

**PUBLIC POLICIES FOR REGIONAL DEVELOPMENT – THE CASE OF THE  
TECHNOLOGY PARK OF SAO PAULO**

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**ABSTRACT**

This paper presents the development of an institutional structure to optimize university/research centers – industry – government relations. The urban technology park model aims to propose public policies to face the impacts and challenges of the new social and economic conditions due to the globalization of markets, in developing countries. The model is being developed taking advantage of the University of Sao Paulo laboratories and the Research Institutes surrounding the *campus*, in Sao Paulo City. The Park links the following players: the Incubator for Technological Enterprises (CIETEC); maturing companies from Incubator Centers, technology-based SMEs and some corporate and institutional S&T&I activities.

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## 1 - INTRODUCTION

The scientific and technology parks have been considered, in the last years, one of the S&T&I (Science & Technology & Innovation) nation systems driving forces, mainly in developed countries.

The classical conceptualisation of S&T parks, as well known, is based on the benefits of the concentration of creative efforts and formal or informal networks, in one place or region, by the presence, among others, of the following actors: the University and/or Research Centres and technology based enterprises.

But what happens in developing countries, particularly in Brazil? The challenge for these nations is to promote social and economic development, to attract new businesses, to create new jobs opportunities, to disseminate an enterprise “culture” of innovation and competitive advantage.

There are 34 S&T parks in Brazil<sup>1</sup>, most of them are under planning or construction (nine parks in operation); there are not yet fully operative examples of urban S&T parks, although some of them have, already, a permanent management team and some companies installed and operating.

The Technology Park of Sao Paulo<sup>2</sup> is under planning. This project aims to contribute to public policies to face the regional (State of Sao Paulo – Brazil) impacts and challenges of the new social and economic conditions due to the globalization of markets.

These public policies are coordinated by the Science and Technology, Economic Development and Tourism Secretary of Sao Paulo State (SCTDET) and concentrate the efforts on the following matters:

- To create new conditions for social and economic development of the Sao Paulo State;
- To stimulate the local knowledge-based innovation system in highly population density regions of Sao Paulo (focus on the metropolitan regions);
- To attract new businesses, opening up the academic institutions and research centres to the society.

The Sao Paulo State has three metropolitan regions: the “great” Sao Paulo region, the Baixada Santista region (a region lying along the coast) and the Campinas region, and other important urban regions (there are more than 36 cities in Sao Paulo State with over 100,000 inhabitants; some of them have really turned into true metropolises).

The figures reflect that the three metropolitan regions concentrate about 58.3% of the whole population of the Sao Paulo State and about 13% of the whole population of Brazil. Other important figure is the GDP of these three regions – about 63.5% of the Sao Paulo State GDP and approximately a quarter of the national GDP<sup>3</sup>.

Sao Paulo City is one of the five global *megacities* of Latin America (population: near 17 million). As well known, the world *megacities* characteristics are: more than 10 million of inhabitants (trend analysis: the *megacities* may reach more than 20 million of inhabitants in 2015).

To be a global *megacity*, more important than the population concentration are the local economic activities. In Sao Paulo, these activities are linked to highly intensive knowledge and technological activities, forming dense networks.

In the South-West region of the city, it can be founded some of the driving forces needed for an urban technology park project:

- The infra-structure for S&T&I development (more than 5000 researchers in University of Sao Paulo and three research centres);
- The most important financial support for S&T activities agency of the country (FAPESP) is located very near to the *campus*;
- The urban movement - the high-tech corporations and companies located in the regions near the *campus* (the Berrini Avenue, for example, is being considered the

“Silicon Valley” of the Sao Paulo City; and the *Vila Leopoldina* quarter, very near to the University *campus*, can be, in the future, one of the privileged places for innovation clusters, linked to the Technology Park).

- A new kind of occupation of the Sao Paulo City spaces can be observed, focalizing the South and South-West regions, where old industrial facilities are being occupied by great corporations, mainly from technological and pharmaceutical sectors;
- International co-operation opportunities – Sao Paulo is considered a strategic region for international markets and it can attract modern productive sectors of the knowledge economy.

