

## **INNOVATION IN SERVICES: THE PATH OF INNOVATION IN THE LABORATORY OF CLINICAL ANALYSIS SABIN**

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### **ABSTRACT**

This paper aims to describe the development of innovation in the Laboratory of Clinical Analysis Sabin and its potential to create competitive advantage in a highly competitive market. It sought to understand why and how a company innovates, and what are the gains from innovation, was verified concepts of innovation that are applied in practice within the organization and that teamwork makes all the difference to create innovation, this creates a culture of organizational innovation with the sharing of information among employees, a basic principle that the organization carries and invests continuously. Innovation can arise in the midst of technology, but it also can be perceived with simple practices that are cultivated daily in the organizational environment of the company. Evaluated as a measure that enables the creation of innovation, the concept of open plan that facilitates the exchange of information with different areas and increase the knowledge of the organization, so it is possible to know all the steps and functions of the company and its provide an innovative and more productive organizational environment. The company also seeks to enchant its customers and leave good memories in their lives, so it makes continuous investments internally in its employees and externally in the organization, using practices of innovation and with the participation of all employees the company manages to reach its public.

**Key words:** Innovation, Innovation in services, clinical analysis laboratory

## **1 INTRODUCTION**

In a high competitive context, business strategies to gain competitive advantages are developed in all types of segments. One of these strategies is the innovation, since a company that innovates seeking increase its position in the market. The innovation has been discussed and conceived as a platform for the development, at first, of the organizations, and later, for the economy of the countries. The transformation of the relationships among organizations, technological development and a political-legal environment represented by the state and society have been performing a fundamental role to a conscience based in knowledge. Associated with the globalization processes in which several organizations offers the same kind of products and services, the businesses environment have found in innovation a way to overcome its organizational problems, such as those related to the scarcity of natural resources, the quest for the production of products and services of high performance and reasonable prices.

However, innovating is not a simple task. There is no single way or steps to innovation, nor are there models that guarantee the company will reach innovative products or services, that is, innovative processes are linked to the way of managing, capturing and retaining professionals with a creative profile, favorable environment, the conjuncture of the markets and other factors that will depend on internal and external agents the organization. In the services area, the task become more complex, the innovation can be the result of several factors, making it difficult to identify. This paper sought to know the path of innovation in the Laboratory of Clinical Analysis Sabin, aiming in identify the reasons that drove the company to invest in innovation, and which results were achieved.

In a research in CAPES website was found that in the period from 2015 to 2017 more than 3 thousand scientific papers with the “innovation” topic were published. On the other hand, when was searched for determinant factors for the investment in innovation were found about 150 papers. However, it’s perceived that the understanding and the practice of innovation are in constant updates by the nature of the subject, and there is always the possibility of deepening and new strands of study. Thus, this article has its academic importance in the sense of increasing knowledge over the subject and it has a practical application in a company focused in innovation.

The innovation is a main factor for a successful entrepreneur, for this reason, the intention of this paper is to contribute with managers in order to enrich their knowledge of the innovation topic related with a managing strategy, presenting an analysis of the evolution of innovation practiced in Sabin Laboratories.

From a data recently collected, it can be highlighted another important factor that are present in the health area nowadays. According to the National Supplementary Health Agency (ANS), a regulatory agency linked to Health Department, responsible for the fiscalization and standardization of the health insurance plans in Brazil, there was a decrease of 130 thousand people from

2016 to 2017. It shows that this part of population that previously would have the support of a private hospitals, clinics and laboratories now depends on the public health system.

Another survey carried out by the research company “Ibope” in 2017 requested by the Institute of Studies of supplementary health (IESS), showed that, for the Brazilians, a health plan is the most desirable achievement, behind just from education and owning a house. It helps to comprehend dependency of the Brazilians on the private health service and the lack of the public health system.

Therefore, innovating and understanding the Brazilian patient becomes socially relevant once those patients, specifically in the laboratory industry, migrate from the public health system to the private system.

In this context, this paper seeks to answer the following question: How is the adoption of practices of innovation in the Sabin Laboratories? As a general objective, was tried to analyze the use of innovation within Sabin Laboratories and in its business management. As specific objectives: Identifying the aspects which brings the company to adopt a innovative measures, to describe the organizational structure linked with innovation in Sabin Laboratories, to describe the organizational processes which involves innovation, to identify the challenges of investments in innovation also the type of competitive advantage achieved with innovations.

For this, was used an introduction to the concept of innovation of Schumpeter (1934), Bautzer (2009), Juran (1992) and others. Were used as base the Oslo manual and researches of innovation (PINTEC), conducted by the Brazilian Institute of Geography and Statistics (IBGE) which investigates innovation in Brazil. After the conceptualization, and presented the methodology of the work, carried out in a qualitative research with a case study, interviews were made with those responsible for the management and human talents of Sabin Laboratory. With the informations it was possible to analyze the results, the final considerations, which include future studies and the limitations of the research.

## **2 THEORETICAL REFERENCE**

### **2.1 Concepts and chronological models of innovation**

When addressing the topic of innovation, it is important to make clear the differences between the concepts of innovation and creation. “Invention refers to create a process, a technique or a product never seen before... without having an effective commercial application. Innovation, however, occurs with the actual practical application of an invention” (TIGRE, 2006, p. 72). Both are related to the launching of a new idea, but in the innovation is where the commercial gain occurs.

In the Schumpeter’s (1934) view, one of the firsts to conceptualize “innovation”, it is related to differentiation and value creation in a business, that is, it explores opportunities to generate revenue. Carreteiro (2009) affirms this thinking when defines innovation as the ability to turn ideas into products or services that can be commercialized.

