

THE BRIDGE BETWEEN BUSINESS AND ACADEMIA

PARALLEL SESSION 4

Universities making use of science parks

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Summary

TECNOPUC has one of the best Brazilian experiences for the promotion of technological innovation related to creativity and entrepreneurship. This strategically planned measure of the Pontifical Catholic University of Rio Grande do Sul presents an ecosystem of innovation - permanently changing as warranty of its progress and sustainability - and the significant growth of its relevance and relationship with its surrounding areas offering products and services and becoming reference in Brazil. All this is possible due to the two propulsion helixes: PUCRS, with its academic units and laboratories and TECNOPUC with its companies.

Introduction

Our present society, based on a new production factor - knowledge - is characterized by an intense set of new organizational relationships and new work structures, diametrically different from previous phases.

The combination science-technology has become a central theme in the ethical and political debates on sustainable development, both in economic and social perspectives on the scene. Therefore, scientific and technological knowledge is the basis of the innovation process, having as key input the networks of knowledge and creativity.

The construction of knowledge, characterized by constant and permanent conversion of tacit knowledge into explicit, better identified and described by the knowledge spiral of Nonaka and Takeuchi (1997), benefits mainly through cooperation and knowledge sharing among employees. In the current context, this network is represented by the Government-University-Business relations. The relations between these actors are increasingly important in the construction of knowledge, enabling and motivating companies to seek new organizational models based on Knowledge Management and its best practices.

In this scenario, innovation is the response of economic agents. The process of innovation and transfer of knowledge is dynamic, complex and interactive, requiring new positioning of these agents, transforming them into vectors for development based on knowledge and innovation. It is in this environment that the Science and Technology Parks (STP) and Business Incubators (BI), with the objective of adding value to the businesses now offer new opportunities for generating employment and income for society.

The Scientific and Technology Park of the Pontifical Catholic University of Rio Grande do Sul (TECNOPUC), Brazil, was deployed in 2003, within this new global logic. After 11 years of a systemic and organic process of implementation, it is now possible to characterize more clearly the scenario that supports this remarkable Brazilian initiative. On the one hand the formation of a national innovation ecosystem over this period, constantly changing as collateral for its advancement and sustainability. On the other hand, the significant growth of its relevance and its relationship with the city and society that surrounds it, producing both products and services, as well as becoming a reference to the state of Rio Grande do Sul and Brazil.

Domestically, the dynamics of this process is profoundly changing the posture of the university community and its relations with society. Initially based on the partnership of three companies of global scale, HP, Dell and Microsoft, the exponential growth of TECNOPUC reflects the potential of intellectual capital available at PUCRS and the ability to attract new businesses, whether they are graded, spin-offs or start-ups. This robust innovation ecosystem, a pioneer in Brazil, is based on several innovative mechanisms, deployed and permanently adjusted to TECNOPUC's stages of growth, as shown in Table 1 from its two main systems.

Main System	
INOVAPUC	PUCRS innovation system composed of Academic and
Network	Peripheral Units.
Entrepreneurial	Congregation and stimulus for entrepreneurial actions in
Nucleus	the academic community.
RAIAR Pre-	Environment for validation of projects and ideas, including
Incubator	market concepts.
RAIAR Incubator	Beginning of entrepreneurial consolidation, with
	infrastructure and management support.
Condominium	Extra support to technology-based companies with
INOVAPUC	innovative drive.
TECNOPUC	PUCRS Scientific and Technology Park.
Complementary System	
Technology	Management of Projects and Services.
Management Agency	
(AGT)	
Entrepreneurial	Development of economic sustainable strategies for
Management Agency	growth.
(AGE)	
IDEIA Institute	Hosts projects e ideas from the academic community.
Support to	Elaboration, diagnosis, consultancy and training in
Innovation	innovation.
Management (NAGI)	
Technology	Intellectual asset management and technology transfer.
Transfer Office	
(ETT)	
R,D&I Centers	PUCRS Research, Development and Innovation Centers.
Global TECNOPUC	Creativity and Inovative Center
CriaLab	Creativity Lab, generation of innovative actions.
TABLE 1: Main System and Complementary System of TECNOPUC	

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Figure 2 below shows the morphology of these two systems, suggesting the synergy as a major factor in the success of this innovation ecosystem.



