

# An Evaluation of the Strategy and Implementation Process of the EEC – *Clusters*

Executive Summary

**An Evaluation of the Strategy and Implementation Process of the EEC – Clusters**

**Executive Summary**

**April 2013**

**Authors:** Sociedade Portuguesa de Inovação e inno TSD

**Coordinator:** Augusto Medina

**Assistant Coordinator:** Marc Pattinson

**Technical Team:** Ana Ribeiro, André Alvarim, Carla Alonso, Douglas Thompson, Franck Le Gall, Guillaume Roux, Hugo Magalhães, Isabel Aguiar, Isabel Morais, João Medina, Mark Spinoglio, Philippe Deléarde, Sara Brandão, Sara Medina e Susana Figueiredo

**Contracting Authority:** Secretaria-Geral do Ministério das Finanças e Observatório do QREN

## Executive Summary

### **An Evaluation of the Strategy and Implementation Process of Estratégias de Eficiência Coletiva (Collective Efficiency Strategies, EEC) – Clusters**

The study presented in this Executive Summary is part of a set of evaluations required by the Plano Global de Avaliação (Global Plan Assessment, PGA) of the Quadro de Referência Estratégico Nacional (National Strategic Reference Framework, QREN) and the Programas Operacionais (Operational Programs, PO) from 2007-2013, which focus public policy on Estratégias de Eficiência Coletiva (Collective Efficiency Strategies, EEC) – Clusters. The policy is sponsored by QREN through its POs.

In accordance with the PGA, the Observatório do QREN (QREN Observatory) and the Secretaria-Geral do Ministério das Finanças (General Secretariat of the Ministry of Finance) conducted a public tender in which the consortium formed by Sociedade Portuguesa de Inovação (SPI) and inno TSD were selected.

This study intends to contribute to the strategic monitoring of public policy regarding Clusters through evaluating the strategy followed, the implementation process and the initial results.

### **Collective Efficiency Strategies Public Policy Framework**

EEC public policy is assumed at a national level to support clustering with the aim to follow relevant international trends. In this regard, public policy recognizes the importance of the role of clusters as platforms for open innovation, as catalysts of accessing and sharing knowledge, and as facilitators of collaborative practices (especially between businesses, higher education institutions and public institutions) in the early stages of the processes of innovation, research and technological development, and internationalization. Therefore, there is a clear understanding of the importance given to clustering processes in order to strengthen competitiveness and industrial efficiency and to promote innovation and economic transformation with particular attention given to market demand and societal challenges.

In historical terms, the national policy analysis started with the work of Michael Porter, conducted in Portugal in the first half of the 1990's that led to follow-up measures and instruments. Since Michael Porter's work, QREN 2007-2013 represents the most significant initiative regarding Clusters in Portugal.

Positioned as a facilitator of national strategic priorities related to the strengthening of cooperation, innovation, technology research and development, and internationalization of the private sector, QREN was considered the focal point for the current cluster support policy. Under QREN, the instruments of co-financing of the Regional POs (North, Central, Lisbon, Alentejo and Algarve) and the Thematic POs (Competitiveness Factors, Human Potential and Territorial Development) were identified as important promoters of collective efficiency.

In order to further establish stability to the development and effectiveness of clusters, it was determined that the cluster's initiative would also benefit from the Programa de Desenvolvimento Rural (Rural Development Program, PRODER) and the Programa Operacional Pesca (Operational Program for Fisheries, PROMAR).

The contribution of the different programs and support tools towards the national cluster initiative was formalized in the Framework of the EEC. Established in 2008, this document was the first step towards the implementation of the policy. The document identified selection methods (e.g. specific budgets and bonuses) that would allow relevant initiatives to be implemented under the EEC. Many of the mechanisms presented in this document were associated with the instruments of the Programa Operacional Fatores de Competitividade (Operational Program for Competitiveness Factors, COMPETE), in particular the Sistemas de Incentivos às Empresas (Incentive Systems to Business) of QREN and the Sistema de Apoio às Ações Coletivas (Support System for Collective Actions, SIAC).