The concept of innovation has several definitions in many scientific fields. It can be studied related to the open and closed business model (CHESBROUGH, 2006), by the impact in the organization (JUGEND; SILVA, 2013), related to the typology of innovation (OSLO MANUAL, 2005), and others. The innovation also can be studied specifically in the services area as a new system using the Gallouj Theory (1991); related to the origins, it can be developed by a chronological model presented in figure 1, in which is understood that the innovation can be the answer to the customer's needs or discovered opportunities (TIDD; HULL, 2005; TROTT, 2012).

It is observed the use of Research and Development (R&D), this area is so meaning and related to the innovation that the big companies have their own R&D departments. According to the National Forum of State Foundations of Support to Research (CONFAP) carried out in 2015, Brazil is in 31<sup>st</sup> place in the world rank of investments in R&D, in 2012 were invested more than R\$ 54 million and private companies accounts for R\$ 29 billion in that period.

Date	Model	Characteristics
1950/60	Technological impulse	Simple linear sequential process; emphasis on R&D; the market is the recipient of R&D products
1970	Market demand	Simple sequential linear process; emphasis on marketing; the market is a source for driving R&D; R&D plays a reactive role
1980	Simultaneous model	Emphasis on the integration of R & D and marketing
1980/90	Interactive model	Combination of impulse and demand
1990	Network model	Emphasis on accumulation of knowledge and external links
2000	Open Innovation	Chesbrough's (2003) emphasis on a further externalization of the innovation process in terms of linkages with the sources of knowledge and cooperation to explore the results of knowledge.

*Figure 1 - Chronological models of innovation, Source: Trott (2012, p.26)*

The “technology push” has occurred in the 1950's/1960's as a result of scientific advances and R&D activities. The usage of researches and technology has a purpose of creating a new demand in the consumers (TIGRE, 2006) and it happens with the allocation of new products and services for the consumers, what creates a consumption impulse that did not exist before.

In the 1970's begins what some authors such as Rothwell (1994), Trott (2012), Tidd and Hull (2005) calls of the second generation of innovation process the demand pull or market demand. There the innovation occurred based in the clients needs (TIGRE 2006). It is linked to hear the customer and innovate to fulfill their demand. According to the figure 1, and through the demand pull, that is comprehended the needs and the behavior of the market segment that the company is in or is interested in (JUGEND; SILVA, 2013). Figure 1 also quote that the R&D has a reactive role, what mean that it is based in market research

results, linking the needs of its customers, this way seeking for solutions and innovating to get close to their expectations.

In 1980's and 1990's the interaction of the models gains more emphasis, in these models can be verified that both can connect the sectors (TROTT, 2012) in an organization to the production of a good or a service with the use of R&D, of technology push and demand pull at the same time. Otherwise, the network models with its emphasis in the 1990's, shows what would be the results of the innovation models of previous years.

The network model enables the exchange and sharing of information (TROTT, 2012). Its use enables all the collaborators to use the same language, called "shared language", the communications will be more efficient once different sectors will be working together with the same goals (TROTT, 2012) and it will bring a friendly innovative environment to the organization.

The open innovation, which gained notoriety in the 2000's, as it showed in the figure 1, happens with the collaboration of others parts (SCHERE; CARLOMAGNO, 2016), with quality (BAUTZER, 2009), and considering the knowledge, external technologies and partnerships between organizations and even consumers (CHESBROUGH, 2006). It can be considered the sharing of ideas, innovation and technology. Unlike a closed innovation which comes with R&D and limits the innovation process (CHESBROUGH, 2006), centralizing the knowledge in a particular sector, area or organization, without sharing it.

In the open innovation it is possible to dismember, outsource and sell the technology (CRAWFORD; DI BENEDETTO, 2015), this way enables other companies to acquire third part technologies and knowledge for internal use (SCHERE; CARLOMAGNO, 2016).

## **2.2 Innovation as strategy and influencing factor**

Regardless of its origin and size, organizations can use the innovation to meet the needs of the customers, the market, society and the company itself. In relation to these needs, several authors (ZOGBI, 2008; BEZERRA, 2011; TROTT, 2012; SCHERER; CARLOMAGNO, 2016) deal with innovation with different perspectives.

One of them may be to delight the customers. Big companies seeks to meet the customers wishes (ZOGBI, 2008), in this way when implementing a innovation should be minded that the customers expectations and the patterns change (SCHERER; CARLOMAGNO, 2016), so the company must always take care of this point of innovation in the sense of not regressing to delight and loyalty them, since with the reduction of novelties can happen to reduce the consumers to the organization (TROTT, 2012). To attract the customer with innovations can be one of the tools for a company's profit, but if it is not monitored, may have the reverse result, having major customer and profit losses.

Another way to meet the needs is standing out in the market. In this way, the innovation acts as a differentiator, highlighting the company in a competitive market (BEZERRA, 2011). This highlight can happen when a problem is

understood in a different way, and from this the company can innovate and attract more consumers than other organizations.

Scherer and Carlomagno (2016) say that at some point the organization will become obsolete and a way to avoid it is to seek knowledge. Trott (2012) quotes that in knowledge based markets, with the right sources of research and informations, enable increase the success probabilities of a new product.

Companies seek to innovate to improve their relationships with collaborators, this can happen through a management and a culture of innovation in which innovative companies are well seen by the collaborators, so the organization can select the most appropriate professionals, and with the culture of innovation, collaborators have space to participate in innovation processes (SCHERER; CARLOMAGNO, 2016).

