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**THE BASQUE COUNTRY: BUILDING INNOVATIVE
COMMUNITIES THROUGH SCIENCE AND
TECHNOLOGY PARKS**

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THE BASQUE COUNTRY: BUILDING INNOVATIVE COMMUNITIES THROUGH SCIENCE AND TECHNOLOGY PARKS

EXECUTIVE SUMMARY

The Basque Country Technology Parks, on reaching maturity, have become a well-established reality which is moving towards a new spatial and multi-campus layout and constantly adapting the strategies, objectives and available tools to lead the innovation process.

They favour the integration of communities of businesses and professionals into a space with a high science, technology and innovation content, which, linked together around the different network and communication spaces, have encouraged the development and establishment of the technology parks as new spaces of innovation.

This paper illustrates how different initiatives developed endogenously within the parks, come together in different communities which foster innovation from different perspectives. Communities which are enriched by the contributions of their participants -the workers in the parks-, workers, who give their all every day, working together towards a common goal: making the Basque Technology Parks a better space for working and living in.

BACKGROUND

In recent years, the most competitive modern economies have often been referred to as knowledge economies: economies which are directly based on production, distribution, and the use of knowledge and information (OECD 1996). These economies have directed their efforts towards innovation concerning both individuals and society of the region in which they are located.

The concept of regional innovation systems has no commonly accepted definitions, but it has been gaining popularity over the recent decades. It is usually understood as a set of interacting private and public interests, formal institutions and other organizations that function according to organizational and institutional arrangements and relationships conducive to the generation, use and dissemination of knowledge (Doloreux, 2003).

Questions have lately been raised over the need to address the role of extra-regional networks and institutions as mechanisms of knowledge generation and circulation in addition to processes (and institutions) within regional innovation systems. (Hommen and Doloreux, 2004; Cumbers et al., 2003; Mackinnon et al., 2002; Bunnell and Coe, 2001). These questions arise from the fact that successful regional innovation systems make use of endogenously generated and exogenously available knowledge to strengthen competencies and maintain competitiveness.

At present, nor is there a general consensus as to the definition of the term social innovation, as a range of definitions and interpretations exist, in which linguistic nuances and different social, economic, cultural and administrative traditions play a role. Social innovation can be defined as the development and implementation of new ideas to meet social needs and create new social relationships or collaborations. It is aimed at improving human well-being. They are innovations that are not only good for society but also enhance individuals' capacity to act. They rely on the inventiveness of citizens, civil society organisations, local communities, businesses and public servants and services.

Part of the current attractiveness of social innovation comes from the fact that it can serve as an umbrella concept for inventing and incubating solutions to all these challenges in a creative and positive way, contributing to stimulate innovation and knowledge based society.

Throughout the process, regional and local authorities can take a lead in promoting social innovation, put forward strategic thinking and support the generation of fresh ideas to overcome societal and social challenges, among others.

Science and technology parks play a key role in the economic development of their environment through a dynamic and innovative mix of policies, programmes, quality space and facilities and high value-added services (IASP), acting as true innovative communities in the environment in which they are located.

Apart from the well-known role in managing the flow of knowledge and technology between scientific and technology agents (companies, clusters, entrepreneurs, universities, etc.), the role they play in providing environments that enhance a culture of innovation, creativity and quality; focusing on businesses, research institutions as well as on people must be underlined.

Science parks, argues David Rowe (2003), started by spending their early years creating infrastructure and buildings. Then, huge energies were required to raise the substantial capital required. In the early 1990s it was time for the more adventurous to move on. The next step was to stimulate technology transfer between their associated universities or centres of research and businesses at their park, or perhaps, develop ways to

assist the development of start-up and young high-tech businesses in and around the park, or even stimulate the creation of new business support or research centres. The message from innovative Science and Technology Parks became increasingly of interest, giving science and technology parks a significant role as serious economic development actors for the first time.

Adopting relevant imperatives from the economic and social environment is the type of evolution science parks need. Thanks to mobility within the network, informal circles of exchange take shape that are sources of creativity and cross-fertilization of ideas. (Formica, 2003)

The technology parks bring together large quantities of specialised resources, of importance for generating new opportunities, acting as a real motor for the development of innovation and creativity in the regions in which they are located. In this respect and as an essential part of the regional system of innovation, the parks offer the perfect environment for orchestrating scientific and technological innovation, in addition to social innovation. This explains why as new models of technology parks emerge, both technological and social innovation gain strength.