In addition to proposing a number of measures, the Framework also defined concepts (clarifying that the clustering processes could be supported in "Poles" or Clusters) and made necessary the formal

recognition of the EECs to be supported (detailing the context in which the process of recognition should occur).

In this context, in order to be considered a “Pole” or Cluster the guidelines required that a partnership integrate actors relevant to the consolidation of strategies (including firms and supporting institutions – research and technology development institutions, higher education institutions and vocational training, business associations, regional entities, etc.). It was expected these partnerships would be led by an association preferably established for this purpose (the managing organisation).

Finally, the Framework provided the opportunity for the co-financing of costs related to the coordination and management of the established partnerships during the implementation phase of the EEC and its Action Plan.

The Framework was followed by a series of applications structured around establishing “Action Plans”, which created the strategies of the EEC’s. Each Action Plan included a set of flagship projects structured to achieve the objectives of the EEC, and priorities for complementary projects that were also important to leverage the desired results within the EEC.

In accordance with the established recognition process, in July 2009, 19 EECs were formally recognized: 11 Poles and 8 Clusters.

### **Methodology and Team**

The Evaluation Team has implemented a multi-method procedure, involving the different members of the ecosystems under analysis, in a participatory manner. This resulted from the complexity of the realities under analysis, the need for providing answers in the area of strategic design and of operationalization, as well as in the area of development, realization and initial results (having international best practices as a reference).

As a result, the evaluation team identified and analysed the key documents and national and international statistical databases relevant to the study. In addition, the team conducted 37 interviews, implemented two questionnaires (which resulted in nearly 500 valid responses), and

conducted three focus groups and expert panels that included international experts. A series of country case studies and international practices were also identified and highlighted to support various perspectives of the evaluation. During the evaluation process, several meetings were held with the Monitoring Group (coordinated by COMPETE and including the QREN Observatory and Financial Institute for Regional Development) and other relevant stakeholders such as the managing authorities of the various funding instruments. The results of the evaluation were presented at two events.

Additionally, the methodology implemented by the evaluation team included an individual EEC evaluation procedure structured around a set of topics, evaluation criteria, and internationally recognized relevant qualitative and quantitative indicators.

The methodology allowed for detailed analysis of various important aspects, while including a wide range of perspectives and opinions of stakeholders (including the managing authorities of the various funding instruments, supporting institutions and companies). This created the opportunity to address the general questions of the evaluation in a thorough way that led to the formulation of relevant conclusions and recommendations.

The methodology was enhanced by the experience of the evaluation team in areas critical to the subjects under discussion. The evaluation team was under the coordination of Augusto Medina (SPI) and Marc Pattinson (inno TSD) assisted in the coordination. Additional overseeing was provided by an Advisory Committee.

Coordinated by Luis Mira Amaral, the Advisory Committee included a group of nationally and internationally recognized experts in the area of clusters, namely: Alberto Pezzi (Italy) - Director for strategy and industry clusters at ACC1Ó and member of the Board of Directors of The Competitiveness Institute; Christian Ketels (Germany) - principal investigator of the Institute for Strategy and Competitiveness (Harvard Business School), Senior Research Associate of the Center for Strategy and Competitiveness (Stockholm School of Economics) and President of TCI Network; Gerd Meier zu Köcker (Germany) - Director General of the

Agency Kompetenznetze Deutschland and the Institute for Innovation and Technology in Berlin, Vice-director and head of the Department of International Technology Cooperation and Clusters enterprise VDI / VDE-IT GmbH; and Mats Williams (Sweden) - Deputy Director of the Center for Strategy and Competitiveness (Stockholm School of Economics).

## Summary of Results, Conclusions and Recommendations

### Strategic Design

Considering, in general, the brief lifetime of the political and operational framework developed under the scope of QREN, and in particular, the framework of the EEC (including the preferential access to a range of instruments co-financed by community funds), **the efforts undertaken are recognized as positive and their continuity is thus defended.** Nevertheless, it should benefit from accumulated experience, comprising the inclusion of potential changes that could avoid the crystallization of less achieved aspects of its policies and its operationalization. In this respect, the reduced involvement of relevant decision-makers in a policy that would clearly benefit from more accompanying and coordination is one example. Another, the anchorage in the community programming instruments, and the subsequent dependence on them, without a clear definition of the model of governance.

