOST innovation accelerator program was created.

This program has four main sequential pillars:

- **Stimuli** with Imagine cup, Microsoft student partner and MVP (most valuable professional) programs. Stimuli focus on generation of ideas.

- **Training** in entrepreneurship, technical tools and TechNet MSDN webcasts events. The training phase focuses on competences for the new ideas.

- **Support** with empower ISV, Dreamspark, BizSpark, Programa Mais, MIC (Microsoft Innovation Centres) and .Net Laboratories. This phase focuses on helping ideas getting access to development tools, capital and incubation.

- **Promotion** focuses on making these new companies known the market through the innovation day, the entrepreneurship forum, by telling successful start up stories and in the final of the Imagine Cup.

Most of these initiatives went well. Imagine cup has reached 1500 people in 2008, empower ISV reached 200 software developers, DreamSpark TechNet and MSDN reached 46,000 software downloads from university students, BizSpark 117 start up companies, etc, reaching or overcoming the expected results Microsoft had prospected.

However one of their initiatives, the Microsoft Innovation Centre (MIC) did not. The MIC program was developed jointly with ISCTE University that has a different focus and priority leading to some delays and lack of results. Gonçalo Pernas the header of the MIC from ISCTE showed what the MIC was, and right now it is only composed of a small room with 2 PCs, stuffed with boxes with no conditions for the goals the MIC wants to reach (creation of new companies, seizing university ideas and implementing them in the market, providing training, integrating management and engineering, etc).

Because of this difficulty Microsoft’s José Fernandes, leading the LSE initiative, accompanied by Vitor Santos who is in charge of the relationship with Universities and Rahim Aly, responsible for MIC, came up with the idea of designing a new project, where I come in – how to develop a way to involve multiple Companies, Universities and...
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

Associations in the software market into the same project and benefiting them all, by generating an environment with more business opportunities, higher growth, more competitive and higher export and software creation capacity, in other words – developing seriously the national software market. This is exactly the focus of this Business plan.

This thesis development incorporated the study of multiple cases of business incubation around the world, such as IdeaLab, MIT and Oxygen, exploring the best practices that exist and crafting breakthrough marketing and processes to seriously influence and involve the Portuguese software market, which can be seen as contingent practices that were built on top of best practices in incubation. Besides this model, Virtual Office models were also analyzed finalizing with the study of the Entrepreneurial process and the entrepreneurship situation in the Portuguese software market considering its advantages and drawbacks, reaching a final development of an adaptation of the best incubators around the world to the Portuguese market reality, crafting some new particular strategies that address this market reality, not designed before.

**Value of proposition**

**Value to Partners and Economy**

Based on the Portuguese expected revenue from Start Ups and on the adaptation of an US study to the Portuguese reality it was possible to calculate the impact the LSE Incubator Model will have on the Software economy, assuming it works for 10 years, measured in terms of NPV (appendix1):

<table>
<thead>
<tr>
<th>year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact of LSE in software economy</td>
<td>0.6%</td>
<td>0.1%</td>
<td>0.2%</td>
<td>0.3%</td>
<td>0.6%</td>
<td>1.3%</td>
<td>2.2%</td>
<td>3.3%</td>
<td>3.9%</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

This means that what will be shown to partners is that investing in this project means increasing right now (NPV) the business opportunities of the currently € 2 billion software and services market by 4.6%. If we consider the whole IT market of around € 4 billion (that includes more Hardware market) than this initiative impact will be of 2.3 % in the whole IT sector.

We can compare this percentage in terms of business volume with Portuguese companies - it is similar to create a company as big as Accenture or Glintt, which occupy the 5th and 6th position in terms of market share.

**Value to clients**

Regarding clients point of view and based in the best practices and international benchmark one could establish as goals and guidelines to be achieved the following:
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

- Graduates will have an expected 75.21% survival rate, living at least 5 years, significantly higher than the Portuguese average of 58.7%8

- An Annual Compounded return of 31% during the 5 years after incubation9, totalling 335.8% growth in 5 years time, higher than the Portuguese IT start Up average of only 9.2%10

- Easier access to funding, direct connections to Business Angels associations, VCs and other companies, networks of clients and businesses

- Managerial and technical support, less costly and experienced, providing support in every area of business development needed to have the business up and running well

Vision - Generating a self sustaining ecosystem in Portugal that allows the software market to expand, becoming more competitive worldwide, by having all the operational, structural and marketing needs built up in 3 years

Mission - Developing an ecosystem that can provide and apply the best knowledge in the software market to local business opportunities, making these businesses become more competitive nationally and worldwide with a major contribution to the software market

Objectives

Web Platform 2.0

- Being a web space for strong community development, by integrating web 2.0 functionalities into the entrepreneurial world

- Having 1500 members in the first year and increasing it to about 5000 in year 3

- Being a Platform that has marketing and training value for IT companies

- Providing On-line marketing and prime community membership to profit on the previous objective values

- Partnering with key players that provide key products and services to the Web Platform 2.0 (Microsoft software)

- Having strong links to Universities events and other innovation & entrepreneurship events, to promote the platform

Incubator

- Providing the best process for software business development in Portugal, applicable to an type of business that has a software need

- Having the capacity to incubate physically 100 projects and 120 virtually by year 4
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

- Recruiting and appropriately compensate a CEO that has strong entrepreneurial experience creating software companies, foreign if needed
- Getting key partners that offer key products and services to the Incubator: training, business consulting, students, hardware, software, legal support, network, international export and access to capital

It has been shown what is the model and what it wants to achieve. It is now time to understand the dynamics of the market and its key drivers.

3. Business environment

To have a clear understanding of the environment two main markets must be analyzed:
1. The Portuguese entrepreneurial situation and software market
2. The Incubators market worldwide, their results and conditions for success

3.1 – Portuguese market analysis, dimension and trends

The software & services market in Portugal generates more than € 2.1 billion yearly (appendix 2) representing only 0.8% of the Portuguese GDP. It corresponds to 53% of the IT market representing 0.784% of the total Portuguese GDP (IT market – 1.58%). This isn’t significant if worldly compared. (Appendix 3)

However in this market SMEs are responsible for a big part of this volume, generating around 58%, compared to 42% of large companies. (Appendix 4)

Considering Portuguese zones, statistics show that Lisbon is the area with less innovation intensity from SMEs and start ups in continental Portugal with only 1.3% of impact from these companies. To have a better comparative notion, Central Portugal has 3 times more – 3.9% impact. ¹¹

The tendency however has been in the side of entrepreneurship with a growth of SMEs offsetting the large companies’ growth - number of companies 0.13%, employment 2.07% and Business volume 0.66%. (Appendix 5)

Moreover, studies have shown the Importance of entrepreneurship as one of the main engines for economic development¹², and increasing the number of entrepreneurs will have a positive impact on total productivity¹³.

