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THE MANAGEMENT OF INNOVATION TO GENERATE ADDED VALUE IN THE FLEXOGRAPHIC PROCESSES: A CASE STUDY IN THE COMPANY SUPPRY ETIQUETAS

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ABSTRACT

The present study has as its theme the management of innovation to generate added value in flexographic processes, being delimited in the analysis of the processes of the company Suppry Etiquetas. It is questioned how innovation management can generate added value in the flexographic processes of the company Suppry Etiquetas. The objective was to understand how innovation management can generate added value in the company's processes. Methodologically, the research was characterized as an exploratory case study, with the data being analyzed qualitatively. Data collection occurred through a literature review in books, magazines, and on site, with a semi-structured interview with the company owner, with the application of a questionnaire containing 7 questions. As main results of the research we highlight that the innovations of processes all of them represented some kind of cost reduction, and implementation of the program 5s, being this very important for the organization of the company. In the innovation of products in addition to the two new products that started to be produced by the company, it is worth mentioning resale items that had an increase of 57,07% in revenue, after the realization of a change of strategy.

Keywords: Innovation Management; Added Value; Flexographic Processes.

1. INTRODUCTION

The contemporary world is undergoing a continuous process of evolution more and more rapidly. Evolution is something natural in humanity, but in the last two decades organizations present technological solutions, allowing different possibilities that did not exist before. This is the case in any market segment and is not different in the graphic sector.

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With all this process of change that has been taking place, the management of innovation is something crucial within organizations so that they can obtain added value in all their processes, making them competitive advantages in the market in which they operate. In this way, companies in the graphic sector move, working the innovation management process in their processes not as an isolated fact, but rather something that involves all people.

In this sense, it is worth highlighting the importance of innovation for companies in the graphic sector to remain competitive, this process needs to count on the involvement of all the people who make up the organization, so that it even succeeds in the short, medium and long term. From the moment this process is conducted correctly, it becomes a competitive differential, since the lack of innovation can be considered as an obstacle to the growth of companies in the sector (Nagano et al., 2014).

Following this context, the present study has as its theme to be researched "the management of innovation to generate added value in flexographic processes", being delimited in the "management of innovation as an instrument to generate added value within flexographic processes", in which it has as research problem the following question: **how can innovation management generate added value in the flexographic processes of the company Suppry Etiquetas?**

Innovation management has become over the years, a tool of paramount importance for companies in the graphic sector, so this study aimed to understand how innovation management can generate added value in the flexographic processes of the company Suppry Etiquetas. The specific objectives of the study are: To understand the concept of innovation management, to define what is added value, to describe the flexographic sector, to analyze and present the innovation management process of Suppry Etiquetas and how innovation management generates added value and competitive advantage for the company, and to finalize the final considerations. Following the study in question, the theoretical framework will be presented in the next chapter.

2. THEORETICAL FOUNDATION

2.1. Innovation Management

Innovation management is an important tool for organizations to remain competitive in their market, because from the moment this process is well structured it increases the performance and competitiveness of the company. Non-innovation can represent a decline of

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the company that needs to remain competitive in the market, not only understanding the importance of innovation, but rather that it is not an isolated fact, but a process that needs management (Nagano et al., 2014).

Faced with this new moment that creates innovation is not the only way to keep the company competitive, it needs to work its processes in a systemic way (Crossan & Apaydin, 2009), so alternatives will be found that best fit its business profile, this being the great challenge of managers (Monteiro, 2015; Ponomariov & Toivanen, 2014). However, despite some literature, they affirm that innovation can make companies more competitive, there is not even a formula for how this process can be made to generate the greatest possible value (Smith et al., 2008).

In general, the innovation management model is associated with products, but this model goes far beyond simply improving or developing new products, but rather encompasses a change in the philosophy of an organization, where innovation is in all processes, and can be in the production or improvement of a good or service (Tidd, Bessant & Pavitt, 2008; Salerno et al., 2009). Tidd, Bessant and Pavitt (2008) highlight that the development of effective innovation management goes far beyond good business management, but rather it encompasses the search for a better configuration of the business in the environment that the organization is inserted.

In this context, innovation management can be understood as planning, organization and coordination for development, seeking innovative results. For this to happen, all individuals need to be involved in the construction of an innovative model, covering several hierarchical levels of the company, seeking to generate many ideas and knowledge of all areas so that the process becomes as effective as possible, generating a competitive differential for organization, but this whole process needs to be managed correctly, in this way the expected results will be achieved.

