Cases on SMEs and Open Innovation:

Applications and Investigations

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Chapter 11

The Case of a Portuguese Intermediary of Open Innovation: Inovamais

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EXECUTIVE SUMMARY

Inovamais is an innovation consultant that began its activities in 1997, several years before the popularization of the Open Innovation paradigm. The founding motivation was to enable the connection of academic and entrepreneurial worlds, with focus on businesses and their needs and special emphasis on small and medium enterprises (SMEs). They work with both worlds, by turning universities' intellectual assets into commercially attractive knowledge, and helping enterprises to search external resources (funding, knowledge, and partnerships) for their innovation processes. The objective of the present case is to shed some lights over the role and services of an intermediary of open innovation in the current general innovation landscape. Therefore, this case will generally present the business model of Inovamais on intermediation of open innovation. It will also discuss the cultural, managerial, and political challenges and problems that Inovamais has identified and dealt with during these thirteen years of work at the Portuguese and European levels.

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ORGANIZATION BACKGROUND

Inovamais is a consultant specialized in management and promotion of innovation projects, both at national and international levels. Its mission is to provide knowledge, management skills, partnerships and technical and financial support necessary to the successful implementation of innovation projects (Inovamais, 2010a).

The company based its expertise in the professional experience of its promoters, especially Eurico Neves. Eurico Neves worked as an expert on innovation in the design and management of the “Innovation” program of the European Commission in Luxembourg between 1994 and 1997, having participated, during this period in drafting the Green Paper on Innovation. After that period, he remained as consultant to the European Commission and several Portuguese organizations. It was in the context of the work with the European Commission, and the Innovation Programme in particular, that Eurico Neves foresaw an opportunity for the creation of this business.

The purpose of the Innovation Programme was to encourage the exploration of the results of research projects, which tend to receive large investments for its execution but, normally, fail to properly explore the results. This failure on the connection between academic, scientific and technological world, where much of the public funding to innovation are headed, and the entrepreneurial world was being only sparsely populated in Europe and particularly in Portugal. Besides, the existing platforms to support this connection were very attached to the academic world, such as technology transfer centers of some universities. In the point of view of Eurico Neves, there was the need of the existence of an organization between these two worlds, but more related to businesses and their needs. Then, in December 1997, the company was created as Printinova, in order to state itself as a provider of integrated innovation for businesses, particularly for small and

medium enterprises (SMEs), occupying the space left open in Portuguese economic environment.

The company experienced rapid growth since 1998, mainly through the participation in European networks financed by the European Commission, and the provision of innovation services in the Portuguese market, including design services for international projects of innovation.

During the years 1999 and 2000, Printinova strengthened its international dimension, through their participation in European projects. Among these is the management of the European Network of Research Centers in partnership with other European companies, a project with total value of several million Euros. During 2000, in order to enhance its role as the interface between companies and the European Commission, the Printinova in partnership with an Italian company created the Innova Europe srl, a subsidiary in Luxembourg with offices in Brussels, owned 50% by each company.

In 2002 the company adopted its current name, Inovamais (Inova+) SA. In the following year, the company opened a branch in the Czech Republic, Inova Pro, which is owned 51%, and a new subsidiary in Portugal, Inovafor, dedicated to training and strategic and organizational consulting services. The company’s performance becomes more significant after 2004 when the company went on to lead large European networks such as Star-net network funded by the European Commission in 1.5 Million Euros and involving institutions from 16 countries.

Between 2006 and 2009, the company consolidated its growth with the turnover in 2008 exceeding one million Euros in innovation services and an increasing enterprise market penetration. In order to better serve customers in the southern region of the country, the company opened, in 2008, the delegation in Lisbon.

Inovamais is characterized for being innovative, open-minded, cross-sectorial and international, and these are also the characteristics and values sought in its employees. The motivation

to work in several areas is seen as a great asset, overlapping great specialization in a specific area, thus creating a heterogeneous environment, fruitful for synergistic ideas. The internationalization and global thinking are also features valued by the company, which, despite being in Portugal, has as the key success factor, since its appearance, the facilitation of links to European companies and public entities.

The search for solutions, technologies and external resources, implies an open mind. It is known that through the connection of otherwise disconnected worlds can often emerge new and innovative solutions (Hargadon & Sutton, 1997), however, these connections require creativity and insight to understand what can happen. These values and characteristics that the company seeks reflect the nature of their business. Inovamais's employees may be working in a project related with information technology one day and the following working in the Textiles area, both in Portugal or abroad.

