Science Parks and Areas of Innovation

New models, trends and success factors

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Workshop on the role of STPs and Incubators in innovation eco systems
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In my presentation, I will try to present an overview of the history and evolution of the science park concept (STP), its main strategic ingredients, models and current trends.

My central thesis is the following:

STPs are powerful tools for economic development and for the consolidation of the knowledge economy at the regional and city level.

The success of the STPs owes much to two facts:

- Responding to the new needs of new kinds of companies in new market conditions.
- An extraordinary capacity of evolution and adaptation to the ongoing changes.
- The new global knowledge economy creates new market conditions. Furthermore, some basic fundamentals of a classic industrial economy have changed. For instance: the industrial economy consumes its raw materials in an unsustainable way (the more oil we use the less it remains).

In the knowledge economy, where knowledge is the main asset and “raw material”, the more knowledge you use, the more knowledge is created. Paradoxically, the use and consumption of knowledge does not extinguish it, but rather multiplies its creation. Knowledge is regenerated and improved by being used.
The main needs of companies and entrepreneurs operating within the KE are:

- Flow of knowledge. Access to the sources of knowledge and technology. Communication channels between companies and universities.

- Access to talent: knowledge based companies require access to the new “knowledge workers”, that is, highly skilled and trained people. On top of being able to find and attract talent, companies need to retain said talent.

- Access to the global level. Regardless of having strong local roots, companies increasingly need to strengthen their internationalisation.

The success of the STP concept comes from realising that a new type of location and environment would help to satisfy the above mentioned needs.

According to the IASP definition, a science/technology park is:

- “.... is an organisation managed by specialised professionals, whose main aim is to increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions.

To enable these goals to be met, a Science Park stimulates and manages the flow of knowledge and technology amongst universities, R&D institutions, companies and markets; it facilitates the creation and growth of innovation-based companies through incubation and spin-off processes; and provides other value-added services together with high quality space and facilities.”

Another way to define STPs would be by saying that they are special areas where the three elements of the triple helix scheme (Government, Academia and companies) are put together and cleverly articulated. Moreover, STPs have also proven to be projects which very easily allow the incorporation of the extra element that constitutes the quadruple helix, that is, the civil society.
Key success factors:

• The right ownership and governance architecture: having all the right actors on-board with a clear division of labour, competences and responsibilities.

• Professional, full time and permanent management of the project.

• The right strategy and model adapted to the region/city where the STP will be operating

Have a clear understanding of the following strategic axes: (i) location (ii) position of the STP in the flow of technology (iii) target companies (iv) technological/sectorial specialisation (v) target markets (the right balance between the local, national and international visions) (vi) networking strategy (vii) management and organisation

• Sustainable business model for the STP

• Securing visibility and proactive position in international networks.

• Sound communication strategy vis-a-vis its civil society
Evolution of the STP concept.

* As I mentioned, a key factor for the success of STPs is its proteic capacity of evolution and adaptation.

* Emergence of the Areas of Innovation concept. These Areas of innovation are projects that have a lot in common with STPs, yet they present significant differences.

* IASP defines AOIs as:

  “Places designed and curated to attract entrepreneurial-minded people, skilled talent, knowledge-intensive businesses and investments, by developing and combing a set of infrastructural, institutional, scientific, technological, educational and social assets, together with value added service, thus enhancing sustainable economic development and prosperity with and for the community.”

* We regard AOIs as an advanced evolution of the STP concept, trying to satisfy not only the needs of companies and universities to collaborate, but also of cities (which, to this purpose, could be considered as the civil society or, if you prefer, the fourth element of the quadruple helix.

* The concept of AOI will enable many existing STPs to reinforce their relevance by becoming a crucial leader in the development of a new type of city or the renovation of degraded areas of some cities.

This evolution ensures in my opinion the absolute relevance of STPs and AOIs but, at the same time requires a tireless effort for observing the reality, forecasting new trends and getting ready to adapt.