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The Power of Knowledge to the Competitivity Increase: The Porto Digital Experience

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Executive Summary

The human capital of a company is one of its most values assets. knowledge is essential for the company´s success and development besides being a determinant factor of socio-economic rate growth of a region. Most industrialized nations have between 60 and 80% of its workforce with high professional standing while in Brazil this percentage is estimate in around 1%. In order to increase the competitive potential of the technology park; attract, create, develop and retain talents; contribute to social inclusion and support local businesses, Porto Digital has create its Qualification Program. The program has 5.632 qualified people, 32 certified companies, 9 partners Education Institutions, retention of high qualified people, among others. This paper will describe the results, its implementation and modification along the years, difficulties faced, benefits provided, how it has contributed to attract talents, providing an social and economic improvement of the region and the next steps.

Keywords: Innovation Management, Competitiveness, Business Model Innovation, Technology Park, Porto Digital

INTRODUCTION

In the current Knowledge Era, the main asset of any productive enterprise lies in its human capital. It is remarkable the importance of human capital for competitiveness of any company, especially for technology companies and knowledge intensive activities and creativity. At first glance, the human resources of a company can only mean an inevitable cost to the production process. However, currently it has been experienced an intensive production model in knowledge. In this context, human capital (and the it embracing) represent 75% of the added value of the company.

Knowledge is a major determinant of the rate of socio-economic growth. The higher the level of professional qualification is higher productivity, better the quality and lower the cost of goods and services generated. According to Espaço Acadêmico Magazine, most industrialized nations have between 60 and 80% of its workforce with high professional standing. In Brazil, it is estimated that this percentage of just over 1%.

The shortage of skilled human capital presents itself as bottleneck and constraint to the development and competitiveness of companies in Brazil and worldwide. This view gains strength and foundation on the current situation of the technology market, where unbridled advancement of technologies makes the universities are unable to keep pace with generating the knowledge necessary to deal with such technologies. The existing bureaucracy to change the curriculum of higher education in the country is still too slow for the required speed with the emergence of new technologies, which exacerbates the problem and makes essential the creation of solutions to the short, medium and long term handle the situation.

According to the definition of the International Association of Science Parks (IASP), Technological Science Park is an organization whose main objective is to increase the wealth of the community by promoting the culture of innovation and competitiveness and knowledge-based institutions associated with him. To achieve these goals, a Science and Technology Park stimulates and manages the flow of knowledge and technology between universities, research institutions and development - R & D, companies and markets. Being a Technology Park an important asset in the production of ICT, able to promote innovation and foster the competitiveness of enterprises, this is characterized as a potential agent to contribute to the increased connection between academia and the market as well as the socio-development an economic region.

In this context, the PD created the Porto Digital Qualification Program that aims to (i) attract, create, develop and retain the right talent to the needs of the resident companies; (ii) support local businesses in obtaining organizational processes and quality certifications improvements; (iii) contribute to social inclusion; (iv) increase the competitive potential of the park. Thus, the program strongly contributes to the growth of the ICT sector and Creative Economy site. It was designed to act as a mechanism through which the park should offer their contributions to the socioeconomic development of the region and hence the city.

This paper will describe the details of the program, its results, how it has been implemented, the difficulties faced, the benefits it has provided for the environment and the society in general, how it has contributed to create and attract talents, providing an social and economic improvement of the region and the next steps.

1. THE ROLE OF A TECHNOLOGICAL PARK FOR CREATE AND ATRACT TALENT

The knowledge along with technological innovations is indispensable in the socio-economic development process of a state. Thus, to ensure a certain and homogeneous progress of a region is necessary to enable the implementation and internalization of knowledge, especially of innovative ICT solutions that should enable social and digital inclusion, the state integration and building relationships, solutions and promising business. It becomes the engine of the economy and social development, the agent of innovation and change, able to promote greater competitiveness and hence a higher socio-economic growth.

According to ANPROTEC[1], technology parks act as promoters of the culture of innovation, competitiveness and entrepreneurship training, based on the transfer of knowledge and technology, aiming to increase the production of wealth in a given region.

Being a technology park a relevant asset in the production of ICT, able to promote innovation and stimulate the competitiveness of enterprises, this is characterized as a potential agent to contribute to the socio-economic development of a region.