## 2 - THE CONCEPTUAL MODEL

The model is developed taking advantage of the University of Sao Paulo (USP)<sup>4</sup> structure and other Research Institutes (IPEN, IPT and Butantan Institute<sup>4</sup>) surrounding the main USP' s *campus*, in Sao Paulo City. The Park links the following players:

- The Incubator for Technological Enterprises (CIETEC);
- The maturing and/or graduated companies from the Incubator Centre,
- The technology-based SMEs and some corporate and institutional S&T&I activities.

The Park's model aims to represent each group as a part of a system where the Incubator Centre is the core of the business radiation.

The goals of the Park are:

- To accommodate companies engaged in the commercial application of S&T&I, creating a cross fertilisation environment;
- To develop activities including R&D, innovative processes, production, sales and services;
- To stimulate quality gains and competitiveness to the productive process of the micro, small and medium-size companies of the region, which stand for great employment generators, by incorporating technology and intensifying the culture of innovation;
- To contribute to regional developing public policies: the recovery of the degraded areas of the city, by generating a healthy urban movement;
- To attract new business in modern productive sectors by establishing an international network co-operation;
- To promote social and cultural development of the region by the mobilisation of the local community and government and private organisations, engaging multiple interest groups.

The Sao Paulo Technology Park model has been designed in two phases. The first one, being developed inside the *campus*, is related to the core of the technological park and will aggregate the following structures:

- *Incubator Center for Technological Enterprises* – a formal model of incubator centre for technological companies, considering the pre-incubation stage, the resident companies and the experience of an “incubator without walls” for mature companies;
- *Mature Companies Joint-Tenancy Buildings* – modules for mature or graduated technology-based companies from Incubator Centres or from other origins; all the services and support needed are provided by the Tech-Park management, by contract;
- *Business Modernisation Centre* – provides services on business mentoring; access to financing support; management, financial, fiscal and marketing consulting services; intellectual property and technology transfer consulting services; management, information technologies and training services;

- *R&D Cooperative Centre* – modules or buildings, rented to firms (formally constituted or not) originated from the cooperation between R&D centres (public or private universities and research institutions) and corporate organisms. They plan to work together in order to undertake research, development and adaptation of technologies, to provide technological services and to promote pioneering industrialization of products and processes emerging from such efforts;
- *National and Regional Government Agencies Offices* – space dedicated to house offices of supporting services (such as financing) interested in taking advantage of the concentration of actors linked to the local system of innovation..