Altogether this shows Lisbon is still the Portuguese zone where SMEs haven’t still established a strong position; this means that Lisbon’s SMEs are still less innovative than
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

in the rest of Portugal where their innovation intensity is already at a higher stage, meaning there is much to be learnt as well as productivity from entrepreneurs to increase.

3.2. Incubator Market analysis, dimension and trends

A Business Incubator is described by the National Business Association as:

“A dynamic process of business enterprise development. Incubators nurture young firms, helping them to survive and grow during the start-up period when they are most vulnerable. Incubators provide hands-on management assistance, access to financing and orchestrated exposure to critical business or technical support services. Most also offer entrepreneurial firms shared office services, access to equipment, flexible leases and expandable space – all under one roof”

Worldwide there are around 4000 incubators\textsuperscript{14}. Most of them are non-profit organizations and backed up by government or university funding. There’s only around 17% privately held and for profit Incubators. Technology incubators play an important role - 40% of all Incubators are in this sector and around 28% are for-profit organizations. Despite being the minority, for-profit Technology Incubation are the role models, graduating profitable businesses more than others do.

The average survival rate of 87% of companies going through incubation is almost the double of companies thriving for survival in the US marketplace where only 50% survive. Profits follow similar patterns, showing yearly revenues of 47% after graduation, totalling 686% in 5 years, six folding the US average\textsuperscript{15}

The tendency of incubation use is increasingly higher. These gained special visibility in the internet bubble of the early 90’s, increasing ever since having increased from about 100 in 1980 to 4000 in 2005 (appendix 6), and the number hasn’t stopped growing yet. Adding to this the U.S. President Barrack Obama has announced his willingness to invest in Incubators as a crisis solver\textsuperscript{16}

3.3 Incubators in Portugal

Incubation in Portugal is a much less developed market than in the U.S. There aren’t many and some have failed. Good examples are SANJOTEC, AITEC and Instituto Pedro Nunes (IPN).

IPN is the best example, and was considered the 2\textsuperscript{nd} best science based incubator in the World It is auto sufficient and has graduated about 130 companies in its 13 year of life and generated € 60 million in 2009 with an 75.2% survival rate, rare in a low growth
country like Portugal. Despite this success, Incubators are not yet popular among most Portuguese Universities, Start Ups and SMEs. There are only 2.6% companies that have used such services, despite the great value it brings to them. Clearly there is a lack of marketing effort to show the value these incubators can offer to businesses. (*Appendix 7*)

4. Market Specifics

4.1 Market Needs and segmentation – why Incubation, who for Incubators?

To address this question we must first understand: **A.** what entrepreneurs need and who are the clients to address, secondly to see **B.** what type of business proposition should be implemented in response to them and the Portuguese market and **C.** having an idea of who is able to make the business proposition work. Finally we will **D.** analyze the tendency of the market according to the segments

**A. Entrepreneurs – Clients**

**What do they need?**

So let us understand the entrepreneurial situation in Portugal. If we consider both early stage and Constitution difficulties, the major difficulties are in three areas, – **1.Capital;** **2.Business Experience;** **3.Legislation/ Beaurocracy.** On the side is the relevance each one has:

Business experience plays a leading role, because the level of experience provided through services and training will determine the quality of clients businesses. The replies to this study were done by entrepreneurs solely, and this might have underscored the value of business experience, because Portuguese companies do not tend to value much training. This can be seen by the low level of training the Portuguese population from 25 to 65 years have – only 4.4% have lifelong training from 25 to 65 years old, one of the lowest percentages in EU (*Appendix 8*)

However we will however follow the approaches of more developed countries in the area of incubation, like UK, Australia and US, and these put training and business experience at the core of most of their models. Besides the ill trained entrepreneurial situation let us understand who the Portuguese entrepreneurs are. The following two studies can clearly show it:
The first graph shows a clear decrease of entrepreneurs with basic to secondary school education in detriment of the growth of professional courses to PhD entrepreneurs – entrepreneurs are getting more qualified.

The second graph shows that experience is a crucial factor of success. 78.7% of entrepreneurs are either employees or have previous business experience (home or self business, liberal professionals or business partners). Students only represent 3.3% of the entrepreneurs.

To clearly understand the motivation of students a study was conducted at Computer Science Universities in Lisbon Area (Appendix 9). It shown that 33.3% of students wish to become entrepreneurs and that 27.8% students have businesses or businesses ideas.

This shows that there is a large pool of IT students that want to become entrepreneurs.

If we join all these studies we can affirm that Portugal is a country where the entrepreneurial activity is becoming dominated by people holding a university degree or in a university, but these do not create their business until they acquire some working experience or have some contact with other businesses, although they want to become entrepreneurs earlier in life. Reducing even more the propensity for entrepreneurship is the lifelong training of 4.4%, making the probability of business creation more reduced.
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

Here lies the big opportunity – since university 33% of IT students already want to pursue an own business, but there is a huge lack of support from a strong structure that can give them the courage to do so, by providing the capital, experience and legal support they need, making them prefer to work for a company where solid structural supports are already built, which is safer given the circumstances. This means that a student who builds a business in Portugal has to be either crazy for risk or to have the “Midas touch” business, and these unfortunately are only 6.4% of them, meaning 26.6% have to abandon their entrepreneurial wishes.

Who will be the clients?

Because of this gap in entrepreneurship support, the core segment will be University Students and Graduates, followed by IT Start Ups and SMEs and finally other Start Ups and SMEs that want to integrate a software activity.

We’ve seen the reasons why IT universities, SMEs and Start ups need support, and that is why they are the other two main targets. Regarding other Start Ups and SMEs the opportunity lies in making them become clients for other IT companies at the incubator. These will be needed to generate more business opportunities to incubator’s IT companies, enlarging the software market, and will join if they need to expand their business into a software activity.

B. type of business proposition – partners segment

To understand what models for innovation creation suit Portugal a detail seen before was more developed – Lisbon’s lowest innovation intensity from SMEs and Start Ups in continental Portugal - 1.3 compared to Central Portugal’s highest, 3.9. The reasons for such difference allowed assuming the structural needs for innovation. Here are the comparisons of both zones in terms of their R&D structure:
The striking difference between both is the Governmental role. In the Centre R&D is in the hands of Universities and Enterprises, whereas in Lisbon Government invests 21% and employs 27% of all R&D\(^1\). This lead to the inference that the best solution can not include governmental partners. The **Incubator Partners** will therefore be **Private Companies** and **Universities**. A good benchmark is AITEC, a Lisbon Based Incubator that has the University – Enterprise control. It has generated 55 IT businesses with 95% success rate\(^2\), without control of the Government.