Currently, the company offers consulting services, project management and training, aimed at supporting the modernization of enterprises, creating new internal mechanisms for innovation, developing applications for funding programs and promoting participation in European Commission projects. To this date the company has achieved a volume of the current contracts for Innovation and Research & Development with the European Commission that exceeds 5 million Euros.

Inovamais is a small company, currently with about 30 employees. Since the conception of the company, the central role in Inovamais hierarchy is played by the project managers. Eurico Neves, the CEO of Inovamais, characterizes the initial structure of the company as an inverted pyramid. In this form of organization, the project managers were responsible to drive the actions of Inovamais under their project, while the responsibility of the administration was to ensure that all the demands of project managers were guaranteed, normally by solving bureaucratic and representative problems.

The growth of the company required the natural division into business areas, creating another layer in the structure. Thus, currently the Administration board, heads of business areas and project managers, who still take a prominent role, constitute the management structure of Inovamais.

The company's revenue in 2009 was 1.45 million Euros, 8% above the revenue in 2008. With an expected significant growth for 2010, Inovamais may exceed the 2 million Euros revenue (Inovamais, 2010a; 2010b). This is the result of a sustained increase of activity in all business areas.

SETTING THE STAGE

"Most innovations fail. And companies that don't innovate die." (Chesbrough, 2003a, p. xvii). The pressure for innovation present in this sentence, in association with changes occurred either in the society as well as in the industry, lead both to a greater mobility of knowledge workers and to the emergence of new capital structures. This new landscape of abundant and mobile knowledge, and the new capital structures, such as venture capital, began to crack the boundaries of the organizations, until then rigid and impermeable. This resulted in a shift in innovation management in the last decade (Chesbrough, 2003a). In the past, the internal departments of research and development (R&D) were considered valuable and strategic assets to the organizations. Their inexistence, in some organizations and industry sectors, worked often as an entry barrier in those sectors. This meant that only large companies would be able to produce great levels of R&D in order to compete in their business areas. Following these ideas, companies had to be able to generate their own ideas, and then to develop, produce, deliver and put them in the market by their own (Chesbrough, 2003b). According to Chesbrough, internal R&D is no more the strategic, priceless asset that once was.

“Not all the smart people in the field work for us. We need to work with smart people inside and outside the company” (Chesbrough, 2003a, p. xxvi). It is in this context that a new innovation management model emerged and popularized. This new model reflects the companies’ need to open up their innovation processes to take advantage of internal as well as external technologies in order to create “business value”. This is the main idea behind open innovation. This concept, created by Henry W. Chesbrough (Chesbrough, 2003a; Chesbrough, 2003b), rapidly grew interest among scientific as well as practitioners communities, as can be noticed by the large number of articles, special issues of journals and conferences dedicated to this area.

Henry Chesbrough defines open innovation as the use of “purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively. [This paradigm] assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as they look to advance their technology” (Chesbrough, 2006, p. 1). In other words, open innovation is the combination of internal and external ideas, technologies and other resources in order to achieve new products, processes and technologies and to reduce the time to market (Enkel, Gassmann & Chesbrough, 2009). Therefore, the boundaries between the firm and the involving environment are more porous, letting innovation move more freely between them (Chesbrough, 2003b, p. 37).

Besides this, Chesbrough (2006) further states that the open innovation paradigm responds to two problems, in his opinion, existing in previous theories about innovation. Firstly, open innovation handles the “spill overs” of R&D, which are the results of R&D that cannot be applied in the context of the research project in which they have been found, as explicit consequences of the

business model that cannot be avoided. Secondly, open innovation considers the intellectual property rights as a new class of assets, instead of a tool for protection. In an open innovation approach, both can bring additional revenues to the current business models.

In an open innovation process, three different types of actors can be defined: intellectual capital providers, innovation seekers and intermediary services. The intermediaries, or knowledge brokers, assist in the sharing of innovation between the first two.