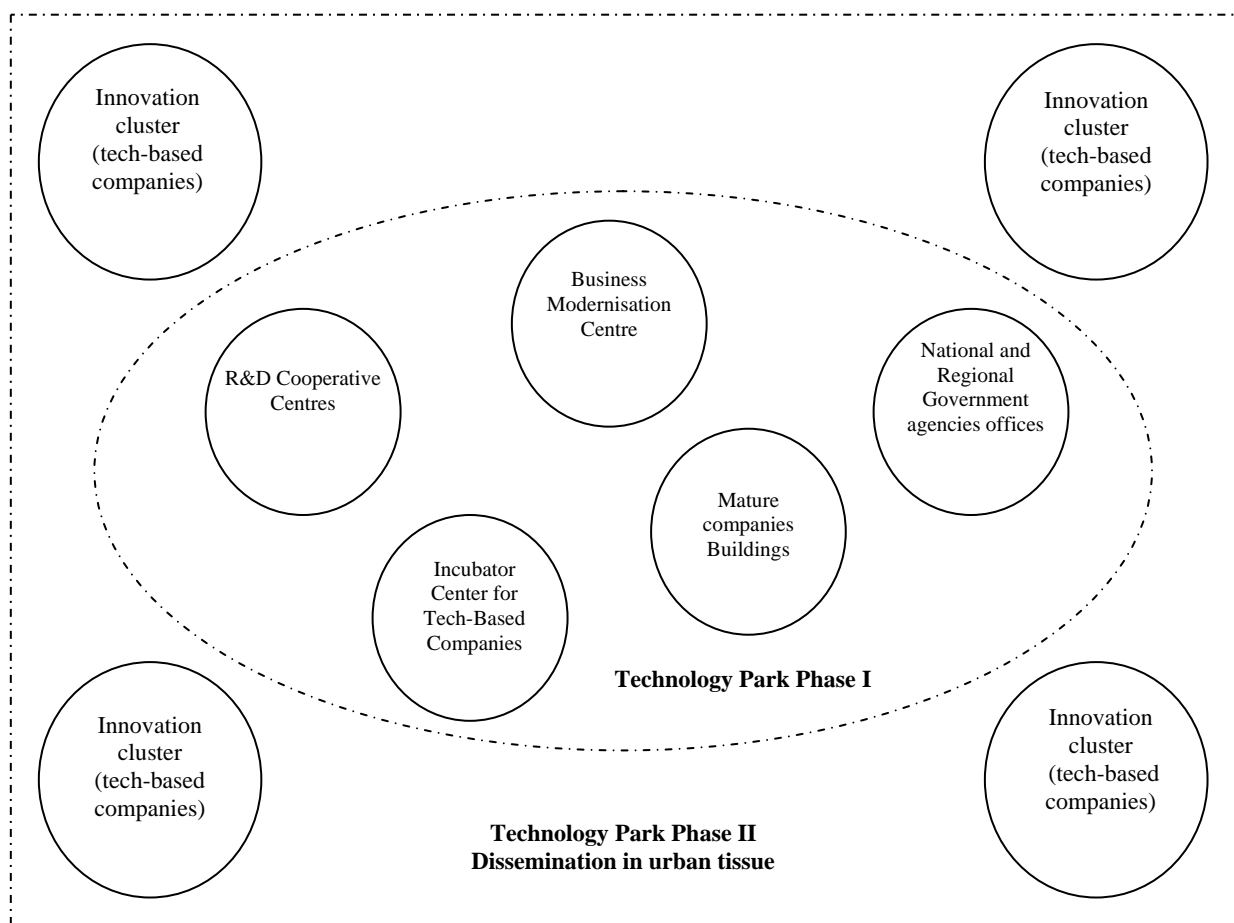
The Technology Park - Phase II refers to the implementation of the Park nearby, but outside, the *campus* of University of Sao Paulo. This phase is related to the dissemination of the Technology Park in the urban tissue.

It is expected that innovation clusters of technology-based companies will be associated to the Park operation, benefiting themselves from the new infrastructure and the services provided.

The clusters may form thematic networks aiming at optimizing the development of enterprises with great potential for acting in the global market.

Currently, the technical and economic evaluation analysis of this phase is under way and some private financial resources already exist for supporting this work.

