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## **Porto Digital Incubator: an Innovative Model of Incubation to Promote Technological and Economic Development**

### **1. INTRODUCTION**

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The Brazilian incubation movement, despite having grown 25 percent in the last ten years, is going through a phase of stagnation due to lack of harmony between their structures and services to the new demands of society and the economic moment. Due to this fact, the Porto Digital Management Unit (NGPD), the institution responsible for the Porto Digital Technology Park governance in Recife – Brazil, launches an innovative model that mainly aims at tackling the main weaknesses in existent incubators that prevent quality work with businesses start-ups and, consequently, better spin-offs.

Porto Digital, regarded by AT Kearney [2] as the largest technology park in the country, is a result of the coordinated effort of the university, the productive sector and government, in order to insert the industry of Information Technology and Communication - ICT in the economic matrix of Pernambuco state. ICT is also the basis for increasing the competitiveness of a region in any contemporary economic development strategy.

Therefore, the new incubator must not only investigate what are the main causes of start-ups failure or premature spin-off's closure, but also investigate the market niche of higher value in order to identify the best focus of marketing performance. It should also identify the way of working to ensure the enterprises success, as well as providing regional development. The incubator structure aims to stimulate the emergence of new business software development in Porto Digital, whose main characteristic is the high degree of innovation. Based on relevant issues in development regions of Pernambuco state, the businesses should show feasibility to climb nationally and internationally.

To identify some bottlenecks to be worked out by the enterprises, it was decided to be based on a survey that was carried out in three clusters of greater relevance in the state economy and carrying out research in two phases. The first consists of interviews and meetings with business clusters to identify the bottlenecks that, in view of these actors, prevent a better economic performance of productive activities in the regions concerned. And the second step of quantitative basis, with field research with samples calculated on each universe considered in order to statistically assessing the degree of occurrence of these bottlenecks in the interviewed companies.

Thus, the idea is to have an incubator that escape from some of the patterns of existing incubation. Thus, according to its conceptual model, the incubation process is based on a list of problems related to clusters of Pernambuco State, so that possible solutions are envisioned to try to minimize the bottlenecks identified in these regions. It is expected that the proposals submitted contain a deeper investigation on the problem in question and a previous idea of the solution to be developed during the incubation period.

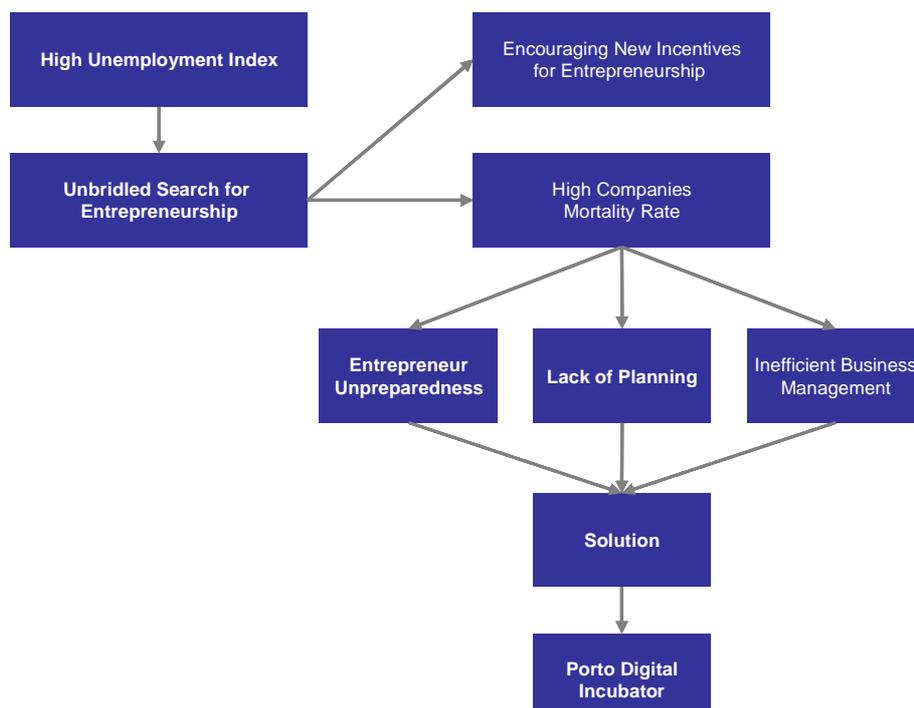
Porto Digital incubator will act in a situation in which the death rate of firms within two years of existence is very high. A survey of 377 incubators throughout Brazil held in 2006 by Anprotec - *Associação Nacional de Entidades Promotoras de Empreendimentos Inovadores* (National Association of Entities Promoting Innovative Enterprises), reveals that the mortality rate of