### 2.3 Innovation management

According to Jugend and Silva (2013) is through an effective and well structured management that an innovative competitive advantage can be reached. For Nunes, Queiroz and Furukava (2016) the management is a result of the interaction that enables the information sharing, joint actions and share responsibilities. Bezerra (2011) mentions that human resources are the most important part to innovate and to exceed the technology. Troff (2012) says that innovation is stimulated by leadership, people management, knowledge and creativity. All the authors quoted above can be analyzed in figure 2.

	1. Innovation model	2. Strategy	3. Organization	4. Processes	5. Performance indicators	6. Rewards	7. Learning	8. Staff and culture
To practice a solid leadership in strategy								
Integration in the business mindset								
Alignment with strategy								
To manage creativity and value capability								
Neutralize organizational antibodies								
To make networks								
Use of performance indicators and incentives								

*Figure 2: The 7 rules of innovation and the management tools, Source: Davila, Epstein and Shelton (2013, p.17)*

Figure 2 shows the degree of importance, as well as the management points that an organization needs to raise and follow when implementing an innovation, as the squares become darker, means that these points are fundamental in the innovation management process.

Innovation management is splinted in innovation model, strategy, organization, processes, performance indicators, rewards, learning, staff and culture. These are, according to Davila, Epstein and Shelton (2013), factors that strongly influence innovation in an organization. It is important to emphasize that if the company wants to innovate it must, first of all, exercise solid leadership in strategy, which involves the high management, the definition of an innovation model and the dissemination of this model to the team.

The dark points in Figure 2 relate to factors with which managers need to have special care, follow-up, and focus on their processes. Staff and culture are of fundamental importance, being the role of management to stimulate in their employees the development of innovation, since everyone in an organization is important the process.

A leadership can be considered a stimulus of innovation (TROTT, 2012) having its importance in encouraging creativity, opening doors to people and teams to develop and create a culture of innovation that will tend to multiply in the future. "Inside the organizations, it is the individuals, in the role of administrators, who decide which activities are to be carried out, the amount of resources to be used and how they are to be developed" (TROTT, 2012, p. 10). So the leadership and managers are the key to organizational innovation.

In addition to leadership, it is important to highlight performance indicators as a way of monitoring and measure the investments and returns of innovation. In this regard, Bezera (2011) and Trott (2012) consider using all possible management tools to achieve innovation, on the other hand, for Davila, Marc and Shelton (2013) the innovation requires resources, skills and experiences from various areas, as Crawford and Benedetto (2006) says that areas should communicate to each other to create innovative products. Schumpeter (1934) also argues that innovation must come from in to outside, counting on the collaboration of all.

Another characteristic is related to maturation time. Kotler e Bess (2011) affirms that the innovation has a planning of 3 to 5 years, with annual revisions that shapes strategies and resources. Investing in innovation demands time, planning and development, the result usually does not appear in the short term (KOTLER; BESS, 2011), it can be said that is why companies often do not innovate, because the focus is on a quick return. For this reason, some companies copy others to launch similar products, so they do not have to make big investments and efforts, also, it reduce the return time, but they never will become the pioneers of innovation.

## 2.4 Innovation classification

The term “innovation” is so broad that in 1990 the Oslo manual was created by the Organization for Economic Co-operation and Development (OECD) to standardize the concepts about technological innovation and to involve R&D papers from other industrialized countries as well as others approaches. In this paper it will be classified by its types: i) in products, ii) processes, iii) organizational and iv) marketing.

The innovation in products can be defined, according to Oslo manual (2005, p. 57) as “it is the one that has implemented technologically new or significantly technologically improved products or processes during the period under review”. However, it is not only the manual that does this classification. Bessant and Tidd (2015) defined as a change in products and/or services that a company offers. Jugend and Silva (2013) mention that it is the introduction, of a new or not, product in the market.

Inside an organization the innovation of a product or service can happen through a system, having the possibility of the existence of an own R&D sectors. Crawford e Benedetto (2006) says that it is necessary strategy, the support from the high administration and cross-sector collaboration.

The innovation in processes is understood as an improvement in an already existing project or the creation of a new one. It can include changes in the technique, softwares and/or equipments (OSLO MANUAL, 2005), introduction of novelties in production processes (JUGEND; SILVA, 2013) and encompass logistics and supplies (BAUTZER; 2009). For Scherer and Carlomagno (2016) the innovation in processes can mean cost savings and productivity gains.

Innovate in processes encompass the entire organization, for Scherer and Carlomagno (2016) it means in efficiency and an increase of the productivity. As an example, they cite Toyota that revolutionized the automotive industry by redesigning its processes. “The company keeps its productivity better than its competitors” (SCHERER; CARLOMAGNO, 2016, p. 26). The innovation in processes is directly related to the quality movement that emerged in the 50’s, which is concerned with efforts, production and services (JURAN, 1992) seeking customer satisfaction. This movement stimulated improvements in internal processes with external results. For this reason, quality is one of the most addressed points by process innovation; the process innovation should be accompanied before, during and after its application so that there are no financial losses and rework.

Organizational innovation, on the other hand, aims for improving working methods and presenting a new look at what already exists. It can happen as a new method in business practices (OSLO MANUAL, 2005), and it should involve the collaborators (TROTT, 2012).