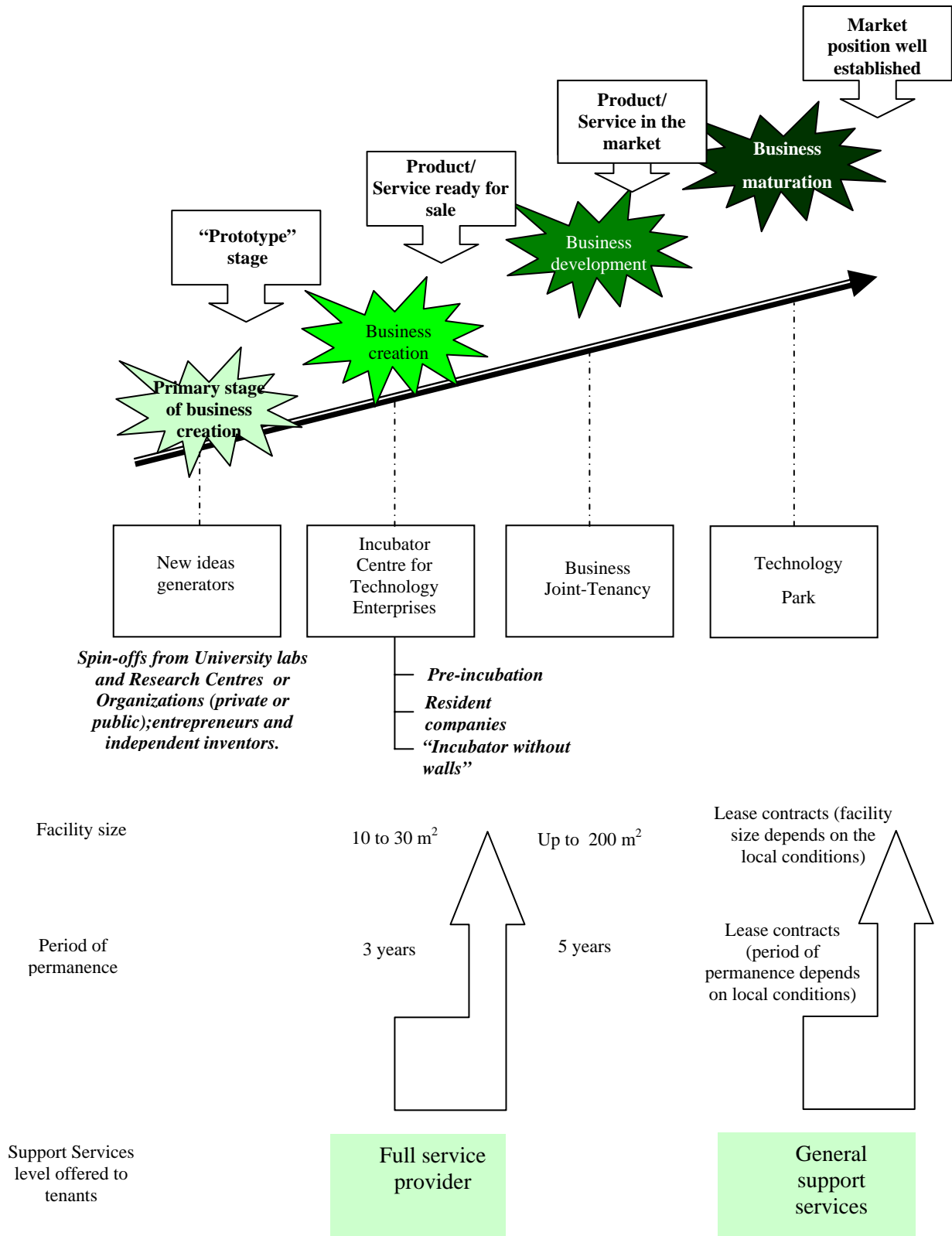
Figure 1 shows a diagram of the urban Technology Park of Sao Paulo model, including the two phases mentioned above.



**Figure 1: The Technology Park of Sao Paulo Model – Phase I and II**

### 3 – COMPANIES DEVELOPMENT IN THE TECHNOLOGY PARK MODEL

The Technology Park of *Sao Paulo* aims to accommodate micro, small and medium companies, as well as great corporations, engaged in the commercial application of S&T&I, developing activities including research and development, production, sales and services, preserving, otherwise, a strong academic involvement with the *campus* environment. Figure 2 shows the characteristics and stages related to the created businesses in the Technology Park concept.



**Figure 2: Companies Development Stages of the Sao Paulo Technology Park Model**

#### 4 - THE INCUBATION CENTER FOR TECHNOLOGY ENTERPRISES - CIETEC

Installed in the University of Sao Paulo *campus*, located in Sao Paulo City, the CIETEC is considered “business radiation” of the Sao Paulo Park Tech model. This incubation Centre points to a new direction for the entrepreneurial development in Sao Paulo.

At CIETEC, 83 companies (see Table 1 for the modalities of the incubation system), in addition to their own researchers’ expertise, may count on researchers and technical individuals from the Research Centers and Laboratories of the University of Sao Paulo *campus*.

