Science and Technology Park Management Implanted in the Missions Region (RS), a regional vision of scientific and technological development.

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Abstract

Innovation and technology, which are part of the debate in the knowledge society, are linked to the creation of a prosperous environment that benefits them, the result of multiple and coordinated action of three factors: government, productive structure and technological and scientific infrastructure. The investigation starts from the following question: What is the best methodology for managing the structures known as Science and Technology Parks? The objective of the research is to develop a management model for the Scientific and Technological Park of the Missions Region in order to optimize its economic and financial self-sufficiency so that it does not depend exclusively on resources from the University or from public notices. In methodological terms, the research is a qualitative one, of an applied nature since its results will be used in practice to solve a specific problem. As preliminary results, a self-sustainable management model for the Scientific and Technological Park of the Missions is presented, considering its specificities and peculiarities. This model was developed from the investigation of the main methodologies used in PCTs in different regions of the world and in Brazil, with the purpose of indicating the most appropriate strategies for the implantation of PCTs in a farming region, as well as, identifying the regional base actors technology to understand the operation of the Triple Helix.

Keywords: Innovation Environments; Management model; Scientific and Technological Park; Triple Helix.

1. Introduction

The theme of innovation and technology has been a recurring issue over the years, both in the debate of theoreticians and researchers in the area of knowledge, and in the public sphere as well as among civil society itself, who share the idea of creating prosperous environments, capable of providing innovation and technology transfer. Such environments result from the multiple and coordinated action of three factors: government, productive structure and technological and scientific infrastructure, called Science and Technology Parks: innovation environments that integrate the three elements, and have their contribution to the scientific and technological development of the region in which they are implemented.

The literature presents discussions about Science and Technology Parks over time, such as the article (ROBLEK et. Al, 2013) that studies the participation of STPs in the creation and development of knowledge-based organizations, associated with centers of technological excellence, especially universities and the impacts of employee turnover on the management of activities and performance in STP member organizations in Slovenia. Another study analyzes elements of added value to new technology-based firms

(NTBCs), identifying differences between companies that operate inside and outside Science Parks in Sweden (LÖFSTEN; LINDELÖF, 2002).

In the most populous country in the world the success of technology parks was already studied in 2006, more specifically, the Zhongguancun Technology Park in Beijing, as it was understood that promoting technology transfer and attracting highly innovative groups of companies was essential for regional development, which motivated countries around the world to try to promote regional development through STPs (TAN, 2006).

In this way, the study is justified by the relevance and contribution that STPs of a regional nature have in adding value to organizations, society and regional development. In the specific case of the study, the Scientific and Technological Park of the Missões region aims to provide diversification and added value in the region's production matrix, in joint work with the Regional Development Council - COREDE Missões, Municipal Development Councils - COMUDES , class entities, businessmen, politicians, regional coordinators, educational institutions, among others.

According to Aswegen & Retief (2020), the main agent of economic change in a community is the knowledge transfer, which will generate technological development, so innovation becomes a factor of transformation by reducing the time to use knowledge to unorthodoxly generate economic and social development in a region, starting to pinpoint the best minds, produced in the region so that they are the transforming agent of local values.

The regional capacity to create science and transform it into technological innovation, is associated with some regional actors such as universities, companies and government, forming the Triple Helix (MÄENPÄÄ & VIRKKALA, 2020).

Thus, the main objective of the study is to develop a Management Model for the Missions STP, in order to optimize its economic and financial self-sufficiency so that it does not depend exclusively on resources from the University or public notices. It is also intended that the built model is adaptable to the reality of other regions and other STPs, to generate research and development of new products, services and processes.

In view of this contextualization, the understanding that the Scientific and Technological Parks (STPs) are inserted as instruments and inducers of sustainable and innovative development is established. In this sense, the research question in this study is: What is the best methodology for managing the structures known as Science and Technology Parks?

The main objective of the research is to develop a management model for the Scientific and Technological Park of the Missions Region as to optimize its economic and financial self-sufficiency so that it does not depend exclusively on resources from the University or from public notices. Thus, when developing a management model for the Missions STP, it is intended that the model can be used by other STPs in Brazil, in view of their adaptation to the reality of each region, generating research for the development of new processes, products and services.