The results that an organization achieves in terms of growth and development, is a mirror of its way of managing its internal innovation management process (Ramos & Zilber, 2015). In this sense, what will differentiate the company from its competitors is a good management of the innovation process, thus emerging opportunities to be explored (Robertson, Casali & Jacobson, 2012). Within this process, two types of results are considered: (a) those related to the purpose, to generate some kind of value for an organization that maintains partnership (b) those related to specific objectives of the organization established for more

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different reasons, which happens in the day-to-day or long term through the relationship with its stakeholders (Barbieri, 2003). It is worth mentioning that the result of innovation will only generate some competitive advantage, from the moment it presents some positive result (Woerter & Roper, 2010).

For the development of strategies that provide the generation of new ideas, there is no ready formula, it can vary according to each organization (FGV/EAESP Innovation Forum, 2014). Thus, it is up to each manager to understand the peculiarities that involve each process of the organization.

From the moment that the innovation management process becomes a factor that determines the success or failure of an organization, it is up to them to reevaluate their processes and not think that only producing efficiently is the solution, customers expect news, and that they generate some kind of value in their product.

Following this line, it is feasible to affirm that the implementation of innovation management involves the approach of three areas of the organization: creation of a portfolio of innovations; creating an appropriate organizational environment, and creating value for the customer from innovations. Thus, it is evident that every day new challenges arise to be managed.

However, for an organization to continue to act competitively in the market, it needs to do with what the culture of innovation is implicit in all its processes, in this context the industries of the graphic sector start in front of the other ones, because their activity requires every day a pinch of innovation. Because service that sector offer in the market differentiates products at points of sale, so it is not considered a cost, but rather leveraged sales. Being is the main feature that makes Suppry Etiquetas a company that has in its DNA innovation.

2.2. Definition of What is Added Value

As defined by (Lean Manufacturing, 2018), the concept of added value is defined in terms of specific products or services that have specific capabilities/functionalities, offered at specific prices to specific customers in time intervals, and may vary according to the perception of each client.

Following the concept of (Lean Manufacturing, 2018), we can classify the value-added cycle of a product or service into three processes (activities that add value, necessary activities and waste).

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- **Adds value:** Raw material processing activity in products, in the graphic sector can cite the label, because an unlabeled packaging it is only an unknown product, with label it becomes a recognized brand, generating immediate value for the purchase.
- **Necessary activities:** Consume resources, do not contribute directly to the product or service, but are highly necessary.
- **Waste:** These are activities that generate some loss of the process, and if they are eliminated they will not be missed.

Following the context of added value, the innovation management process appears as a differential in this concept, because it is the specific instrument of entrepreneurs who seek to generate added value in their processes, that is, the means by which companies explore change as an opportunity for a different business or service, being a sustainable advantage (Drucker, 2000; Carlomagno & Scherer, 2013). It can be said that innovation is a mechanism of great importance for the differentiation of organizations in the search for new practices or execution of activities in an improved, improved or exclusive way, becoming an important source of added value in industrial processes.

In this same line, it is perceived in the daily life of organizations, that the generation of added value in organizations, has innovation as a competitive differential within a given company is something complex, due to the high speed that changes occur in real time, and the generation of innovations in products and/or services becomes one of the main elements of competitiveness, being predominant for the survival of organizations (Bautzer, 2000; Carreteiro, 2000).

In this context, organizations have to seek to understand the environment in which they are inserted, in addition to their own competencies and limitations, in order to develop efficient and effective strategies, understanding the concept of value by their clients. In this sense, it is essential to study useful tools for organizational and marketing diagnosis to obtain this differential in relation to competition (Ceribeli, Meadow & Merlo, 2010).

Given the above, Prahalad and Ramaswamy (2004) state that one of the alternatives of generating value, is in the exploration of all the team that is involved in the processes for these can be creative and innovative. In the same sense, Nagano et al. (2014) and Mello (2010) point out that innovation has the ability to directly impact the competitiveness of a company, generating added value in its processes. Therefore, innovation should not be understood as

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something fortuitous or occasional (Silva et al., 2014). Although creativity occurs more easily for some individuals than for others, innovation and creativity are not innate (Dyer et al., 2011).

