

Clusters, engines of business innovation in Spain

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Spanish clusters play a key role in the progress of innovation within Spanish enterprises, especially among SMEs, which account for 99.8% of the total in Spain. This article describes the origin and growth of clusters in Spain; the Spanish registry of “excellent” clusters, known as *Agrupaciones Empresariales Innovadoras* (AEIs); the Spanish Federation of clusters; and our current status, a critical time due to the significant changes that the central government plans to apply to its policies of support for AEIs.

The development of clusters in Spain

The Basque Country was the Spanish region pioneer in creating policies for the development of its competitiveness through clusters. In 1991 the Basques relied on Michael Porter to aid them in the definition of their Industrial Policy, hence creating a solid program to support clusters that has driven the remarkable economic growth in that region for the last two decades. Some of its great clusters, such as GAIA, have already celebrated their 30 years of existence. This accounts for three decades, since their policies in some cases did not need the creation of new organizations, but instead acknowledged those that already existed, supporting effectively and in a sustained manner the region’s growth.

Catalonia launched in 1993 its first cluster initiatives, adapting the concept to their industrial reality. Their initial analysis suggested the transition from cluster to microcluster, defining these as business groups often located in relatively small geographical areas. Clusters like FEMAC, focused on agricultural machinery and located in Lleida, were strengthened. In 2012 FEMAC was the first Spanish cluster to receive the Gold Label of the European Cluster Excellence Initiative. These policies have evolved in Catalonia towards the development of more global initiatives and projects, suited to reach the global markets. An example of this recent approach is INDESCAT, the Catalonian sports cluster.

Progressively there were initiated, recognized and supported new initiatives in other regions. Two examples of this are CEAGA, which brought together the Galician automotive sector in 1997, or IDIA, a horizontal cluster focused on ICT projects, born in Aragon in 2004.

***Agrupaciones Empresariales Innovadoras* (AEIs)**

In 2006 the Spanish central government launched its first national program to support clusters. Consequently, a national registry for the *Agrupaciones Empresariales Innovadoras* (Innovative Business Groups - AEIs) was created, centralized in the Ministry of Industry. A list of those clusters that introduce and develop strategic plans considered by them as “excellent” is kept here. The program aids clusters oriented to the international market, providing financial assistance to support their infrastructure during their first four years of existence, as well as it grants the development of their projects at any stage of their existence, while they remain registered. In 2013 the registry had 174 clusters recognized as AEIs by the ministry.

A study led by the Asturian cluster MANUFACTURIAS established in 2010 the following profile of the AEI that could be considered “typical” at that time:

- Legal form: Non Profit Association
- Members: 41 companies (87.8% SMEs) + 2 Technologies Centers + 1 University
- Structure: 3 people on payroll.
- Projects: mainly innovation, training and internationalization.
- Area: regional.

The document published in 2011 by the General Secretary of Industry, “*El Programa AEIs 2007-2013. Balance Actualizado de cinco años de aplicación de la política de clusters del MITYC*” greatly assesses the impact that this program has had on the Spanish business sector. The study concludes that the support given to the AEIs has enabled the expansion of the benefits derived from the services they provide, reinforcing visibility and strengthening relationships, which in turn has increased the competitiveness of the participating companies. It also suggests that this initiative can contribute greatly to Spain and the Autonomous Communities taking up a better stance during the new period 2014-2020.

In March 2009 FENAEIC, the National Federation of Innovative Business Groups and Clusters, was created. In this way, we, the Spanish clusters, began to organize our cooperation. One of our first goals was to assist the development of our Clusters Managers, launching an intensive training program in collaboration with the Ministry of Industry.

On the current process of reflection taking place

We arrive at 2013. The global concept of cluster has evolved significantly. Europe has redefined its initiatives, creating programs such as *Horizon 2020* and *Smart Strategies Specialization* for their regions. Clusters are an important pillar for those policies. Spain has great clusters, and some initiatives that now require reviewing.

The Spanish Ministry of Industry decides to completely rewrite their new program to support clusters.

Some Spanish clusters embark on an intense process of reflection. A Think Tank is created, with the participation of the AEIs Avebiom (Castille and Leon), CEAGA (Galicia), FEMAC (Catalonia), GAIA (the Basque Country), IDIA (Aragon), INDESCAT (Catalonia), MANUFACTURIAS (Asturias) and Security and Defense (Madrid). Together, they write a proposal, a profile for the “AEI of the Future”, summarized below.

We support audit and certification processes that encourage improved standards for excellence on cluster management.

Innovation in AEIs is structured in 4 axis (Market, Organization, Process and Product). The goal is for AEIs to work in the 4 levels of innovation through projects led and structured by enterprises.