The CIETEC’s mission is:

- To support setting-up and consolidating micro and small companies of technology basis,
- To assure their strengthening and performance improvement;
- To have a positive impact on the City of Sao Paulo’s economic development by maximizing the success of emerging companies.

The CIETEC’s<sup>5</sup> mainly areas of incubation are: instrumentation, biomedicine and biotechnology, laser applications, chemicals, new materials, information technology, software applications, environment and nuclear technical applications.

In addition to physical infrastructure and administrative support, CIETEC also provides other services:

- *Experienced mentorship* – the residents in the program are provided with business mentoring (Business Plan);
- *Networking* – events, in a regular basis, are organized to provide support and feedback on entrepreneurial issues and opportunities (“technology breakfast”, Venture Capital Meetings, etc...);
- *Access to capital* – to facilitate the access to financing sources such as national and local programs for technology development, venture capitalists, strategic partners and other investment alternatives;
- *Training solutions* – in house learning sessions (business plan development, management issues, team building, etc...);
- *Ready-to-use facilities* – provides administrative support on a fee for services; flexible space modules.

<b>Modality</b>	<b>Jan 2003</b>	<b>Vacancies</b>	<b>Total</b>
➤ <b>Start-ups incubation</b>	26	03	29
➤ <b>Resident companies</b>	23	14	37
➤ <b>Resident companies – software</b>	17	14	31
➤ <b>“Incubator without walls”</b>	17	16	33
➤ <b>Total</b>	<b>83</b>	<b>47</b>	<b>130</b>

**Table 1: Occupation of the CIETEC Incubator Centre – January, 2003**

## 5- A BRIEF CONCLUSION

The aim of this paper has been to underline the aspects of the Sao Paulo Technology Park Project, as a regional development and urban model, characterizing the synergy between the private initiative, the academic community and the public administration.

The urban model of the Sao Paulo Technology Park, as a public policy, can be applied for other regions of the Sao Paulo State, setting up a network of “innovation habitats”.

Such a network could be an appropriate structure for exploiting the S&T&I systems of the metropolitan regions and other important urban regions of the Sao Paulo State. Thus, the Sao Paulo Technology Park would be more than just a regional instrument of social-economic development, but scatter the benefits for other regions of the country.

## NOTES

<sup>1</sup>ANPROTEC *Panorama 2002*. Brasília: ANPROTEC, 2002. Available in: <http://www.anprotec.org.br>. Mar 09, 2003.

<sup>2</sup>The Technology Park of Sao Paulo Model Project has been partially supported by FAPESP (the State of Sao Paulo Research Foundation) in its Public Policies Research Program (research projects developed in partnership with public and non-governmental organizations).

The implementation of the Park's Phase I has also been assisted by the Federal Government Program for S&T Parks - the “Yellow-Green” Fund - as well as by the Science and Technology, Economic Development and Tourism Secretary of Sao Paulo State (SCTDET).

<sup>3</sup>EMPLASA. *Empresa Metropolitana de Planejamento da Grande São Paulo*, 2001. Available in: <http://www.emplasa.sp.gov.br/metrodados.htm>. Nov 20, 2001.

The Sao Paulo State is the most cosmopolitan and modern of all Brazilian states. It has the largest consumer market in Brazil, it accounts for 22% of the Brazilian population, and has an income per head of US\$8,300.00, which is twice as much as Mexico's. For more information about foreign investments in Sao Paulo State see <http://www.saopaulo.sp.gov.br/invista/privatiza/apoio.htm>.

<sup>4</sup> IPEN – Institute for Nuclear and Energy Research: information available in <http://www.ipen.br>;

IPT – Institute for Technological Research: information available in <http://www.ipt.br>;

Butantan Institute (Basic and applied research in biology and biomedicine, as directly and indirectly related to public health): information available in <http://www.butantan.gov.br>.

USP – University of Sao Paulo: information available in <http://www.usp.br>;

<sup>5</sup>CIETEC – Incubator Center for Technological Enterprises. Information available in: <http://www.cietec.org.br>.

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