Understanding the new management methodologies developed for regional STPs that converge so that these organizations support the advances in science, technology and innovation, is of fundamental importance. In this attempt, ANPROTEC (National Association of Entities Promoting Innovative Enterprises) spared no efforts in its actions, presenting an unprecedented survey of technological parks in

Brazil, evidencing growth since the 1990s. According to collected data (BRASIL, 2019), technology park initiatives have multiplied in Brazil, over time, from 10 in the year 2000 to 103 in 2017, 37 of which are in the design phase, 23 are in the implementation phase and 43 in operation phase. It is worth highlighting the South and Southeast regions, with greater concentration.

In view of the perspectives of the Brazilian government at its different scales, the implementation of public policies, such as the Sectorial Funds, the Law on Informatics, the Law on Innovation, the Law on Good and tax incentives, stands out. Associated with these policies, mechanisms for transforming knowledge into goods and services are encouraged and supported, such as Incubators, Local Productive Arrangements, Technological Modernization Poles and Science and Technology Parks, considered innovation environments or innovation habitats.

In Rio Grande do Sul, the state government has encouraged such enterprises through the Secretariat for Economic Development, Science and Technology (SDECT), promoting Higher Education Institutions, through agreements and resources from the International Bank for Reconstruction and Development (IBRD) and the National Bank for Economic and Social Development (BNDES) to implement and strengthen innovation environments.

Regarding the Scientific and Technological Parks and according to data from SDECT / RS, more than 20 (twenty) projects have already been registered, of which 12 (twelve) are already accredited, with 03 (three) of those already consolidated, 03 (three) in the consolidation phase and 06 (six) with their works started and in the implementation process (SDECT, 2017).

But how to manage the different regional factors that influence the management of STPs, given that the structures of science and technology are different in different regions and countries, influencing regional actors?

The methodological aspects defined in this part were intended to guide the research's constructive process, from the initial stage of elaboration to its execution. It is based on the formulations and typologies proposed by Silva and Menezes (2005); Vergara (2014) and Gil (2010). In practice, the steps followed were: a) to investigate the main methodologies used in STPs from Brazil and various regions of the world, with the purpose of pointing out the most appropriate strategies for implementing PCT in an agricultural region; b) to identify regional technology-based actors to understand the operation of the Triple Helix; c) to map the management processes used especially in STPs administered by IES Comunitária do RS (RS state community HEI) , in order to assist in the construction of the management model and, d) to elaborate the Management Model for the Scientific and Technological Park of Missões.

The study is structured in five parts: In the first part, it refers to the introduction that discusses the research problem, objectives, the justification and relevance of the study. The second part presents the theoretical framework that supported the construction of the management model. In the third part, the methodological aspects used to achieve the proposed objectives are exposed. The fourth part presents TecnoURI Missões and the management model developed, the result of the main objective of this study. Finally, the final considerations of the referred study are aligned.

2. Knowledge, Innovation and Technology

For quite some time there has been talk of a knowledge society (DRUCKER, 2001, p. 38). This society is strongly influenced by knowledge and should not be treated as a simple factor of production of the new era, as land, labor and capital were previously considered, but rather, as the only resource, "which makes this unique new society "(NONAKA; TAKEUCHI, 1997, p. 32).

Modernly, it can be said that inter-university cooperation is a source of economic growth and competitiveness in all knowledge societies, that refers to the understanding of the university as fundamental in this current system of transition and development of information, which ends up generating the current knowledge society (TETREVOVA & VLCKOVA, 2020)

According to the Oslo Manual, OECD (2005, p. 28), knowledge-based economy "is an expression coined to describe trends in advanced economies towards greater dependence on knowledge, information and high levels of specialization, and the growing need for prompt access to these factors by the private and public sectors.

Innovation is the use of knowledge in an applied way. According to OECD (2005, p. 31), it is considered a "technological innovation of product or process if it has been implemented, that is, if it has been introduced in the market (product innovation) or used in the production process (innovation process) ". In this sense, Giugliani (2012, p. 40) defines innovation as "a process by which companies dominate and implement the development and production of goods and services, which are new to them, regardless of the fact that they are new to their competitors – national or international".