In more detail, considering the importance of an adequate governance model (supported with a center of rationality with the necessary resources), a higher operationalization of the instruments was observed in which a system of operational articulation between the entities (namely the Incentive Systems to Business of QREN) was already instituted, as well as a clear reduced capacity of promotion of instruments that required articulations that were less institutionalized (with the Regional POs, Thematic POs, PRODER and PROMAR).

**It is thus relevant to reformulate the model of governance,** consolidating a structure of policy coordination and **nominating a management**

**structure that benefits from the accumulated knowledge, both at a national and international level.** The two structures should be articulately committed to the operationalization of a national policy of comprehensive clustering. The latter being defined in a medium-term context (2014-2020) and presenting objectives aligned with the country priorities and the international contexts. It should be anchored in the National Government Budget, even if conditions need to be created so as to benefit from the subsequent programming period of Community Funds (2014-2020).

It is also important, on the other hand, to match expectations to reality. In this specific situation, it is observed that excessive expectations have been generated around a process that, given its novelty, should have been a process of experimentation and learning.

To further support this, the policy implementation context should be highlighted. This context having little previous culture of clustering, resulted in difficulties in the early stages that are a consequence of the reduced experience in activities involving leveraging the processes of collective efficiency. Considering that the culture in the area of clustering processes was not sufficiently enriched, **a significant difference between the initial intentions and the reality can be observed, which is important to reduce in the political continuity.**

### Recognition Procedure

Taking into account that the alignment of expectations should occur from the beginning, **a new process of recognition is identified as necessary** that takes advantage of the good practices of the past, also introducing new factors or innovation.

Thus, considering that the process of recognition of the Poles and Clusters was on the whole adequate, and given that it involved an Evaluation Commission (which included political decision-makers and international experts) and also that it was participated and flexible, it is imperative to create conditions which depict, in a new process of recognition, strategies that are robust, participative, committed to results and that demonstrate the ability to contribute to the defined objectives.

In this context, in 2009, there was a conditioned recognition process (and a reformulation of the Action Plans presented), which pointed towards some weaknesses regarding the maturity of the EEC candidates.

On that occasion, the degree of compliance required in relation to conditions and recommendations that accompanied the process of conditioned recognition, was found not to have been set accurately. It was found that the same has been completed with the formal recognition of all Poles and Clusters. In this context, it is important to question to what extent the 11 Poles and 8 Clusters in question had actually conditions to ensure the emergence and/or consolidation of ECC oriented to increasing the competitiveness of the Portuguese economy in relevant domains.

Additionally, the existence of a few factors of innovation in the recognition process should be noted. In this sense, a conservative approach at the strategic level (as regards the definition of priority areas and top-down processes, with the prevalence of focusing on sectors traditionally supported) and at the operational level (in relation to ecosystems - higher education institutions, technology centers and companies - involved in defining strategies with reduced focus on market orientation) can be observed, in general. This posture seems to have limited the recognition process to consolidate traditional domains considered to have a high potential for exporting, at the expenses of the emergence of other sectors or the assumption of risks outside the traditional alignment of the sectors.

The fact that the recognized Poles and Clusters presented, at an early stage, distinct features and levels of maturity is still to be highlighted and these initial differences intensified with time. In this sense, the current differences do not demonstrate themselves to be accommodated in the classification system that distinguishes Poles and Clusters.

A clear example of the differences in the level of maturity of the EEC results from their perception of the contribution of policy to support clustering for structuring the value chains/sectors they represent, registering cases in which recognition is seen as a sine qua non condition and other cases in which it is

considered as a complement to a work that was already being done within the ecosystem.