The marketing innovation can be understood as a positioning change of the product (OSLO MANUAL, 2005) or the creation of new concepts (SCHERER; CARLOMAGNO, 2016). The marketing innovation seeks for discovery and meets the customers needs (TROTT, 2012). An example of marketing innovation are

companies that left their area of production of a particular product and expanded to other types such as Coca-Cola, which in addition to its main product, increased the line producing other types of products such as T-shirts and pens. These companies have changed their concept.

Another relevant classification to be presented is about radical and incremental innovation, being classified according to the intensity of innovation impact. The radical innovation was first introduced by Schumpeter (1934). For him it is something completely different from any product or service that came before, it can be defined as fundamental to the growth and survival of companies, and can replace a current product (CRAWFORD; DI BENEDETTO, 2015). It is related in great transformations; they have unprecedented characteristics and can change the direction of the markets. An example would be the evolution of CD to digital media in MP3. It was a change in the technology with a completely new product.

On the other hand, incremental innovation has a moderate degree of novelty (JUGEND; SILVA, 2013). An example would be in the pizza segment, the adoption of new toppings, where the existing product is modified, but it is not something completely new.

### 3 METHOD

The methodology within a research, according to Kumar (2014), is to make a problem searchable. When classifying methodology were considered the research paradigms (KUMAR, 2014), the research classification and its objective (YIN, 2015). Based in the meaning of a paradigm as a principle originated from research in a scientific field, here the paradigm involves understanding the evolution of innovation practices within Sabin Laboratories, linking the scientific knowledge presented in theoretical reference and with the collected data.

The research classification delimits its path (KUMAR, 2014) and set how the data will be collected and confronted. Figure 3 shows the research division according to the classification of nature, objectives, procedures and approach.

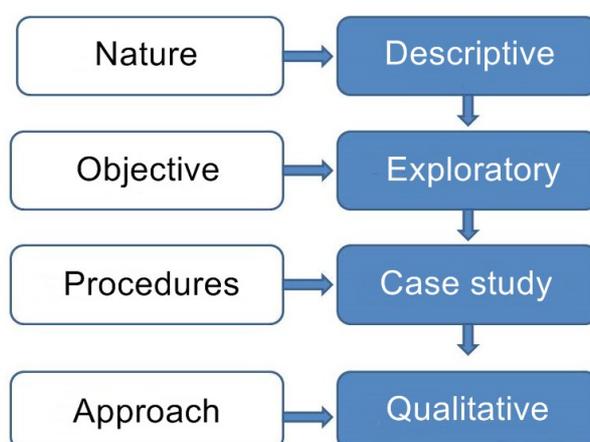


Figure 3: Research classification, Source: Adapted from Aranda (2009)

It is a descriptive work, as presented in figure 3, which the objective of explain situations, facts or behaviors (KUMAR, 2014), to study the characteristics of a determined thing comparing and showing its properties are the phenomenon and the researched context (KUMAR, 2014).

Figure 3 also shows that the research has a exploratory objective, thus, it was necessary to observe the environment and the people, to seek for information of the organization from its opening to nowadays to a better comprehension of the innovation theme inside the company.

The procedure adopted was the case study. According to Kumar (2014, p. 201) the case study happens without the worry formulate a theory, its objective is “to study deeply the phenomenons inside its context”, it means that the purpose is to relate a specific and unique experience of the local, the study comes from the desire to understand complexes social phenomenons. Thus, it was utilized an intrinsic case study, where the case is also the studied object. The case study was to investigate the emergence of the innovation within Sabin Laboratory.

The company was selected in the search for companies with reference in the area of management and in the quality in processes and innovation, the choice was made for the accessibility that the company provided in data collection, allowing recording the interview and sharing the data in this paper.

The approach was qualitative because it was a research that described innovation points within the Sabin Laboratory, with characteristics of interpretation and using the data collected to interpret and analyze about the adoption of innovation.

The technique of data collection was the interview with the Technical Director and the Human Talents Coordinator, together with the analysis of the documents made available by the organization. The semi-structured interview script is contained in Appendix A and contains 36 questions divided into the following categories selected a priori from the theory: already developed innovations, processes of innovation, organizational context, challenges to innovation and competitive advantage. It should be noted that the Interviewee 1 has been the Technical Director of Sabin Laboratory for 9 years and the Human Talent Coordinator (Interviewee 2) has been in the organization for 5 years.

The interviews were recorded and transcribed, the analysis was performed through the content analysis of Bardin (1998). According to Krippendorff (2013) the content analysis is related to the interpretation of the collected data and how the phenomenon occurs. Bardin (1998) states that it is an analysis technique to describe the collected content that happens through practice. Thus, it was verified how innovation is present within the company and how it happens.

#### **4 DATA PRESENTATION AND DISCUSSION**

Sabin Laboratory has been operating for more than 30 years, having been founded in Brasilia in 1984 by Janete Vaz and Sandra Soares Costa. It has more

than 200 units in 10 states of Brazil, 70 of them are in Midwest and has more than 4.000 employees. The laboratory offers clinical analysis services, imaging diagnosis, vaccination service and check-up.

Its firm is "to offer health services with excellence", aspiration "to be a reference in health in Latin America" and its values are "credibility, ethics, socio-environmental responsibility, innovation, quality, respect for life and simplicity."

The organization has a quality management and accreditation standards, such as ISO 9001 (ISO quality management standards), ISO 3001 (ISO standards for risk management) ISO 14001 (ISO environmental management standards), and it is a member of the National Quality Foundation (FNQ), and accredited by the Accreditation Program for Clinical Laboratories (PALC).

