

Opinion of the European Economic and Social Committee on 'European Technology, Industrial and Science Parks in the crisis management, preparation of the after-crisis and post-Lisbon strategy period' (additional opinion)

(2011/C 44/22)

Rapporteur: **Mr TÓTH**

Co-rapporteur: **Mr SZÚCS**

On 14 July 2009, the European Economic and Social Committee, acting under Article 29(2) of its Rules of Procedure, decided to draw up an additional opinion on the

European Technology, Industrial and Science Parks in the crisis management, preparation of the after-crisis and post-Lisbon strategy period.

The Consultative Commission on Industrial Change, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 1 July 2010.

At its 464th plenary session, held on 14 and 15 July 2010 (meeting of 14 July 2010), the European Economic and Social Committee adopted the following opinion by 147 votes with seven abstentions.

1. Recommendations

1.1 The EESC acknowledges the significance of the Technology, Industrial and Science Parks (TISPs) in the support of economic development and modernisation. The structures established support industrial change by the smart specialisation, concentration of resources and knowledge base.

1.2 The EU needs a more focused and integrated approach geared towards sustaining and developing the TISPs of the 21st century. Particularly in the crisis and post crisis context, a more comprehensive strategy should be followed, to capture the potential benefits of parks for economic growth and competitiveness. These actions have to be implemented with leadership and ambition on behalf of the EU.

1.3 It is advised to identify and develop synergies with the flagship EU initiatives in the field, particularly with the European Institute of Technology and Innovation and its Knowledge and Innovation Communities.

1.4 The development of new generations, a new form of parks has to be noticed and encouraged. The role of the parks in shaping the innovation structures should be promoted.

1.5 The regional dimension: in line with the subsidiarity principle, local governments', agglomerations' involvement in the development of TISPs should be strengthened. There is a need to improve networking activities between the actors of the public sector, the business community and the higher education institutions.

1.6 Cooperation with scientific institutions, especially universities and research institutes, as well as R&D aspects, are becoming more and more important in park development; however there is currently less cooperation with parks than there should be. Parks could serve in their function as bridges

between the academia and the industry. The partnership with parks may be part of system of criteria for awarding the excellent universities.

1.7 The observatory – evaluation – accreditation activities in the field should be initiated and supported, together with the dissemination of good practices. Assessment and comparative empirical studies are required to frame concerted European and national policies and instruments related to park formation and growth. It is desirable to support the mapping of TISPs across Europe in the form of comprehensive database. This may facilitate collaborations among the parks by creating an inter-connecting matrix that promotes connectivity to overcome regional barriers to growth.

1.8 The continuous professionalisation in the development and operation of the parks is acknowledged in the organisational-management, complex (regional) development aspects and also in the integration of the research component, the structured clustering approach and the quality element. Further enhancing the standards of operations of the parks remains however a requirement

1.9 The EU offers possibilities for greater cohesion and catching up; we need to tap into more of the development potential which this offers and to keep track of it in the long term.

2. Introduction

2.1 The EESC approved in November 2005 a comprehensive own-initiative opinion in the theme of Technology-, Industrial-, Innovation- and Science Parks. Particular attention has been paid to the parks in the new Member States however the findings and recommendations made have been valid for the EU in general.

2.2 It can be noted that the above opinion has pronounced several relevant statements and formulated appropriate recommendations, which have had significant policy impact in the past years. The resulting progress has been in synergy with the regional, industry and innovation policy efforts of the EU.

2.3 The following findings and recommendations with clear impact may be recalled:

- a) Parks meet the criteria for instruments to facilitate innovation, parks therefore can be considered as 'innovation poles'.
- b) It is highly relevant to facilitate interaction between science, technology and economic development and creating synergies through cooperation between business and research institutions, thus promoting their market access.
- c) The parks provide comprehensive framework to facilitate, stimulate innovation and regional development and have played a prominent role in these efforts, by enhancing competitiveness, helping to overcome unemployment and the gap between divergent levels.
- d) There is a need of economic strategies capable of addressing the complex nature of opportunities offered by the parks and of providing leadership.
- e) Parks have a key role to play in promoting innovation. In this context the mobilisation of intellectual resources from universities and other research institutions is becoming increasingly important.
- f) The networking of parks at trans-regional levels, development of pan-European networks by supporting integrated cooperation programmes between parks and industrial districts has been a desired but not fully achieved concept.