companies that go through an incubation process is 20 percent. Moreover, according to the Brazilian Ministry of Science and Technology (MCT), the American and European statistics indicate a reduction of 70 percent to 20 percent in the mortality rate of companies that go through incubation, compared with the developments born out of that environment . Given this, Porto Digital incubator aims to foster enterprise start-ups sustainable, whose mortality does not exceed 10 percent at the end of the second year of life after the spin-off. To strengthen entrepreneurship in the country and reduce the high mortality rate of micro and small enterprises, the NGPD launches an innovative incubation model which mainly aims, as shown in Figure 1, to attack the main problems involved in creating new ventures, such as underdeveloped entrepreneurial behavior, lack of advanced planning and inefficient business management.

Given the model that reconciles the development of entrepreneurship tied to reducing bottlenecks in the productive sectors in a region to promote economic development, structured and homogeneous, one can see that this solution is shown not only important because it can be applied elsewhere but mainly because it can be replicated in other regions of the world.

**Key Words:** Incubation, Cluster, Stat-up, Spin-off, Porto Digital

**Co-authors:** Polyana Targino – Porto Digital  
 Francisco Saboya – Porto Digital  
 Guilherme Calheiros – Porto Digital  
 Marcos Suassuna - Mega



**Figure 1 - Market Flow**

## **2. DEVELOPMENT**

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### **2.1. Entrepreneurship and Economic Development**

In general, entrepreneurship can be defined as a process by which individuals initiate and develop new business. For Schumpeter [5], beyond considering the economic context, entrepreneurship involves any innovation form that is related to the company prosperity. The entrepreneur, therefore, can be either a person who starts their own business or someone connected to an already established company that is committed to promoting and developing innovation. Thus, he argues that entrepreneurship, whether is applied in new or existing enterprises, is what allows the survival and business prosperity in nowadays dynamic economic environment.

Thus, entrepreneurship is a continuous process in which individuals identify new opportunities and exploit them. It becomes an economy engine, the agent of innovation and changes, able to promote greater competition and thus economic growth. To make it happen, however, the entrepreneur must be self-confident, take initiative, accept and calculate risks, have power to decide, among other features that enable a business winner.

The entrepreneur figure, along with technological innovations, is indispensable in an economic development process of a State as Pernambuco, in Brazil, with presenting an internally uneven economic performance and even old-fashioned practices in traditional sectors such as agriculture. Thus, to ensure a certain progress, more homogeneous, it is necessary not only a qualified professional, capable to promote the economic development through innovative developments, but facilitate the transposition and internalization of their knowledge, especially of innovative ICT solutions that should enable the social and digital inclusion, the integration of the state and building relationships, business solutions and promising.

This knowledge diffusion, therefore, in addition to being input to promote the productive sectors development and the consequent jump in the state economy, will also serve as a tool for reducing the social gap that exists between the developing regions of Pernambuco, especially between the countryside and the metropolitan area of Recife. This region, according to *Condepe / Fidem - Agência Estadual de Planejamento e Pesquisas de Pernambuco* (Pernambuco Planning and Research State Office) occupies 2,82 percent of the state and concentrates 62,8 percent of GDP – Gross Domestic Product. The economy participation can be better distributed to promote social inclusion development in the clusters. The metropolitan area has a Human Development Index (HDI) of 0.783, above the average for the rest of the state, that can be changed with the knowledge overflow and application of ICT as a tool to increase clusters competitiveness.

### **2.2. Porto Digital: Pernambuco's Valuable Economy Active**

The main breeding ground of knowledge and development of ICT applications in Pernambuco is the *Porto Digital* (PD). This is a technology park. PD is a result of the innovation environment that was consolidated in Pernambuco in recent decades along with the coordinated effort of the university, the productive sector and government, in order to enter the industry of Information Technology and Communication in the economic matrix of the Pernambuco state. Sector with high growth potential, ICT is also the basis for increasing the competitiveness of a region in any economic development strategy contemporary.

Porto Digital's goal is to implement economic development, public policies for the state, urban regeneration, social inclusion, strengthening of the ICT cluster and other arrangements through the technologies use. With 10 years of existence, PD is a leading technology centers in the country. It generates to the state 4000 jobs, attracted 135 institutions among universities, government ministries, research and development centers and technology companies on a national and international level.

As a result of the success of all its actions, the PD was elected by AT Kearney [2], as the largest technology park in the country (2005). Since 2007, the PD was recognized as the Best Technology Park and Habitat for Innovation in Brazil by the *Anprotec 0*. The recognition came with the National Award for Innovative Entrepreneurship 2007. Moreover, in 2008, PD was the only Brazilian technology park to integrate the first edition elaborated by IASP - International Association of Science Parks of the book *Learning by Sharing* which is that featured four parks around the world. And in 2009, *BusinessWeek*, the largest business magazine in the world, recognized PD as one of the places where the future is being created.