#### **4.1 Innovative steps from Sabin Laboratory**

As a company which has innovation in its values, besides it is in a constantly changing sector, there are several actions to innovate within the organization (innovation in product/service). In addition to conventional laboratory services, the company offers complementary services such as 24-hour units, fetal sexing, drive-through unit, vein scanner, virtual reality glasses, kids space, a musical project and animators for children, these are considered innovations which are in contact with the patient.

According to Interviewee 1, the latest innovation was the creation of the one step test for the detection of Dengue, Zika and Chikungunya viruses. This test offers the prevention and the management of complications during the acute phase of the three diseases and it is another example of innovation in service, according to the Oslo Manual (2005).

As for the other innovations mentioned, the innovation of "24-hour unit" offers a service with a faster result. The "fetal sexing" refers to knowing the sex of the baby during pregnancy and its differential was how to perform the examination, which made it possible to decrease in the time frame for the analysis. The "Drive-through" unit is able to make a quick treatment. The customer does not need to park, this new system enables the customers to receive the samples or results from inside their car. The "vein scanner" offers more safety and comfort as it facilitates precise location of the veins through a green light.

As for "virtual reality glasses", "kids space" and "animators" have been created to attract children, who are more sensitive clients, so they can have fun in the laboratory with interactions through tables and balloons made by animators.

The "musical project", like the innovations aimed to the children, seeks to alleviate the tension of those who will do a laboratory examination, through a musician and a guitar that sings various types of music while patients wait for service.

These innovations are classified as innovation in services (OSLO MANUAL, 2005), according to Carreteiro (2009), these innovations in services bring solutions and benefits that the customer cannot find in other companies. As every innovation,

receiving this classification is needed to generate value, it is understood that meet the customers needs giving them comfort and relief to the stress generated by the laboratory environment itself can become a point of value creation for the organization.

Another interesting point is that these innovation in service comes from the patients needs and through the company essentials (firm + aspiration + values) as a part of the company philosophy, to provide good memories that impact the customer in some way, bringing a better environment is the company's competitive differential which can lead the customer to loyalty.

As for the innovation in processes (process innovation), according to Oslo Manual (2005), the blood samples, daily received, are stored in place called Technical Operational Center (NTO) what is considered as improvement in existing process.

*An innovation in process that happened recently with the change of the headquarters to SAAN, was the NTO, was made a new process system in which the sample go through the conveyor belt, is analyzed and discarded efficiently.*

The NTO, together with a new layout and investments in machines with a great potential of processing, optimization of time and transport work, generating the tests release to patients in less time, representing a productivity gain (JUGEND; SILVA, 2013), besides a competitive differential. This environmental optimization avoids a future rework related to logistics and supplies (BAUTZER, 2009) also representing a quality improvement (FEIGENBAUM, 1986).

The innovation in process also extends to the scientific advice formed by doctors from various specialties that interconnect the service, participate in the validation of results, as well as the laboratory research. It shows the care with quality and efforts by Feigenbaum (1986), this way when occurs a doubt about an exam, for example, the company has a scientific advice to solve it. For the customer, the innovation in process is not visible, but, it is fact that these innovations improve the quality and the trust in company services, an important characteristic for companies that deals with life.

For the organizational innovations, they can be found in the SHIFT system (automation platform). This platform controls the exam results that are provided to the customer. Also, through the platform is possible to follow every steps of collecting, transportation, processing, result release, who did and the time of each step. The platform is used by the attendants (who insert the data in the system registering the exams) and later by all the sectors that are part for the analysis and release of results. This platform is understood as innovative since it was the the first lab to release this technology, which enable the customer to access the results and exam history online.

In this sense, innovation is present in the structure (system) (SCHERER; CARLOMAGNO, 2016), in the improvement in the forms of work (OSLO MANUAL, 2005) and allows the integrated communication of employees in the same tool enabling agility and integration. Other systems are used as organizational

innovations within the company, such as Portal Sim, which is a tool in which supervisors and coordinators interact through indicators, record of evidence and goals that, according to Davila, Epstein and Shelton (2013), are essential for track the company.

Lastly, the innovations in marketing are also contemplated in Sabin. An example analyzed in the interview was the creation of a card where the customer, when going to perform examinations, is invited to fill the card with compliments to their doctors. In October 18 (Physician's Day) Sabin drives the cards to the doctors. This innovation creates a differentiated relationship among Sabin, its customers and doctors, as well as strengthen the relation between patient and doctor.

Another innovation in marketing that can be found in Sabin website was the "Brasilidades 2017" campaign, where Sabin reinforced the position of the company (TROTT, 2012) showing their essence and their values through the donation of handmade heart keyrings to the mothers who went to the laboratory in May. Similarly, the company launched a profile in Spotify (music application) being the first laboratory in Brazil to be present in this segment. This innovation marks what Sabin wants, to be in some way present in people's lives, to be remembered. With a profile, Sabin makes its mark to customers who are using their services or not. In this point it creates a new concept (Scherer, Carllagno, 2016).

#### 4.2 Origin of Sabin's innovative steps

After analyzing the innovations, it was notice the need to understand its origins. The innovations come from the network model (TROTT, 2012) and open innovation (CRAWFORD; DI BENEDETTO, 2015; SCHERE; CARLOMAGNO, 2016). Figure 4 shows the source list of Sabin Lab innovations.