Sabato and Botana (2011), develop a triangle in which three types of relationships are pointed out that can be articulated by Latin American societies enabling them to stop being dependent on the acquisition of patents and royalty payments, to also become producers of technical and scientific knowledge within the complex world economy. In this model, innovation is used as a substitute for the import substitution model. As agents of these relations, Sabato and Botana (2011) understand that the government is the apex element of the triangle and in the other two vertices, on the one hand, the entire productive structure, and on the other, the scientific-technological infrastructure. According to him, the combination of the efforts of these agents, catalysts of the economy, would be the basis of a new way of seeing and thinking about regional development, creating a structure that would be favorable to the emergence of new technologies and, consequently, of new products that could insert Latin American countries in the world technology circuit.

3. Management Models for STPs

Every organization demands a management model that is complete, perfect for the company to be effective and successful in its trajectory, however, it is important to emphasize that it is the people within the organization that keep the wheels turning. In this line of thought, the organization's culture can design or outline the management model. According to Deal and Kennedy (1983, p.501), culture within the organization "is the way we do things around here". Thus, this definition in practice determines how to understand culture from the observation of how things are done. Thus, success or failure may not depend exclusively on the Management Model.

According to Catelli (1997), the greatest influencers of the organizational culture are the founders and the

main leaders of the company. As definers of the management model, because they are in power, these people will influence, through their own way of making things happen.

In the words of Fleury (1987, p.10), "culture, conceived as a set of values and beliefs shared by the members of an organization, must be consistent with other organizational variables such as structure, technology and leadership style". Thus, there are countless factors for an organization to achieve success. Within this concept of organizational culture, aligned with the other concepts presented in this phase, the Triple Helix or Quadruple Helix model is fundamental to enable the exchange of experience among the helices based on the managers' predisposition and, thus, this relationship strengthens and the innovation environment is effective.

Catelli (1997, p. 49) approaches in his theory that "the management model is the set of rules and principles that should guide managers in choosing the best alternatives to lead the company to fulfill its mission effectively".

The success of the first North American experiments contributed decisively to the evolution and construction of the concept of technology parks as well as to the development of emulation experiences in Europe, with emphasis on the implantation of the French and British pioneer parks, in the early 1970s (SCHMITZ; HUPHREY, 2000).

4. Methodological aspects

Regarding the classification of the research, the typology proposed by Vergara (2014) is used, classifying it as for its purposes, in Applied and Descriptive research and, as for the means, in Case Study and Bibliographic research.

Thus, the research was applied in the Missions PCT, as it sought to solve a specific and practical problem, that is, to develop a management model appropriate to its reality and capable of consolidating it into a self-sustainable park. Still, the research was descriptive because, according to Silva and Menezes (2005, p. 20), "descriptive research requires an inductive analysis where the main focus of the approach is the process and its meaning". Describing, therefore, the management methodologies used by science and technology parks in Brazil and the world.

As for the means, the research was outlined in a case study and bibliography. It is a case study, as according to Gil (2010), such a research can be qualified when there is an in-depth and detailed study about a certain unit. In these terms, it was configured in a case study for carrying out a detailed study on STP TecnoURI Missões in order to elaborate a management model applied to its reality. It is bibliographic, because it is based on published works, books, theses, scientific journals, among others. Gil (2010) mentions that bibliographic research is the first step for any scientific research. As for the nature and treatment of the data, the research is qualitative. In the interpretation of Silva and Menezes (2005, p. 20), “the phenomena and the attribution of meanings are basic in the qualitative research process. It does not require the use of statistical methods and techniques. The natural environment is the direct source for data collection and the researcher is the key instrument”.

Data collection took place through bibliographic, documentary research and on-site observation. **Bibliographic:** based on books, articles and essays already published in periodicals, specialized magazines,

websites, newspapers, among other sources. **Documentary:** in STPs regulations and statutes, in Laws, Decrees. **On-site observation:** throughout the research, visits were made to the STPs of Community Institutions of Higher Education (ICES) such as PUC / RS, FEEVALE, UPF, UNISC and UNIVATES, in which the researcher used direct observation to better understand the management process of these innovation environments.