**Private companies** will be in the IT area, not competing directly with Microsoft as well as experts in financing projects – Business Angels and Venture Capitalists. These bring experience, capital, products and services into the project

**Universities** will play an important role as well and there should be as many as possible in the areas of IT sciences and Business sciences.

**C. Who are the valuable partners?**

Here are some of the possible companies and universities joining the project:

**Hardware** - HP, Tsunami, Intel, CPCDI, Dabox, JP SáCouto; **Software** – Microsoft; ISVs – ViaTecla, Acidados, PR nformática, Infosistema, JDSoft, etc; **Training** - Galileu norte, TDK, universidade aberta, MIT, UNL, IST, ISCTE, Universidade de aveiro, etc (almost any university from business or computer sciences); **Business consulting** - Deloitte, Cappgemini, McKinsey, BCG, rolenberger, etc; **Logistics** - DLI, TechData; **Web support** – WebBase; **Juridical support** – PLMJ, Abreu advogados, etc; **Capital support** – APBA, ANJE

**4.2 Market Potential –Portuguese prospects**

In 2007 Portugal was the country from Europe with lowest private equity funding, only 0.1% of GDP. Measures were taken to improve this seriously and now Portugal has been the European country with the highest increase in private equity funding in the critical year of 2008, increasing by 143.1% while Europe average was only 11% (Appendix 10). About 30% were made in the communications, computer and consumer electronics sectors\(^2\), but representing a very little percentage of the whole capital provided to this area – only 3.9%. If compared with Europe, where it is normal to have 20% it is one of the lowest rates (Appendix 11)
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

The demand for an Incubation centre that justifies this funding increase through the canalization to the best software market projects is and will keep on being very much demanded by the public and private sectors, maintaining this position at least until 2020.

This means the prospect is of high support from partners to invest in this project.

Regarding clients there are strong tendencies in the way of advertisement. The main tendencies are the entrepreneurship & innovation competitions and the Web 2.0. These will be efficient ways of promotion, as we will see further in the business plan.

We’ve seen the growing need for the Incubator, now we need to see who the players that are responding to this need are.

4.3 Market Rivalry – Competition and Benchmarking

Studies have shown that only 25% of companies have a relationship with Universities with the objective of exploring new innovation opportunities. In Lisbon the only solid competitors are INESC and AITEC who have good relationships with IST University. They act in various engineering and sciences areas, being more focused on knowledge creation than in incubation itself; however, incubation is a strong area and reached a 95% success rate with 55 IT companies.

The rest of incubation in Lisbon is widespread throughout big companies. For instance, BRISA has its own incubation centre, supporting ideas generated at universities and involving suppliers, government, investors, Start Ups Universities and Innovation centres towards the same goal of generating new innovations. (Appendix 12)

However, this and other forms of incubation have little capacity and are not specified to any type of market. Simply put, these large companies help business ideas from their area to develop more their idea only if they see a way of profiting from it.

One of the ways the incubator distinguishes itself from these is by making it possible for companies like BRISA to outsource this innovation activity, but at the same time, they can keep their connection to the business ideas they would develop by their own. In this way, they have the advantage of focusing on their business instead of wasting resources on this new segment.

To do so, it is needed a high quality incubation process that guarantees better survival rates and profitability of businesses as well as a structure that is flexible to keep these companies’ interests in their area related business ideas.

The LSE Incubator will position itself as a vehicle to both the student market, where competition is low (there is 75% of the market unused, AITEC is the only
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

competitor) and in the university-company relations market, which respect to the other 25% capturing it through the offer of an outsourced service they will hardly refuse, for the software market.

**Benchmarking – a model for Portugal**

The International market has a handful of good incubation programmes. They vary in terms of the quality and quantity of services they offer.

From a benchmark analysis to the best incubation programmes around the world, from all the various institutions and types of incubation made, it was possible to understand what the key factors of success for the inexperienced and underdeveloped Portuguese market are. *(Appendix 13)*

The conclusion from this analysis shown that the LSE incubator must provide a complete range of business services, advice, physical and virtual space, it cannot take much stake of its clients (maximum – 5%), it will have to be specifically for one market (software market) and it must have a wide network of suppliers, investors and buyers for the clients. Capacity however was not respected according to benchmarks. The average number of clients is 40, but this model is designed to reach out 200, due to some innovations that generate higher operational efficiency that we’ll see further on, on point 5.

**4.4 distribution channels and Purchase Policy**

**Distribution channels** – Microsoft and its Partners Networks; Web 2.0. Communities; Web designers; Web marketing experts; Innovation & entrepreneurship Competitions; Community events, referrals, board of directors, Partners and Universities. We will see their role further on, in point 6.2.

**Purchase Policy** - To support the Web Platform 2.0 there will be development and maintenance costs of the Web 2.0 site of 40.000€ in the first month and 1000€ per month further on. Besides this updates must be done every year, costing 10.000€ plus the inflation rate. Servers to host each user will cost 8€ per user yearly, and will be internalized through one of the Partners (Web Base). This is important to be internalized due to the default and operational risks of outsourcing the Servers.

Office rent costs on average 10€/m² per month, having each incubated project the average need of 6m². Space will be rented according to the expected number of clients per year, being equipped with material yearly. All other activities needed are mainly outsourced services, of which some are basic services (energy, water, fuel, car rental,
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

travelling costs, representation costs…) and others provided through partners (training, consulting, legal expenses, web marketing…) paid monthly.

4.5 technological challenges/ opportunities

**Challenge** - The biggest challenge is to have all the partners involved, without interfering in the operations of the Incubator and has to be correctly managed not to allow any of them to bias the operations towards their own interest.

**Opportunities**

**MIT Portugal – a pool of new clients** - This program is one of the most valuable programs that Portugal has for this incubator. A study conducted on the MIT incubation process in the US revealed the most amazing results in the area of incubation ever registered. The Bank of Boson reported that in 1994 alone MIT graduates were responsible for the creation of 4000 firms, employing 1.1 million people and generating $232 billion world sales. If they would form an independent nation they’d be ranked as the 24th wealthiest in the world, with a GDP (revenues) of $116 billion, a bit lower than South Africa and bigger than Thailand. Some of the well known companies from MIT active are Arthur D. Little, Gillette and Stone & Webster.

This shows the opportunity there is to attract the early starters of this program. Establishing relationship with MIT and making their students know about the Incubator is crucial to guarantee that valuable knowledge is brought into the Incubator. Microsoft already pursues this partnership, making it easier to access.