In short, it could be said that technology parks act as promoters in the creation of spaces for innovation, communication and knowledge, in which the interaction and activity of the participants generates new knowledge, contributing to the development of the individuals and communities making up these spaces.

BUILDING INNOVATIVE COMMUNITIES IN THE BASQUE COUNTRY THROUGH SCIENCE AND TECHNOLOGY PARKS

Science and technology parks have gradually developed and adapted their objectives, strategies and tools in order to provide facilities and services based on the needs detected within the organisations and communities in the parks. This is the case of the Basque Country Technology Parks, the first network of science and technology parks created in Spain and internationally recognised as a model of success, consisting of 402 organisations and nearly 15,000 people who work, by means of coordinated management, in three strategically placed technology parks in the Basque Country.

They come together in just one region, the Basque Country, with a high degree of development, 130%, above the European level, and a percentage of dedication to R&D of 2.19%, higher than the EU percentage (2.06%) and the Spanish rates (1.30%). In fact, the Basque Technology Parks unite 30% of the employment engaged in R&D&I in the Basque Country, and are a reference point in their environment.

The activities connected to the Basque Technology Parks contribute to the improvement of the economy of the Basque Country, producing 5% of the GDP, 4.70% of employment and 5.3% of revenue. Having reached maturity and become firmly established, the Basque Technology Parks have become an essential element in the science, technology and innovation system of the Basque Country.

Thirty years after their creation, the Basque Technology Parks have become a well-established reality which is moving towards a new spatial and multi-campus layout, integrating the different scientific, technology and innovation agents that operate in the Basque Country and constantly adapting the strategies, objectives and available tools to lead the innovation processes. Human capital is a fundamental asset in the design of this new model of park, which is more competitive and forward-looking.

The Basque Technology Parks offer a space in which innovation has become part of the very structure. They

play a vital role as proximity agents, acting as a link between the different institutions and organisations installed therein, and through different actions aimed at promoting the creation of collaboration spaces in the parks, understood as networking and communication spaces in which synergies and joint projects are created among the firms and individuals established in the park.

In the thirty years since the creation of the Basque Technology Parks, there have been numerous initiatives dedicated to the construction of an innovative community in the Parks: a community of professionals and business, a community that ignites innovation, and which supports the development of an innovation ecosystem in the Basque Country. This is the case of:

1. Red Innovanet: improving the competitiveness of the Basque SMEs
2. Technology Interpretation Centre, BTEK: taking science and technology closer to society
3. Collaborative environments project: making the most of the internal knowledge of the Science and Technology Parks
4. Aisiatek: leisure as a means of generating relations built on trust
5. Innovalan Bioeskola: encouraging social innovation

The five initiatives launched have enabled, on the one hand, the importance of the individuals and organisations involved in the regional development processes to be highlighted, and on the other hand, the demonstration of the importance of establishing communities and professional networks within the parks that contribute to the creation of a truly social committed innovative community.

1. RED INNOVANET: IMPROVING THE COMPETITIVENESS OF THE BASQUE SMEs

The Red Innovanet brings together the different intermediary agents of competitiveness in the Basque Country: businesses, technology centres, clusters, universities, professional training centres, together with development agencies, business associations, and the Basque Innovation Agency, among others.

They are coordinated through the Basque Country Technology Parks and united by a common objective, to improve the competitiveness of the Basque SMEs through the application of policies for innovation and competitiveness by increasing the efficiency of the communication channels with the managers of the business network.

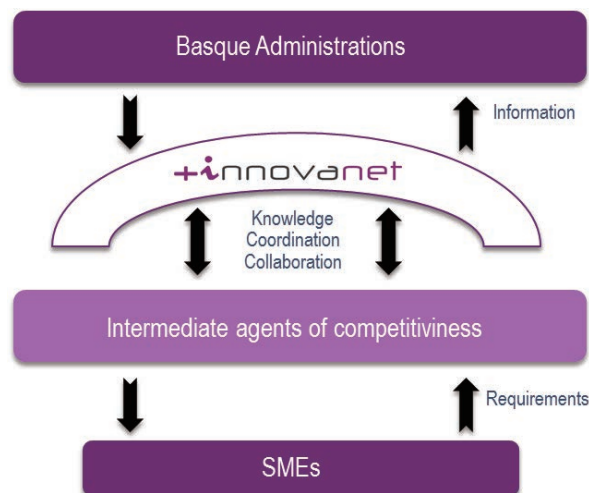


Figure 1: Red Innovanet diagram

Since the start of the initiative, many projects and actions have been developed through the Network, including the exchange of 50 successful agent experiences via a collaborative platform, the development of a "Map of Agents" of the Network, a Who's Who, which has allowed agents to get to know each other and encouraged collaboration between agents and businesses. A number of training activities have also taken place, allowing agents to increase their skills, share knowledge and good practices, and to find out more about the policies and tools available for businesses.