5. Characterization of the Missões region – STP Missões' performance stage

The Missões Region, inserted in the process of this study, is composed of more than 25 municipalities and is located in the Northwest of the State of Rio Grande do Sul. This region borders the Republic of Argentina, and is located between the following geographical coordinates central: 28 ° 18 '1' 'South Latitude and 54 ° 15' 49 " West Longitude. The total area of the Missões Region corresponds to 4.6% of the territory of the State of Rio Grande do Sul. Its altitudes vary from 0 to 360 m distributed predominantly in the geomorphological unit of the Southern Plateau. Its Municipalities are inserted in the Hydrographic Basin of the Uruguay River and belong to the Pampa and Mata Atlântica biomes (COREDE MISSÕES, 2010). This micro-region of the State, composes COREDE Missões (Regional Council for the Development of Missions), linked to SEPLAG / RS (Secretariat of Planning and Management of Rio Grande do Sul), comprising twenty-five (25) municipalities (COREDE MISSÕES, 2010).

Important road routes are located in the region: BR 285, BR 392, RS 168, RS 561, RS 165, RS 536, RS 344 and RS 472 in a total of 342.57 km of state highways, of which 250.97 km are paved. Road links with Argentine territory are also noteworthy. "Air transport, on the other hand, consists of a regional airport, which was deactivated for four years, being reactivated in the first half of 2017 for small non-commercial aircraft transit". It also has a railway network that crosses the region south to north passing through São Luiz Gonzaga and in the west to east direction it goes from Cerro Largo to Santo Ângelo, functioning poorly, and in some sections it is disabled (WBATUBA et al., 2017, p. 91).

The main economic activities present in the COREDE Missões region are temporary crops, especially soybeans, corn and wheat. Another highlight is the ranching activities, especially cattle. The industrial segments that stand out, in terms of the number of establishments installed in the region, in decreasing order, are: Food Products, Clothing, Footwear and Leather, Wood, Metallurgy and Non-Metallic Minerals. These segments are, for the most part, small, with around 55% of industrial workers being linked to an establishment considered small, while 17% of the workforce is linked to a medium-sized company (among 50 and 249 workers). Large establishments (250 workers or more) employ 28% of the total. It is important to note that such companies are strongly concentrated in the main municipalities in the region: Santo Ângelo, São Luiz Gonzaga, Cerro Largo and Guarani das Missões (WBATUBA et al., 2017).

In this space, through a state public policy, the Local Productive Arrangement of Family Agroindustry of the Missões was organized, for the development of the region, with the objective of increasing the aggregation of value in agricultural products, expanding markets and facilitating the growth of family agroindustries, companies and cooperatives, as a way to generate more income for the rural and urban population, and an alternative for the permanence of young people in rural areas. However, the agricultural potential and the strengthening of the food market in the Missões region need to incorporate technology,

innovation and management, in addition to diversifying the production of raw materials and coaloesce to other industries and markets (POLACINSKI et al., 2014).

Another important instrument to support development and research is the Missões Technological Modernization Pole (TMP Missões), fostering the culture of innovation outside major metropolitan centers. In Rio Grande do Sul, consolidated courses and Masters and Doctoral programs in the area of materials only exist in the greater Porto Alegre and in the region of Serra Gaúcha, which, coincidentally, are the most economically and technologically developed.

It is understood that, in order to develop the interior of the state, it is necessary to decentralize investments by the government, to new research centers, to better meet the regional demands of applied research, thus reducing regional inequalities in the state of Rio Grande do Sul, which has been discussed for some time by researchers in the area (SCHULZ, 2020).

Also, the Local Productive Arrangement of the Missões Family Agroindustry (APL - Missões) has been strengthened since 2012, when it was implemented, encouraging the development of agroindustries, fostering the growth of an important vocation in the region, as well as the creation of URINOVA - University-based Technology Incubator to act on the innovation environment that is being established. In 2019, a study published on the territorial activation of rural agroindustries in the Upper and Middle Uruguay region corroborates with the thesis that innovation is inevitable for the development of regions, especially in those regions with a great vocation for agricultural production (ALBARELLO, 2019).