Figure 2: Main System and Complementary System - Proposal Synergy

This platform aims to support the development and deployment of business through a process of supporting innovation management, which will offer a product or service to society with market demand and available at competitive values. \square

Externally, together with the expansion of interdisciplinary activities geared to technological innovation, there are several actions that are transforming and enhancing the relationships of TECNOPUC with the city and society. Products and services for a global market have been an attractor to similar entrepreneurial initiatives, both headquartered in TECNOPUC

or elsewhere. As an example, we can cite the establishment of a TECNOPUC company in London in 2012 as a pioneering effort to Softlanding in the world's leading financial center.

Another initiative focuses its actions on the development of innovative urban facilities, modeling new behaviors for people and their surroundings in the best sense of the contemporary transformations aimed by Smart Cities. The implementation of the project GLOBAL TECNOPUC, scheduled for 2014, will expand these relationships. This new environment will house and provide communities, internal (TECNOPUC and University) and external (society), with new dimensions and synergies to be explored. There will be environments for networking, open innovation, creativity and internationalization to add more value to products and services generated, as well as to serve as a source of attraction of new domestic and foreign partnerships . Ratification of a management model with strong agility in decision making, and as a governance model with the external reviewers of society and supported by best practices of corporate governance, summarizes this innovative proposal for a new organizational structure for technology parks, associating disclosure, fairness, accountability and compliance.

To provide a summary of what is now recognized as one of the most important Brazilian experiences in the field of innovation, it is necessary to identify its roots, the main factors that contributed to shaping the Innovation Ecosystem TECNOPUC. Briefly, there are three strategic actions that contributed decisively to the current format of TECNOPUC, visualized in Figure 3 below.



Figure 3: TECNOPUC - Time Line

1990:

The first action occurred in 1990, when PUCRS set the challenge of achieving in the year 2000, a minimum of 1000 Masters and Doctors in the faculty. This action has led to a profound transformation of the intellectual capital of the University measured in the short, medium and long terms.

2003:

Deployment of TECNOUC starting from the first three elements that would lead later to the innovation ecosystem, starting the first and incipient synergy of academia to society and market:

• Technology Management Agency (AGT)

• Business Incubator RAIAR

• Scientific and Technology Park - TECNOPUC

Figure 4 positions these elements, which later would be recognized as the future mechanisms of TECNOPUC's innovation ecosystem.



Figure 4: Innovation Ecossystem TECNOPUC- Structural Initial, 2003

2004:

Recontextualization of the focal object of PUCRS as an Entrepreneurial University, moving to redefine its mission and its vision from this new context, as described in Table 2:

Mission

Create a community of transdisciplinary research and innovation through collaboration between academia, business and government to increase the competitiveness of its actors and improve the quality of life of their communities.

Vision

In 2015, PUCRS will be a national and international reference for quality of teaching and the relevance of research, with the brand of innovation and sustainable management, promoting the education of students and contributing to the scientific, cultural, social and economic development.

Table 2: Entrepreneurial University - PUCRS Mission and Vision as of 2004

2005-2013:

Organic deployment of mechanisms to strengthen initiatives focusing on innovation, particularly technology-based, integrated the purpose of the innovation ecosystem:

- Microsoft Innovation Center (IC)
- Office of Technology Transfer (ETT)
- Entrepreneurial Center (NE)
- INOVAPUCRS Network (INOVAPUCRS)
- Institute for Research and Development (IDEA)
- Pre-Incubation RAIAR
- Condo Business INOVAPUCRS
- Creativity Lab (CriaLAB)
- Management Ventures Agency (AGE)
- Center of Innovation Management (NAGI)
- Global TECNOPUC (in development)

The INOVAPUCRS Network is the structure that brings together a group of actors, actions and mechanisms relating to the process of PUCRS' innovation and entrepreneurship. Its main objective is to promote continuous innovation process, articulating a healthy synergy among Government-University-Enterprise for the process of development of society - locally, regionally, nationally and internationally. The INOVAPUCRS Network aims to act as a vector in order to promote a multidisciplinary effort to seek solutions and provide answers to the demands of society in terms of economic, social, environmental and cultural development.

Figure 6 below illustrates the complexity and scope of the INOVAPUCRS Innovation Ecosystem, forming the Main System, aiming at the formation of innovative companies and

their various complementary agents that make up its secondary system, reflecting the close relationship between academia and market.