Procter & Gamble is the most known example of innovation seeker and is frequently mentioned in open innovation literature, though hardly can be treated as a SME. This organization is one of the world’s largest producers of consumer products. During the year of 2000, Procter & Gamble’s management team realized the potential of exploring external innovation sources. Simply put, while Procter & Gamble employed 7500 workers in R&D division, nearly 1.5 million researchers worldwide were working in the same areas of interest, with equal or greater potential and knowledge than their internal staff (Gaule, 2006; Huston & Sakkab, 2006). As a result of this finding, the organization decided to implement their model of open innovation, the Connect & Develop. The logic behind this model was to find good ideas all over the world and to bring them to Procter & Gamble to increase and capitalize their internal competences (Huston & Sakkab, 2006). As a result of the application of the Connect & Develop program, Procter & Gamble announced that it managed to increase their product success rate by 50% and the efficiency of their R&D by 60% (Enkel, Gassmann & Chesbrough, 2009). Other large companies like Philips, Siemens (Enkel, Gassmann & Chesbrough, 2009), SAP (Ebner, Leimeister & Krcmar, 2009), Deutsche Telecom (Rohrbeck, Hölzle & Gemünden, 2009) or the Portuguese company Brisa (Pinheiro, 2009) were mentioned in the literature as examples of successful adoption of open innovation strategies.

However, although there are cases of successful adoption of open innovation and that in theory as in practice all seem to point that these strategies are beneficial to the adopting organizations (Dodgson, Gann & Salter, 2006; Laursen & Salter, 2006), few attempts are known about the evaluation systems and the key performance indicators. Therefore, it is still hard to effectively assess and evaluate open innovation strategies in comparison with traditional innovation strategies (Enkel, Gassmann & Chesbrough, 2009) and to help these organizations to find the desirable balance between these strategies (Enkel & Lenz, 2009).

In these aspects, a central role in the open innovation model is being played by the intermediary services or knowledge brokers. Knowledge is, in an imperfect way, shared over time and across people, organizations and industry sectors. The ideas of one group may solve the problems of another, but only if connections between existing solutions and problems can be established. When such a connection is established, existing ideas often acquire the status of new and creative as they change form, when combined with other ideas to meet the needs of different users' problems. These new combinations are, objectively, new concepts or objects, since they are built based on previously existing, but unconnected ideas (Hargadon & Sutton, 1997).

As Hargadon and Sutton (1997) summarize, knowledge brokers generate value by letting resources flow between previously unconnected sub groups of a network. When facilitating transactions of technological solutions, brokers benefit by being well connected to a range of disparate industries and enabling the flow of existing solutions between those that have such knowledge and those that do not (Hargadon & Sutton, 1997).

Taking in consideration the above described about knowledge flow enabling innovation generation, by bridging otherwise disconnected ideas, knowledge broker enable the emergence of innovations (Törrö, 2007).

The scope of intellectual capital brokerage is broader than intellectual property marketplaces. As described by Chesbrough (2003a), intellectual property refers to the set of ideas that are original, useful, have been reduced to practice in a tangible form and have been managed according to the law. Intellectual property includes patents, copyrights, business secrets, registered trademarks, etc. Intellectual property may trigger innovations, "but it is not a prerequisite for an innovation to be born. Groundbreaking innovations might as well spring up from combining knowledge streams or implementing wild ideas" (Törrö, 2007, p. 42). Therefore, the scope of intermediary open innovation services is not limited to the intellectual property exchange: it also covers ideas, knowledge, competences, and other resources like financial support.

Inovamais is an example of an intermediary service. The company wants to occupy a prominent position in the national economy in the context of innovation. Inovamais works directly with both enterprises and Universities and other scientific institutions, corresponding, usually, to innovation seekers and innovation providers. Nevertheless, its main focus is in businesses, particularly in SMEs.

The company has as strategic mission to develop its activities in order to achieve four complementary objectives. Firstly, Inovamais aims to be the innovation manager in a growing number of companies. Secondly, the company also pretends to be the partner for the technology transfer of an increasing number of universities, assisting them to bring their innovations to market. Thirdly, the company aims to be a national reference in the innovation sector, taking advantage of its experience and know-how about this area and of the studies they develop to some of the main European networks of innovation. These networks include the European Commission itself, the Scottish Enterprise, the Generalitat of Catalonia and the Office of National Coordinator of the Lisbon Strategy and Technology Plan. The company was also selected by the Parliament as a provider of

specialized regulations and policies in the fields of Industry, Telecommunications, Research and Technology, Energy and Environmental Policies. Fourthly, Inovamais pretends to be the liaison to international institutions, including the European Space Agency and Enterprise Policy Group. This privileged position allows Inovamais to provide design services for international projects of innovation to its customers, asserting itself in the international market.