To manage the park, it was created in 2001 the NGPD – *Núcleo de Gestão do Porto Digital* (Porto Digital Manage Unit), a private and non-profit social organization. Its actions essence is to strengthen the competitive capacity of enterprises to enable them to access regional, national and international markets, in another scale level and magnitude. This strategy involves actions such as increase levels of cooperation between enterprises; increase the capacity of human capital formation both at the technical and management level, among others. In this context, Porto Digital is a valuable active in Pernambuco's economy with the potential to contribute to improving the productive efficiency standard in any sector and therefore to improve competitiveness levels of domestic and foreign markets.

This design gains strength and foundation through the current socioeconomic situation of Pernambuco's clusters that contrast with the Recife reality. The main productive activities of these clusters have few applications of ICT solutions to get out of informality, minimize manufacturing situation, or to accelerate growth. The local populations have a fragile structure to multiply the knowledge and therefore are out of the intellectual production unit. All these reasons create obstacles to socioeconomic development in these regions.

Thus, it is urgent an economic leap of these locations in order to make them more competitive and include them in the State economy actively. The Porto Digital incubator, therefore, presents a solution to this situation since it is an initiative that seeks to promote economic and social clusters development by strengthening and increasing their competitiveness through the generation of innovative IT projects aimed at solving the real problems of this clusters.

This initiative is supported by the clusters producers speaking. According to a Sebrae and Itep – *Instituto de Tecnologia de Pernambuco* (Pernambuco's Technology Institute) research, developed by the Micro and Small Enterprises Digital Inclusion Project in April 2007 with the Local Production of Gypsum, Textile and Irrigated Agriculture / Viticulture, the entrepreneurs consider the development and technology application critical for their business. This indicates that there is a great potential to improve competitiveness from technological development and innovation strategies throughout the all value chain, focusing not only in these clusters, but extensively, for the others.

The interviewees do not only consider the technology development important for the cluster progress and competitiveness increase, but also evaluate ICT as an element of a high relevance compared to other many essential organization attributes. From all the managers interviewed in the Gypsum cluster, 59 percent believe ICT is between the three elements of higher importance. In the Textile cluster, this rate was 61 percent and in Irrigated Agriculture/ Viticulture it increased to almost 70 percent.

### **2.3. Incubation to Develop Entrepreneurship**

Given the need to reduce the mortality rate of micro and small enterprises, thus reducing the unemployment rate, the promotion of innovative entrepreneurship is shown as an essential aspect not only to such matters, but also for the economic development of a state and its public participation in national and international economy. In this scenario, incubators appear to promote the development of science and technology playing an essential role in meeting the market demand by transforming great ideas into concrete projects. Such sites provide favorable conditions for micro and small businesses to expand and conquer your space.

Companies' incubation consists in support and assists innovative services and products projects in its initial phase. This is one of the most effective mechanisms for the innovative enterprises development, competitive, self-sustaining and growth potential. In modern market competition is very difficult to build a potential business, with no technology or innovative processes. Therefore, start-ups do not need to immediately launch the market to try to consolidate their business. It usually happens because they want to combat the high rate of bankruptcies in the early years of corporate life in order to reach this purpose by maximizing the growth rate and businesses success with greater potential. Thus, it creates a favorable environment for entrepreneurs and investors and also allows the local growth with an initial investment, somewhat reduced, generating a return for the regional economy.

Thus, we intend to make the developments residents growing and profitable with great potential.

It is easy to notice that those new developments facilitators are designed to enable and support business development and consolidate them in the market. Therefore, they support the technological innovations survival, products and services and also promote local and regional development.

#### **2.3.1. *The standard model***

In Brazil, according to Anprotec, there are about 380 incubators. As the Diagnóstico Sobre a Situação Atual da Incubação no Brasil (Diagnosis About the Current Incubation Situation in Brazil), conducted by the NGPD, inform, in 2007, 75 percent of them were technology based. They are very similar regarding to structure, processes, financing, management, tools offered, and Spin Off aspects, and we can even draw a standard of the currently aspects applied. As identified in NGPD research, it follows below the current incubators standard based on these aspects:

##### **i. THE INCUBATOR STRUCTURE**

Brazil is composed mainly of private and non-profit incubators, with a formal link with universities and / or research centers. They are usually physical, and are located on college campuses, being supported by the institution that harbors them. There are also a large number of incubators that are in technology parks and have links with both universities and research centers.