The adoption of projects and practices aimed at achieving extend employability and improve competitiveness and innovation potential of companies, a scientific and technological park can serve as an attraction to partners and customers, and also as a model to be followed by companies in an innovative and competitive market, since the parks are strategic actors of influence in this market.

2. PORTO DIGITAL

The Porto Digital Technology Park develops activities that foster cooperation, promote innovation, increase competitiveness and support the export of products and services for enterprises of Pernambuco. Its goal is to implement public policies for economic development of the State, urban regeneration, social inclusion, strengthening the ICT hub and other clusters through the use of these technologies. In 15 years of existence, the Porto Digital (PD) is a leading technology hub in the country. The PD has already generated for the state 7.100 jobs, attracted 500 entrepreneurs and 250 institutions including universities, governmental agencies, research and development centers and national and international technology companies as illustrated in the Figure 01.

Figure 01 - Porto Digital´s environment

[1] ANPROTEC - Disponível em: http://anprotec.org.br/site/incubadoras-e-parques/. Acesso em: 06/jun/2013

In 2005, the international consultancy, AT Kearney[2], classified Porto Digital as the largest technology park in the country, and a national benchmark in using public policy to promote innovation and strengthen the technology sector. In 2007 and in 2011, the National Association of Organizations Promoting Innovative Enterprises (ANPROTEC)[3] considered PD the best technology park/ habitat of innovation in the whole of Brazil.

In 2008, the International Association of Science Parks and Areas of Innovation (IASP) published the first volume in the Learning by Sharing series, in which it highlighted the case of Porto Digital, along with three other science parks in Malaga (Spain), Manchester (UK) and Hyderabad (India). Also in 2008, the Brazilian Ministry of Development, Trade, and Industry recognized Porto Digital as the Cluster of Information and Communications Technology of Pernambuco.

In 2009, a report published in the online edition of Business Week mentioned Porto Digital as one of the most innovative technology parks, listing it as one of the ten places in the world where the future is being created. More recently, McKinsey singled out Porto Digital, along with the Campinas Region, in the State of São Paulo, as the two centers for innovation with the greatest potential for generating business in the technology sector in the country.

In 2012, the park won from INPI - (National Institute of Industrial Property), the first Seal of Geographical Indication in the area of IT services. The seal certifies that the software produced in the Porto Digital has a quality certificate.

In 2013 BBC presented Porto Digital as a great tech hub away from the Rio-São Paulo axis that has a great success. In the same period, Financial Times Special Report titled “Brazil Innovation, Research & Development” highlighted Porto Digital’s history and activities as a great example for the special report.

In the same year, Porto Digital hosted the 30th IASP World Conference and the XXIII Anprotec’s National Seminar. The events occurred jointly between 14th and 17th October, under the organization of Porto Digital. The event whose theme was "Science Parks Shaping New Cities" featured about 1,150 participants from 47 countries, of which 85 were speakers. In this event, the Porto Digital Incubator, C.A.I.S. do Porto, was elected by Anprotec, through the Innovative Entrepreneurship Award, as the best incubator in the country facing oriented local development companies.

After that, in 2014, another Financial Times Special Report highlighted Porto Digital again. With the title “Latin America’s Regions – Doing Business in Brazil’s northeast”, the text makes reference to Porto Digital as a project not only designed to stop the city’s brain drain but also to create an economic model based on information and knowledge.

Months later, Porto Digital was cover story in the magazine of TusPark, a Chinese Technology Park. The article wrote about the glorious history of PD establishment at initial stage, and development in the past two years with relevant limitations PD faced.

In 2001, NGPD – Management Unit of Porto Digital was created to manage the park. It is a social, private and nonprofit organization which role is to guarantee Porto Digital’s success. NGPD is the agent for implementation of public policies to promote the structure and evolution of the Technology Park, through the implementation of public and private resources.

NGPD’s main objective is to increase the positive environmental factors in order to improve the innovative capacity and competitiveness of enterprises and of the cluster as a whole. To do

[2] AT KEARNEY. Desenvolvimento de uma Agenda Estratégica para o Setor de “IT Off-shore Outsourcing”. Brasília, 2005

[3] 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> Acesso em 29 de junho de 2009. 15:32:57

this, its main roles are: (i) to generate original ideas, (ii) to develop innovative projects, from original ideas, (iii) to joint operating agents, so that projects can be implemented -including sponsors, government, enterprises, universities, and (iv) to attract innovative ICT-based companies.