Figure 6: INOVAPUC Ecosystem for the formation of innovative companies - Present Structure

2013-2014:

Development and implementation of Governance Model for TECNOPUC with the creation of two councils: Advisory and Managerial, and extensive re-structuring of its processes, qualifying, professionalizing and rationalizing their actions. In this context, three elements of this set deserve special attention for its potential in the important inter-relationship between academia and market: TECNOPUC, Entrepreneurial Nucleus and Global TECNOPUC.

TECNOPUC → Scientific and Technology Park

Characterized and recognized as a modern and contemporary innovation system, harboring distinct size entities and actions of the university in the areas of Research, Development and Innovation (RD & I), it facilitates technological development of all actors involved. Within this context, it brings together organizations representing the voluntary and business segments, major companies active in the global market, small and medium enterprises, as well as incubated companies and spin-offs.

The structural framework of TECNOPUC consists of its mission, vision, governance, objectives and procedures. TECNOPUC's mission is to create a community of transdisciplinary research and innovation through collaboration between the university, business and government, to increase the competitiveness of its actors and improve the quality of life of their communities. Its Vision of the Future projects for national and international recognition for the relevance of innovative research, the promotion of the technological, economic and social development of the region.

TECNOPUC's overall goal is to insert PUCRS directly in the economic and social development process in the region and the country, and their specific goals involve:

- Attracting businesses with RD & I projects to work in partnership with the University;
- Promoting the creation and development of new technology-based companies;
- Attracting RD & I projects in general;

• Stimulating innovation and interaction government-university-industry;

- Generating positive synergy between academia and business;
- Acting in coordination with governmental spheres, both in the city, the state and country.

The installation of companies in a Science and Technology Park is maximized when they are intensive in knowledge and technology and whose subjects leverage the capabilities and competencies of University researchers and their labs in order to achieve competitive advantages through innovation.

TECNOPUC is focused on four areas:

• Technical Scientific: Information and Communication Technology and Electrical and Electronics;

- Environment: Renewable Energy;
- Biotechnology: Biological and Health Sciences;
- Creative Industry.

These thematic areas were defined on the basis of PUCRS' competence and academic abilities involving groups of scientific and technological research and postgraduate courses (master and doctorate), associated with the existence of the demands of society. Other areas of knowledge can be exploited depending on the alignment of business and government interests with the powers of the University. TECNOPUC is inserted into the government-university-industry framework developed by PUCRS interaction process, according to its own organic and dynamic model, which aims to encourage the activities of RD & I, connecting their skills to business and government demands and available resources.

ENTREPRENEURIAL NUCLEUS

The role of the Entrepreneurial Nucleus is to stimulate entrepreneurship in the University through different actions, events and entrepreneurial consultancy for students. It is a R\$126.000 project from SEBRAE, with teacher entrepreneurial training for both public and private schools. In the next section, we will outline the importance of the EN in more detail.

GLOBAL TECNOPUC

Deployment of GLOBAL TECNOPUC - Center for Innovation, Creativity and Networking, offering an innovative proposition both for its spatiality as the interconnected functionality of its multiple activities. It is characterized by the dimensions provided to cohabitate in the same innovative space, it is tangible realization of environments that should be filled with the future vision of attaining sustainability and innovation, creativity and the construction of new social networks, as described in the next section.

Contributing to a broad and integrated view of TECNOPUC Innovation Ecosystem, Table 3 below registers its main indicators, confirming the effective growth throughout these first 11 years of development.

Mensurat
ion
72
22
7
11
8
+ 5.650
+ 150
+ 60
+ 160
+ 300
+ 150

Table 4: INOVAPUC Innovation Ecosystem indicators (2013).

These indicators, expressed through tangible and measurable numbers tend to reflect the value of this initiative and its extreme adherence to the urban context of the city of Porto Alegre. New initiatives have been attracted to the nearby area of PUCRS' campus and hotels, restaurants and new services are starting to significantly alter the urban context and its importance as a reference in the area of innovation.

The bridge between business and academia - How does it work?

Around the world, there are experiences related to the implementation of Scientific and Technology Parks and the relationship with Universities to foster knowledge and innovation. TECNOPUC, the Scientific and Technology Park of the Pontifical Catholic University of Rio Grande do Sul - PUCRS, generates development from the synergy between academy and its 100 companies. TECNOPUC has one of the best Brazilian experiences for the promotion of technological innovation related to creativity and entrepreneurship. This strategic measure of PUCRS presents an ecosystem of innovation permanently changing as warranty of its progress and sustainability and the significant growth of its relevance and relationship with its surrounding areas offer products and services referenced in Brazil.