In the Basque Country, the Red Innovanet has managed to bring together 145 agents located inside and outside the parks, helping them to improve their training, extend their network of contacts, locate possible collaborators, meet other agents in their environment and line of business, thus establishing the bases for present and future collaboration. In addition, the Red Innovanet has been able to align the interests of different agents from the Basque Innovation system, breaking with limits in the parks and managing to multiply the impact of the actions carried out.

Based on a community that works together to support the competitiveness of businesses, which is the objective of the Red Innovanet, a more efficient participation of these businesses is encouraged, with the involvement of interest groups towards key priorities, challenges and requirements for knowledge-based development.

This Network is an example of how alignment and collaboration among different agents located in and outside the parks towards a common objective, such as improving the competitiveness of Basque businesses, through the technology parks, has a direct impact on the firms in the vicinity and in the region in which they are found.

Furthermore, it encourages the generation of an exchange of knowledge, innovative ideas, good practices, and methods of working, which have served to generate relations built on trust, to start joint projects with the intermediate agents of competitiveness and the individuals that belong to the network. At the same time it has managed to bring the Basque administrations and institutions closer to the SMEs through the coordination of the Basque Technology Parks.

2. TECHNOLOGY INTERPRETATION CENTRE, BTEK: TAKING SCIENCE AND TECHNOLOGY CLOSER TO SOCIETY

The Technology Interpretation Centre, BTEK, located in the Basque Technology Parks is committed to the promotion of science and technology in society. It contributes to awakening scientific and technological vocations, to recognising the social contribution of innovation and to making science and technology more accessible to society.

BTEK, the Technology Interpretation Centre has aimed to be the meeting point between students, science and technology, the general public and the science and technology park, between everyday life and life in R&D&I. This all serves to promote the science and technology culture in society.

Almost 4,000 people visit the centre every year to find out more about the developments taking place there. In particular these visitors include, in addition to people from the park environment, Basque educational establishments, schools, associations, universities, technology centres, etc.

The visits to the Technology interpretation centre, include also workshops on selected topical subjects, including biotechnology, renewable energies and robotics, which allow the visitors to temporarily become

immersed in and to discover at first hand the different developments carried out by the organisations in the parks, and to come into contact with science, technology and innovation in a way which is enjoyable, fun and educational, where interaction takes priority over inactivity.

In addition to the usual activities, technology camps aimed at younger participants are also organised in the summer to coincide with the school holidays. Moreover, throughout the year, BTEK serves as a meeting point for different events and conferences directed towards the business sector, thus combining the latest technological developments with innovative talks in the same space.

BTEK has established itself as a reference space in the Basque Technology Parks. It represents a truly innovative investment by the parks to contribute to awakening interest in science and technology vocations and to encourage the science and technology culture in society. In short, to contribute to the integration of the Basque Technology Parks into the city landscape of Innovation.

3. COLLABORATIVE ENVIRONMENTS PROJECT: MAKING THE MOST OF THE INTERNAL KNOWLEDGE OF THE SCIENCE AND TECHNOLOGY PARKS

The Collaborative environments Project, in operation since 2010 in the Basque Parks and promoted from the parks' areas of innovation, aims to make the most of the internal knowledge of the organisations installed in the parks and contribute to the development of the firms in the parks and of their staff, for the generation of synergies, and the implementation of joint initiatives of common interest.

The implementation of this project has enabled the generation of a tailor-made proposal designed by the areas of innovation, based on the requirements detected in the different participating organisations, and directed towards the development of the participating organisations and their staff, in different areas. These include: language training, the improvement of transversal skills, leadership, team management, project management, etc.

Moreover, it has permitted the promotion of the flow and exchange of knowledge, and the generation of synergies and collaborations among the individuals and firms at the park.