Given the above, it is understood that Porto Digital is a valuable asset of Pernambuco state, with the potential to contribute to improve the human capital and companies level and therefore to improve the level of the park business and competitiveness.

This view gains strength and foundation on the current situation, where enterprises needs to be more competitive and innovative to face its current problems related to the level of human capital. Thus, given the constant need to provide better solutions to this scenario and the global concern for the environment, Porto Digital has created the Qualification Program which aims to create and attract talents, strengthen the relationship between the academia and the market, build a favorable socio-economic development of the region's environment, providing the attraction of new businesses and creating skilled jobs and high incomes, on the premise that skilled human capital attracts large companies, given the shortage of this raw material on the world market.

In this context, it is noticed the importance of Porto Digital for the economic and social development, not just for the ICT cluster, but also for the Pernambuco State. One of its various roles is to work in disseminating knowledge and promoting an innovative culture.

3. PORTO DIGITAL QUALIFICATION PROGRAM

As part of its activities, the NGPD through Agreements with the public spheres, such as the Ministry of Science, Technology and Innovation (MCTI) and FINEP, created the Qualification Program which aims to expand the supply qualified human capital and support resident companies Porto Digital in obtaining improvements in organizational processes and quality certifications. Thus, the program promotes increased connection between academia and market, increasing competitiveness of enterprises, the recognition of its quality in the world market and the ability to provide quality solutions for the development of other productive chains in the country. Thus, it contributes greatly to the growth of the local ICT and Creative Economy sector. It was designed to act as a mechanism through which the Digital Port should offer their contributions to the socioeconomic development of the region and therefore of the city.

The Qualification Program, therefore, acts as a channel of the Park to support the development of their businesses by supporting the qualification of human capital and the quality of their processes, which can serve both as a competitive advantage for the company, as to increase the competitive potential of the park, making it a global showcase of Innovative Environment and a constant Socioeconomic Development. Thus, the program operates with activities that enable:

(i) To increase the skill level of professionals working in the park companies;

(ii) Increase the supply of qualified professionals by training students from Institutions of Higher and Technical Education (IETS) partner of the park;

(iii) minimize the bottleneck in human capital for companies in ICT and Creative Economy;

(iv) improve the organizational processes of companies to obtain quality certifications in software development, at national and international level;

(v) Support the attraction of new technology companies to the city;

(vi) Generate qualified and high-income Jobs;

(vii) Increasing the level of competitiveness and innovation in the ecosystem;

(viii) Creating jobs for people with disabilities.

In the beginning the program, was created only with 2 executions line, as shows in Figure 1[4].