2.4 It is timely to take stock of impact of the previous opinion, both as for the policy lessons and the practical lessons learnt. The follow-up opinion also elaborates the role and possibilities of parks in the management of the economic crisis. In this document, the EESC focuses on park specialisation, on new expectations of industry, employees and other civil society stakeholders, on new challenges facing parks at regional, national and European level, and on the complex tasks of organisations managing parks.

2.5 The Technology-, Industrial-, innovation and Science Parks (TISPs) are seen increasingly as a means to create dynamic clusters that accelerate economic growth and international competitiveness. They are contributing the European industrial change, enhancing the innovation-, clustering-, B2B-activity, supporting the SME sector and the job creation. A definition of clusters has been discussed in detail in paragraph 2.3 of the EESC own-initiative opinion on '*European industrial districts and the new knowledge networks*' ⁽¹⁾.

2.6 The EU should also be prepared for the after-crisis period, where the concentrated innovative, scientific and industrial capacities and resources are there in the TISPs all over the EU. It is relevant to highlight the potential role of the parks in the preparation of the post 2010 Lisbon Strategy planning. The aim of this follow-up opinion is to set up recommendations in line with these findings.

3. The changing role and positioning of the TIS parks

3.1 The profound economic and social changes in the past years, in particular the process and consequences of the economic crisis, the robustly emerging sustainability, energy security and climate change issues have re-positioned for Europe and the whole world the notions and tasks related to modernisation, growth and economic development. In order to be efficient in this environment, parks have to develop new functions, services and produce new business models that enable emerging activities and sectors to flourish.

3.2 The significance of science and technology parks and alike, as concentrated and integrated development structures has been increasing. Innovation and creativity have been receiving special attention in the EU and worldwide. These structures are acknowledged as promoters of an innovative and competitive economy, supporting both creation and consolidation.

3.3 Parks around the world vary considerably in terms of their mission and scale. A fuller understanding of the different variants of parks bears upon determining needs, setting priorities and elaborating strategic planning. Many definitions of a park have been advanced, by professional organisations. Common among these definitions is that a park is a type of public-private partnership that fosters knowledge flows - often between park firms and universities and among park firms - and contributes to regional economic growth and development.

⁽¹⁾ OJ C 255, 14.10.2005, p. 1.

3.4 The term 'science and technology park' has come to encompass any kind of high-tech cluster such as: technopolis, science park, science city, cyber park, hi tech (industrial) park, innovation centre, R&D park, university research park, research and technology park, science and technology park, technology park, technology incubator, technology park, technopark, technopole and technology business incubator. While similar in many respects, experience suggests that there is difference between a technology business incubator, science park or research park, science city, technopolis and regional innovation system.

3.5 It is advisable to distinguish between Science Parks and Research Parks. While the former denomination is the most common in Europe, the latter is widely used in the United States and Canada. Science parks in Europe coexist with technology parks and the main differences between the two concepts regard size or the possible admission of productive activity. A science park tends to be more reduced in size, with strong links to university and less emphasis on manufacturing activities, while a technology park is of medium-sized/big size and allows for productive activities. Geographically, science parks tend to follow the 'British model', while technology parks refer to a 'Mediterranean model', typical of countries like France, Spain, Italy and Portugal.

3.6 Admittedly, the organisational factors essentially contributing to the success of flagship TISP initiatives have been:

- a) long-term and sustainable public/private partnership;
- b) parks run by professionals with innovation expertise;
- c) strategic operations agreed through joint decisions involving the main stakeholders: regional authorities, businesses and research institutions, and the local community;
- d) an explicit advantage when parks have a well defined specialisation;
- e) reaching critical mass in time for enabling research findings to be implemented, even though the incubation process is unusually time-consuming.

4. Networking, clusters and university-industry collaboration

4.1 As a result of the prevailing connectivity in the European post-industrial economy, the societal and economic renewal emerges in creative eco-systems of innovation. It is desirable

that parks cooperate with other similar entities, both nationally and internationally.

4.2 Clusters are most relevant examples of competitiveness-supporting 'ecosystems'. Science and technology parks have been proving to be good drivers of cluster organisations.