In this path the management of innovation can be considered one of the main factors that contribute to the generation of value within the processes of the industries, whatever segment the company, because it is able to generate continuous improvements in all processes, making the organization increasingly competitive. In this same context when understanding the processes of industry, the great possibility of the emergence of ideas that may become some kind of financial gain, generating added value for industry and for customer. This is the great challenge of companies in the graphic sector, more specifically that of Suppry Etiquetas.

2.3. Description of the flexographic segment

The printing industry provides its entire customer chain with extremely creative designs that are able to leverage sales of products at a point of sale. Cruz (2011) states that in an average supermarket there are about 27,000 items at our disposal and that the time of a consumer in the store takes an average of 45 minutes. In this context, the equation can be performed: 45 minutes X 60 = 2,700 seconds, that is, we visually obtain 10 items per second. According to POPAI Brasil (2004) 81% of the decision to choose between brands is made at the point of sale and, in addition, Mestriner (2011) raises the estimate that every year about 6,000 products are launched in Brazil.

In this path, the label or label, has the power to influence the consumer's purchasing decision, from the moment it is elaborated in a creative and innovative way it becomes a great ally of those who acquire it to generate value to their brand (Wittmann, et al., 2017).

According to Zukowski (2011), the label or label of a product comprises a harmonious design between packaging and product, capable of attracting the attention of the end customer, translating the essence of the product that is in the packaging. To develop a good innovation process on a label of a product, it needs to be developed with the participation of all involved in the process, analyzing all possible variables, which can generate some impact on the final product.

Visualization technologies help the democratization of creative design (Ambrose & Harris, 2012). However, understanding of printing processes is crucial for producing a quality label or label. When creating a base where a product is recognized by its label, without it the

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product loses its identity in this context Negrão and Camargo (2008) ask a question about the subject:

> [...] imagine a box of cornstarch or a packet of wheat flour, you probably remembered Maizena or dona benta flour. Who 'lent' an image to each of these products was the packaging with a printed image, because the product itself, is a powder that can not identify itself or classify itself easily (Negrão & Camargo, 2008, p.336).

Given the importance of the graphic segment, a new philosophy is created that is adopted by companies in the sector, even though it is characterized by rapid and complex changes, which refer to the reflection on how companies manage movements in their markets (Michael, 2013). In such changes, the increasing insertion of technological resources in business has facilitated the advancement of the economy to the global competitive level, including price, bringing the relationship between demand and supply (Dogan & Aydin, 2011). In this environment, knowing the life cycle of graphic products, developing new technologies and raw materials that make this process a little more sustainable is a path to the success of the sector.

In this way the graphic sector constantly works with words that involve sustainability, sustainable projects, social actions and environmental issues, becoming part of the strategic planning of companies in the graphic sector, so the internal processes of the company begin to undergo many changes, these changes begin to become a competitive differential in the market, becoming an important action of innovation management as added value (Wittmann, 2017).

In this context, when industries in the graphic sector are concerned about the negative impacts that their processes can generate, environmental indicators begin to be created capable of identifying points in their processes that can negatively impact on nature (Sebastiany, 2012). Thus, a synergy between the printing industry and the environment begins to emerge, in which industries begin to rethink their activities within their complexities, prioritizing the use of ecologically correct practices, tracing a path towards sustainable development, with innovation management being the way to leverage this process.

In this way the processes mentioned above will become a competitive differential in the market, from the moment the companies in the graphic sector understand that innovation is the path to sustainability of their business, making this theme an important competitive differential when seeking future customers. This search will bring tangible results to the graphic sector from the moment that the meme of innovation management, is incorporated into all its processes.

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It is always important to emphasize that the printing industry is a very broad segment, because it serves several segments, such as different printing processes, not always all sectors of this segment, are susceptible and the implementation of improvements in their processes. Thus, seeking to give a greater limitation to the proposed study, research will be carried out in the flexographic segment narrow band, having as object of study the company Suppry Etiquetas.

2.3.1 Narrow band flexographic printing

The flexographic printing process, which is classified as flexography, treats two different processes. The first works with broadband printing (packaging printing) and the second narrowband printing is related to the production of (labels and labels), the latter being the object of this study, in which the printing of labels and labels is the main activity of Suppry Etiquetas (Wittmann, 2017).

Flexography is a direct printing process, made with matrix, rubber cliché or polymer photo, embossed. The principle is the same as the stamps, in which the elements, which will be printed, embossed in the matrix and receive ink, being printed on the support from the applied pressure. Due to its speed and the large low-cost print run, flexography has become a competitive option for printing flexible packaging, considering that in flexography each color corresponds to a different ink and the machines use six to twelve water-based inks (Wittmann, 2017).