To achieve the above stated strategic objectives, Inovamais centers its activities in three main business units. The Regional Cooperation Business Unit works directly with Portuguese companies in order to improve their innovation cycles. This unit provides integrated and personalized services to support the definition and implementation of strategies and open innovation practices. This team is responsible to support the Portuguese companies in the identification and seeking of national fundings to support R&D. Inovamais also offers a service to the certification of the R&D processes of its customer, according to a national standard.

The Technology Transfer Unit aims to increase the offer of new technologies, promoting and facilitating the transfer to the market of innovations and research, developed by the R&D departments. Another objective of this unit is to support the creation of start-ups and spin-offs. This unit works both with companies and universities. It longs to eliminate the technological needs of the companies, through the intermediation of technologies and R&D results from the universities.

The International Cooperation Business Unit is responsible for the interaction with the European institutions. This unit can interact directly with these institutions or as intermediary between customer enterprises and the European institutions. Inovamais often works directly with the European Commission and other governmental entities by conducting studies on innovation policies. The activities of this business unit also include the identification of international funding opportunities, validation of project ideas to better adapt them

to the available opportunities and the preparation of applications to the identified suitable opportunities. These activities aim to broaden the scope of known opportunities and to assure a higher success rate in terms of acceptance. Inovamais also provides project management for R&D projects developed in consortium or individually. Thus, the enterprises involved in the project are freed from bureaucratic tasks and focus solely on the technical execution of the project.

Apart from these activities related with innovation intermediation, in January 2010, the merge with ID Agilus resulted in the creation of the Unit for Research and Technological Development. This new unit is primarily engaged in applied research projects in terms of business. Thereafter, Inovamais started to have an integrated range of services from the identification of problems and opportunities to the implementation and operation of technology research projects. Besides, together with the company Inovafor, Lda (owned by Inovamais), the company aims to promote the competitive capacity of businesses and their human resources through training processes and skills development.

CASE DESCRIPTION

When Inovamais was created, the Portuguese companies did not seek European funds for innovation purposes neither established international networks. Based on the in-depth knowledge of the European Commission, the first main service of Inovamais was to promote the participation of companies and other organizations in European funding programs to support R&D and Innovation. In the beginning, the customers were technological SMEs, mainly in the area of IT and situated in the north of Portugal. With the sustainable growth observed since the first years, the company completed its services and enlarged its client base. Currently, Inovamais also works with some bigger

companies, scattered throughout the Portuguese territory.

Through a team with diversified skills, both in engineering, management and legal issues, Inovamais contributes to the improvement of the state of business innovation by identifying opportunities for both national and European public funding to support entrepreneurial Research & Development and Innovation. In addition, Inovamais focuses on assessing and transferring technology, support for entrepreneurship and the creation of start-ups and spin-offs and also promotion of R&D and new technologies projects, both at national and European levels. These activities in the intermediation of innovation are focused in the services offered by the Regional Cooperation and Technology Transfer business units, in close collaboration with others business units. The activities of these business units characterize the way the company support the different actors in the innovation market, satisfying both the demand and the supply sides.

The Regional Cooperation business unit is the mainly responsible for answering client companies' needs and demands, especially through the "Outsourcing Innovation" service. The "Outsourcing Innovation" is an integrated service for solutions tailored to corporate costumers' measure. Inovamais wants to give their customers the best monitoring in the definition and implementation of innovation strategies. In the case of this service, customers are companies with established Research, Development and Innovation activities or wishing to establish them, companies seeking public funding (national and European) to develop new products, processes and services, companies aiming at the internationalization of their business or more generally companies looking to boost the innovation cycle. This service is intended to produce new products, services and processes, and beyond the technological development, the international visibility and new financial sources that it can bring to costumers, as added advantages. More specifically, Inovamais gives

tax assistance to innovation, advising on the level of fiscal mechanisms available for activities and management of R&D and others who would prove the company's interest, and it does marketing for R&D by promoting R&D activities of the company with public and private entities related to innovation in Portugal and in Europe in order to bring recognition, promotion and visibility.

Obtaining corporate customers is achieved both by the commercial team of Inovamais and by direct contact from potential new costumers. The commercial team has grown significantly in recent years. Their function is to look for companies with which they think there may be synergies by working with Inovamais. Despite this commercial effort from Inovamais, the company often directly contacted by potential new costumers, driven by positive experiences and opinions of other customers.