**Bologna Agreement – operational opportunity** – this European agreement is currently changing the structure of universities in Portugal, making it much more practical and market oriented. Theoretical thesis are increasingly being replaced by practical cases or internships reports, much closer to the market than it used to be before, this is the case of FE-UNL, Católica, ISEG, etc. This opportunity can be seized by creating strong relationships between the Incubator and Universities and providing business cases or thesis on aspects from incubated projects, that can be thoroughly developed by both the clients and university students, being perfected by the Project managers or IT managers afterwards, greatly reducing the time spent in the analysis of each incubated project.

**Web 2.0** – **Marketing Opportunity** – Web 2.0 is the new virtual phenomena in the world. It allows a two way communication that means that users of a web site can upload contents to the site. The most well know cases are Facebook and Wikipedia.
The social networks like Facebook and Hi5 have reached 1.4 million users in Portugal, mostly the younger generation where they have reached 58.4% from 15-17 years old, 46.6% from 18-24 years old and 31.3% from 25-30 years old, of which 52% are students – the main target group of the LSE project\textsuperscript{26}. Besides these are the websites most visited by them and number of users grows exponentially, due to the viral effect they have. Therefore effective marketing 2.0 is the best way to do communicate on the web, with teenagers and students – the future clients of LSE Incubator.

4.9 SWOT analysis

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Excellent start through Microsoft’s network of partners</td>
<td>• Using only Microsoft software tools reduces number of engineers interested in joining it might be perceived as a monopolistic practice</td>
</tr>
<tr>
<td>• Valuable Partners competences shared on the incubation process</td>
<td>• Too many partners generate divergent points of interest that can sink the project</td>
</tr>
<tr>
<td>• Very innovative and strong marketing and operational strategies</td>
<td>• To overcome this weaknesses Microsoft must make sure that it is only one of the partners of the project, which is controlled by APBA or ANIE. There has to be a limit on the investment of each partner, maintaining an equal participation.</td>
</tr>
<tr>
<td>• Good benchmark basis, from other countries incubators</td>
<td>• Opportunities</td>
</tr>
<tr>
<td>• By unit design, allowing for rapid and flexible expansion</td>
<td>• Market downturns, risky environments</td>
</tr>
<tr>
<td>• Capital incentives to entrepreneurship form public and private sector, until 2020</td>
<td>• Dynamics of the software market might clash with willingness from partners for a “secure” structure.</td>
</tr>
<tr>
<td>• Huge market gap between these incentives and entrepreneurial activity, and entrepreneurial spirit and structural support to entrepreneurs</td>
<td>• Being in Lisbon, where start up failure is high and innovation intensity is low.</td>
</tr>
<tr>
<td>• Huge need for experience, funding and legal support to start ups</td>
<td>• Internationalisation of clients – fierce international software competitions, mainly from Indian products</td>
</tr>
<tr>
<td>• MIT Portugal – pool of clients with quality</td>
<td>• To overcome these threats the environment created at the Incubator and Web Platform must be completely different from the market reality for other start ups. The project owners must feel supported and secure in being at the incubator. Building solid international networks</td>
</tr>
<tr>
<td>• Bologna agreement – operational efficiency</td>
<td>• Web 2.0 – marketing through communities</td>
</tr>
</tbody>
</table>

It has been shown how the market needs a solution like the Incubator, and why to implement it now. By now one should have a clear framework of the Portuguese situation and that Incubation is a brilliant solution for Software market growth. In the following sections we will aboard the details of the model.

5. Competitive Strategy

The LSE ecosystem Model strategy is to capture entrepreneurial talent earlier in life, instead of waiting for entrepreneurs to go trough companies to acquire experience. It does it by having a structure and process that provide all the resources entrepreneurs need
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy
to thrive – experience (Universities, training, consulting), capital (partners and other investors), business support (accountants, lawyers, office services, shared office) and network of contacts.

There are three main differentiating distinctions this project has from competitors:

- The first is the social web site – the Web Platform 2.0 - that allows the entrance into a community of businesses, where users can mutually develop their businesses and network with others. Number of users is going to growth very fast because of the exponential proliferation of websites with social communities – the viral effect.

  The Web Platform 2.0 follows a Blue Ocean strategy\textsuperscript{27} – it gathers social websites functionalities, but instead it uses this effect for the end of entrepreneurship, to enhance businesses profiles instead of a personality. There isn’t any kind of competition here.

- The second is the recruitment process - Most Business Incubators focus only on the process of company creation, having a very low effort in marketing. However a critical success factor is to have good entrepreneurs. The Web Platform 2.0 will have a distinction here, because it has a process to obtain a large pool of people – 5000 by year 3. Having such a big quantity of business ideas will allow the Incubator to select only the top projects from this pool of IT entrepreneurs, about 3%, guaranteeing the quality of businesses moving on into the Incubator.

- The third distinction is in the operational process at the Incubator, by making University teachers and students get involved in clients process, seriously reducing costs on client business development, due to more time gained for Incubation workers.

  In this way the LSE model will be able to have what other competitors do not have – both high quality and quantity of clients, impacting strongly the software market.

  Let us now see what are the products and services that allow reaching this strategy

6. Marketing and Sales strategy

6.1 Marketing strategy – P&S Positioning, price, communication

There will be 7 products, the first 3 are provided at the Web Platform 2.0 and the last 4 at the Incubator. Here is the list of Products:

- **Web Platform 2.0** – This platform will bring the web 2.0. to the IT entrepreneurial market. Like Facebook or LinkedIn, but in a much lower scale. It will be a free access platform where users can update their profile, invite friends, promote events, etc. There
are however prerequisites – users will not be people but business ideas, or SMEs. This will allow them to have here a space to meet, network and create strong communities of businesses with the same interests. Furthermore it will allow community members to access a virtual database of software tools to download like .Net and WPF, webcasts on these software tools and on business management, for free or at discount (in the case of discount products these will be partners products, profit fully revert to partners). Moreover community leaders will be chosen, based on their profiles and assigned to promote events.

**Web Marketing** – For a fee of 50€ a month a member of the Web Platform 2.0 will be able to have their product or service listed in the website and emails will be sent with information about the companies to the top 100 partners and clients that might be more in need of the product or service, decided by key words.

**Prime membership** – for a small fee of 4€, 12€ or 24€ Web Platform 2.0 clients can access a privileged area with reduced software costs and access to special webcasts that will boost business performance. Besides they’ll be the member companies or ideas on top of the members list, having easier access to funding, due to higher visibility.