##### **ii. THE INCUBATOR PROCEEDINGS**

- a) Selection: After the candidates' recruitment for incubation through public announcements, incubators start the selection, based largely on three criteria: (i) project economic viability, (ii) entrepreneur profile and (iii) possible contribution to local development / sector. It is important to notice that to participate in the selection must be a new entrant.

- b) Participation: The incubators usually do not have any kind of formal participation in the companies' resident business. There is no type of financial and /or management assistance, leaving only to the incubator its own operation management.
- c) Supervision: The supervision process, for simple activities monitoring or to monitor the evolution, is carried out through monthly meetings and reports. There is, however, the adoption of special procedures to assess the maturity degree and actual conditions of enterprises to enter and face the market.

### iii. FINANCING

- a) Incubator: They have their own resources and, sometimes have Sebrae assistance to ensure its operation. FINEP – Financiadora de Estudos e Projetos (Studies and Projects Financer) and CNPq - Conselho Nacional de Desenvolvimento Científico e Tecnológico (National Counsel of Technological and Scientific Development), two financial institutions are also two major funding sources.
- b) Incubated companies: There is no a widely used source The main financial supports given to new ventures originate from agreements or grants. The last one even consist of stimulating factors at the beginning of the new venture and can still contribute to the staff training of people who will join the company after graduation.

### iv. MANAGEMENT

The incubators are governed by a board that is being attended mainly by representatives of universities and /or colleges. There is also, but less frequently, the participation of government and the productive sector.

### v. INSTRUMENTS OFFERED TO INCUBATE

Regarding to infrastructure, incubators charge a contribution and offer beyond the office, auditorium, meeting room and library. Regarding to services, they basically offer computer support, marketing and finance consulting, business guidance, legal assistance and support for intellectual property and cooperation with universities and research centers.

### vi. SPIN OFF/ GRADUAÇÃO

The incubators Spin Off process is not developed with each resident, or based in their maturity level to enter the market. The most widely used criteria are the incubation time and few incubators graduate based on desired resourcefulness. Even those incubators do not plan the residents graduation, they just note that they are mature enough and do the spin off without giving a direction for performance in the market in a more simple and independent way or even or in more complex ways that require more elaborate operations such as mergers and acquisitions.

## **2.4. Introduction to the Incubation Model**

To identify some bottlenecks to be worked out by the incubated enterprises, it was decided to be based on a survey that was carried out in three clusters of greater relevance in the state economy. They are: (i) the Plaster Cluster, (ii) The Confection Cluster and (iii) The Fruits Production Cluster. The study was the result of a partnership between ITEP - Instituto de Tecnologia de Pernambuco (Technology Institute from Pernambuco) and SEBRAE - Serviço Brasileiro de Apoio às Micro e

Pequenas Empresas (Brazilian Service to Support Micro and Small Enterprises), [4], that drew a diagnosis based on information from 399 entrepreneurs assisted by SEBRAE in some business support program.

The research was divided in two phases: (i) qualitative interviews and meetings, with entrepreneurs from the clusters to explain the key barriers to a better economic performance of certain productive sectors, and (ii) quantitative field research to identify objectively the problems occurrence degree indicated in these interviews in the companies researched universe.

The interviews were conducted according to the universe from table below:

APL	Universe	Nº Interviews				Total	Error %
		Micro	Small	Medium	Large		
Plaster	100	22	39	07	--	68	5,4
Confection	337	77	50	07	02	136	5,2
Fruit Production	756	--	183	08	04	195	4,8
Total	1.193	99	272	22	06	399	--

In the opinion of experts, gathered in the qualitative research phase, there are around one hundred and fifty factors that hinder the LPA (Local Productive Arrangements) economic performance. Given the nature of the incubator activity - which scope is the innovative solutions development intensive in technology for the enterprises from the diverse productive sectors - the field research tested only those bottlenecks hypotheses that were part of the firms internal environment and, simultaneously, were more directly related to information technology solutions.

By the way, in the end of the study, it was identified that the technology development activity (which includes R&D, automation, design and processes redesign, know-how and procedures) is among the top three critical spots for the productive activity development. That is a perception of the three clusters entrepreneurs involved in the research, which indicates a large potential for improving competitiveness from technological development strategies and innovation throughout the value chain of fruit and wine, plaster and confection, as well as other clusters. Other spots, however, were also identified crucial as shown in the table below that summarizes the final result of the study.

LPA	RELEVANCE DEGREE					
	1º		2º		3º	
Plaster	Marketing and sales	62%	Purchasing	59%	Technology Development	59%
Confection	Marketing and sales	67%	Technology Development	63%	HR Management	61%
Fruit Production	Marketing and sales	72%	HR Management	68%	Technology Development	68%

## 2.5. Porto Digital's Innovative Incubation Model

Porto Digital, as a technology park, among its many roles, stands out as an important agent in the technological innovation process by presenting a synergistic business environment with actual conditions to promote continuity of the business development generated from incubators, educational institutions and research or its employees. But more than providing an environment for the new ventures development, among its core management tasks, NGPD, is the design and implementation of an innovative incubator model based in Porto Digital, the Porto Digital Incubator.

