



Regione Toscana



Innovation Poles in Tuscany

SUMMARY

Tuscany Region, within the Regional Economic Development Plan (PRSE) 2007-2010 - Line 1.2. "Support to technology transfer through qualification of competence centres" has promoted - with European, national and regional resources - the establishment of innovation poles, or combinations of research centres and companies "with the aim of coordinating their initiatives and encouraging the dialogue between research and manufacturing world, to make the interventions for innovation more targeted, flexible and effective, and levelled with different productive systems."

"This form is inspired by the Community regulation on state aid for research, development and innovation (2006/C 323/1) which defines the "innovation poles" as groupings of independent companies - innovative start-ups, SMEs and main companies and research institutions - active in a particular sector or region and aiming to stimulate innovative activity by promoting intensive interactions, shared use of facilities and exchange of knowledges and experiences, as well as by effectively contributing to technology transfer, networking and information dissemination among the companies in the pole".

The Innovation Poles, as defined by the regional strategy, represent structures of synergistic coordination among different actors of the innovation process, characteristic of a specific technological sector, and to provide services with high added value, with the following objectives:

- to develop, in the framework of the wider regional network for technology transfer (Tecnorete¹), innovation activity, to play the role of specialized intermediaries in the field of research, and scientific and technological knowledge; as well as - through the delivery of advanced services - to act to encourage and support both the strengthening of links between the research and business systems, and the collaboration among companies in order to raise the inclination for innovation of the productive system;
- to organize and integrate, ensuring quality and common services standards, the current and future infrastructures for scientific research and technological innovation in the region with reference to a specific technological sector;
- to establish, in the framework of the regional system of technology transfer, an organised infrastructure able to collaborate in the development of Strategic Intelligence tools for the enterprises system, with particular reference to Innovation audit and benchmarking;
- to promote and implement the coordination among the different actors of the Pole in the innovation process of a specific technological sector;
- to provide to the enterprises system, primarily to those affiliated to the Pole, advanced services and infrastructures for innovation.

The Poles have the following operational objectives:

- to stimulate and accept the innovation demand of enterprises belonging to the Pole and, in general, of SMEs in the reference technological sector;
- to follow the companies in accessing to specialist services with high added value in order to support the diffusion of innovation among companies inside and outside the Pole;

1 Regional Network of technological transfer system.

- to facilitate companies access to scientific and technological knowledge with an industrial interest, to networks and to national and international resources in the scientific research and innovation field;
- to encourage the sharing of research equipments and laboratories, and of testing and certification.

I. Basic information

NAME/LABEL OF THE PRACTICE/PROGRAMME

Innovation poles / Tuscany Region ERDF Operational Programme 2007-2013, Axis 1, Activity 1.2. "Support to the qualification of the system of direct transfer to promote innovation in the enterprise system".

PRSE 2007-2010, approved by the Regional Council Resolution No. 66 of 10/10/2007 - Line of intervention 1.2. "Support to technology transfer through qualification competence centres" and Line of intervention 1.3 "Development of competing networks to the enhancement of the technology transfer and supporting processes of innovation";

PAR 2007-2013 FAS line of action 1.1.b Action 1.2 "Support to technology transfer through qualifying competence centres"

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II. Policy context and rationale

GENERAL BACKGROUND AND POLICY CONTEXT

Tuscany should be quoted among the richest regions in Italy, even though the gross domestic product per inhabitant is lower than other areas of the country: last year Tuscany was in eighth place, with a figure that puts it above the national average and close to the strongest regional economies.

Tuscany's economic system has some particular features: alongside sectors that are as important or slightly less so than in the Italian economy as a whole, there are sectors that have a much clearer impact on Tuscany. This is the case above all for the fashion segment (textiles, clothing, leather) which counts for 5.3% of the region's industry, while the figure for Italy is 2.0%; but it is also the case for the commerce, hotels and the commercial business sectors (accounting for no less than 17.0%), which obviously shows how important tourism is for a region like Tuscany. On the other hand, the importance of other production sectors, such as building, the various service sectors and even agriculture, is lower.

As far as the manufacturing sectors are concerned, in addition to the tanning and textiles and clothing sectors, the sectors that stand out as more specialised than in Italy as a whole are gold-smithery and furniture production. Specialised manufacturing is distributed varyingly over the region.

Industrial development of Tuscany was to a large extent based on local systems of small and medium-sized companies, even though large companies, especially engineering companies have played and continue to play an important role.

The industrialisation process has not so much been characterised by the large number of smaller companies as the fact that hundreds of small and very small companies have gone to make up a system. That is, they have built up concentrated areas of production activities that are strongly integrated with each other. The companies gain strength and nourishment from these local roots, and in turn enhance the particular resources that the local society possessed. According to available data, the 95% of local units in the Tuscan territory have less than 9 employees and on almost 366,000 businesses more than 221,000 are represented by sole proprietors.