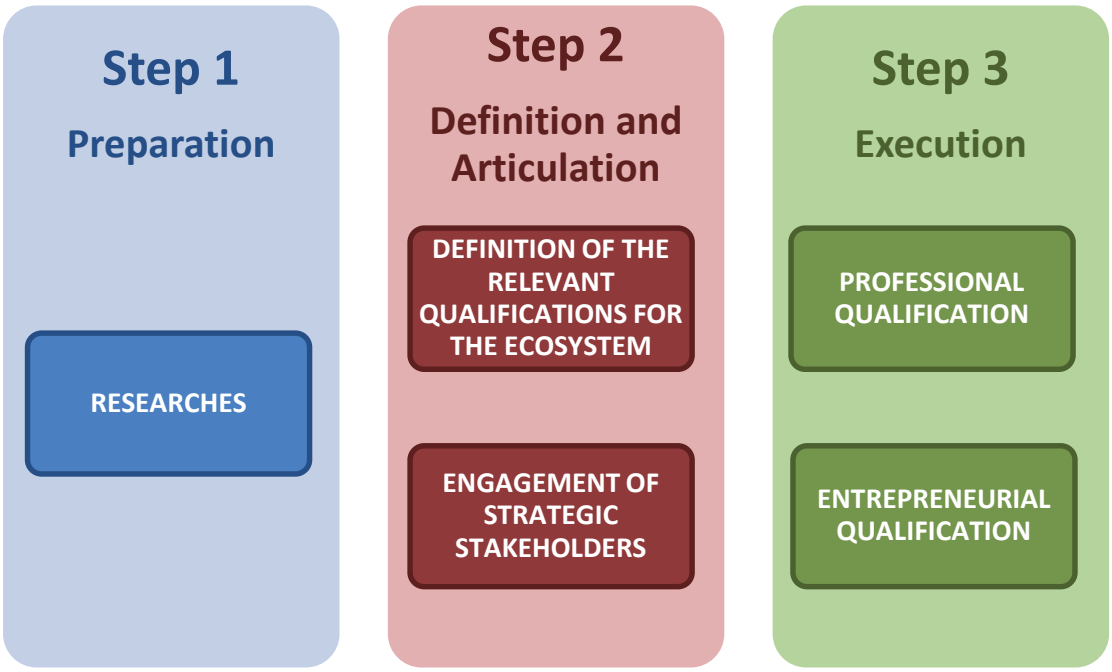

Figure 1 - Old model of Porto Digital Qualification Program

After some years running the program, some changes were made in order to increase its scope and make it better. So, now the program has includes new executions lines to meet different types of stakeholders with specific strategies for each of them, as show in Figure 2:

[4] GOUVEIA, Cidinha, TARGINO, P., MAINARA, C., ALMEIDA, A. P., SABOYA, F.- The Flow of Knowledge connecting academia and market - The Porto Digital Experience, 31st IASP World Conference, Doha, Qatar, 2014