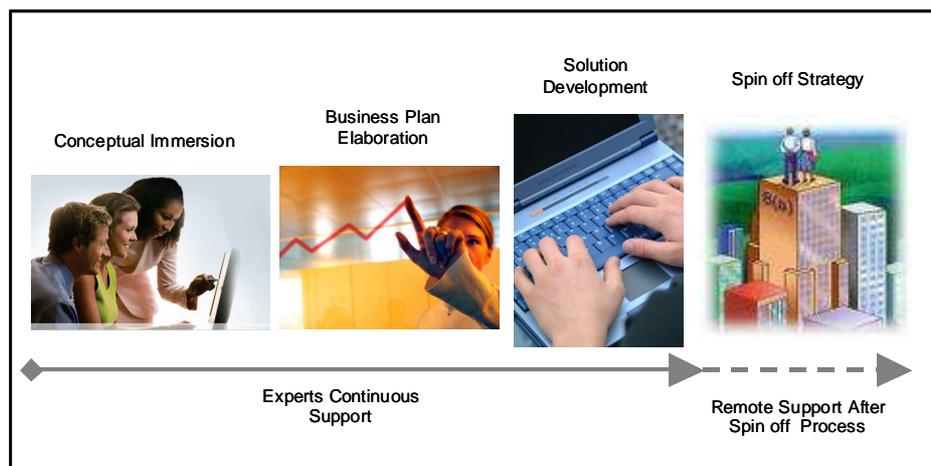
Among the reasons for structuring the incubator environment in PD are: (i) maximizing the survival conditions of new ventures generated from the University and companies already established, (ii) the possibility of developing ideas and technologies generated by entrepreneurs, and (iii) the consolidation of a link in the sequence and maturation of these new businesses.

The Porto Digital Incubator will be structured as a micro site of innovation, conducting training activities, capabilities, structuring companies, incubation and post-incubation. In a multifunctional space that provides adequate support to all its activities, the Incubator will be able to graduate in three years 30 new companies.

The incubator structure is expected to stimulate the emergence of new software development business in Porto Digital, whose main characteristic is the high degree of technological innovation and it is focused on a higher value market niche. Based on relevant issues in development regions of Pernambuco state, the business should show feasibility to grow national and internationally.

### 2.5.1. Incubation process

The incubation process will have a support of an expert group that will provide training and advice in areas such as Marketing and Sales, Management / Business, Accounting / Financial, Technological and Behavioral. These consultants will act at all stages, both collective and individually, varying the intensity according to the steps that are detailed below and summarized graphically in Figure 2.



**Figure 2 - Incubation Stages**

#### i. CONCEPT IMMERSION

This step is divided into two parts: the first consists in an intensive and collective training about the areas supported by the experts and the second part consists in an individualized support. Each part will take place in a period of one month, resulting in two months for completion of the whole stage. At this point, the expert consultants will work with great dedication, each one in its own area.

#### ii. BUSINESS PLAN PREPARING

The Business Plan construction will be held based on the proposed project, putting into practice the concepts learned in training, and refined with the help of experts. This stage will be held in the 3rd and 4th months.

### iii. SOLUTION DEVELOPMENT

This will be the biggest step and it is the moment, in fact, when the technological development of the proposed solution will take place. During this step, which occurs within 12 months, the experts' performance will be less intense than the early stages, but systematic. It will increase, as the project is taking shape and the need is increasing. It is believed that, even though it is the technological development moment, the market does not stop. Therefore, the incubator manage unit must always be following and updating the marketing plan, conducting surveys, participating in fairs, events, managing the project, raising more resources, etc.

### iv. SPIN OFF STRATEGY

Finally, after the solution development, the company will be held to prepare for the spin off. Specialists and incubator manager, together, will consider and decide the future of graduate companies choosing one of the three alternatives below:

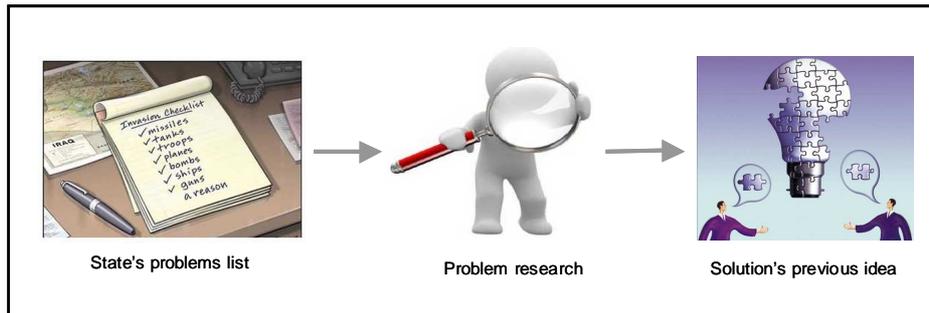
- a) The enterprise may be: (i) a new business generated from each incubated solution, (ii) a new business generated by all the solutions incubated, or (iii) some companies generated by the best combination in terms of future sustainability subsets of solutions incubated.
- b) The enterprise may be a new project or product supporting institution, in this case it is a company already established that it was decided to incubate a new business, or,
- c) The project could become a product ready to be sold.

### v. POST SPIN OFF PROCESS SUPPORT

After performing the spin off, entrepreneurs may take advantage of expert consultants during a 6 months period in order to establish itself in the market.

## **2.5.2. Differential**

The Porto Digital Incubator idea runs far from the already existent models. His conception believes that the business success comes from ideas and people. Thus, as summarized graphically in Figure 3, the incubator will be based on ideas that come from a list of issues related to Pernambuco's cluster, so that possible solutions are envisioned to try to minimize the bottlenecks identified in these regions. It is expected that the proposals submitted contain a deeper investigation on the highlighted problem and a previous idea of the solution to be developed during the incubation period.



**Figure 3 – Flow to join the incubator**

Based on the same aspects that formed the basis for a Brazilian standard profile, it will be presented below, the differential items from the innovative model of the Porto Digital Incubator.

#### i. INCUBATOR STRUCTURE

The Porto Digital Incubator will be private, non-profit and will be located in the Technology Park. Comparing with the standard incubator model previously presented, the Porto Digital Incubator highlights for be located in NGPD space and interact directly and continuously with it. The NGPD, besides being an agent articulator with the academy, interacts and promotes integration with other parks and incubators national and internationally, with companies, promotion agent, with the government (at the municipal, state and federal) and institutions from the third sector. Thus, resident companies will be placed in a synergistic environment where networking will be far greater than the one promoted by the incubators in general and still offer the greatest potential for strategic business by being cultivated in the innovative agents, opinion makers and actors with a power decision.

Besides that, because it is directly related to the NGPD, the incubator will benefit by working among the core activities that among their duties, stands out for being a generator of ideas, designers of innovative designs and great promoter of attraction developments of innovative IT and generation of skilled jobs. The docks, because you can count on all the physical structure of the core manager of Porto Digital, and can interact with human capital and this benefit also of their activities.

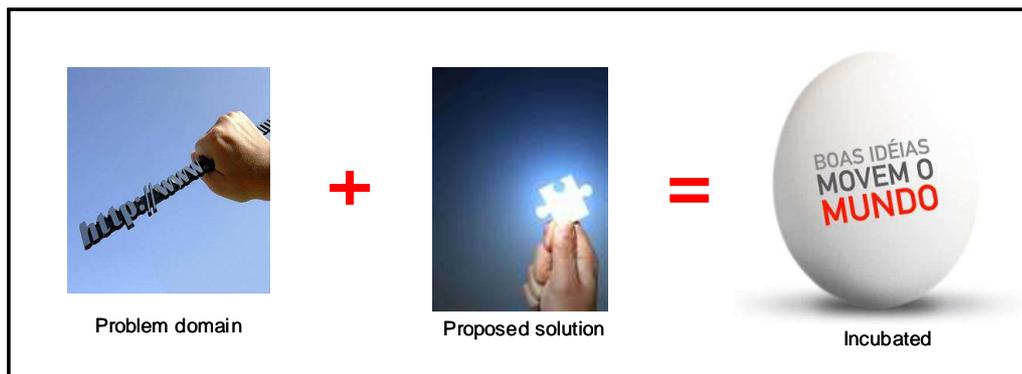
#### ii. INCUBATOR PROCESS

- a) Selection: The Porto Digital Incubator selection process is different from those applied by other incubators, since its beginning, in the recruitment stage. The selection announcement focus on the state clusters problems is an incubator attempt to promote more information and market dominance for the executives of new companies, once it drives the submitted ideas to a market with real existent problems waiting for solutions. The lack of domain about the industry and its market, as originally presented, is one of the main factors that lead companies into bankruptcy in its first years of life. It is one of the problems that the incubator intend to minimize.