**SME consulting** – Advice and guidelines are given by experienced Incubator Consultants and SMEs co-develop a project or study along with universities, or alone being monitored by the consultants in all the process. This greatly reduces cost of consulting, each pack of 7 hours with consultants (corresponds to 1 month of consulting) is 357€

**Incubator services** – there are many services provided to companies that join the whole incubation process, here they are with they respective monthly prices: shared office rent + basic services- 90€; virtual office + basic services- 65€; full juridical support- 120€; Management and Financial coaching – 250€ (8 hours); access to studies or network marketing – 45€ each; training 50€; accounting- 140€.

**Incubator InAccess fee** – this fee will be charged to partners and other interested investors to have the right of financing a business from the Incubator, priced at 650€

**Incubator Stake** – providing all the services to clients cheaply will need a future form of payment. Therefore every Incubated company that gets support for at least 1 year will pay 1 to 5% share to the LSE incubator, on average 3%. Instead of this stake they can opt to pay 4000 € extra to access the
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

incubator, in the year they get in. It works as a membership fee (Appendix 14 – price list).

On the side is a graph that shows the price-quality relationship of these P&S:

Communication strategy

Post-innovation event follow up – At the moment in Portugal there are many innovation and entrepreneurship competitions. Almost every university has at least one, and many companies have them as well (Start, IAPMEI, Imagine Cup…). However support after competitions is rare. Promoting the Web Platform 2.0 will be done here, as a tool to keep on developing the business ideas.

Web 2.0 communities – Linking the Web Platform 2.0 to other social websites which are already well established– Universia, Facebook, Hi5, LinkedIn and MySpace…

Magazines – speciality magazines (exame informática, BiT, Jornal de Negócios…) Partners’ direct contact – referrals, links on web sites both for Web Platform 2.0 and Incubator

6.2. Sales Strategy – Distribution Channels, Sales Force, tactics and forecast

The strategy for selling is phased. Phase 1 is to sell the Web Platform 2.0, facilitated due to being for free, followed by Phase 2 which focuses on selling web services. Phase 3 sells the incubation process and consulting services to Start Ups and SMEs, and Phase 4 the In Access Fee. Let us see what enables all these phases to be done:

Distribution channels strategy

Mostly a Push strategy is followed however sometimes there will be evidence of client needs due to the Web 2.0.Interaction with clients. Here are the channels used per Phase:

Phase 1 – Encompasses outsourced website development, maintenance and buying servers to host users, than communication is done via Microsoft and Partners network of Universities, ISVs, SME and Start Ups, web 2.0. Communities and Innovation & Entrepreneurship Competitions; Phase 2 – Web Marketing experts and Web Designers; Phase 3 – Microsoft and Partners networks, community events, referrals, board of directors’ selection and university teachers and students; Phase 4 – Microsoft and Partners networks, Partners and University students and teachers

Sales Force

The sales force will be in a first stage Microsoft and Partners network, and will be done by the people heading the LSE initiative – José Fernandes, Rahim Aly and Vitor Santos and other partners involved in the project. Afterwards it will be through the commercial department, CEO and Senior Managers. Who will establish relationships with
Sales Tactics

Because a push strategy is being followed, than the way to sell is by gradually increasing the needs of customers, showing they need support. To do so the prices of services also gradually increase, starting for free and increasing slowly. Because many clients will not move to subsequent levels, where they have to pay higher prices it was estimated that only a small percentage would adopt each of the paid products and for that the first tactic is to focus on variability of clients – getting as much as possible, that correspond to the minimal requirements of the Web Platform 2.0 and than focusing on the best clients – those with more potential, to follow through Incubation.

Besides this process there are also some adjacent products like the In Access fee and SME consulting, which perceive value in the Incubator and decide to join it.

Sales Forecasting

Here is a detailed forecasting of each of the products:

<table>
<thead>
<tr>
<th>Year</th>
<th>Web Platform</th>
<th>Web Marketing</th>
<th>Membership</th>
<th>In Access Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>1500</td>
<td>0 £</td>
<td>0 £</td>
<td>0 £</td>
</tr>
<tr>
<td>Year 2</td>
<td>3500</td>
<td>32,250 £</td>
<td>21,004 £</td>
<td>0 £</td>
</tr>
<tr>
<td>Year 3</td>
<td>5000</td>
<td>38,708 £</td>
<td>50,873 £</td>
<td>173,625 £</td>
</tr>
<tr>
<td>Year 4</td>
<td>5500</td>
<td>25,715 £</td>
<td>75,733 £</td>
<td>372,054 £</td>
</tr>
<tr>
<td>Year 5</td>
<td>4500</td>
<td>31,703 £</td>
<td>113,993 £</td>
<td>460,699 £</td>
</tr>
</tbody>
</table>

Note: because there’s no profit in the Web Platform 2.0 it shows the number of users

7. Processes and Operations

Regarding the General model, we can see the interaction between internal and external entities, and how they influence the key phases (in green).

The role of Marketing for Web Platform 2.0 clients’ acquisition is shown by the orange lines.

Regarding the Incubator phase it shows the main processes supporting its key phases as well. Here we can see clearly the influence of Universities in the operational phase, built on the Bologna agreement opportunity pointed out in point 4.8.
8. Organization Design

The organizational design follows a matrix structure, where workers co-develop clients’ projects. It is shown on the side:

Commercial department will be responsible for managing the Web Platform 2.0 and the Operational department will manage the physical and virtual Incubators.

9. Management Structure / Management Processes

We can see on the side the salaries and capacity to respond of each position. This is the team that will enable to reach the operational objectives referred in point 2. Besides this base salary there will be bonuses on performance of clients - If the Incubator reaches the normal case scenario increases in all salaries will be of 8%, in case it stays at the bad case scenario increase will be only 2%, and in the best case – 12%. For every 10% variation from the Normal results base salaries vary 1.3% in the same direction.

In the normal scenario, by year 5 there should be 39 workers at the Incubator. To better understand the entrepreneurial market the incubator will have to be quick to respond to a shift of needs, and their clients will always be different, requiring different needs. Quarterly reports will be essential to understand if an operational change is needed according to their clients needs (considered one of OCDE’s best practices)\(^ {28} \)}
A very important success factor is to keep management independent from Board interests. The CEO will play a crucial role in avoiding interference while maintaining shareholders interested.

10. Human Resources Management

Job selection will be mostly done by the board and CEO. Job candidates will be required to have entrepreneurship spirit and graduates areas of IT, Engineering, Economics or Management. Competences will be built with a 1 month training process and further perfected with the support from expert consultants in the first 8 months.

The CEO however will have to be carefully selected. He has to be a strong serial entrepreneur, with a vast experience in creating IT businesses and about the Portuguese IT market – probably this selection will be outsourced to a Head Hunting company.