Tuscany has a consolidated R&D system with an extraordinary concentration in its territory of institutes and research centres (at national and international level) and the presence of 2 universities and 1 institute for advanced studies with 288 departments, laboratories and research centres distributed throughout the region. Tuscany is the 6th region in Italy for number of research laboratories (896 units).

In Tuscany there are several science and technological parks and incubators for high technology firms and the phenomenon of research spin-off ranks the region third in the national context for number of active companies (88 on 910 surveyed in Italy).

The number of employees in R&D in 2007 was 13,975.9: the 3.8% of total employment in the Region (national percentage 3.5%). The 50.8% of the total employees in R&D are employed by the Universities and the 14.8% by public institutions, highlighting the strong "public" composition of the research in Tuscany.

The recession of 2009 in the manufacturing sector has questioned balances that appeared consolidated. Industry primacy - which has made Tuscany almost an example with the effective model of districts, of collaborative business networks and with an original path of internationalization, driven mostly by artisan micro-enterprises located in Italian products excellence niches – is wavering.

Recently almost all manufacturing sectors are reducing, especially the production of motorcycles, furniture, general mechanic, manufacturing of pumps and tanks, glass, textiles, while food, pharmaceuticals and clothing sectors are resisting. Also the labour market shows worrying signs of deterioration, revealing unexpected weakness, almost unimaginable until 2008.

Carefully analysing these phenomena, something different than a general decline of manufacturing is emerging. One of the recent crisis effects seems to be, in fact, the acceleration of sectoral reassembling, still nascent, but that anticipates new markets and new opportunities for the Tuscan territory.

In addition, a reflection on the technology transfer activities carried out in Tuscany is developed on a number of critical issues, not specific of Tuscany as also present, with different intensity, in other national contexts.

In particular, in the first instance, the difference between the research activities carried out by universities and National Research Centre (CNR) and innovative activities developed (or implemented) by companies. On the one hand, many research activities don't meet real business needs, if considered as technology transfer and thus as strengthening of the productive system competitiveness; and on the other hand it is detected a low level of collaborations, "spontaneous" or "mediated" by the service centres system, between research and enterprises, which highlights also an inadequacy of the type of the involved companies (which are in most large companies that escape the logic that governs the regional production system), and the limited spillover effects of these collaborations on the other companies.

Secondly, it is highlighted the presence of a wide potential space for connection actions between research and industry. The policies pursued to date (funding of research projects with public funds and presence of a large institutions system working to promote technology transfer activities) - that in recent years received an increasing visibility and attention from policy-makers and stakeholders - don't yet affect in a decisive manner on the productive system competitiveness, nor act as a "guide" for the same system.

Thirdly, it results the substantial separation, still existing, among innovative activities, technology transfer (or productive application of technological innovation by companies) and market impact of the introduced "innovations". This constitutes a strong limitation to the current policies for innovation and technology transfer².

The loss of competitiveness of Tuscany in specific traditional sectors leads to believe that the revitalization of regional industry and business system, in general, steps from the modernization and "re-centring" of the manufacturing system through increasingly advanced forms of innovation, internationalization and growth of labour productivity and of more sophisticated market strategies.

To date, the need is to move from sectoral policies to a development model and to the definition of tools that accompany a process of diversification, openness and reconstruction of the productive sectors.

2 "Trasferimento tecnologico e sistema istituzionale regionale dei Centri Servizio in Toscana" Ricerca a cura di: IRES Toscana, Istituto di Ricerche Economiche e Sociali, Per conto di: Regione Toscana Giunta Regionale, 2010

III. Implementation and good practice features

DESCRIPTION OF THE SET UP AND IMPLEMENTATION OF THE MEASURE

The creation of innovation poles has been promoted through the launch - in January 2011 – of a call (on European, national and regional resources) for the support to a transfer system qualification of the aimed at promoting innovation processes within the business system.

In order to ensure the coherence of the development of Innovation Poles with the current regional planning, the call - expiring in April 2011 - identified a list of technology sectors such as:

1. Fashion (textiles, clothing, leather tanning, footwear, jewellery);
2. Paper;
3. Stone;
4. Boat and Technology for the sea;
5. Furnitures and Furnishing;
6. Technologies for renewable energy and energy saving;
7. Life Sciences;
8. ICT Technologies, Telecommunications and Robotics;
9. Nanotechnology;
10. Technologies for sustainable city;
11. Optoelectronic and Space;
12. Mechanics, with particular reference to automotive and transport mechanical.

The managing institution of each Innovation Pole - with operative office in the region - is identified among the following subjects:

- business service centres – with public or mixed public and private partnership's capital - participating in Tecnorete;
- Temporary Association formed by service centres and research organizations;
- service centres, research organizations and companies participating in the Pole and constituted as a consortium with public holding.