We live today in the so-called knowledge society. This society has as its basis the knowledge itself, as well as innovation. Knowledge constitutes the application or use of contextualized and critical information, whereas Innovation creates the need to develop learning mechanisms increasingly agile. Here is where the University contributes with the economic and social development, which is in turn, associated with the development of new technologies, especially clean technology, adding value to society, without harming the environment.

TECNOPUC is an innovation ecosystem, pointing to an economical and cultural development, not only in our region, but also in Brazil. This development is inserted in the reality that this knowledge society places us today.

PUCRS monitors the development of society, acting as a direct vector for a better future by attracting great national and international investments as well as start- ups, thus creating a new dynamics fostering growth in our county. Among our projects, we can cite TECNA, in the Creative Economy area, around which various segments such as productions, video, television, digital media (cinema and games) will gravitate. Articulated with the University, the Park and its companies generate an innovative, not isolated but continuous to the development principle: technology transference, with the University leading the many actors and generating opportunities for joint efforts with students, professors and researchers. The companies at TECNOPUC enable a more efficient relationship in the professional life of our learners; they allow college students to enter their workforce, as they already know their academic level, and therefore, can find specific profiles to suit their needs, helping students to improve their professional experiences, improving their curriculum to get better jobs.

Another advantage of the University-Tech Park association is the possibility of granting funds to sponsor less fortunate students and definitely hire them. There is a contractual relationship with the Park's companies establishing duties and rights for both. This relationship supports a research fund, used as a platform for activities related to basic and technological research, as well as grants for under graduate and graduate students. Additionally, there is a variety of brilliant minds converging to the same purpose: learning to live together. A good example is our Innovation Center, a result from an exclusive partnership with Microsoft, which offers free-of-charge training courses and opens many doors of the Park companies for the students. .

Another Unit of INOVAPUCRS' Network, is the ENTREPRENEURIAL NUCLEUS:

Over the last years, the concept of entrepreneurship has been widely disseminated in Brazil; initially in the commercial area, and nowadays more and more in the academic area. In a nutshell, entrepreneurship means doing something new, different, changing the current situation and incessantly seeking new business opportunities with a focus on innovation and value creation.

Based on this context, the creation of an entrepreneurial culture within the university is of great importance. The university should be concerned with the preparation of young entrepreneurs so that, in several areas, we can cope with the demands of the environment.

In this sense, PUCRS created the Entrepreneurial Nucleus (EN), intending to meet the growing needs related to the creation of new businesses or actions and projects focused on self-knowledge and the development of entrepreneurship in the minds of our students.

It is guided by four objectives: planning and implementing integrated actions to develop an entrepreneurial culture in the academic community; stimulate entrepreneurial attitude, especially teachers and students; facilitate access to information related to the creation and development of business; and become a reference in entrepreneurship for the academic community and the external community.

Aiming at getting closer to the students the EN associated with TOTVS, leader in Latin America in ERP (*Enterprise Resource Planning*) systems and one of the biggest in the world in this segment.

With one of its units installed in TECNOPUC, the partnership with TOTVS puts into practice a project that provides more entrepreneurship opportunities for the university community through the creation of a modern, spacious environment, attracting young people and providing the interaction between teams formed by students with the support of senior business professionals who serve as mentors in the discussion of ideas and monitoring of innovative student projects.

Vandré Moraes, TOTVS' s HR Corporate Manager, states that "Being in the midst of the university community expands our capacity for renewal and makes us more connected to the new generations. This interaction enhances the positioning and objectives of TOTVS to transform the environment around them through collaboration and sharing of ideas. The opportunity to partner with PUCRS' EN, an environment in constant innovation, enables the academia and companies think together and do better. "

Among the many actions and projects focused on self-knowledge to develop entrepreneurship in the minds of our students, we can cite the following:

- Entrepreneur Tournament: The tournament's main objectives are to awaken and stimulate the entrepreneurial spirit of undergraduate and graduate students in various academic fields, providing participants opportunity to learn teamwork and leadership. Students also develop business plans by planning, analyzing and making decisions in a systematic way in order to identify a business opportunity.