Following information available on the website of the Brazilian Association of the Graphic Industry (Abigraf, 2018), flexographic printing narrow band is a process of graphic printing in which the form, a rubber or photopolymer cliché, is embossed. Highly dry, water-based, solvent or UV-cured liquid inks or electron beam-cured liquid inks are used. One of its virtues is the flexibility to print the most varied supports, of different hardness and surfaces. Figure 1 presents an illustration of the printing process.

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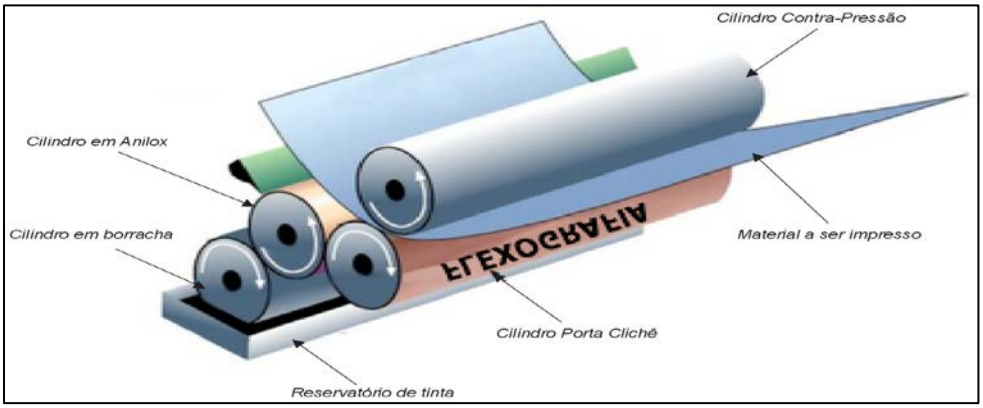

Figure 1: Flexographic Printing Process
Source: Abigraf, 2018.

With technological advances, Villas-Boas (2008) comments that it is necessary to divide the process into three major groups: rudimentary, conventional and state-of-the-art flexography. Rudimentary flexography is used in packaging for the sole purpose of protecting the product, as it provides printing problems visible to the naked eye, such as excessive squash, flaws in uniform ink areas and elements with very irregular contours.

The conventional flexography model stands out as the most used in graphic parks in Brazil and in the world, due to the low cost in high runs and with reasonable printing results. Villas-Boas (2008) points out that this type of flexography generates better results with stroke prints, but lower yield in the midtones, due to the aforementioned point gain, causing poor definition in small and detailed elements.

Finally, state-of-the-art flexography combines innovations in matrices, inks and printing equipment responsible for better resolution with points invisible to the naked eye, for the extraordinary decrease in point gain, as well as in the significant reduction of squash, this being the model used by Suppry Etiquetas, which sees in this production method an important source of innovation that generates added value in its production systems.

Thus, we can infer that from the moment that companies in the graphic sector begin to understand the innovation management process as a competitive differential in their market of operation in front of their competitors, the opportunity to generate added value, in front of their competitors.

3. METHODOLOGY

In this chapter, the methodology that was adopted in the development of the present work was described, that is, the characterization of the research, the object, the procedures for

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collecting and analyzing the data to meet the general and specific objectives defined by the researcher.

In this context Gil (2010, p. 9) defines method as the "[...] way to reach a certain end", and scientific method as "[...] the set of intellectual and technical procedures adopted to achieve knowledge". Remembering that, according to Marconi and Lakatos (2015), for each research project an appropriate method is used to carry it out that will depend on the type of research in question.

As for the scientific method, the present research is classified as deductive, since from true premises we sought to achieve the results, that is, one can reach the conclusions that answered the research problem and proposed objectives.

Regarding the type of research, this is non-experimental, since an object of study was selected, and some variables chosen for its influence and effects on the object were analyzed (Gil, 2008).

As for the characterization this work is characterized as a case study. According to Yin (2015) the "case study is used in many situations, to contribute to our knowledge of individual, group, organizations, social, political and related phenomena. In summary, a case study allows those investigated to focus on a "case" and retain a holistic and real-world perspective".

As for the objectives, the study is exploratory, the choice of this method was made, because it established criteria, methods and techniques for the elaboration of a research and aims to offer information about the object of this and guide the formulation of hypotheses (Cervo & Silva, 2006).