Each Polo adopts its own three-year activities program of knowledge and technological and scientific skills transfer, with specific business plan for the achievement of the following operational objectives: to stimulate and accept innovation demand of enterprises in the Pole, and in general, of SMEs in the reference technology sector; accompany companies access to specialized services with high added value to support the diffusion of innovation among companies inside and outside the Pole; facilitate enterprises access to scientific and technological knowledge, and to networks and resources at national and international level in the field of scientific research and of industrial interest innovation; ensure the sharing of equipments and laboratories.

The Polo management is structured according to a market logic trend.

The Innovation Pole must be compulsory composed by:

- a) at least one business services centre with operative office in the region and adhering to Tecnorete;
- b) at least one research organization with operative office in the region;
- c) companies working in the mentioned technological sectors and with operative office in the region.

Poles have to aggregate, also in relation to their technology sector, a significant number of companies both in the initial phase and afterwards. Depending on the number of aggregated companies, the Poles are divided into:

- First bracket Innovation Poles: more than 160 companies for a maximum contribution of € 800,000.00
- Second bracket Innovation Poles: more than 80 companies for a maximum contribution of € 600,000.00
- Third bracket Innovation Poles: more than 40 companies for a maximum contribution of € 400,000.00

A company generally can participate to no more than three poles. Company participation is made through the submission of the participation letter and doesn't imply any cost.

For a 3 years period (01/07/2011 – 30/06/2014) each Pole managing institution has guaranteed a decreasing grant (from 100% to zero), depending on the semester of activities and on Poles bracket.

The Aid scheme according to the EU Framework on R&D state Aid is decreasing and the last semester from 100% up to 0% contribution.

GOOD PRACTICE CHARACTERIZATION

In the previous programming period it has been implemented a policy to support chain projects in specific sectoral areas (e.g. textiles), with the goal – shared by most of the regional governments - to promote the constitution of aggregations among small companies that provided the presence of a big company.

The objective of encouraging such business aggregations has met considerable difficulty: this model can be applied if in the area there is a real business convenience to start operative partnership, otherwise it results in a way to access to public funding that can also be achieved through the adoption of generic instruments³.

³ "Migliorare le politiche di Ricerca e Innovazione per le Regioni: Contenuti e processi di policy" Ministero dello Sviluppo Economico Dipartimento per lo Sviluppo e la Coesione Economica – maggio 2009

In July 2011 12 proposals for the creation of as many poles were approved. For each identified technological sectors, Tuscany Region has funded a single pole, as follows:

	Pole Name	Managing Institution	Location/ Province	Sector	Number of companies
1	Polo Optoscana - Optoelettronica e Spazio	CNR Istituto di Fisica Applicata "Nello Carrara"	Florence	Optoelectronic and Space	67
2	INNOPAPER	Lucense SCpA	Lucca	Paper	89
3	OTIR 2020	Next Technology Tecnotessile Società Nazionale di Ricerca r.l.	Prato	Fashion (textiles, clothing, leather tanning, footwear, jewellery);	223
4	Polo di Innovazione Scienze della Vita	Fondazione Toscana Life Sciences	Siena	Life Sciences;	41
5	Polo Pietre Toscane	Garfagnana Ambiente e Sviluppo	Lucca	Stone	52
6	Polo per l'eccellenza nautica toscana (P.E.N.TA.)	NA.VI.GO. scarl	Lucca	Boat and Technology for the sea;	225
7	POLIS	Fondazione per la Ricerca e l'Innovazione	Florence	Technologies for sustainable city;	228
8	nanoxm	Agenzia per lo Sviluppo Empolese Valdelsa spa	Florence	Nanotechnology;	70
9	Polo di competenza per il sistema interni CENTO	Centro Sperimentale del Mobile e dell'Arredamento srl s.c.a r.l.	Siena	Furniture and Furnishings;	177
10	PIERRE - Polo Innovazione Energie Rinnovabili e Risparmio Energetico	cosvig srl	Siena	Technologies for renewable energy and energy saving;	120
11	Polo 12	Compolab srl	Pisa	Mechanics, with particular reference to automotive and transport mechanical.	198
12	POLITER	Polo Navacchio Spa	Pisa	ICT Technologies, Tele- communications and Robot- ics;	195
					1,685

The strengths of the poles, although there are not yet confirmed data and evaluations - considered the "youth" of the same - are represented by the following factors:

- New forms of aggregation that shall produce structures with lower managing costs, greater efficiency in the relationship with transfer providers, and upgrading of existing facilities;
- Support to Tuscan companies, through infrastructure and services in order to promote business opportunities and cooperative growth among enterprises, universities and research centres;
- Provision, by the participating companies with role of suppliers, of their services for the Tuscan territory, for the PA and at national and international level;
- Technological cooperation between the business system and transfer-oriented research one to facilitate the demand and supply matching;
- Increase of visibility;
- Creating partnerships aimed at the participation to projects proposals funded at regional, national and European level.