Historically, the Missões Scientific and Technological Park - TecnoURI Missões, takes its first steps in 1968, when the old FUNDAMES, started its activities in Santo Ângelo. It started to gain strength in 1975, with the implementation of engineering and technological courses. In this period, the state of RS was already looking for alternatives to stimulate economic and social development, promoting actions that would facilitate interaction between the public and private sectors (universities and companies). In this sense, the Government of the State of RS, through the State Bureau of Science and Technology, structured in 1989 the Support Program for Technological Modernization Poles and the Research Support Foundation of the State of Rio Grande do Sul - FAPERGS, with the objective to increase the capacity for socioeconomic development and, through its public notices, to finance research projects.

The University is gaining expertise and continues to work on building its innovation habitat, implementing in 2008, the Innovation and Technology Transfer Center - NIT, with the mission of strengthening the relationship between URI, Santo Ângelo campus with the community, involving public agencies, the private sector and other civil society organizations, in order to provide research and extension opportunities to spread the technological development of the region.

In 2012, the URI campus of Santo Ângelo accredited in the State of RS its Incubator of Technology-based Companies, called URINOVA, with the objective of developing actions to promote and support new technology-based enterprises, whose products, processes or services are generated from from the results of applied research, in which technology represents a high added value. Thus, promoting social well-being and contributing to changing the regional economic profile through the dissemination of the culture of entrepreneurship in its area of operation.

Thus, after a long walk, the University obtains the accreditation of the Missões Scientific and Technological Park - TecnoURI Missões, in 2014. The building has a structure with an auditorium for up to 250 people,

equipped with a sound system, air-conditioned environment, multimedia projector, screen and stage. With an area of 300 m² for the installation of laboratories, rooms for the installation of the sectors of research and development of companies, four meeting and training rooms and two rooms for the administration and secretariat of the STP, the building occupies an area of 1475 m², liable to expansion over the years.

6. Management Model for the Missões STP - TecnoURI Missões

Based on the classification of the National Institute of Industrial Property (INPI), which conceptualizes the product, based on a diversity and particularity in relation to each evaluation area, the Management Model developed in the study fits into the AXIS 1- Products and Processes - characterized by the development of a technical or technological product, subject to protection or not, which may generate industrial / intellectual property assets (INPI, 2008).

Based on this definition, the Management Model developed is linked to the Management processes, which according to the INPI (2008), refers to an interdisciplinary approach to identify, design, execute, document, measure, monitor, control and improve business processes, automated or not, to achieve consistent results and aligned with an organization's strategic objectives.

The Management Model for STP Missões is the result of a study based on the Innovation Law, State Decree, Regulations and Statutes, as well as on research in published studies on the subject. It is noteworthy, however, that the proposed research and the management model developed differs from other STP management models that are linked to a specific area or a single production system, such as the management model proposed to the Agency. of Coffee Innovation - INOVACAFÉ (COSTA, et. Al, 2020). Still, based on the bibliographic documentary survey and observation of the innovation environments through on-site visits carried out in some STPs in Brazil, in addition to courses and seminars related to the theme, the necessary strategies for the construction of the Management Model for the STP Missões, whose methodology is described step by step, below:

FIRST STEP: Become acquainted and observe the correct compliance with the legal requirements pertinent to Science and Technology Parks, on a permanent and updated basis. Law No. 13,196 of July 13, 2009; Innovation Law of the State of Rio Grande do Sul, on July 11, 2012; Decree No. 49,355 of July 10, 2012;

SECOND STEP: Know, observe and comply with the University's guiding standards: URI Statute; General Rules of the URI; FuRI Bylaws and Rules; General Norms, Resolutions and Ordinances of the University related to the PCT, Incubators of Technologically Based Companies, Pole of Technological Modernization of Missions and Center for Innovation and Technology Transfer.

THIRD STEP: Knowing, observing and complying, as well as making the necessary changes to the TecnoURI Missões guiding documents: TecnoURI Missões Internal Regulations; Public notices; STP Conduct Manual; Intellectual Property and Royalties Guide; General Standards.