Seeking to give a greater theoretical anchor, this research made use of the literature review based on books, academic articles, monographs, these and other studies focusing on the management of innovation in the graphic industries. In other words, this was a bibliographical research based on primary, secondary and documentary data.

Initially, seeking to analyze the innovation management process of the company Suppry Etiquetas, observation was carried out on site, through a field research using a questionnaire and a semi-structured interview, answered directly by the owners and / or employees responsible for the management of the company. The results obtained through the research will be presented in the form of pictures and figures, and analyzed qualitatively.

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In qualitative analysis, data are collected through techniques that are unstructured and treated by interpretative analyses. The results obtained are not generalizable (Vergara 2010, p. 242).

The research in question was carried out in three stages: Preparation of a questionnaire, data collection, presentation and analysis.

- **Step 1** - Preparation of a questionnaire: In this stage, a semi-structured questionnaire was elaborated, containing 7 descriptive questions, presented in the appendix of the study.
- **Step 2** - Data collection: This step included an interview with the manager of Suppry Etiquetas, lasting approximately 40 minutes.
- **Step 3** - Type of data analysis: In this step a content analysis was performed, where all the data collected in the previous stages of the research will be described.
- **Step 4** - Presentation and analysis of the data: In this stage the data collected through the application of the questionnaire, will be analyzed qualitatively, after it will be presented in the form of "run" text, answers the specific objectives of the research in question.

After presenting the stages of the research, we set out for chapter 4 where the results of the research will be presented.

4. PRESENTATION AND DISCUSSION OF RESULTS

The competitive environment has encouraged companies to seek profit at any cost in this context, innovation management becomes an important tool that companies start working on, to generate added value in all their processes, generating competitive advantages in their market. In this context, the company Suppry Etiquetas included in its strategic planning actions that began to prioritize the development of actions that encourage the innovation process in its processes. Becoming a complex scenario, but which should have the ability to integrate employees with the company's objectives, thus in this chapter will be presented the results obtained by the company with this new form of management.

4.1. The company

The company Suppry Etiquetas, based in the municipality of Estrela, serves, with its services, the entire national market. The company has more than 17 years of experience in the

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market, its team and composed of 25 employees who work at the company's headquarters, performing the most varied activities, the company's commercial team and composed of 27 representatives who serve all over Brazil.

It has state-of-the-art machines, qualified professionals and a sales team trained to meet the needs of the customer and the market as a whole. The company, in turn, seeks to reinvent in all its processes and in the implications and needs to be more and more about developing social and environmental actions.

4.2. Analysis and presentation of the innovation management process of Suppry Etiquetas

Based on the data collected in the interview, the first question answered was: **How does the Innovation Management process of Suppry Etiquetas take place?**

Manager's Response: "The innovation management process of the company Suppry Etiquetas, has undergone some changes over the years, in order to generate greater added value in all its processes and make these changes competitive advantages. All these changes have been fundamental to the growth and development of the company over the years".

When a company has a well-structured innovation management process, where all employees are engaged with process and product improvement, surely these factors will transform into competitive advantages in the market (Ramos & ZIlber, 2015).

The second question to be answered was: How is the innovation management process divided?

Response from the manager: "In this sense the innovation management process of the company is divided as follows: Process Innovation and Product Innovation". Initially, we speak of process innovation, which happens as shown in Figure 2.

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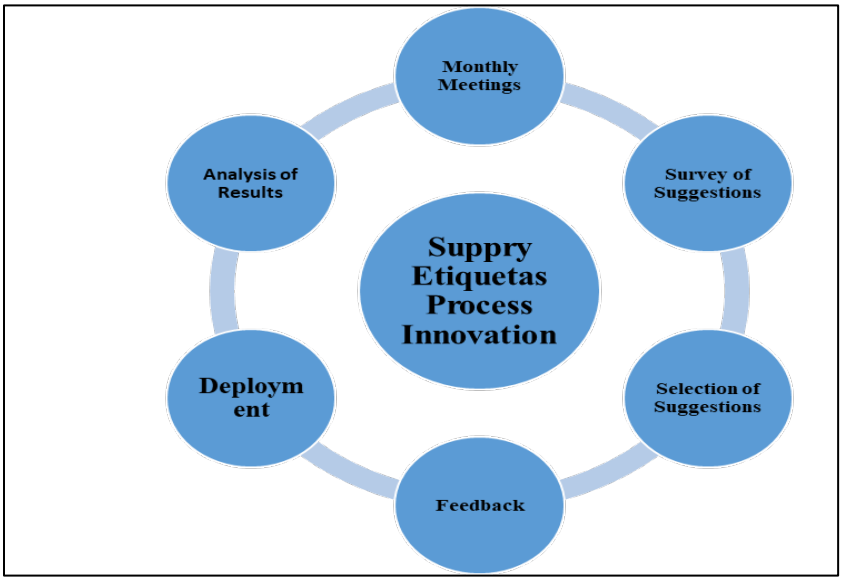

Figure 2: Process Innovation Flow
Source: Prepared by the authors, based on the research.