The incentive systems will mostly be for group performance, if they make clients overcome a 75.2% survival rate and overcome a yearly overall profitability of 31%. However if one team’s portfolio of clients (1 project manager, 1 IT manager and other) performs better than others these will have an increase of their salary of 1.3% for every 10% better than the average. There will be individual performance appraisals as well as based on other dimensions – quality of work, quantity of work, Job Knowledge and Teamwork capabilities, and these will be 360º evaluations done by every team members. If performance is excellent there is an extra 3% salary increase and if it is good – 1%.

(Appendix 15)

Training will be provided to those below average, and if they have the worst score, they ought to quit the Company or will be relocated to other areas.

11. Risk Analysis

There are three main risks in this project: technological, Web Platform 2.0 community and equity. There’s the risk that technology fails, causing serious delays on the operational process. Because the entire model is heavily reliant on IT products there must be backup plans to avoid any fail.

Secondly there are the risks associated with creating a Web 2.0 community. Because everyone can communicate freely and create a business profile, credibility and In Access fee problems arise. Investors can go directly to the Web Platform and propose
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

investment opportunities to businesses, by making fake profiles. The worst case scenario is loosing all the Investors, harnessing profitability of the project, however not much.

The way to overcome this is clearly showing that the LSE Incubator provides valuable experience that will boost profitability and chances of success of businesses.

Thirdly, equity concerns rise because Investors might not be willing to invest in all products and services. The way to solve this is by attracting shareholders to the LSE Incubator, their capital will backup every project when needed.

There are also competition risks. IBM for instance can do the same type of project if Microsoft does not decide to do it. It is important to be the first one doing this project because it establishes an early position and retains most of the good clients in the software market, due to the power creating social a web 2.0 community of businesses.

The financial model already entails the contingency plans in case something goes wrong. All the resources for the project are indexed to the growth rates, and if these reduce than labour costs, outsourced services, etc… also reduce in the same proportion. This means that if needed people will be laid off.

12. Implementation Plan

The Key phases occur in month 0 with Web Platform 2.0 start and in month 6 with the LSE Incubator start. Here is the plan:

13. Financial Analysis

The project profit is medium-long term oriented. Its payback is only in 2 years and 10 months. As shown what really attracts partners are the new software market opportunities it will generate, profits exist but are secondary, attracting more shareholders only by year 3 when the LSE Incubator is more solid.
Here are the main performance indicators, in the 3 types of scenarios:

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Total Financing</th>
<th>NPV</th>
<th>IRR</th>
<th>Payback Period (months)</th>
<th>Cost of Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worst case</td>
<td>350,000€</td>
<td>420,566€</td>
<td>100.1%</td>
<td>30</td>
<td>21.8%</td>
</tr>
<tr>
<td>Normal</td>
<td>350,000€</td>
<td>824,836€</td>
<td>116.2%</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Best case</td>
<td>350,000€</td>
<td>991,399€</td>
<td>143.3%</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

The initial financing will be needed to address Web Platform 2.0 development of 40000€ and the initial costs of running it for free (1000€/month), as well as the first Incubator development needs – 10000€ in training, and 1500€/ month in consulting.

14. Conclusions

This business plan has shown a proposal to build an Incubation Model in Portugal, based on my analysis and recommendations, supported by primary, secondary and tertiary research, including interviews and discussions with different agents that are part of this ecosystem. Moreover, it integrates new ways of proceeding that are not common and that applied to the Portuguese reality become very valuable sources to the project, constituted by relevant group of P&S that integrate the latest technological trends to suit the software market needs and tendencies.

Strategically, the project does not only focus on developing an Incubator that creates profitable enterprises, having a stake in them. Instead it involves many companies and Universities in the Software sector by having all these institutions cooping in a unified plan towards a goal that all of them want to achieve– Software market development.

In that sense the LSE model should be seen more as an alignment of benefits, results and objectives of the entities included in this project.

Despite the solid basis on the best practices and Incubation Models, it was concluded that there are very good opportunities in Portugal that have been underused and can be exploited in a very positive and relevant way, like the Post-event marketing and the co-development of Incubated projects with university students and professors. These opportunities being exploited were shown to have a tremendous potential in exponential promotion of the Web Platform 2.0 and operational capacity of the Incubator respectively.

It was also possible to see that although the structure made was designed to be a very good bargain for clients – low price high quality – as well as to partners involved who besides profit get access to the new business opportunities that this initiative will generate in the Portuguese software market.
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

The outcome was a project that has a high added value to the software economy – 4.6% and still has some good operability – a net present value of 804.151 €, an Internal Profitability of 116.5% and payback in 33 months, needing a total financing of 350.000€ needed for the establishment of the Web Platform 2.0 in the beginning and the Incubator in the 6th month.

This Business Plan recommendations for Microsoft’s LSE to succeed in the Incubation area encompass understanding that the main success factor are people and that there are two great ways of attracting and retaining them:

1. Creating a web2.0 community focused on entrepreneurship and the effect this blue ocean strategy will have on business networking and performance will enable to attract the best businesses in the market
2. Understanding that an Incubator that integrates multiple partners to succeed it will need to be independent and to have a strong team that can provide valuable experience to the clients

This Business Plan has been one more important step in generating awareness to the large number of possibilities that Portugal has to be a leading country in the software market, showing how to explore these possibilities thoroughly. It is now up to all the people who read this plan or who ever come across some similar ideas to implement it, if they have the power to do so, to see a really big change happening.

Let us make a strong software market and evolve Portugal to an IT level never sought before!
15. Annexes

Appendix 1

<table>
<thead>
<tr>
<th>2008: growth of start ups and SMEs</th>
<th>survival rate</th>
<th>probability growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powdered avg growth per Start Up</td>
<td>Sherman (1999)</td>
<td>87%</td>
</tr>
<tr>
<td>survival rate Portugal</td>
<td>53%</td>
<td>3%</td>
</tr>
<tr>
<td>real growth rate per company, yearly</td>
<td>Sherman applied to Portugal</td>
<td>75%</td>
</tr>
<tr>
<td>reduction based on markets</td>
<td>Benchmark IFN</td>
<td>63%</td>
</tr>
<tr>
<td>Portuguese GDP 1999</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>US GDP 1999</td>
<td>4.5</td>
<td></td>
</tr>
</tbody>
</table>