When a new connection is established with a corporate client, Inovamais begins by identifying its business model, technological resources, business values and business area. This initial survey prepares Inovamais to seek for relevant and attractive R&D projects' results, to identify the most innovative companies in the business area and to try to compare the corporate client with others among its competitors. After these procedures Inovamais will be ready to advise the client. It is important, however, that the corporate client knows what they want to achieve, so that the Inovamais can help to identify a path to that goal and help its client move towards it. In this type of partnership, initially Inovamais identifies the company's current situation, and identifies the path to innovation. After that, using its own network of contacts Inovamais seeks for the resources needed.

Inovamais have been working to a great extent, and increasingly, with different enterprises. In these cases the partnerships are usually "Innovation Outsourcing" agreements. These are normally long lasting partnerships, being the agreements

usually set for a one year long period, and always extendable.

As an intermediary Inovamais is ready to help in the innovation of products, services or processes. Nevertheless, when companies think of innovation they usually think in innovation of products or services, and traditionally this is the kind of innovation that Inovamais supports. In the opinion of Eurico Neves, the idea of process innovation still appears, for most companies, associated with reengineering ideas or strategic thinking, and in these situations, firms typically request the services of specialized consultants, with a more strategic approach. However, in the opinion of the CEO of Inovamais, there are results of research projects related to business models that can be applied in practice, with surprisingly positive results, even leading to competitive advantages.

In these partnerships the help of Inovamais does not end with the identification of path, ideas and technologies for an innovation goal. When companies seek new technologies developed in the scope of research projects in universities, generally, there is still a long way to travel until the final adoption of the technology. The technology developed in universities, while highly innovative, is not yet, in most cases, market-oriented. Generally, universities produce mostly knowledge, with little degree of development or as prototypes. When this knowledge is of interest to the companies there is still some development to do, and consequently some investment to make. To overcome the lack of resources of smaller companies or to minimize risks, during this phase, companies can, with the support of Inovamais, test partnerships and seek resources. The image of Inovamais as an Innovation consultant is important to locate these partnerships and public and private resources, including financial and help to open some doors, otherwise inaccessible.

In addition to the above mentioned services, Inovamais offers other services both for companies or universities. One example is the Innov'Value service. The general purpose of this service is

to assess and value the intangible assets of the clients. The intangible elements turn out to be, nowadays, a competitive advantage, but they are often ignored or undervalued. It is necessary to quantify them, disclose them properly and evenly, so that financial information is accurate and updated, allowing management to know the real value of the company. This service begins with a thorough technical audit, which reveals and analyzes intangible assets that can be measured reliably, which are internally developed and recognized to produce future economic benefits. Following this, Inovamais proceeds with the valuation of the intangible assets in accordance with cost, current and potential market value. The whole methodology is properly certified, allowing the evaluation results to have no effect in taxes. The evaluation process is also certified by a ROC (Individual Statutory Auditors), thus complying with all requirements necessary to convey the true and fair view of the real value of the company.

Although this service is targeted to both companies and universities, but the service has been of great acceptance within the universities. Inovamais already has a broad range of customer universities. The connection with universities is usually done by the Technology Transfer business unit, and through the governing bodies of the Universities, that subsequently connect to their research centers. This relationship may have two major objectives: on one hand the assessment of the intellectual assets of the university, and on the other the support for obtaining partnerships and financing, both public and private.

However, the concern in achieving business results for the Portuguese universities, is being seen as a recent activity, and thus reflected in the maturity of their processes. Until recently, the universities were only concerned in developing their research projects, completing them and in getting scientifically and technologically innovative results. Currently, they have the need to commercially explore these results, which requires a more market-oriented strategy. Hence, Inovamais

helps them to orient their activities in order to obtain commercial profit from the results of their research projects.

For assessing the intellectual assets of the universities, two main activities have been carried out. First, the inventory of what universities already have and the value of their intellectual property, the definition, using a partnership of intellectual property laws, often inexistent in universities, and second, the evaluation of what intellectual assets may be sold and among the ongoing projects which could potentially provide business results. In other words, direct them towards the commercialization of intellectual assets.