Figure 2 presents the flow of process innovation, which is structured in 6 stages, as will be described:

- **Monthly meetings:** Company management defined that in the first week of each month a meeting is held for each sector of the company (production, administrative, finishing, pcp), commanded by the industry leaders, in order to analyze the ideas of each employee to suggest improvements in all processes that participate. Meeting lasts 40 minutes, a form is distributed to All employees so that they can give their suggestions.
- **Survey of suggestions:** All suggestions are made via form, this is delivered at the end of the meeting, employees leave the forms filled out with industry leader.
- **Selection of suggestions:** Industry leader takes the suggestions to the direction of the company, these are analyzed together, to analyze the feasibility of the implementation of the suggestion or not.
- **Feedback:** After defining whether suggestion was accepted or not, it is talked individually with collaborator who gave suggestion, and passed the final evaluation on this to himself.
- **Implementation:** Analyzed the suggestions, part for deployment if there are any approved.

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- **Analysis of the results:** Implemented the suggestions is carried out an analysis during three months, of the results achieved. If these are proven, employee receives 3% of the net profit that innovation represented.

After a description of each step that involves innovation in processes, we start for product innovation, as shown in Figure 3.

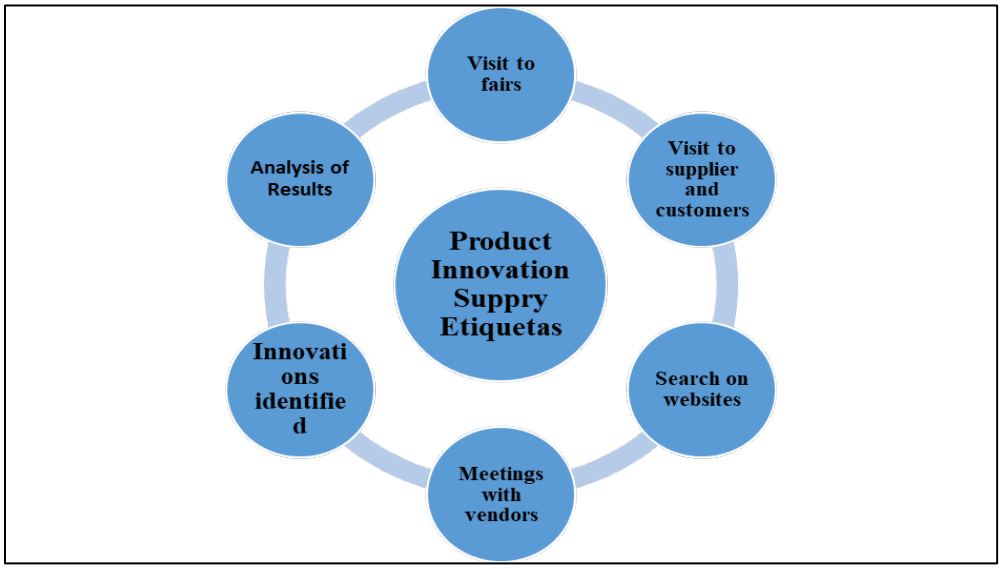

Figure 3: Product Innovation Flow
Source: Prepared by the authors, based on the research.

Figure 3 shows the flow of product innovation, which is structured in 6 stages, as will be described:

- **Visit to fairs:** Company has as planning to visit the fairs that graphic sector, in search of new technologies and raw materials, so that these can represent improvements in the final product developed by the company.
- **Visit to suppliers and customers:** Visits to customers are made by the company's representatives on a daily basis, they send monthly reports for analysis of the company's management, and this group is composed of 27 people. Visits to suppliers is carried out sporadically by the technical area, being more common they come to the company's headquarters. Ideas and suggestions are collected from all these agents in order to improve the efficiency of the final product.
- **Search on websites:** Company monitors, suppliers' websites, customers and competitors in order to identify new business possibilities and raw materials.