The AEIs can be involved in projects and services in various ways:

- Promotion of strategic thinking, leading to actions and projects.
- Innovation Agendas
- Detection of opportunities and generation of collaborative projects of
 - Technology
 - Competitive models
 - Business models
 - Training
 - Management and transfer of knowledge

- Launch of projects, working on the approach, search for partners and planning.
- Search for funding, facilitating access to financial resources for projects and services.
- Participation, especially in coordination and dissemination tasks.
- Management of projects.
- Leadership, where the cluster leads and executes projects.

The types of projects and activities that AEIs would address would be

- Development of innovative activities within each AEI, activities addressed to consolidate the AEI as a center of expertise in technological and strategic lines defined by its associates, including:
 - Animation and management of innovative networks.
 - Specific training in key skills for innovation.
 - Dissemination and visibility at a national and international level of the technological capabilities of the AEI and its members.
 - Actions aimed at the promotion of opportunities for collaboration between innovation agents.
 - Promotion, coordination and development of cooperative plans for innovation in processes and products.
- Technology demonstration projects, including previously developed R&D projects.
- Projects for the development, incorporation and adaptation of innovative technologies: the assimilation of a new technology by one or more members of the AEI, including the validation by means of a prototype or demonstrator.
- Maps of early demand, made from within the sector's companies, aimed to encourage the projects of Public Procurement of Innovation.
- Inter-cluster projects with impact on the value chain of a product, incorporating members of various AEIs and complementary entities in said value chain, process or service. The development of the new product, process or service will end with a demonstration through prototyping, pilot lines, or precompetitive demonstrations.
- Complementary activities for projects:
 - Management of the definition and preparation phases of proposals.
 - Promotion, coordination and/or dissemination through workshops, conferences or seminars.
- Non-technological innovation. Projects for the collaboration of SMEs belonging to AEIs, in order to develop new business opportunities, especially those with some market and/or technological risks, with international focus and market. These projects should be designed to develop the business plan and the business model, and alternatively implement the first steps of the business plan.

One of the key factors that are helping Spain to exit the current economic crisis is the internationalization of our companies. Clusters play a key role in these processes, bringing together our SMEs and providing the necessary critical mass to approach this type of projects.

The collaboration between clusters is crucial for innovation processes, because it enhances the competitiveness of initiatives through projects more powerful, in many cases cross-sectoral.

This last statement makes even more sense in the actions aimed at international markets. Collaboration between clusters of different countries, between its member companies, should be supported and strengthened, promoting the creation of strong consortia able to really compete at a global level.

One of the problems that the AEIs in Spain have been facing is a very limited or lacking recognition in programs not specifically aimed at the clusters. The AEIs should be recognized as innovative agents in development programs for competitiveness and innovation within all Public Administrations, in order to speed up the definition and implementation of projects, and allow the cluster's associates, and especially SMEs, to effectively promote their business' competitiveness.

FENAEIC began in 2013 a deep collaborative process of reflection and reinvention, which addresses both our associative objectives and the means to be employed in order to achieve them, including the organization of our collaborative structures. This process should culminate in the approval of new statutes, to be submitted for said approval by the General Assembly during the event that will gather us in Zaragoza in September 2014.

FENAEIC is also developing the ideas outlined above, working in various lines of action.

One of our current priorities is the internationalization of both our associates and the activities of the federation. In this way, our first great ally has been France Clusters, with whom we had the pleasure of signing a collaboration agreement last September 2013, in Lille.

We are confident that our associates, French and Spanish clusters, will be able to benefit from both their geographical proximity and their cultural community. We will work to finalize the agreement in productive activities, as can be told by this very article, in a media, France Clusters Guide, which is leader and example of worldwide good practice.

We want to continue down this road, coming closer to other associations with similar interests. We believe that joint reflection at an European level will be of great interest for both the development of our associates and the definition of effective policies and programs at all levels.

The AEIs of 2014

Back at Spain we are, at the current time of writing this article, March 2014, awaiting important decisions to be made by the Ministry of Industry. This ministry is expected to publish the new bases of the AEI program in a few weeks. What we know so far incorporates, unless further modifications occur, significant changes. There will be new mandatory criteria for maintenance in the registry; criteria that many believe will lead to a drastic reduction in the number of AEIs. The Ministry of Industry wants to ensure the economic relevance and representativeness of the AEIs, limiting its recognition to clusters belonging to vertical sectors, representing at least 1% of the region's GDP, and having a sufficient critical mass of the sector, 10% companies or 30% of global net billing.

This approach could leave out of the program all cross-sectoral clusters, as well as those that can bring together companies in emerging sectors that have not reached a sufficient level of economic critical mass.

As stated above, we are working for the recognition of the registered AEIs in many other public programs at both national and regional levels, especially with the Ministry of Economy and Competitiveness, with which we are studying the publication of a program that will facilitate the financing of innovative SMEs participating in AEIs. Nevertheless, we still need to work a lot more in this kind of programs.