- **Restless Talks:** chats with entrepreneurs seeking to make a connection between students and professional experiences. The idea is to show that we can all be entrepreneurs, using the knowledge acquired in their area and develop innovative ways. The incentive is given from lectures given by successful professionals from different areas.

- Class with Pop Corn: a joint project of EN with the Research Group on Language, Communication and Cognition (LingCog). The activity discusses important current issues through analysis of films, always with the participation of two speakers.

TECNOPUC is the result of the combination of three propulsion helixes: the Government, the University and the Industry.

Concerning the role of the University in the context of knowledge society, the aim is to expand its focus on teaching and research to help the process of economic development of society. PUCRS offers an entrepreneurial environment for its students as the result of investments in TECNOPUC: the Park companies offer space for innovative research in partnership with the government searching for practical results for society. The condition is a win-win situation: there is a successful relationship for both the industry and the University: PUCRS as knowledge generator, which is transferred to the companies, which transform it in products and services generating competitive advantage for society.

TECNOPUC is a concrete example of PUCRS innovation and entrepreneurship. Therefore, in order to keep and stimulate these two processes, TECNOPUC created the GLOBAL TECNOPUC, a main vector for innovative companies, so that start-ups and spin-offs from projects being developed in the University can give their first steps towards the market (society). External companies search for innovative environments and differentiated intellectual capital. GLOBAL TECNOPUC (henceforth GT) is the "glue" that connects and potentializes pioneer and daring initiatives. GT - TECNOPUC's center for innovation, creativity

and networking - offers a competitive advantage to amplify the range of initiatives implemented and operating at the Park.

GT project has as its main aim to build a new locus to foster innovative and creative actions, integrating in a network, in the same place, initiatives for both internal and external publics as a way to amplify the synergy of the incubation of new ideas and new knowledge-based projects. Among GT's many lines of action, it intends to:

- Stimulate interdisciplinary projects and entrepreneurship;
- Offer an environment to foster better synergy among TECNOPUC's multiple actors;
- Generate new opportunities for business;
- Improve the link between academia and society;
- Consolidate TECNOPUC as a growth vector based on research and innovation;
- Potentiate the attraction of new stakeholders to invest in R&D;
- Foster the establishment of new networks and stimulate new innovative proposals;

- Foster innovative actions, with multiple stakeholders to increase the opportunities for new, innovative projects.

The space being built (more than 4000m²) is to be filled with a vision of the future, offering fuel to sustain innovation, creativity and the construction of new networks. There will be unique spaces for the promotion of collaborative actions among people with diverse interests and knowledge, generating more interaction and flexibility for new projects. These flexible spaces, located in different floors will induce the perception of new horizons brought forth from the richness of its intellectual capital. GT offers four dimensions in its innovative proposal:

1st: Coexistence: many of the facilities offered to TECNOPUC collaborators are exclusively on PUCRS' campus, external to where the Park is located. On one hand, it offers the stakeholders a complementary view to the University, but on the other hand, it inhibits the creation of multiple networks inside the Park. As integral elements of this dimension are a reception atrium, cafeteria, cultural facilities (bookstore and library), services (drugstore, post office, ATM), spaces for entrepreneurial agencies (SENAI, IEL, SEBRAE), auditorium, arena for open and innovative activities.

2nd: Networking: the focus is the convergence of multiple actors, fostering the externalization of knowledge in the various fields. As integral elements of these dimensions are communication rooms; multifunctional meeting rooms with collaborative tools, spaces for entrepreneurial, professional or institutional associations, space for co-working.

3rd: Open innovation and creativity: the purpose is offer temporary use of flexible, and with complete infrastructure spaces for incubation of ideas and projects, thus allowing the participation of collaborators, CRIALAB - laboratory of creativity - to foster group work, with virtual environments, collaborative platforms, complementary activities to the Nucleus of Support of Innovation Management (NAGI)by offering training courses, innovation management plan, diagnosis and entrepreneurial consultancy, as well as support to newly born innovative projects and ideas.

4th: Internationalization: The aim is to offer spaces for international companies that wish to develop products and services for the global market; softlanding.