The selection announcement shall present the main problems of Pernambuco clusters that require technology solutions to be minimized. Thus, candidates who submit project will already be more informed about the market that will be explored and they will be encouraged to dominate the market and its problems even more if they wish to be selected. That's because after the submission, they will be judged based on two criteria that are not usually used by other incubators, which are: (i) the problem domain and (ii) the proposed solution. As shown in Figure 4 below, the Porto Digital selection process will look for good solutions that can promote the clusters economic development in the state. The solutions

will be developed by those who have knowledge about the subject, so the solution refinement and the manager entrepreneur profile development will be done along the incubation process.

At the current moment, for the first phase of the incubator program 15 ideas were selected between 62 proposals submitted.



**Figure 4 – Porto Digital Incubator Selection Process**

- b) Participation: The Porto Digital incubation innovative model is, designed by NGPD, provides a direct and intensive incubator participation in resident companies business during the whole incubation process. The Porto Digital Incubator manager will be responsible not only for the incubator's administration and goals, but also for the individual goals for each incubated project regarding to schedule, goals related to quality, business plan development and refinement, and the market concepts application previously learned. Thus, he needs to follow them daily, evaluating their performance and monitoring the Business Plan execution and the goals achievement.

The incubator manager will also serve to promote the integration between the incubated enterprises and between them and the market, by simple joints, business prospect or for attendance at conferences, road shows, among other events types. This initiative is directly linked to another incubation phase that, as all process stages, has a direct and active manager. This step focus in the study and planning of the spin off and support the post spin off, which will also have involvement of incubator consultants.

Each enterprise will have, not only the direct incubator manager support, but also the consultant team and the NGPD project team support, that will be monitoring closely the incubator activities.

The ideas already selected in the selection process are now starting to receive the support from the incubator manager and organizing their work to be done during all the incubator process.

- c) Supervision: Based on the active and direct incubator manager participation in the resident business, the supervision will follow the same way. The reports and monthly meetings will also be used as tools for the business supervision. Other additional tool will also be used to a daily monitoring and continuous assessment that the manager will do during his daily contact with the resident companies. So, not only the Business Plan fulfillment will be evaluated. The method also makes it possible to know about the maturity degree of the enterprises and the real conditions that the company will have to act in the market without the incubator direct support.

### iii. FINANCING

- a) Incubator: Besides having resources support from a FINEP project and from Sebrae, the Porto Digital incubator stands from others incubators because it also have funding from Pernambuco State Government, through its Science, Technology and Environment Department (SECTMA). As noted earlier, the strategy provides innovative ideas for solving some state clusters problems, promoting the knowledge transfer generated in Porto Digital, which meets the new trend presented in the state of knowledge dissemination and technological innovation for provide the region with a base of human and business capital necessary to sustainable development for a long time.
- b) Incubated Companies: The differential point in this subject is the aspect that the incubated enterprises are financed by own Porto Digital Incubator. The companies will have all the tools offered throughout the incubation process without any additional costs. So, the resident will use the instruments for their qualification and development process, like the incubator manager coaching, the consulting and events participation, with no real costs. As a plus, if the company is interested in developing proposals to get financial resources, the incubation can use the support from the NGPD office team, which has expertise in designing projects to get resources from public institutions.

### iv. MANAGEMENT

The Porto Digital Incubator management is an immeasurable benefit to the incubated companies. It will be shared with the Porto Digital governance exercised by NGPD. This governance works integrated with its Directors Board composed by governments' representatives (37%) productive sector (21%), universities (11%), non-governmental organizations (16%) and other society sectors (16%). All of them have deliberative function and supervision regarding to setting objectives, targets and guidelines for the operations. That is why Porto Digital has a notorious technical expertise. This setting ensures that the incubator is part of a rich and democratic ecosystem where all the actors from this environment have and active participation and representation, ensuring that resident companies have a larger and more comprehensive feedback of their performance.

### v. INSTRUMENTS OFFERED TO INCUBATE

The Porto Digital incubator do not provides only the basic package of infrastructure and administrative resources to perform with simply reducing costs to prolong the survival of new businesses in the market, although many candidates for the incubation programs are mainly attracted by it. Unlike the vast majority of incubators in the country, the tools provided by Porto Digital Incubator, as noted earlier, are intended to provide not only maximize their living conditions in the new enterprise environment, but also allow the ideas development and build a link in the sequence and maturation of these new businesses.

So, about the infrastructure, the Porto Digital incubator will offer not only the physical structure as office, meeting rooms, auditoriums and event space, but the incubated enterprises will have all the working equipment, as laptops to each team member incubated, printers and all necessary material required for the daily routine.

Related to the offered services, besides the technical support, which is basic, Porto Digital Incubator offer a diverse team of experts that will meet different market requirements to assure the enterprise competitiveness (Marketing and Sales, Finance and Accounting and Business and Management), and direct interaction with the NGPD team. In addition to the technical attributes, managers will conduct their work and professional attitude to serve the market and they can use the NGPD communication team for dissemination and project team to obtain venture capital and, support to export and for technology transfer.