## Appendix 2

### Services & software Markets

<table>
<thead>
<tr>
<th>1999</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5,000$</td>
<td>$5,200$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Market share (Bus. Vo)</th>
<th>Software</th>
<th>Services</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM</td>
<td>3.9%</td>
<td>16.9%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Microsoft</td>
<td>40.5%</td>
<td>0.0%</td>
<td>12.0%</td>
</tr>
<tr>
<td>Novell</td>
<td>9.1%</td>
<td>9.6%</td>
<td>8.7%</td>
</tr>
<tr>
<td>SBS</td>
<td>0.0%</td>
<td>7.8%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Accenture</td>
<td>0.0%</td>
<td>7.4%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Glint</td>
<td>0.0%</td>
<td>9.6%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Redius</td>
<td>0.6%</td>
<td>5.0%</td>
<td>3.7%</td>
</tr>
<tr>
<td>HP</td>
<td>0.0%</td>
<td>4.2%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Oracle</td>
<td>9.3%</td>
<td>0.0%</td>
<td>2.9%</td>
</tr>
<tr>
<td>SAP</td>
<td>9.3%</td>
<td>0.0%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Deloitte Consulting</td>
<td>0.0%</td>
<td>3.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Alcatel Lucent Portugal</td>
<td>0.0%</td>
<td>3.8%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Neubronze</td>
<td>1.8%</td>
<td>1.7%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Capgemini Portugal</td>
<td>0.2%</td>
<td>2.1%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Altitude Software</td>
<td>3.3%</td>
<td>0.4%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Distinct</td>
<td>2.5%</td>
<td>0.4%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Contact</td>
<td>0.6%</td>
<td>1.2%</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

**Business Volume Portugal: 99.3%**

### OECD Key ICT indicators

Share of ICT value added in the business sector value added, 1995 and 2006
Appendix 4

<table>
<thead>
<tr>
<th></th>
<th>Software</th>
<th>IT services</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>rest of market</td>
<td>19.4%</td>
<td>40.0%</td>
<td>39.6%</td>
</tr>
<tr>
<td>top 10 companies</td>
<td>80.6%</td>
<td>60.0%</td>
<td>60.4%</td>
</tr>
</tbody>
</table>

Appendix 5

Variação do peso de cada classe dimensional na estrutura empresarial nacional
2000/2005

Empresas

Emprego

Volume de Negócios

Appendix 6

Appendix 7

User of specialized services from incubators or other technological intermediates

number of incubators worldwide

Yes 2.6%

No 97.4%
### Appendix 8

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU 27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Appendix 9

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Level of studies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masters</td>
<td>28</td>
<td></td>
<td>77.8%</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>5</td>
<td></td>
<td>13.9%</td>
</tr>
<tr>
<td>PhD</td>
<td>2</td>
<td></td>
<td>5.6%</td>
</tr>
<tr>
<td>Post-graduation</td>
<td>1</td>
<td></td>
<td>2.3%</td>
</tr>
<tr>
<td>2. Professional ambition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee</td>
<td>19</td>
<td></td>
<td>52.9%</td>
</tr>
<tr>
<td>Entrepreneurs</td>
<td>12</td>
<td></td>
<td>33.3%</td>
</tr>
<tr>
<td>Academic career</td>
<td>0</td>
<td></td>
<td>0.0%</td>
</tr>
<tr>
<td>Self Research</td>
<td>1</td>
<td></td>
<td>2.8%</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td></td>
<td>11.1%</td>
</tr>
<tr>
<td>3. Business owner or exploring an idea</td>
<td>Yes</td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>26</td>
<td>27.8%</td>
</tr>
<tr>
<td>4. Knowledge of business support centres</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technological park</td>
<td>16</td>
<td></td>
<td>44.4%</td>
</tr>
<tr>
<td>Government associations</td>
<td>11</td>
<td></td>
<td>30.6%</td>
</tr>
<tr>
<td>Innovation centre</td>
<td>8</td>
<td></td>
<td>22.2%</td>
</tr>
<tr>
<td>Business Incubator</td>
<td>6</td>
<td></td>
<td>16.6%</td>
</tr>
<tr>
<td>Business Angels</td>
<td>4</td>
<td></td>
<td>11.1%</td>
</tr>
<tr>
<td>Waste</td>
<td>11</td>
<td></td>
<td>30.6%</td>
</tr>
<tr>
<td>5. Had any support of a centre?</td>
<td>Yes</td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>35</td>
<td>0.0%</td>
</tr>
<tr>
<td>6. Participants in Innovation Competitions</td>
<td>Yes</td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>27</td>
<td>18.8%</td>
</tr>
<tr>
<td>7. Support on your idea</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>8</td>
<td>11.1%</td>
</tr>
</tbody>
</table>

### Appendix 10

![Graph showing investments and number of funds](image-url)
## Appendix 11

<table>
<thead>
<tr>
<th>by business type</th>
<th>Ireland</th>
<th>Netherlands</th>
<th>Norway</th>
<th>Portugal</th>
<th>Spain</th>
<th>Switzerland</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>seed</td>
<td>7.526</td>
<td>11.245</td>
<td>30.323</td>
<td>0</td>
<td>3.003</td>
<td>37.069</td>
<td>12.322</td>
</tr>
<tr>
<td>start-up</td>
<td>20.235</td>
<td>216.716</td>
<td>90.601</td>
<td>56.728</td>
<td>90.043</td>
<td>153.756</td>
<td>719.967</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>by sector</th>
<th>Ireland</th>
<th>Netherlands</th>
<th>Norway</th>
<th>Portugal</th>
<th>Spain</th>
<th>Switzerland</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications</td>
<td>5.238</td>
<td>119.979</td>
<td>55.240</td>
<td>9.517</td>
<td>266.938</td>
<td>125.229</td>
<td>2.579.039</td>
</tr>
<tr>
<td>Computer &amp; electronics</td>
<td>30.838</td>
<td>70.282</td>
<td>59.609</td>
<td>6.018</td>
<td>78.218</td>
<td>132.564</td>
<td>2.041.755</td>
</tr>
<tr>
<td>total</td>
<td>79.769</td>
<td>1.757.810</td>
<td>755.512</td>
<td>395.726</td>
<td>1.842.293</td>
<td>1.806.987</td>
<td>22.525.974</td>
</tr>
<tr>
<td>% seed</td>
<td>9.43%</td>
<td>0.63%</td>
<td>4.01%</td>
<td>0.00%</td>
<td>0.48%</td>
<td>2.84%</td>
<td>0.05%</td>
</tr>
<tr>
<td>% start-up</td>
<td>25.37%</td>
<td>12.12%</td>
<td>11.55%</td>
<td>14.34%</td>
<td>4.89%</td>
<td>11.76%</td>
<td>3.20%</td>
</tr>
<tr>
<td>1. % communications</td>
<td>6.64%</td>
<td>6.71%</td>
<td>7.84%</td>
<td>2.40%</td>
<td>14.46%</td>
<td>9.58%</td>
<td>11.45%</td>
</tr>
<tr>
<td>2. %Computer &amp; electronics</td>
<td>30.03%</td>
<td>3.93%</td>
<td>7.03%</td>
<td>1.52%</td>
<td>3.87%</td>
<td>10.14%</td>
<td>9.66%</td>
</tr>
<tr>
<td>total 1 - 2</td>
<td>44.7%</td>
<td>10.6%</td>
<td>15.2%</td>
<td>3.9%</td>
<td>18.5%</td>
<td>19.7%</td>
<td>20.5%</td>
</tr>
</tbody>
</table>
## Appendix 13