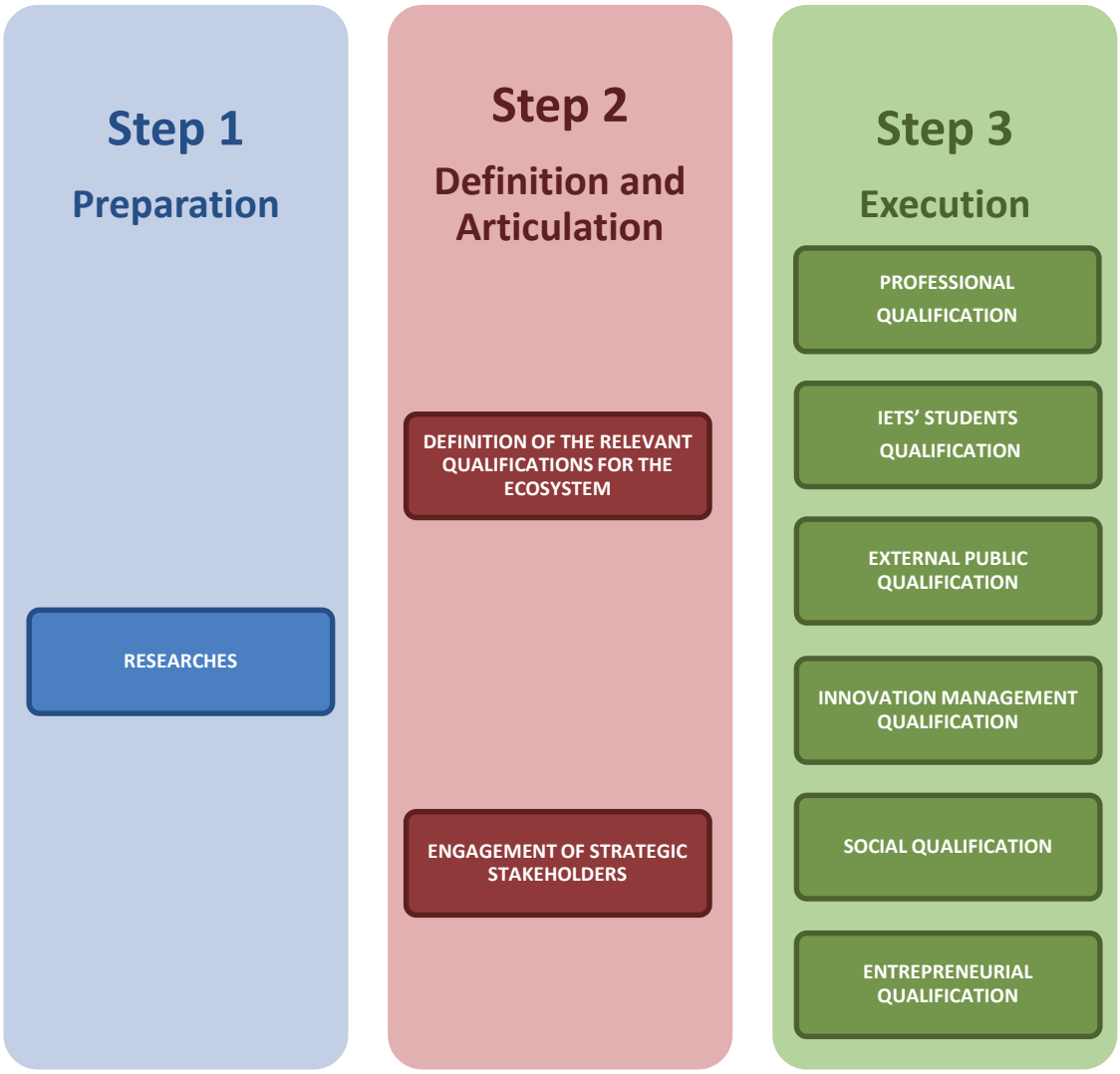

Figure 2 - New model of Porto Digital Qualification Program

STEP 1: Preparation

Research

This step is a survey of the needs of the environment in order to prepare the program to be able to put it into practice. For this, it intends to do some researches in order to know the actual demand of the enterprises of the park. The idea is to conduct extensive research, involving (i) Institutions of Higher and Technical Education (IETS) responsible for the formation of human capital demanded by the area of Information Technology; (ii) Students in the technology industry; (iii) Professionals in the field of technology, employed or not; and (iv) Companies in the Technology and Creative Economy sector in the Metropolitan Region of Recife. The profiles of each of these actors should be identified in this study, with regard to the formation of human capital: the listing of the courses offered by educational institutions; the profile of the qualification (or qualification necessity) by students and professionals; and the demand for professionals from companies. The document resulting from this research will enable the Pernambuco information technology environment better understand market trends and the features of skilled human capital shortage. This information will aid the subsequent stages of this project.

STEP 2: Definition and Preparation

From the mapping of training needs required by the market, through research conducted in the preparation stage, we intend to define priority areas for skills and identify and select the educational institutions of human capital partner for implementing the proposed objective.

Definition of the Relevant Qualifications for the Ecosystem

A survey conducted earlier should point out which are the areas most demanded in the local market. Armed with this result, should be identified which would be the appropriated courses to meet this need. These courses should be complementary to the curriculum of higher education and not compete with them. Thus, we define which courses will be taught in most demanded areas, its hours, summary, duration, location, etc.

Engagement of Strategic Stakeholders

Besides defining the courses, it is also necessary to identify and establish partnerships with strategic stakeholders, such as: (i) Institutions of Higher and Technical Education (IETS) so that its students are also trained to facilitate their entry into the Porto Digital ecosystem. The idea is to meet the need of companies, qualifying students of IETS in specific areas demanded by enterprises. (ii) public organs for people with special needs in order to work together with them to find and recruit people to be part of the social qualification; (iii) business school to help us to create a new MBA focused on innovation management, etc.

STEP 3: Execution

This step consists in the practical execution of the program; it means the realization of the qualifications, as follows:

- **PROFESSIONAL QUALIFICATION (FOR PARK WORKERS)**

The Professional Qualifications are exclusive implemented for the park workers as a benefit for work at Porto Digital. The idea is expand the ability of Porto Digital´s companies to deliver results and generate innovative solutions in the planned schedule, within the allotted budget, according to the negotiated scope and according to quality standards defined.

The qualification actions benefit of local knowledge and potential, adopting participatory methodologies and understanding the reality from the transversality of the technical, economic, cultural, social and environmental knowledge of Porto Digital Technology Park.

To deploy the qualifications it is needed to define a Regulation containing rules of participation, selective criteria, tiebreakers, among other information relevant to the participants. In addition, you must also define the responsibilities of each part involved: companies, students and the park. Then the courses should occur, and for those who obtain good grades, above the previously established average, the program will also afford the desired certification, related to the course conducted, proving the qualification of professional in the field in question.

Through research conducted regularly, Porto Digital raises the training needs and certification of employees of companies embedded in the park. From this information the trainings are planned. In the latest research were demanded training in the following areas: English Language; ICT; Project Management; Entrepreuner; Innovation; Internacionalization and Corporate Social Responsibility, according to Table 1.