FOURTH STEP: TecnoURI Missões will be linked to URI Santo Ângelo, having as a governance body a Management Committee, directly linked to the campus management, the highest deliberative instance, composed by the Director General of URI -Campus de Santo Ângelo, by the Administrative Manager of the TecnoURI Missões, by the Scientific Manager of TecnoURI Missões, by the Manager of the Center for Innovation and Technological Transfer - NITT, by the Manager of the Technology-Based Business

Incubator - URINOVA, by the Manager of the Technological Modernization Pole of the Missions and by a representative and a representative alternate of each of the entities: Association of Municipalities of Missions - AMM and Regional Council for the Development of Missões.- COREDE MISSÕES, to decide on the actions to be developed within the scope of TecnoURI Missões.

FIFTH STEP: The hiring of TecnoURI Missões managers is exclusive responsibility of the Chairman of the Management Committee - General Directorate of URI, who is also responsible for the administrative and financial function. The members of the Management Committee and their respective alternates will be appointed by an act of the URI Rectory, upon indication of the entities represented.

SIXTH STEP: Creation of the Advisory Partners Council, to be integrated by at least two members of the Steering Committee and, voluntarily, by a representative of each of the TecnoURI Missões Partners. The members of the Partner Council and their respective alternates are appointed by the TecnoURI Missões. Partners and appointed by specific act of the Rector of the URI. The board should provide for the participation of various actors, such as representatives of regional entities and associations, business unions, secretaries, councilors, presidents and directors of other bodies and institutions.

SEVENTH STEP: Another representation to be listed is the Scientific Committee, which must be formed by: TecnoURI Missões Administrative and Scientific Managers; 01 (one) Doctor Professor, from the URI Santo Ângelo career board; 01 (one) PhD Professor, from the career board of the Federal University of the Southern Border - UFFS Cerro Largo; 01 (one) Doctor Professor, from the career board of the Federal Institute Farroupilha Campus Santo Ângelo - IFFAR; 01 (one) PhD Professor, from the career framework of the State University of Rio Grande do Sul - UERGS São Luiz Gonzaga; the Manager of the Missões Technological Modernization Pole - PMT Missões; the Manager of the Innovation and Technological Transfer Center - NITT - URI - Santo Ângelo and the Manager of the Technology-Based Business Incubator - URINOVA. In addition to these, other regional actors may participate, such as teachers from Basic Education Schools (Public and Private) and Technical Schools.

STEP EIGHT: The Missions PCT infrastructure must house the URI - URINOVA Technological Incubator; the Center for Innovation and Technological Transfer - NITT; the Technological Modernization Pole and other actors in this process, together with businessmen, who will be able to take advantage of the space for the development of research related to the innovation of products, processes and / or services, in compliance with the Internal Rules of TecnoURI Missões. Thus, PCT Missões will offer several laboratories in the areas where the Park operates, as shown in Table 1 below. vai oferecer diversos laboratórios nas áreas de atuação do Parque, conforme o Quadro 1 a seguir.

Laboratory	**Área Física (m^2)**
Mathmatics Laboratory	74,03
Physics Laboratory	109,24
Chemistry and Corrosion Laboratory	138,06
Pharmaceutical Chemistry Lab	144,71
Electronic Structure and Simulation Lab	30,00
Chemistry and Toxicology Lab	262,13