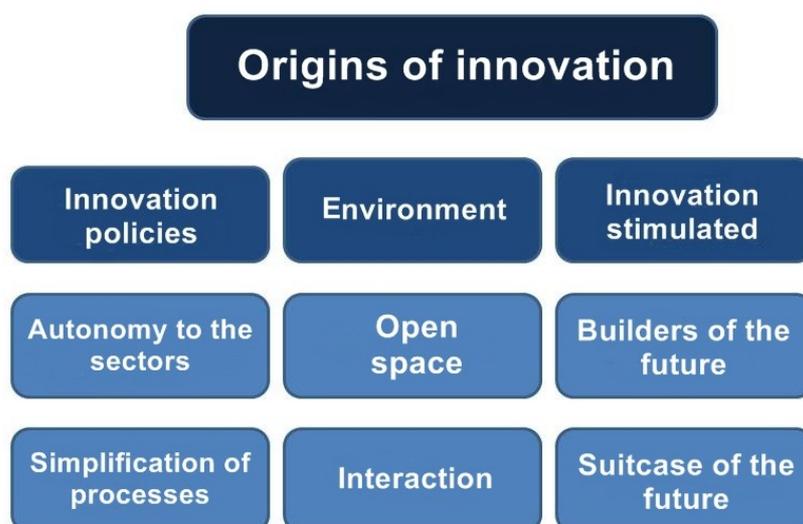


Figure 4: Innovation in Sabin Laboratory, Source: Data

The laboratory uses innovation policies, this means that the company does not centralize a sector to innovate, but rather it seeks to have all employees participating in these processes, giving them the freedom to create. In this sense, autonomy for the sectors is a way to achieve innovation. Another point refers to the search by simplification of processes, in this way, it is possible to “break the bureaucratic barriers” and encourage the creation of new ideas. It can be said that one of the origins of innovation is the network model, in which there is a shared language and efficient communication, characteristics that according to Trott (2012) are part of this model that as a benefit provide the simplified, collaborative work for the same purpose.

*Innovation is not “tied” to a specific management or sector. The sector that starts is responsible for innovation, with the collaboration of those affected, if applicable [...]. The management has the autonomy to start an innovation and this makes the process simpler, without depending on approvals from other sectors (INTERVIEWEE 1).*

It also emerges that this style is part of an open innovation, in which everyone can participate in the process (CRAWFORD, DI BENEDETTO, 2015). The interviewee affirms this thought when he says that innovation happens in an open way:

*It happens in a stimulated way [...] where we have problems and these problems are put to stimulate ideas (INTERVIEWEE 1).*

The organization's environment is also part of the innovation process, being considered as an innovative source. The sectors of the laboratory are integrated and the physical structure of the site makes it happens, according to the interviewee, that also cites:

*We opted for a physical arrangement in which there are no walls separating the departments, but a large open area, sector next to the sector where everyone works collaboratively, providing the interaction. (INTERVIEWEE 1)*

The sectors work in the same environment, this provides the collaboration to extract results and knowledge (TROTT, 2016) that are part of the open innovation, and the environment provides the interaction between sectors of areas in which they could have no link. It is noted, that stimulated innovation is a way that the laboratory uses for the engagement and creation of innovations characterized by an open innovation due to the collaboration of several people (CRAWFORD; DI BENEDETTO, 2015).

Within the presented, it is evident that the open innovation is present within the Sabin by promoting ideas among the collaborators and being able to collaboratively develop innovations of various types, besides a competitive differential the company manages to have a pleasant work environment and that allows the creation and development of new ideas.

Interviewee 1 exemplifies open innovation in a program (Builders of the Future) that takes place annually and is geared towards generating ideas. The program was launched in 2014, and according to company data, it was created so that the strategic planning of Sabin Laboratory could have the contribution of its collaborators with the development of ideas for new projects.

This selection does not happen randomly, it is structured and, according to Interviewee 1, they are mixed among the ideas of long-term and junior collaborators so that there is a balance. At this point the network model resurges, with the interaction of several profiles.

*It can have the participation of any collaborator, called "the builders of the future". This moment begins with the "Suitcase of the Future" where the employee suggests an idea for the organization and goes through a screening carried out by the innovation committee, where the employees are selected. In this selection the responsible ones are from the sectors which the idea will be implemented "(INTERVIEWEE 1).*

After the screening, the selected spend a day with managers and directors in groups to develop the ideas that were suggested. The program consists of two phases: pre-immersion (selection of ideas) and immersion, which is the day they meet. The ideas are read, sorted and stored in a database, and used for further queries.

#### **4.3 Organizational context and innovation processes**

The company has an organizational structure formed hierarchically with leaders, coordinators and directors. However, there is no specific area in the organizational structure that deals with innovation, as said before, innovation happens in a pulverized way among the various sectors of the company. So, it is understood that everyone can actively participate in the development of innovations. This characteristic was already pointed out by Schumpeter (1934), who said that innovation must arise within the organization and count with the collaboration of all.

Within the Sabin Laboratory it was possible to analyze that as the ideas are created they end up being shared and passed on by the organization's management not by a formal process, but by specific incentives. One of them is the Innovation Committee, founded in 2014, which manages innovation policies and incentives. According to the website of the laboratory, the committee is formed by professionals appointed by senior management and has the function of defining the theme of the new projects, validating strategic partnerships and analyzing the feasibility and impact on the business. Bimonthly meetings are held to monitor innovation projects called the "sponsors meeting".

*"At these meetings are presented the projects that were carried out and their progress, their financial return as a response to the investment made (INTERVIEWER 1)."*

Davila, Marc and Shelton (2013) related that to have innovation it is necessary to have resources, competences and experiences, it is identified at that point that the committee would be responsible for providing these resources and skills within the laboratory, as well as the experiences are acquired daily. Crawford and Benedetto (2006) argue that areas should talk to each other to create innovative products, this is cleared with the concept of open innovation analyzed within the company environment.