<table>
<thead>
<tr>
<th>Incubator type</th>
<th>Available Services</th>
<th>Incubator success</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entrepreneurial Innovative Ventures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Microsoft: Local Software Economy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Appendix 13</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Incubator type</th>
<th>Office and facilities access</th>
<th>Finance support</th>
<th>Human Resources</th>
<th>Legal and tax support</th>
<th>IT support</th>
<th>Networking/Marketing</th>
<th>Office services</th>
<th>Operational support</th>
<th>Internet research</th>
<th>Incubator facilities</th>
<th>Funding</th>
<th>Incubated project portfolio</th>
<th>Success rate</th>
<th>Cost for development</th>
<th>Profitability</th>
<th>Equity holding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Property</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Government</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Universities</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Corporate ventures</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Entrepreneurs</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Venture Capitalists</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Business Angels</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Consultants</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Specialised</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Virtual</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Benchmarking</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>IPRI - Instituto Pedro Nunes</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>IDEV (Instituto Do Elcano)</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Incublab (entrepreneur)</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### Incubators best practices

<table>
<thead>
<tr>
<th>Phase of Development</th>
<th>Best Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Set Up</strong></td>
<td>Nurture Incubator – 60% of time to establish support structures and training programmes. Building requirements – adjust physical space to needs. Centralise office services. Structure self sustainability – sources of income must cover costs.</td>
</tr>
<tr>
<td><strong>Incubator Management</strong></td>
<td>Create structure to support a standard programme. Recruit right staff – SMEs experience in Finance, marketing, planning, operations. Networking capacity – understand clients needs – experience in their area. Establish formal and informal networks client/face-to-face meetings. Managers should design specific training programmes to help tenants growth.</td>
</tr>
<tr>
<td><strong>Incubator Services</strong></td>
<td>Focus space, services and advice on tenants needs – cheap space and services, valuable and cheap advice. Wide range of support services, internal or external – planning, management, marketing &amp; sales, bookkeeping, taxation, financial support, legal matters, mentoring.</td>
</tr>
<tr>
<td><strong>Incubator Performance</strong></td>
<td>Regularly evaluate and improve the incubator’s programme performance – at least yearly measure financial results of incubator and measure clients needs regularly.</td>
</tr>
</tbody>
</table>
Appendix 16 – Financial Model
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

Bibliography

Books

Colin Barrow, 2001. *Incubators – a realist’s guide to the world’s new business accelerators*. Chichester: Wiley
IAPMEI, 2006. *Benchmarking nas PME, Observatório 2006*

References:


Frank Siebdrat, 2009. “The bright side of virtual collaboration: How teams can profit from dispersion” *Academy of Management*
Hudson Valley Business Journal 2009, Virtual office support, a 21st century solution
Jay F. Nunamaker Jr., Bruce A. Reinig, and Robert O. Briggs (2009), Principles for Effective Virtual Teamwork 52 (4)
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

Kuratko D. & Sabatine F., 1989 “From Incubator to Incubation: A conceptual focus on the development of innovation” Economic Development Review
Wing-Ki Wong et Al. 2005 International Journal of Innovation and Technology Management
Maital S. et Al, 2008 “toward a Grounded Theory of Effective Business Incubation” journal of creativity and Innovation Management
McKinsey Quarterly 2009: How Firms Are Benefiting from Web 2.0, Law office management & administration report
Temali & Campbell “Business Incubation Profiles”

Internet references:
http://www.idc.com/portugal/press/pr_2008-01-03.jsp
http://www.idc.com/portugal/press/pr_2008-12-29.jsp
http://www.idc.com/portugal/press/pr_2008-11-03.jsp
http://idcportugal.blogspirit.com/
http://www.ukbi.co.uk/index.asp?SID=222
http://www.incubadora.ufg.br/novo/noticias_detalhe.php?id_not=436
Meetings/ discussions

José Tribolet, CEO INESC
José Fernandes, Microsoft, responsible for LSE initiative
Rahim Aly, Microsoft, responsible for MIC
Gonçalo Pernas, MIC director ISCTE
Paulo Santos, CEO Instituto Pedro Nunes – Incubadora
José Mata, PhD FE-UNL
Hanadi Mubarak Al-Mubarak, PhD, College of Engineering and Petroleum, Kuwait University
Duarte Carilho da Graça, Web designer, Undergraduate Economics, FE-UNL, currently in Arts University London

Endnotes:

1 http://www.microsoft.com/portugal/boost/default.mspx
3 Lantz, 2001; Straus, Miles & Levesque, 2001; Anson and Monkvold, 2004; Sutanonpaiboon, 2009
4 Drucker, 1985; Kuratko, 2006
5 OECD, INE, IAPMEI, EVCA, EUROSTAT, Ministério da Economia e Inovação, Banco de Portugal, Delloite, IDC,...
6 Based on calculations and inferences from Sherman study 1999, interest rates from Portugal and US, statistical yearbook of Portugal and IAPMEI
7 Sherman, 1999 and also supported by Molnar 1997
8 Based on Sherman 1999 study and other Portuguese Incubators survival rates
9 Based on growth rates comparison and study on incubation revenues -Sherman, 1999
10 Calculated from the most representative Portuguese SMEs in IT market:
   http://www.semanainformatica.xl.pt/949/esp/100.shtml
11 Statistical yearbook of Portugal, 2007
12 Statistical yearbook of Lisbon Region, 2007
14 Nickell, Nicolitsas & Dryden 1997
16 Barrow 2001, Sherman 1999
Entrepreneurial Innovative Ventures – Microsoft: Local Software Economy

http://www.incubadora.ufg.br/novo/noticias_detalhe.php?id_not=436

Adapted from “IAPMEI - Observatório da Criação de Empresas – Relatório 2007”. Calculated considering an equal weight of constitution and early stage difficulties


Statistical yearbook of Lisbon Region, 2007

http://www.aitec.pt/empresas.html

2009 EVCA Yearbook, Pan-European Private Equity & Venture Capital Activity Report


http://casa.trovit.pt/141527/preco,arrendamento,imovel,lisboa


http://www.marktest.pt/internet/default.asp?c=1294&a=2097

Kim, W. Chan & Mauborgne Renee 2004

OECD, 1999