During the years of existence of this unit it is noted that, in general, the institutions are more aware of the need to market their intellectual assets. However, this trend to orient the institutions' strategies to the market is, in the opinion of the CEO of Inovamais, behind expectations. In fact, this trend is marked by advances and setbacks in the past decade. Still, there are a few Portuguese universities that can be considered active agents in the intellectual assets market. In addition, the need to market their knowledge still is not a top priority for the governing bodies of universities. Few years ago, there were some public programs aiming to help in the creation of structures for the provision of knowledge and technology. These programs helped some of them to evolve in this direction, and there is a growing awareness by the governing bodies of universities to the need for capitalizing on their research projects. However, in practice, generally, there is not known sign for a steady growth in recent years. Therefore, in the opinion of Eurico Neves, this type of service is still far from its full potential.

Taking into consideration of what has been mentioned earlier, it is possible to understand in general terms the business model of Inovamais, as an innovation intermediary. The company works both with those who want to promote their knowledge, intellectual assets and new technologies and

to turn them commercially attractive, and as well as with those who have needs in their innovation processes and seek to integrate external resources in their innovation, whether they are financial resources, ideas, technologies or partnerships. Hence, as an intermediary, Inovamais profits from both sides of the intermediation, the demand and supply for innovative solutions.

In projects with universities, Inovamais usually begins with the identification of what the university has potentially to offer, the identification of the projects they are involved in and the identification of the areas where they have competences to offer, and then transform this knowledge/technologies into something with more commercial potential. In this case, the customer university pays for the service.

It can happen that a company needs a technology/knowledge of a client university, in this case the corporate client will pay Inovamais for it, further than paying the university for the service. While, on the other hand, the university as a client has already paid for the promotion of its technology.

Despite Inovamais is already on the Innovation market for thirteen years, Eurico Neves believes this is still an emerging market with huge growing potential, that is starting nowadays, to gain some significance, both as a market and as a science, in an evolution that can be compared to the Management and Marketing sciences. Having as clients the most innovative companies in the national scene, the future of Inovamais prospects are for growth and expansion.

From these last 13 years of working in innovation in Portuguese context, the CEO of Inovamais have a sound image of the profiles of Portuguese companies, as well as the general national overview on what concerns innovation. According to him, the problem with "innovation" in Portugal has to do more with quantity than with quality, and there are Portuguese companies with innovation processes with great maturity, but they

are only a few. With the great increase of highly qualified people in recent decades it would be expected that this could lead to the increase of “innovative” enterprises as well, but this increase of qualification has not been translated into higher levels of entrepreneurship, and the creation of new enterprises with innovative potential. Despite these, this research argues, that although there is not any case that deserves special attention at the international level, Portugal has some companies with great potential for innovation and very mature innovation processes.

CURRENT CHALLENGES FACING THE ORGANIZATION

The Inovamais practices “Open Innovation” since its first days of existence, some years before the term appeared in the scientific landscape. Since the beginning, its purpose is to explore external resources in order to make customers’ businesses more innovative. These resources can range from financial support to partnerships with R&D labs, leading customer companies to execute these projects in cooperation with the laboratories. In this sense the role of intermediaries in open innovation, like Inovamais, becomes very important. In an open innovation context, the extent of the network of contacts is a key factor, which can be drastically improved by an intermediary. Also, it is important to choose, among these contacts, the best for the company’s objectives and situation. For this, it is necessary to evaluate potential partnerships and understand the gains they may get from these partnerships. These are tasks for which the presence of an intermediary becomes vital.

The entrepreneurs are increasingly aware that it is necessary to explore external knowledge and opportunities in order to be competitively innovative, and there are increasingly better conditions for this. The climate of economic crisis also encourages the search for external solutions that

are already developed. Usually, these solutions become more advantageous than to invest in R&D departments to try to get similar results.

In the opinion of the CEO of Inovamais, Portuguese people are not the most open nor confident people in Europe, and still have some cultural barriers to overcome to be able to speak in an era of open innovation. Many Portuguese companies still base their business value on the secret and its protection. However, the success story of Inovamais notices that this is evolving towards an open innovation era.