In this context, it is suggested to **uniform the nomenclature used**, opting for the designation of cluster (adopted in a generalized manner at an international level) and for a **dynamic system of classification** that distinguishes clusters according to their level of maturity. This system, which could for instance differentiate “maturing clusters” and “mature clusters”, the latter being subdivided into the classification categories “national leader clusters” and “clusters with international ambition”, should be aligned with the objectives and instruments of support, such that differences are expected in each, according to the maturity level of the clusters. It should further allow the declassification or increase in echelon between the different levels to be created, with consequent compliance, or not, with the objectives initially set.

Following the new process, it will be possible to lead the recognized EECs in 2009 to re-apply, subjecting them to a common set of rules for new applicants and to the classification system. It should be also considered that, in the course of the new process, some of these EEC are not recognized (immediately by observing situations where proposals are not submitted).

#### Activities developed within the EEC

In order for clusters to be recognized, they should assume themselves as central elements in the process of strengthening the culture of clustering, maintaining an open posture to the international dimension, as a vehicle for learning and affirmation. To this end, the **Management Entities should present management models with competence and leadership and bring together technical teams with experience** in topics relevant to the induction of collective efficiency.

In fact, what is observed from the analysed realities is that the activities developed under the scope of Poles and Clusters have been limited, in many cases, to the implementation of projects (flagship, complementary and of promotion, coordination and partnership management), which was a result on the one hand, of preferential access and specific budget allocations, and on the other hand, of the

limited experience of the Management Entities in leveraging the clustering processes.

This last aspect seems to have limited the capacity of the Management Entities to introduce activities that were expectable, regarding R&D, investment in other dynamic factors of competitiveness, orientation to external markets, cooperation, articulation with the skills-set and reinforcement of international connections. In general terms, the influence of the EEC in these domains has shown to be limited.

**The existence of solid strategies of governance, grounded in significant knowledge on clustering at the level of the Management Entities** is envisioned by the Evaluation Team as a necessary change, which will allow the desired development of activities with higher added value. In turn, a greater differentiation in the activities promoted by the Management Entities will have an effect on the attractiveness of clusters, particularly on the respective capacity to mobilize private resources. In this scenario it will be possible for the Management Entities to undertake more audacious objectives and to achieve a gradual autonomy of the public support to promotion, coordination and partnership management.

With the changes referred to regarding the level of the Management Entities, part of the difficulties experienced in the operation of the instruments will be easily overcome in the future, especially those pertaining to the dynamics, rhythms and ability to mobilize private resources. However, it will be necessary to anticipate the need to introduce mechanisms that also overcome the operational weaknesses, which may arise from the governance model of the policy or framework of action on which the latter relies.

In this context, it is noted that **although significant amounts were made available for flagship, complementary and promotion, coordination and partnership management projects, there were some difficulties in operationalizing the majority of the preferential access foreseen** in the initial EEC action framework. Specifically, it can be recognized that only the preferential access subscribed in Incentive Systems to Business of QREN and in Support System for Collective Actions were truly mobilized. From this conclusion it results the **need of the clustering policy to be anchored in a**

**transversal framework of measures** (to be financed through the national governmental budget and the different structural funds), stimulating in a complementary manner, the mobilization of private and/or international resources.

With a program specifically designed to support the clustering policy, the use of the selectivity mechanisms currently applied, such as the bonuses, will be less necessary. Nevertheless, it will be important to ensure the continuity of other mechanisms, in particular, the use of benchmarking mechanisms as part of the selection of projects. In this context, it is noted that technical priorities were defined for inclusion in EEC projects, designated as "technological areas and areas of development of new products, processes or systems" and "typologies of eligible investment" under the scope of some of the instruments of the Incentive Systems to Business of QREN.

In this domain, it will be also relevant to introduce some changes, especially in regards to **ensuring that methodologies are more robust, participative and periodic in the identification of the development priorities for clusters** (that guide projects to be supported through the future framework of measures). The Management Entities, called to lead the identification of technical priorities following new methodologies, should assume a decisive role upstream of the project selection process, and its absence of action at the level of project assessment is recognized as adequate.