Magnetic Materials Lab	28,39
Mechanical Test ans Stress Analysis Lab	50,00
Electromachanic Instrumentation and Automation Lab	50,00
Mechanical conforming Lab	59,56
Heat Treatment and Sutface EngineringLab	113,75
Metrology and Metallography Lab	289,26
Engine, Machines and dWelding Lab	95,00
Thermical Sciences and Fluid Mechanics Lab	80,00
Metalurgy, Machinery and Agricultural implements Lab	50,00
Geoprocessing Nucleus - composed of: Topography, Photointerpretation and Photogrammetry laboratories.	59,56
Laboratório de Mecânica dos SolosSoil Mechanics Laboratory	113,75
Building Materials Laboratory: concrete, asphalt, paving and mortar.	289,26
Electricity and Electrical Installations Laboratory	25,00
Design Laboratory (Civil Engineering and Architecture)	147,00
Mockup Lab-1 - Building 13	82,13
Mockup Lab-2 - Building 15	60,39
Architecture Studio	50,40
Design Laboratory (Architecture) building - 17	82,46
Clinical Analysis (Hematology) Lab	90,00
Clinical Parasitology Lab	65,00
Human Physiology Lab	44,65
Biochemistry and Biophysics Lab	92,13
Biotechnology Lab	35,89
Microbiology Lab	86,80
Farmacotécnica e Cosmetologia Lab	79,00
Pharmacognosy Lab	79,00
Pharmacology, Pharmacodynamics and Pharmacokinetics Lab	36,52
Pharmaceutical Technology and Quality Control Lab	137,36
Pharmacy School	43,02
Metallography Lab	49,50
Distributed Networks and Systems Lab	23,16
Technological Integration Lab - LABINTEC (research)	33,83
Infoaccess	35,00
Digital circuits Lab	70,00
Programming and Accounting Lab	40,00

Computer Graphics and Multimedia Lab	38,93
Computer Lab I, II, III, IV, VI e VIII	367,86
Hardware Lab	46,86
Office of Legal Practice	241,65
URISAN-TRADE, Junior Enterprise Innovation	25,00
Accounting Laboratory (Project Room)	32,00
Botany Lab	67,86
Water and Environmental Sanitation Lab	95,10
Geology Lab	35,8
Herbarium	30,55
Scales Room	16
Support Center for the Development of Products and Processes	200

Sourcee: the authors

The main services that URI laboratories can offer to future companies to be installed in the STP Missões are listed in the main areas of operation, namely:

I) Innovation and Technologies in Engineering, Automation and Socio-Environmental Technologies: Statistical treatment of products and processes; Corrosion analysis of materials; Toxicological analysis; Analysis of chemical structure of elements; Analysis of solid tests, such as magnetic and mechanical formations and surface treatment; High precision machining and welding services; Assistance to agricultural machines with geoprocessing; Analysis of building materials, paving and mortar; Assistance in civil construction projects.

II) Food, Pharmaceutical Innovations and Nutraceuticals: Chemical analysis of medicines; Clinical analysis; Biomechanical analysis; Assistance to pharmacology and cosmetology companies; Quality control of food; Training of pharmacists.

III) Information Technology, Communication and Digital Convergence: Training companies in the use of software; Software production; Production services for the creative industry.

IV) Technology and Innovation in Agribusiness and Agriculture: Irrigation services; Soil analysis; Accounting advice; Legal advice; Administrative assistance.

It is important to note that the companies included in the STPs must be aware of and know the Safety Standards, Equipment Use Manuals and Laboratories use protocols, as well as the price list of materials and equipment used in the laboratories. The main services that URI laboratories can offer to future companies to be installed in the STP Missões are listed in the main areas of operation, namely:

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STEP NINE: The technical and financial feasibility, and the technical feasibility will depend directly on the organizational capacity of the researchers and scholars who will attend the companies. The financial viability of the Missions PCT, on the other hand, is initially prospected by means of promotion notices at different levels (public or private), rent of spaces for companies and laboratory services to be made available, according to the list above.

It is also necessary to invite the institutions or actors who are in charge of the Business Accelerators, Angel Investors and / or Mentors to assist in the development of start-up companies (Startups), in order to promote their exponential growth in the region.

TENTH STEP: Support from other institutions. All other public and private institutions and bodies that are interested and ready to collaborate with research, development and innovation, within this logic of the triple helix, will certainly contribute to this model to be successful and TecnoURI Missões to play the role competes, spreading the culture of entrepreneurship and providing regional development through knowledge, innovation and technological transfer.

Finally, it is worth registering the proposed organizational chart based on the Management Model developed for the Missions PCT - TecnoURI Missões, as shown in Figure 01.