Guidance and constant, close and personal monitoring, will also be a service provided to incubated companies. The role of coaching, as mentioned above, will be played by the incubator manager and the experts' team, acting directly on each particular project, forming the professionals to be a successful entrepreneur. The incubator goal will be to ensure good performance and projects progress in a mature, committed and secure way.

#### vi. SPIN OFF/ GRADUATION

It will be providing for companies not just a structured spin off, but also a post spin off. After the solution development phase, the business enterprises graduation will be studied and planned not only by the entrepreneurs, but they will still have the incubator manager support and involvement and also of its experts. During the first six months after the spin off, the new enterprises can still be benefited by the incubator consultant team in order to ensure their consolidation on the market.

### **3. CONCLUSION**

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As the Brazilian current reality with high unemployment rates and enterprises mortality, especially from micro and small enterprises, the country looks for ways to change it. This paper presented an innovative incubation model, with a focus on major problems responsible for the early mortality of these companies, such as underdeveloped entrepreneurial behavior, lack of advance planning, and inefficient business management.

In order to develop the entrepreneur behavior, the incubator was concerned about the incubated entrepreneurial formation. So, it will be created, during the incubation process, specific trainings in each key areas to the entrepreneurial success, such as focused, monitored through the results by pre-defined goals analysis. In addition, there will also be encouraged participation in road shows, events and fairs.

Many enterprises also tend to be started without a minimum information and strategic planning about the new business. To avoid this lack of advance planning by the lack of market information regarding the business in question, the incubator is anticipated to provide, through its submission announcement, a list of real problems from the Pernambuco's clusters, for which solutions will be developed, increasing the chances of succeeding in order to bring to market a well positioned product.

Typically, new entrepreneurs are too involved with their development of new ideas that they forget these ideas needs to be managed. In order to solve this problem, the incubator will establish, collective and individual goals, which will be monitored often, so that the entrepreneur will be forced

to manage their own business. Otherwise, they may take the risk of losing their space in the incubator.

In addition to problems previously explained, the incubator is also worried about the lack of political support. Thus, the Porto Digital Incubator provided a model with the maximum possible articulations, establishing SEBRAE and SECTMA support and all policies and joints already existent today on NGPD.

According to this new model, it is expected to decrease the enterprises mortality rate, especially in their first years of life, and, at the same time, balancing other economic regions of the Pernambuco state, stimulating competitiveness and contributing to the state economic development.

Focusing on a different model, the Porto Digital Incubator believes that the entrepreneur formation is a crucial factor for the enterprise success. Besides trying to solve the current key problems, the incubator is also serving as a place for entrepreneurs training, which is often overlooked by universities and other educational institutions. Well-trained professional can take risks and optimize the chances to prospering the market. The risk is part of learning and, if well managed, can be the key to entrepreneur.

#### 4. REFERENCES

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- [1] ASSOCIAÇÃO NACIONAL DE ENTIDADES PROMOTORAS DE EMPREENDIMENTOS INOVADORES. Panorama de Incubadora de Empresas e Parques Tecnológicos 2006. Brasília> ANPROTEC, 2005. Disponível em <[http://www.anprotec.org.br/ArquivosDin/Panorama\\_2005\\_pdf\\_11.pdf](http://www.anprotec.org.br/ArquivosDin/Panorama_2005_pdf_11.pdf)> Acesso em 29 de junho de 2009. 15:32:57
- [2] AT KEARNEY. Desenvolvimento de uma Agenda Estratégica para o Setor de “IT Off-shore Outsourcing”. Brasília, 2005.
- [3] MINISTÉRIO DA CIÊNCIA E TECNOLOGIA - MCT  
SECRETARIA DE POLÍTICA TECNOLÓGICA EMPRESARIAL – SEPTe. COORDENAÇÃO DE SISTEMAS LOCAIS DE INOVAÇÃO. Manual para a Implementação de Incubadoras de Empresas. Brasília, 2000.
- [4] SERVIÇO DE APOIO ÀS MICRO E PEQUENAS EMPRESAS, INSTITUTO DE TECNOLOGIA DE PERNAMBUCO. Projeto de Inserção Digital das MPE – Pesquisa nos Arranjos Produtivos Locais de Gesso, Confeção e Fruticultura Irrigada/ Vitivinicultura, Diagnóstico dos Gargalos das Empresas dos APLs. Recife, 2007.
- [5] SCHUMPETER, Joseph A. (1911). A Teoria do Desenvolvimento Econômico. São Paulo: Abril Cultural, 1983. 169p.