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- **Meetings with sellers:** They are held monthly with the entire sales team, possible improvements and ways of acting in the market are discussed, which can improve the company's results.
- **Innovations identified:** When possible innovations in products are identified, these are structured, analyzed the feasibilities of this suggestion and put into practices.
- **Analysis of the results:** Implemented the suggestions is carried out an analysis during three months, of the results achieved, for continuity or not of these.

An organization needs clearly, the description of how its innovation management process happens, and may be the innovation of a process or a product, and that this, is clear to all its internal and external audience, is the first step for the results of growth and development to be satisfactory, this being a mirror that must be followed (Ramos & Zilber, 2015). In this sense, Suppry Etiquetas is a well-organized company, having its innovation management process well-structured at all hierarchical levels of the company.

After describing each step that involves innovation in products, it is worth mentioning that to boost the innovation process in the two processes mentioned above, the company has partnered with ACIL and SEBRAE, and are entities provide training and courses for all employees of the company. Next chapter will be presented the results obtained, with the company's innovation management process.

4.3. Innovation management generates added value and competitive advantages for the company

After presenting how the innovation management process occurs in the company Suppry Etiquetas, we start to present how innovation management generates added value and competitive advantages for the company. We started to answer the following question: **What actions related to innovation management were carried out by the company in 2017?**

Manager's response: "Suppry Etiquetas carried out actions, in the improvement of internal processes, such as investment in preventive maintenance of machines, readjustment of master boxes, among others, already in products were realigned partnerships with companies recognized in the market for resale of ribbons, printers and thermal coils, we started to produce sheet label and label reels for companies that work with water bill".

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Following this context, there is a caveat, for all the actions mentioned, there was an important market analysis so that the investment was made correctly and becoming a differential against the competition (Ceribeli, Meadow & Merlo, 2010).

Next question to be answered was: **What results did these actions bring to the company regarding lawsuits?**

"Below follows the response of the company manager"

Readjustment of the master boxes used in the company: Initially the company used in the shipping sector four models of master boxes all with different measures and in the role of where double, because they are characterized as more resistant. After completion of tests, the use of only two types of master boxes was standardized, made of simple wave paper, boxes that are less resistant, but that meet the needs of the process. Results of this change are presented in Table 1.

Table 1: Cash purchase amounts

Year	Value
2016	R$ 48.567,00
2017	R$ 35.657,00
DIFFERENCE	R$ 12.910,00
PERCENTAGE	26,58%

Source: Prepared by the authors, based on the research.

As shown in Table 1, it is evident that the company had a reduction in costs related to the purchase of master boxes in 2017 compared to 2016 of 26.58%. This fall was due to the boxes made and single wave paper has a lower price than double wave boxes. Using only two models of boxes, it was possible to increase the purchase lot and consequently reduce acquisition value.

Lighting: All existing lamps have been rehanged by LED lamps, and in the productive areas it needs lighting all day, being an area of 150 mts², containing 40 lamps. This exchange provides a reduction in energy consumption by up to 80% compared to traditional lighting, in addition to lower maintenance due to its longer service life. Results of this change are presented in Table 2.

Table 2: Energy consumption value

Year	Value

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2016	R$ 78.152,56
2017	R$ 69.345,98
DIFFERENCE	R$ 8.806,58
%	**11,26%**

Source: Prepared by the authors, based on the research.

As shown in Table 2, it is evident that the company had a reduction in energy consumption costs in 2017 compared to 2016 of 11.26%. This fall was due to LED lamps having a lower energy consumption than normal bulbs. This percentage was not higher than the company has other larger equipment that has a higher energy consumption.

Purchase of knives: All the order that enters the company (label, label) needs a cutting knife, an item that defines the layout, of the product, all these cutting knives are purchased from a factory in São Paulo, being the only option on the market. Seeking a reduction in the investment of purchases of this item, a work was carried out with the entire commercial area of the company, so that they work with their customers the use of knives already existing in the company, and today there are approximately 3125 different knives. Figure 4 shows a comparison with 2016 in terms of investment.