Adding value for this "freedom of use" by the community, some activities might undergo a previous selection process, as a way to guarantee that we do not lose track of the four afore mentioned dimensions. In this context, the spaces destined to incubation of projects and ideas, creativity rooms and internationalization must pre meet some requirements:

- Analysis of the potential for adding value to companies re: generation of new opportunities for employment and income;

- Identification of the interest focus and its related scientific area, aligned with TECNOPUC's areas of interest;

- Evaluation of demands according to infrastructure available.

- Establishment of a Plan of Action, discriminating objectives, methodology, need resources, outcome and evaluation indicators.

All these experiences will be duly documented, intending to refine and improve the activities, generating a repository of knowledge to be made available to the community, feedback continuously and systemically.

On the socio-economic side, TECNOPUC's companies take active part in improving the lives of the surrounding community. Some of the actions benefitting society we can cite as examples, are RBS (Rede Brasil Sul de Comunicação - GLOBO Networks affiliated) and the American company THOUGHTWORKS (IT, Telecom)

RBS, the GLOBO affiliate in the South region of Brazil, in partnership with the Mauricio Sirotsky Sobrinho Foundation, offers two important initiatives of social nature to mobilize society to search action which improve the quality of the Basic Education in the states of Rio Grande do Sul(RS) and Santa Catarina(SC):

- Institutional Flag: "education needs answers" -a campaign (www.monstrinhosrbs.com.br)

- RBS Education Award: has as its main objectives to recognize and add value to projects implemented by teachers in elementary schools of RS and SC; offer opportunity for development by means of a free online course(www.premiorbsdeeducacao.com.br)

THOUGHTWORKS (TW), a global software developer through agile methods, also offers many initiatives for the local community.

- Young Learner Project: in partnership with CESMAR (Marist Association), this project allows teenagers to visit TW's office once a month, during which they interact with TW's workers. They learn concepts and techniques in computer programming as well as in social matters. At CESMAR, they have daily both theoretical and practical lessons.

Thoughtworks also has developed other lines of action, such as:

- NASA Space Apps Challenge: A challenge launched by NASA so that different groups get together and think about technological solutions for problems of the Space and the Earth.

- **Brazilian Laws:** UX Design Dojo to build an app that simplifies the text of the Brazilian legislation in order to help citizens to understand their laws more easily and faster.

- **Rails Girls:** A one-weekend event to motivate women to get into Technology. The aim is to offer tools for the development of platforms that might solve problems identified by the group.

We must never forget that the most important collaborations are those where both partners offer distinct capabilities. Universities are like businesses and their role is to explore, in an attempt to answer not only the questions of today but the questions of tomorrow. Successful businesses, on the other hand, have to produce products for today, as well as plan for the future. Businesses have to keep one step ahead of their ever-present competitors, so time and short-term outputs are important.

Collaboration can help us move forward. Most importantly, it can provide opportunities for our students to try possible careers, for businesses to recruit suitable students, and for staff in both kinds of organizations to assess empirically both the University and the business sides, using their best talents.

Final Thoughts

Tecnopuc celebrated its 10th anniversary in 2013. In this ecosystem, there are companies, associations and research structures, making up a physical space filled by various actors, including professionals, researchers, under graduate and graduate students from different areas of knowledge. In such an environment, it is expected innovation, entrepreneurship, social relationships and collaboration. The Park searches for qualified interactions, adding value for all actors which reflect on social and economic development for our city, our state and our country.

Assessing the context of the deployment and development of PUCRS Science and Technology Park - TECNOPUC, it is possible to see extremely positive effects on the University, on the community of their surroundings, and on TECNOPUC. In view of the academic world today is undeniable that entrepreneurial actions permeate the whole intellectual fabric of PUCRS. Professors and researchers view that the qualified growth of their actions can be strongly enhanced when there is synergy with the environment of technological innovation, having students as vectors of these initiatives. In this sense, the Entrepreneurial Nucleus provides the first step to this walk, which may result in new startups, pre-incubation or even business incubation.

There are countless graduated companies that promote actions in partnership with the community, as reflected in the text of this article. Such initiatives collaborate with their

growth and their intellectual capital, providing greater commitment of its employees and corporate actions to promote sustainable development, based on knowledge and innovation.

The organic growth of TECNOPUC, together with the permanent deployment of new and innovative mechanisms, have increased the perspectives of pioneering actions. The Global TECNOPUC becomes the main reference, as it lies facing the internal and external environment, becoming an attractor of new creative and innovative actions, unique in the context of Brazil.

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