Area	Qualified	Certified
Project Management	606	345
English	1.026	-
ICT	1.049	158
Entrepreuner	1.215	-
Innovation	314	-
Internacionalization	46	-
Corporate Social Responsibility	609	-
TOTAL	**4.865**	**503**

Table 1 - Results of professional qualification

The number of certified people is low if compared with the number of qualified workers. It happens because there is no certification for some courses; we decided focus on Project management and some ICT certifications. However, the certifications are not easy, so, as an improvement of the Project, it was introduced new actions in order to get those numbers better. In the end of the course they have some classes focused only in training questions for the certification, for example.

- **IETS' STUDENTS QUALIFICATION**

Its objective is to get partner educational institutions to train students in courses related to the park expertise areas in order to prepare them to be absorbed more easily by the market. Whereas there is a gap between knowledge generated by universities and knowledge required by companies to follow the frenetic pace of the market, it is very important to prepare these young people so they can have a differential and enter the labor market.

Today, Porto Digital has 8 partnerships formalization with the main IETS of the city: (1) Faculdade Boa Viagem; (2) Faculdade Joaquim Nabuco; (3) Faculdade Marista; (4) Uninassau; (5) Faculdade Nova Roma; (6) Faculdade dos Guararapes; (7) Escola Politécnica de Pernambuco – UPE; (8) AESO.

Before choose the courses that should be provided, Porto Digital runs a research in the park companies in order to understand their needs and define which areas they have a lack of knowledge.

Through this partnership, the park has provided qualification courses in the following areas: (i) Project Management (focused in CAPM certification offered by PMI Institute – an international) and ICT (Java, MySQL Database, Web Technologies, Android), according to the companies interest, as shown in the formal research conducted by Porto Digital. In order to stimulate the students, the program also offers the certification exam for the students that reach good grades and do not miss the classes, having a minimum limit of absences. The Table 2 shows us the courses done, the number of trained students (the ones who got good grades and minimum absences) and how many passed in the exam:

Course	Qualified	Certified
Java	91	10
Banco de Dados MySQL	84	Canceled certificaton
Tecnologias WEB	78	7
Android	81	In progress
CAPM	46	19
TOTAL	**380**	**36**

Table 2 - Results of IETS' students qualification

The numbers shows us that the ratio of qualified students who can get the certification is low. This happens because they are early in their academic career and with little work experience, which makes it the most difficult to get certified. However, Porto Digital believes it is important

to keep this activity as a way to encourage students and to enhance the content acquired graduations, and increase entry opportunities in the park ecosystem.

Aiming the improvement of the actions related to the Qualification Program feedbacks are collected from students in the middle and at the end of each training. At least one meeting per semester is held with the representatives of each IETS in order to discuss about the classes and provide improvements in the Project. As results of these meetings, some improvements were done, such as: (i) provide more material for studing; (ii) buy specific books for all students oriented to the certification exam; (iii) changes in working hours, menus, schedules, methodologies, lessons and tests; among others.

❖ **EXTERNAL PUBLIC QUALIFICATION**

Besides ICT another axis of Porto Digital is Creative Economy which has as objective foster productive chains in six areas: Cine-video animation, Photography, Design, Digital Games, Music and Multimedia. As it is not consolidated as ICT axis yet, the strategy adopted was to attract the specific public that work in this area to Porto Digital by offering the best training models in the city. There are 2 kind of trainings:

- Practical training: this training use the best professionals together with the high level equipment the park has bought. Some equipments are unique in the country available to the general public. The correction color equipment, for example, there is another one, with the same quality, only at Globo Television (the bigger TV channel in Brazil) and is is private, being not accessible to the public. The high level laboratories are used for expert professionals for a very cheap price and, on the other hand, they need to teach for students while they work. So, this way the students has a chance to learn in the real life with the best equipment offered in the country.

- Specialized training: some unique high level training are planned every semester, bringing worldwide famous professionals to teach our students, such as:

  - **Courses and lectures on color correction** for film using Baselight equipment, correction system used in large world-renowned productions both in film and on television, taught by **Vanessa Taylor**, a famous films colorist. She has done movies, such as: Harry Potter and the Deathly Hallows: Part 2 (David Yates, 2011), The Great Gatsby (Baz Luhrmann, 2013), This is England (Shane Meadows, 2006, UK), and several other international productions of Sweden, Israel, Turkey and India, among others.