The different initiatives promoted within the scope of this project are aimed at encouraging networking and collaborations, at creating a meeting place that promotes the generation and exchange of innovative ideas, and providing a channel of communication among the participating organisations and individuals.

The role of facilitator assumed by the parks, acting as catalysts and promoters of the initiative, is essential for the development of this project. Since the implementation of this initiative in the Basque parks, more than 40 organizations have benefited from the channel of communication open between the organisations and the parks for launching and transmitting their proposals and the requirements detected within their organisations, and thus making the most of the organisations' internal knowledge.

4. AISIATEK: LEISURE AS A MEANS OF GENERATING RELATIONS BUILT ON TRUST

Aisiatek is a leisure association, which seeks to promote the generation of relations built on trust and relations among professionals from the Basque Country Technology Parks. In 2015 it celebrates ten years of activity. The Aisiatek Association was conceived by the workers at the firms and technology centres located in the

technology parks, to strengthen ties among the people working at the parks, the Universities and their environment; to promote culture, leisure, sport and other activities essentially intended for entertainment in the spaces within the park.

This association, directed at and focussing on the workers at the park enjoys the participation of more than 1,600 associates, mainly employees from the parks. Following the launch of the association, a leisure guide has been published, and a variety of different activities have been carried out: ranging from sport, including paddle and tennis tournaments, football matches and golf tournaments, open running races, Nordic walking, ski trips, etc. to cultural and leisure activities: such as card game tournaments, wine tasting sessions, cookery courses, photography, language classes, etc.

The activity of Aisiatek helps to foster social innovation, to generate relations and communication spaces among the employees, and to view the park environment as a place of work and leisure, in which another type of innovation is possible.

After 10 years of activity, Aisiatek has helped to create a networking and communication space among the employees of the parks, a network which has enabled strong ties and relations of trust to be built among the individuals who have taken part in the different activities, and a network which has brought Technology Parks closer to society.

5. INNOVALAN BIOESKOLA: ENCOURAGING SOCIAL INNOVATION

Last but not least, the initiative Innovalan-Bioeskola, is a social initiative for improving the social and labour market inclusion of individuals at risk of social exclusion, which reverts back to society and the people and agents located in the park.

The objective of Bioeskola is to market baskets of seasonal organic products. The project is able to prepare approximately 8000 baskets per year, which are distributed among the park employees and personnel, and the residents nearby, who are able to enjoy a responsible and sustainable organic consumerism thanks to this system.

This experience focussed on social innovation has enabled individuals at risk of social exclusion to receive training in order to improve their job opportunities. Starting at the beginning of 2014, results to date have been very positive.

This project brings social innovation closer to the Technology Parks and wants to be the starting point of other joint projects that are of a social nature and that at the same time revert back to the people working in the park but also to the residents of the surrounding areas of the park, integrating the Science and Technology Parks in the city landscape.

CONCLUSIONS

The Basque Technology Parks, favour the integration of business communities and professionals into a

space with a high science, technology and innovation content, which, linked together around the different network and communication spaces, have encouraged the development and establishment of the technology parks as new spaces of innovation.

Spaces and communities in which the exchange of knowledge, innovation and trust among the individuals play a decisive role, and which continue to advance towards the creation of true communities, which bring together the different agents operating in the Basque Country and installed in the science and technology parks fostering the so-called living and working environments.

Thirty years after their creation, the Basque Technology Parks have become a well-established reality which is moving towards a new spatial and multi-campus layout, integrating the different scientific, technology and innovation agents that operate in the Basque Country, constantly adapting the strategies, objectives and available tools to lead the innovation process.

All the initiatives described have something in common, their contribution to the generation of innovative communities in the technology parks: from the case of the Red innovanet, mainly focussed on business innovation and the promotion of competitiveness among the Basque SMEs; or the collaborative environment project which seeks to make the most of the internal knowledge of the organisations installed in the park for the generation of synergies and joint projects of an innovative nature; to more social initiatives such as BTEK, The Technology Interpretation centre, for taking science and technology closer to society; Aisiatek, for encouraging leisure activities and the establishment of relations and ties based on trust among the park employees through after-work activities, or Innovalan- Bioeskola, for the promotion of social innovation and the inclusion of individuals at risk of exclusion.

In short, it could be said that technology parks act as promoters in the creation of spaces for innovation, communication and knowledge, in which the interaction and activity of the participants generates new knowledge, contributing to the development of the individuals and communities making up these spaces.

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