One of the cultural barriers most associated with Europe, and particularly Portugal, which influences a culture of innovation, is risk aversion. Innovation has associated risks and these must be properly managed. Likewise, there is shortage of entrepreneurship at the national and even at the European levels, which can be somehow explained by risk aversion. Eurico Neves believes this risk aversion is very much associated with the type of education and values that are transmitted in Portuguese culture. He argues that, traditionally, the construction of less risky careers, like in tertiary sector, is encouraged and privileged over entrepreneurship. In the past few decades, there was a large increase of highly qualified people in Portugal. However, the levels of entrepreneurship increased at much slower rate. In the opinion of the CEO of Inovamais this may, to some extent, be the reflection of this type of education and values transmitted, that turn workers and potential entrepreneurs more risk averse.

Further than cultural barriers, Europe is also facing economic and general “innovation problems”. The European Commission recognizes that Europe is “facing a situation of ‘innovation emergency’”. Europe is spending 0.8% of GDP less than the US and 1.5% less than Japan every year on Research & Development (R&D). (...) Although the EU market is the largest in the world, it remains fragmented and not enough innovation-friendly” (European Commission, n.d.).

SOLUTIONS AND RECOMMENDATIONS

Despite the cultural problems identified by the company, and also supported by some scientific literature (e.g. Hofstede, 2001), Inovamais have not been affected by them. Eurico Neves believes that their customers are part of the elite of companies that decided to be innovative and who are aware that, despite the risks, they need to innovate to remain competitive. It is also one of the roles of the intermediaries, in general, to mitigate these risks, either by seeking external funding, mainly public, which will help reduce the risk and exposure of the corporate capital and by the study and analysis of potential partnerships, Inovamais helps its customers to identify and reduce risks associated with the innovation process.

Also, although the education and training of Portuguese students is very scarcely focused in entrepreneurship, there are some progresses that have been observed in recent years. Innovation is a multidisciplinary field actor, who's funding bases range from various scientific fields, and working in a relatively new discipline. Therefore, it is not plausible to build "innovative" minds purely in the academic context. The "learn on the job" is certainly crucial, and this aspect, that has been increasingly valued in the academic *curricula*, has shown great benefit. This idea is in conjunction with the adoption of the Bologna process¹, which reduces the time that future workers spend in the academic environment, and fosters the spirit of learning at work. In addition, in technological areas, the knowledge learnt may become "invalid" if academic route is too prolonged.

European Union needs "to do much better at turning our research into new and better services and products if we are to remain competitive on the global marketplace and improve the quality of life in Europe" (European Commission, n.d.). One of the focuses of the Europe 2020 strategy² is the "smart growth", dedicated to innovation and

educational objectives. Accordingly to the Europe 2020 team it is important to refocus "R&D and innovation policy on major challenges for our society like climate change, energy and resource efficiency, health and demographic change" and to strength "every link in the innovation chain, from 'blue sky' research to commercialization" (European Commission, 2011). Inovamais is, undoubtedly, part of this solution.

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KEY TERMS AND DEFINITIONS

Intellectual Capital: All the knowledge (individual or collective) that can generate wealth. IC include both tacit and explicit knowledge (documentable or not), thus IC is a broader concept than intellectual property.

Intellectual Property: A creation of the mind, that can be fully represented, and consequently be recognized as a creation of the rightful owner. Because IP must be legally proved, there is a set of types identified as IP (e.g., patents, trademarks).

Open Innovation Business Model: Companies adopting open innovation business models, center their activities, and profit from open innovation. The business model of such companies should describe the way they profit from the open innovation paradigm. As an example, an intermediary who enables customers to adopt open innovation practices has an open innovation business model, while, a company, incorporating external knowledge in its innovation process, do not necessarily have one, despite profiting from open innovation practices.

Open Innovation Intermediary: A service/company responsible for helping organizations embracing open innovation to establish fruitful relationships with external entities. The activities of an intermediary often include idea, knowledge, technology and/or other resources scanning and screening, technology transfer support and intellectual property transfer or licensing.

Open Innovation: An innovation management paradigm that assumes that the organizations should look for and explore both internal and external ideas, knowledge and/or other resources throughout the entire innovation process, in order to maximize their profit. The central idea behind this paradigm is that in a world globally connected where the knowledge is widely distributed, organizations cannot afford to rely exclusively on internal R&D.

ENDNOTES

- ¹ The Bologna Process aimed to create the European Higher Education Area (EHEA). The EHEA was meant to ensure more comparable, compatible and coherent systems of higher education in Europe. As a result of the application of the Bologna Process, the undergraduate programs in Portugal were reduced from, typically, five to three years.
- ² Europe 2020 is the European Union's growth strategy for the second decade of the XXI century.