It was analyzed that the results of innovation are not immediate within the organization, and with policies of innovation, the environment and stimulated innovation, the laboratory presence innovation daily and the “builders of the future” that puts ideas into practice, mature and develops them and it takes time.

As for the Human Resources department, Davila, Epstein and Shelton (2013), who dealt with the importance of people management focused on innovation, it is conceivable that, according to Interviewee 2, the hiring of employees involves values, profiles and diversity.

*It seeks to align profiles with the department managers, looking for creative and innovative people not necessarily being the focus of a hiring, but because they are values that are part of the values of the organization (INTERVIEWEE 2).*

This point is related to the theory presented by Scherer and Carlonagn (2016) in which they mention that with the culture of innovation the employees can participate in the processes of innovation and that is why that innovative companies are more attractive for those who looking for a job. Both interviewed say that the company has become more attractive in recent years with the people management policy and that it seeks to hire people with diversified profiles.

Figure 4 represents the organization’s necessary characteristics for the current organizational culture, counting with the diversity of employees, alignment of the profiles with the requesting sectors and the individual values compatible with the values of the organization.



*Figure 5: Formation of the organizational culture, Source: Data*

Interviewee 1 says that innovation happens naturally, since the company does not work with rewards for employees who suggest or participate in innovation processes. Davila, Marc and Shelton (2013) present in Figure 5 that "reward" should appear in all stages of innovation management, not the case of Sabin Laboratory. What is observed in this case study is that the policies to stimulate innovation, the environment and stimulated innovation created a culture of innovation so strong that creating or reinventing something within the company becomes natural. One example was that when asked about the kind of reward that the "Builders of the Future" winners had the answer was that they were not rewarded, these factors are in the culture of the company and ends up happening spontaneously.

In essence, it can be said that the company is focused on innovation without, however, having a specific department to do so. There is an active participation of the organization with the figure of the Innovation Committee and the R&D area present in the NTO. Innovation activities are characterized by organizational culture, as shown in Figure 6.

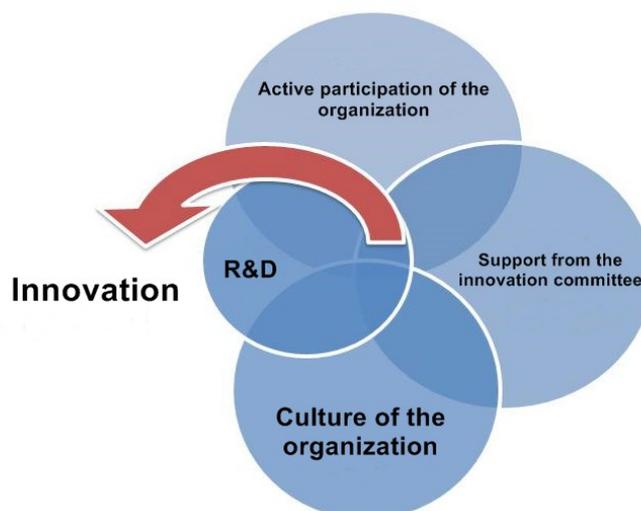


Figure 6: Innovation structure, Source: Data

Figure 6 show that each innovation has an answer, a structure or process to serve it. The active participation of the organization would be one of the main factors, the engagement is primordial, because as analyzed the innovation counts on the initiative and collaboration of the people, and this happens spontaneously. The support of the committee, who will enable the innovation process and the culture of the organization must exist so that participation becomes viable, also research and development can provide support to support innovation.

#### 4.4 Challenges to innovate

Challenges to be able to innovate can be to attract the customer (ZOGBI, 2008) to excel in the market (BEZERRA, 2011). These points were analyzed within the company in the way that Interviewee 1 mentioned that investments in innovation are more present in the mode of scientific congresses.

*The laboratory opts for investments in innovation through national and international congresses in the area of laboratorial medicine being scientific and with technical exposure, so the organization knows new equipment that can be used by it (INTERVIEWEE 1).*

As a strategy, the company monitors market trends and preferences. For this, the technical director of the organization presented some channels of communication with the patients, among them is the satisfaction survey about breakfast, in addition to the channels open for opinions through social networks.

*It is necessary to know your customers to understand their needs and follow the competition movement (INTERVIEWEE 1).*

In this point, is identified the use of the demand pull where it is necessary to understand customers and their needs (TIGRE, 2006) and through the tools of satisfaction survey and social networks the organization is able to collect this data, understand the client and work on it.

The challenge to innovate found in this analysis is to understand the customer and seek to meet their needs. It is observed that the laboratory can understand its customer through demand pull with the communication channels, and meets their needs through the investments and searches of novelties in the segment.

An example of demand pull as a source to acquire information to innovate was also observed in relation to innovation in services in the creation of the exam to identify the Dengue, Zika and Chikungunya viruses in 2016, a period in which Brazil experienced a large outbreak of the 3 viruses. The exam was released at the same time, improving the diagnostic time. Thus, the organization used a population's need to innovate and serve them.

Another challenge to innovate is to stand out in a competitive market, it has been found that the laboratory seeks to establish partnerships with suppliers, the laboratory is an organization focused on clinical analysis, thus using partner products and even outsource some analysis, for example a toxicological test, uses a kit from a partner company where the laboratory collects using this kit and forwards them. As a result, the organization is able to increase its services (BEZERRA, 2011) through its partners, thus standing out in the market with a greater number of services available.