  - **Sound Design Course for movies and digital games** conducted by "Future Sound of NY", an institution based in the United States, administered by the designer and sound engineer, music producer, composer and professor **Jean-Luc Sinclair**. Sinclair is a composer and music producer who for the past 15 years has worked with some of the influential and successful most artists of his team, co-writing with visionary musician Trent Reznor, and engineering and doing sound design for the Scissor Sisters, Zach de la Rocha from Rage Against the Machine and Michael Stipe from REM, Among others. He worked at BBC, produced DVDs for bands like Ministry and Slayer, que Reached Gold in the US. Also scored the acclaimed documentary "Small Small Thing" which has gone on to win best documentary at the Montreal International Film Festival, Kansas Film Festival and First Glance Film Fest.

These 2 approaches (practical and specialized training) are a way to stimulate the creative economy local market and attract good professionals to the park by facilitating the use of high level equipment and providing special trainings. This flexibility has qualified people in the most modern techniques in order to support the local market that continues in growth.

As part of this program 34 real movies were finalized in the park structure using the training methodology and 59 special training were done, having 767 people trained.

❖ **INNOVATION MANAGEMENT QUALIFICATION**

Porto Digital Technology Park created a MBA (Master Busniness Administration) program focusing on System and Strategic Innovation with a nearby business school called CEDEPE. This MBA is structured based on three central assumptions, namely: (i) innovation is essential, not only to have competitive advantage but to the survival and growth of organizations and the economy as a whole; (ii) innovation is a multifaceted and multidisciplinary phenomenon, requiring a systemic approach; (iii) despite the uncertainty involved in innovation processes, it can be managed by organizations, through the adoption of routines in the associated processes such as seeking opportunities, generating new knowledge, management processes and projects and so on.

The objective is to train managers to become able to critically analyze and manage innovation processes in its large dimensions and impacts on organizations, the economy and society as a whole. For this, methods and tools are presented as well as theoretical and empirical knowledge, enabling the understanding of integrated way of managing organizational change, technology and market. It is expected to provide these contributions in the skills and competences of entrepreneurs:

I. A critical and systematic understanding of how scientific advancement and technological innovation influence the economic growth and development and impact on broad changes in society, both locally and globally;

II. The analytical understanding of the causes and consequences of technological change and scientific, organizational and market, particularly in the way market and society co-evolve as technology and innovation. It depends on the decisions and actions of companies, organizations and individuals;

III. The ability to integrate theories, tools, approaches, perspectives and methods in the analysis and solution problems related to management innovation, and design and evaluation of alternative actions in a variety of economic and organizational contexts.

This program strengthen ties with the academia and provide more expert managers focused in innovation in order to have better people managing the companies and increasing the chances of being more competitive in the market. The MBS has a duration of 18 months. Currently, the program is with its first class on progress, finishing in november/2016 with 40 students. The ideia is continue improving the course and increase the number of classes.

❖ SOCIAL QUALIFICATION

It is also role of the park to promote the social inclusion. Once the ICT is a rich sector in opportunities, it allows a lot of people with special needs to participate more actively in society and acquire higher levels of citizenship. In the current information society, production mechanisms are no longer restricted to physical activities. The workers from this Knowledge Era produce with the mind more than with his arms and legs.

Through ICT it is possible that people with disabilities transpose their limitations and relate more broadly to society, particularly over the Internet. Thus, the information technology industry is one that can more easily absorb people with disabilities in their staffs. Since its production model is based exclusively on intellectual production, mediated by ICT, it becomes possible to overcome the limitations arising from deficiencies, even in the midst of a labor activity. Simply use specific tools to adapt to the person's needs, and that it has the technical competence and appropriate knowledge.

In addition, some embedded companies in the park strongly address the shortage of qualified human capital with special needs. This real need is reinforced by the Brazilian legislation, by Law 8213/91, which establishes quotas for the disabled people in companies, defining the company with 100 or more employees are required to complete 2 to 5% of its positions with rehabilitated or people with disabilities. Thus, this action of the Qualification Program achieves two objectives, to include people with disabilities in the labor market and to help embedded companies to solve this bottleneck.