#### Evaluation

Given the clear distance between the expectations and the achievements, what is foreseen in the EEC Framework and what was actually operationalized, the networking and the difficulties of interaction between the different entities and the ambitions of the EEC and its capabilities, among other aspects, the inexistence of an evaluation system is questioned that would have allowed the early detection of weaknesses and the introduction of corrective measures in a timely manner.

In this regard, it is noted that although the Framework of the EEC has predicted that a Public entity would assume responsibility for the promotion, monitoring and evaluation of the policy and that COMPETE would have assumed that same

responsibility, their activities were restricted to the supervision and monitoring of the EEC, leading to some uncertainty in the evaluation activities themselves.

In fact, it became clear that, contrary to what should occur, the evaluation activities were reduced to the current evaluation exercise.

At the same time, the evaluation did not receive the necessary attention within the EEC, having limited the accompaniment, monitoring and evaluation procedures to the balanced assessment of the activities during the General Meetings for the preparation of semi-annual progress reports.

The existence of an international dimension to the level of supervision and monitoring practices developed (with few exceptions) was neither observed with regard to politics nor to the activity of the Management Entities and the ecosystems they represent.

Recognizing that the **evaluation should deserve a prime space of reflection and implementation, consolidating itself in its own evaluation system, which is participative, continued and rigorous**, the Evaluation Team recommends the elimination of the uncertainty created at this level. It is further suggested to take the **relevance of the frequency and the international dimension of these processes into consideration**.

Regarding this last aspect, it is recommended, for instance, that the Management Entities are made aware of the importance of obtaining an Excellence Label (Gold Label), attributed by the European Secretariat for Cluster Analysis. This Label recognizes (in the sequence of the evaluation process) the merit and quality of a cluster at an international level. Thus it is a relevant element for clusters to have in the future an active role in the numerous instruments and initiatives of the European Union related to R&DT and innovation.

#### Policy Contributions

In recent years, there have been many studies conducted internationally on the relevance of clustering policies in relation to the competitiveness of the economy of a country or a region.

In several of these studies, contributions such as the increased productivity/ efficiency of companies, the facilitation of companies' access to the market, the encouragement to innovation and to technological development, the promotion of technology-based entrepreneurship, are presented among others.

Therefore, it is important in the national scenario to continue to support the clustering policy, with the new cycle started by a process of recognition which, by presenting changes in relation to the past, makes use of the accumulated experience, creating the path for the entire set of changes that should occur for the benefit of a more effective and efficient policy and for an extended impact of its contribution. These should be clearly translated into objectives, defined early with a realistic dimension, and the necessary conditions for their achievement guaranteed.

It is to be noted that the clustering policy evaluated in this exercise presented comprehensive and ambitious objectives that were losing direction as the difficulties of operationalizing various measures have emerged. This led to expectations being inadequate compared to the policy's contributions at various levels. In this group the objectives related to internationalization are included, but also the objectives resulting from an effective interaction between the support policy of clustering and the policies relating to the Sistema Nacional de Inovação (National Innovation System, SNI), the Sistema Científico e Tecnológico Nacional (National Science and Technology System, SCTN) and the Territory.

Although it is observed that the contributions in the areas mentioned were generally reduced, attention should be drawn to the temporal circumstances in which this evaluation occurs, highlighting the relevance of revisiting these issues in a more adjusted temporal horizon.

It is also worth mentioning that the definition of the policy objectives (which may include the strengthening of the cooperation relations; the intensification of innovation and R&DT, investment in the production of tradable goods and internationalization; the promotion of technology-based entrepreneurship; the stimulation of competitiveness and modernization of the business, capacity building and the generation of skilled employment, among others) should occur at these



same interfaces, in a clear alignment with national and international priorities.

As an example, it is relevant to note, in the context of the interaction between the processes of collective efficiency, the SNI and the SCTN and the

development of the Territory, the importance of ensuring adequate articulation between clustering policies and the strategies for smart specialization, in accordance with the guiding principles included in European documents on this matter.

Porto, April 2013

Sociedade Portuguesa de Inovação and inno TSD