Another challenge encountered in the organization is related to the specialization of tasks. Interviewee 1 explains that as the company was growing activities were being added to the daily tasks of employees, it was noticed a constant concern with day by day activities, lacking the time to think and reflect on larger situations. For Interviewee 1 it is necessary to think outside the box, that is, the environment is focused on open innovation, it is interaction of people, to be able to know how things happen and, thus, develop a greater flow of ideas:

*People start to look at what is on their table only, and it start to look like an automatic process[...] they can not see what is happening at their side [...] one of the concerns was this, the people are seeing what is happening [...] When we moved here, there were people sitting next to each other who did not even know they worked in the same company.  
(INTERVIEWEE 1)*

It was verified that the company works with the challenges of innovating in the search to meet the needs of its customers as Zogbi (2008) quotes through Demand Pull with channels that can receive these needs and work to innovate and meet them. It seeks to differentiate itself from the market by increasing the services performed by having partners so that the company is able to reach a greater number of services and people also has new information and technologies that it obtains through scientific congress, thus manages to bring a new technology faster, standing out in the market.

#### 4.5 The seek to competitive advantage

The company has a business policy and as already presented several times in this analysis does not manage the innovation in order to monitor and process the stages of innovation. Within its policy, the company offers general conditions to be innovative. With this, it manages to create innovations with a broader vision. Once again Freitas Filho (2014) points out that innovation often does not have an immediate return and the result does not appear in the short term. "It seems that lots of strategic planning includes reviews in market and rivals, problems like updated market share, income, annual growth prediction. These planning could also include strength, weaknesses, opportunities and threats analysis" (Abtahi; Jafari, 2013).

As an example, can be presented the cards that are given to the doctors, mentioned above, which constitutes an innovation that had the vision of the Relationship sector and customer service. This shows the theory presented when Crawford and Di Benedetto (2015) argue that areas should talk to each other to create innovative products. The card is a breakthrough that brings together both patients and doctors differentiate the company by showing care and attention to both parties.

*Innovation does not necessarily have to go through a funnel [...] the cards, were generated within a management, it was put into practice and then it expanded [...] there is no such need for a centralized approval.*

Another competitive advantage is that the company monitors the technology and follows the trends, being aware that the area of diagnostic medicine will change a lot in the next 5 years and seeks to align the expectations and regulations that the market imposes. Kotler and Bess (2011) already stated that the innovation needs a planning period of 3 to 5 years, at which point it was analyzed that the company holds a semiannual "sponsors meeting" to follow the innovations, besides monitoring the market trends and participate in scientific congresses seeking to innovate.

Innovation also has a measurable influence on financial performance, Interviewee 1 explains that it is not something immediate.

*It is like the example of the cards, it is an innovation and I can not quantify how much each card that is sent to the doctor will bring back, but it is an innovation and it will bring a return, the loyalty of the doctor and of the patient, that sees that something different is offered in a mere rendering of service, and then the obtaining of a result. (INTERVIEWEE 1)*

As discussed by Crawford and Di Benedetto (2015) there is no measurable return, but one that differentiates the organization, with this the laboratory has already expanded this innovation for mother's day and parents.

As a service company, it seeks to attract its customers, in addition the company has customized structures and this is the key to its prominence in the market. Interviewee 1 explains that it is an innovation, but that is far beyond the cost and returns, it is to attract customers, and to retain loyalty, provide memories and leave something in the people that make them want to return.

## **5 FINAL CONSIDERATIONS**

It was considered that the models of market demand, simultaneous models, interactive, network and open innovation are innovative measures adopted by the organization. It was verified that within the company the use of network innovation and open innovation gains more emphasis and that demand pull are present in the organization as ways of seeking knowledge about the market in which the company is inserted.

It was analyzed that the Laboratory uses open innovation and the network model by unlinking standards and opening space for everyone to think and develop innovation. With this, the company achieves significant results in the market and each year stands out more.

The specific objectives were reached and answered, since it was possible to identify the aspects that lead the Sabin Laboratory to adopt innovative measures formed by the innovation policies through the autonomy for the sectors and the simplification of the processes. The environment with open spaces provides the interaction of employees and innovation stimulated with the example of The Builders and The Suitcase of the Future.

Regarding the organizational structure, it was noticed the absence of an area exclusively focused on innovation, presenting other aspects that lead to the creation of a culture of innovation. Equally absent are the organizational processes focused on innovation, resulting from the inexistence of an area of innovation.

The challenges identified are linked with attracting customers and standing out in the market, in addition to get the collaboration of the teams for collaborative works. The competitive advantages and the ways to get them through innovation include the general conditions to create, monitoring the market and its customers, with constant interactions and a search to meet their expectations every return that the patient makes.

The overall goal was achieved by analyzing the use of innovation within the organization as an open and networked way with collaboration and innovation policies. With that, was it possible to answer the research problem of how is the adoption of innovation practices in Sabin Lab? It has been realized that it is present in all sectors, and acts in a collaborative way among people, just as the environment provides their involvement.

This research presented some limitations. The first one was to present a restricted number of research subjects, and it is not possible to triangulate the data. Also, because it is a case study, we can see a limited reality to a single situation.

Based on that, as a future agenda, it is suggested that new researches about innovation in services seeks for a broader view of organizations that do not use an innovation structure to innovate. Another proposal of study would be related to the better understanding of how the management of innovation within laboratories is performed, with the intention of analyzing the practices of the sector, a quantitative research is proposed.

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