Through this action the Porto Digital held until now three classes of Software Testing course, ICT knowledge area demanded by embedded companies, facing people with 3 types of disabilities: intellectual (Down syndrome), visual and hearing deficiency. Each course has been adapted to the special needs of each type of disability cited. They were trained 19 people (4 visually disability people, 8 people with hearing disability and 7 people with intellectual disabilities). Within these trained, 9 people are already in the labor market, where 4 of these are already working in Park companies.

- **ENTREPRENEURIAL QUALIFICATION**

This project consists on the implementation of enterprises processes in order to obtain quality certifications. For this, the program provides support to the resident companies of Porto Digital to obtain improvements in organizational processes and obtain quality certification in software development in order to promote their competitiveness and recognition of its quality in the world market and the ability to provide quality solutions for the development of other productive chains in the country.

With the entrepreneurial qualification of Porto Digital companies, it is expected to obtain generation of new skills, increase the number of certified Brazilian companies in software quality and quality management systems, promoting competitiveness of the national software sector and knowledge sharing among the community of national software industry.

As part of this project implementation, events with interested companies were conducted to clarify the participation rules to joins the project. Once they accept the rules, they apply to join the project. As a result, two rounds were performed with 32 companies and 38 certifications at all. Some companies got 2 certifications. In the first round 20 companies were certified, being 17 in MPS.BR and 3 in CMMi. In the second round 12 companies were certified in CMMi, as show in the Table 3:

Round	Certification	Amout of Certified Companies
1	CMMi Development 2	2
	CMMi Development 3	1
	MPS.BR level G	12
	MPS.BR level C	1
2	CMMi Development 2	9
	CMMi Service 2	8
	CMMi Development 3	1
	TOTAL	**34**

Table 3 - Results of entrepreneurial qualification

Within the results of this project Porto Digital could increase the level of its companies in the national and international market, facilitating for them to raise funds, join in govern programs, increase their competitive potential, wins bids, among others.

4. CONCLUSION

The Porto Digital Qualification Program has enabled to identify market demands and offer young people a chance to work placement to provide them with training specifically geared to the demands of the companies, facilitating the retention of talent, through the connection between academia and the marketing. With this specific training, the beneficiaries have been able to enter into high value-added market, creating skilled jobs and high income. It can be stated that the qualification is intrinsically related to employability, which in turn, enables the generation of employment, attraction of high level skilled people, income and social development.

The increase of intellectual capital of companies can, among other things, create innovative projects aimed at encouraging the development of technological innovations, directly impacting the levels of competitiveness of companies working in the national and overseas markets.

The actions of qualification program are directly related to the strengthening businesses in the Park, which allows increasing their levels of competitiveness in national and international markets.

The solution in question also stands to make the cluster a more competitive and innovative environment, enabling connection between academia (partnerships with IETS), government (funding) and market (companies from the park) confirming thus the role Porto Digital as a practical reference case of the Triple Helix model, Henry Etzkowitz[5].

The Porto Digital Qualification Program was established since 2010 and has trained arround 4.000 people, including employees of PD companies, students from IETS, people from creative economy industry and people with disabilities. In addition, 32 companies were certified in quality processes. We believe that the program is constantly evolving, by developing and retaining talent, integrating new knowledge and cultural change, creating a social and economic impact on the ecosystem and the region.

With funds already raised around R $ 6,127,980.00, the program also aims to: (i) identify new indicators to measure project performance; (ii) evaluate the program results and new researches in order to guide the next training round, (iii) execute new trainnings, (iv) perform actions with the IETS for adjustment in the curricula of university courses, to reflect the reality enterprises, (v) take actions to try to reduce the bureaucracy involved in current procedures for adjustments of curricula of university courses, (vi) identify improvements and new fronts for the program.

The correct identification of qualification for business and the productive sector, and the implementation of an appropriate and comprehensive training program provides the Recife Metropolitan Region a competitive advantage compared to other places in the world, creating and retaining the best talents, offering companies the most fundamental input to the innovative and competitive activity today and contributing to the socioeconomic development of the city.

[5] ETZKOWITZ, H. Hélice Tríplice: Universidade – Indústria – Governo Inovação em Movimento. Porto Alegre: EdiPUCRS, 2009. 207 p.