4.3 Recent development of economy puts increasing emphasis on producing, exploiting, transferring and applying knowledge. There is a need to develop and strengthen networking activities between the actors of the public sector, the business community and the higher education institutions.

4.4 A conscious, multi-layered management, ensuring synergy between the various levels of government – EU, national, regional and local – and encouraging partnership between businesses, universities and NGOs is required, which enable the creation of broad links between knowledge-generating and innovative institutions.

4.5 Aligning incentives and missions of universities, other scientific and research institutes and TISPs, together with encouraging new ways of collaboration is required. Parks can considerably increase their powers of attraction by offering a broad range of activities, like technology transfer, patent support, tutoring of start-ups and spin-offs, project management and financial support. All services provided in TISPs must be up-to-date and high quality, enabling them to genuinely support the necessary forms of cooperation.

4.6 Cooperation with scientific institutions, especially universities and research institutes, as well as R&D aspects, are becoming more and more important in park development; however it has to be acknowledged that the less than desirable extent of cooperation between scientific circles and the business community has been a problem and there is currently less cooperation with parks than there should be.

4.7 Parks could serve in their function as bridges between the academia and the industry. In evaluating the quality of performance and impact of universities, it is desirable that their impact on the industry and economic sector receives higher attention. In increasing the entrepreneurial spirit at the academia, the Chambers of Commerce, regional authorities may have significant role, supported by adult training measures. The presence of business parks may be part of system of criteria for awarding the excellent universities.

4.8 The role of parks in decreasing the distance between university and industry may have particular significance in the new member states.

5. European governance, operation and control initiatives and measures

5.1 The EU needs a more focused and integrated attitude geared towards sustaining and developing the TISPs of the 21st century. Particularly in the crisis and post crisis context, the EU should pursue a comprehensive strategy to capture the potential benefits of research parks for economic growth and competitiveness.

5.2 Following the only partly achieved goals of the Lisbon strategy and trying to learn from its experience, the initiatives regarding the post Lisbon Period should be rationally streamlined with focus on a limited number of concrete, measurable and nationally differentiated objectives, building on the development potential of the different capacities located in the TIIS parks. These actions have to be implemented with leadership and ambition on behalf of the EU.

5.3 The companies, the jobs, the knowledge, the economic and innovation capacity, located in the TISPs, are hidden asset of the EU. We know that vast number of all is existing, but we do not have an overall view, neither exists a common strategy to approach and involve those assets. Fragmented knowledge and limited actions are only available at EU, national or regional level. Special emphasis should be placed on the importance of work by regional or national-level professional and civil society organisations active in park territory. These organisations should be encouraged to cooperate with one another; such cooperation must also be enabled to develop a technology platform at EU level.

5.4 Key to the success is to make TISPs an integral part of strategic and targeted planning that will underpin Europe's strong determination to grow and become internationally competitive through significant regional investments in science-based economic development. These initiatives should officially feature in the European plan for research and innovation, thus reflecting the importance of TISPs in European innovation policy.

5.5 It is desirable that the Commission DGs undertake horizontal joint actions in order to promote synergies among the different instruments, to intensify governance and coordination between the different programmes. This should lead to the setting up of platforms, bodies or high level groups to remove barriers to the co-funding of activities and to design and launch co-financed actions.

5.6 Criteria for *evaluation*, *assessment* and *mapping* of parks should be developed. Evaluation, assessment and comparative empirical studies are required to frame concerted European and national policies and instruments related to park formation and growth that can carry TISPs to a new level.

5.7 There is a need furthermore for public accountability, i.e. development and implementation of evaluation methods and tools which quantify the net spillover benefits that result from public sector support. There is now no clear consensus on the parameters of success (e.g. financial criteria - investment, turnover etc. - indicators of innovation patterns (start-ups, patents, new products). The difference in park types and national/regional contexts also poses benchmarking difficulties.

5.8 It is desirable to support the mapping of TISPs across Europe in the form of comprehensive database. This may facilitate collaborations among the parks by creating an inter-connecting matrix that promotes connectivity to overcome regional barriers to growth.

5.9 Greater investment in education and training is again emphasised in knowledge and innovation, in information and communications technology, in sustainability and a greener economy.

6. The regional dimension

6.1 Regions are important players in the knowledge based economy by focusing on the integration of R&D and innovation into their development strategies. The regional authorities in support of restructuring the economy, should even more shift focus to innovation.