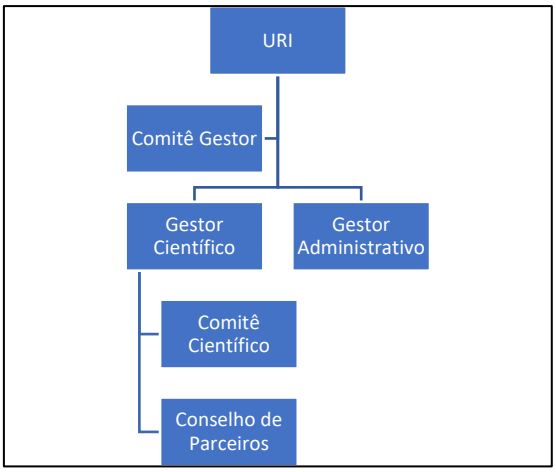

Figure 01 - Organizational Chart of the Missions PCT - TecnoURI Missões

It is noteworthy that the organization chart proposed in the Management Model elaborated for the Angel Investors, although it was based on published studies on STPs, on the methodologies observed in the RS

STPs linked to Higher Education Institutions and on the theory of the Triple Helix, Laws and Decrees (federal and state), considered the specificities and particularities of the missionary region and the need for active participation of qualified regional actors in the Councils and Committees, in order to consolidate and legitimize the performance of the Missions PCT in the socioeconomic development of the region in question. that is inserted.

Future scenarios for the socioeconomic development of regions in the Brazilian territories, in which knowledge, innovation and technological transfer are linked to favorable environments, as in the case of STPs, in a strict connection with Higher Education Institutions, government and companies, is increasingly evident in the results of research and studies already published that involve the theme. As an example, the research carried out by Andrade et. Al. (2020), who reserves similarities with the present study, by inferring the use of technologies, through STPs, in the prospecting of scenarios and development of agribusiness (area of activity, equally relevant for the Missions PCT).

7. Final considerations

This study aimed to offer URI Santo Ângelo, the technical-administrative entity responsible for the Scientific and Technological Park of Missões, a management model, considering the particularities of the Missões Region.

It is understood that the proposed general objective was achieved, as the study intended to elaborate a Management Model for the Scientific and Technological Park of the Missions, in order to optimize its economic-financial self-sufficiency. To achieve the proposed objective, it was necessary to theoretically estabilish the study based on publications in periodicals, books and magazines that dealt with the theme. It was also necessary to research internal documents and observe on the spot STPs linked to Higher Education Institutions in RS, seeking to appropriate the methodologies used by these STPs , compare them with studies of STPs from other regions of the country and the world, in order to identify the most appropriate strategies for the implantation of the STP Missões, considering the particularities inherent to the monoculture region.

In the elaboration of the Management Model for the STP Missões, the regional actors that could be inserted in the process were identified, taking into account the theoretical proposal of the Triple Helix and the mapping of the management processes used especially in STPs administered by ICES.

In this sense, the study sought to characterize, albeit briefly, the Missões region, where the STP Missões operates, describing the political and social aspects of this territory. Equally relevant and necessary, was the temporal description of the institutional and technological trajectory of URI Santo Ângelo, from its foundation to the conquest and implantation of the STP Missões.

The entire theoretical apparatus researched, the documents analyzed, the observations made in other STPs, the understanding and description of the Missões region and the identification of the regional actors who must integrate and assist in the process of consolidating the STP Missões, according to the Triple Helix , culminate in the Management Model elaborated in the study and presented, in a simplified way, through the description of the 10 (ten) sequential steps / steps and the proposed organization chart.

Still, acknowledging the difficulties and limitations encountered during the study, it is understood that for

the success of the Management Model developed, some basic premises must be considered: i) the model cannot be static, its dynamism and flexibility are necessary for the effectiveness of the management; ii) the model must be participatory and its ideas disseminated and shared with all the actors involved in the constituted Committees and Councils, ensuring good governance of the Missions PCT; iii) the regional community must be involved as a protagonist in the process, contributing on legitimating of the Missions PCT; iv) it is essential that all the regional actors involved establish relations of trust and mutual cooperation, in favor of the territorial development of the Missões region. Thus, it is understood that the success of the management model will depend on this relationship of trust and cooperation between the regional actors, the very environment of innovation and the culture of the Missões region.

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