6.2 The Regional Innovation Strategies and on their basis, the development of specific operative programmes has to be encouraged. National authorities should focus on improving the local conditions by establishing a stable and predictable economic and political climate.

6.3 Access to financial resources (venture capital, seed capital) for technology and science parks has been a real bottleneck and constraint of systematic development. The appropriate allocation of local and regional funds should complement in an organic way the European resources. Enhanced know-how supporting the access to co-financing from European funds is necessary. The use of EIB and EIF funding should become a structured and regular practice.

6.4 For TISPs, availability of funding over a sustained period is key success factor. In a crisis situation, it is critically important to ensure that parks benefit from financial and policy support from the member state governments and the EU level.

6.5 The attraction and management of talents, representing a special asset from the perspective of the sustainable, long-term, organic development in the region is required.

6.6 The excellence of the parks' management is a key factor for ensuring the outstanding quality of the park operation. Managers' continuous training, professional development is important to maintain the quality of services. Structured programmes should be available so as to build the necessary capacities in the TISP park manager organisations.

7. A strategic EU initiative – the European Institute of Technology and Innovation

7.1 The European Institute of Innovation and Technology (EIT) aims to become a flagship for excellence in European innovation. EIT aims to deliver innovation through collaboration between all the actors in the 'knowledge triangle', to transform education and research results into tangible commercial innovation opportunities, favour sustainable economic growth and job creation throughout the Union. The EESC has great expectations of this new EU body, and hopes that TISPs and suitably qualified associated institutions will be useful partners and participants in projects organised by the EIT.

7.2 As operational tool, the 'Knowledge and Innovation Communities' (KICs) have been selected on a strategic basis as responses to the challenges currently facing the EU, addressing climate change adaptation and mitigation, renewable energy and the future information and communication society. KICs are highly integrated public-private partnerships of universities, research organisations and businesses, embedding the business dimension in all knowledge activities, generating innovation in areas of key economic or societal interest.

7.3 The EIT also represents an opportunity for regional and local development. Its role and impact may be significant by providing expertise in regions where such knowledge and experience is missing. Furthermore, through spin-off effects

and by attracting new people and resources, regions and cities can benefit from the activities of the EIT and the KICs.

7.4 The EIT is representing a new concept of knowledge clusters, relying on virtual networks, instead of geographically linked communities. The current economic crisis is reinforcing the timeliness of the EIT initiative. It is therefore more than reasonable to explore the possible support potential, existing in TIIS parks of the EU.

8. TIIS parks and the economic crisis – changes needed and actions for recovery

8.1 The economic crisis has affected to different extent and in different ways the functioning of the TISPs Parks and the companies located there. Companies may react to the crisis with activity reduction, staff reduction and expenditure reduction, cessation of projects and investment.

8.2 The management of the TIIS parks is preferably reacting by an active policy to retain the companies and works together to minimise the crisis impact:

- a) Providing leadership for the communities.
- b) Facilitate coordinated actions among the companies in the park.
- c) Help with assessment of the business situation and possibilities, new market and product search.
- d) Monitoring action on the companies located in the parks, review the business and management models.
- e) Information and lobbying on public programmes and support, collaborating with agencies and businesses.
- f) Keeping contacts with the stakeholders (business associations, local boards, trade unions) to activate potential workgroups in order to manage problems.
- g) Improve services and internal management of parks.

8.3 Demand for more sophisticated products and services of the companies may meanwhile also appear. The new industries: biotechnology, cutting edge information and communication technologies represent opportunities and challenges. The recognition of new competitiveness factors coming up - sustainability, value creation and corporate social responsibility – in the new economic environment and social atmosphere is inevitable.

8.4 The entrepreneurship gets new emphasis under the present circumstances and in particular, in the context of the

parks. Businesses and their associations, by deeper understanding of the strategic situation, may provide leadership. It is important to identify and properly highlight the competitive elements of the parks.

8.5 Both the Single Market and Foreign Direct Investment (FDI) play a significant role in park development. The signs of turnaround of FDI from production to R&D should be noted in this respect. The EESC supports these processes and advocates enabling key sectors clearly defined in EU industrial policy to benefit in the course of becoming established in parks.

Brussels, 14 July 2010.

The President
of the European Economic and Social Committee
Mario SEPI