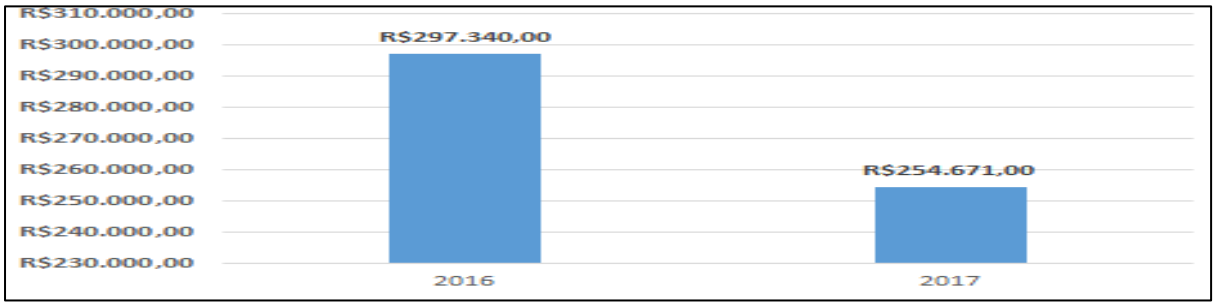

Figure 4: Comparative knife purchase 2016 x 2017
Source: Prepared by the authors, based on the research.

Figure 4 shows that all work carried out by the company, with the intention of improving the process of buying knives, together with the commercial area, represented a reduction of 14.35% in the purchase of knives. Thus, this reduction provided investments in other areas.

Treatment of liquid waste (water): In 2017 Suppry Etiquetas developed a partnership with a Foundation located in the city of Bento Gonçalves, which began to treat 100% of the water used in all production processes of the company, causing the material to be disposed of in the correct way, minimizing damage to the environment, being an innovation within the company's processes, which until this period were discarded in different locations.

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Solid waste treatment (linner): development in partnership with the Foundation, for linner routing, waste generated after the end customer has used the label or adhesive label. Suppry Etiquetas provides the collection of this waste for co-processing of the material and reuse of the material, always obeying the national policy of solid waste and responsibility for the environment.

Treatment of liquid waste (solvent): partnership with a solvent recycling company, where the solid materials of liquids are separated and then sent to distillers, where they will be heated until they reach the boiling point. It is at this point that the solvent evaporates, leaving the contaminants in that distiller, then cooled to resume to the liquid state. After this process, it is destabilized turning back into solvent, ready to be reused. It is evaluated through reports and if it does not present conditions to be used in the same function, it can be used as a thermal energy generator among other functions related to energy.

Figure 5 shows a comparison of the investment for the years 2016 and 2017, with treatment of the three types of waste described above.

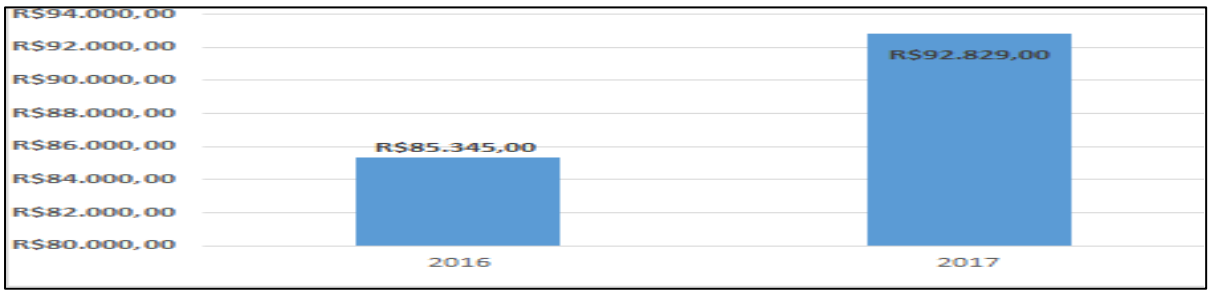

Figure 5: Comparative waste treatment 2016 x 2017
Source: Prepared by the authors, based on the research.

Figure 5 shows that there was an increase of 8.77% of the company's investment in waste treatment, this investment generated added value in the company's process and also generated a competitive advantage, because some companies only approve suppliers of labels or labels, which treat their waste in its entirety and prove this treatment. Thus, the improvement in this process has become a competitive advantage over its competitors.

Certifications of origin: the company prioritizes suppliers who value good environmental practices and who present certifications of origin of their materials marketed, such as the FSC seal that ensures that the wood has correct origin and an ecologically appropriate management.

Institution in the company in the program 5S: The 5s is one of the tools of the help us to identify problems and generate opportunities for improvement. The proposal of the 5s is to

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reduce the waste of resources by making use of space in order to increase efficiency. Thus, the results of this implementation are presented in Figure 6.

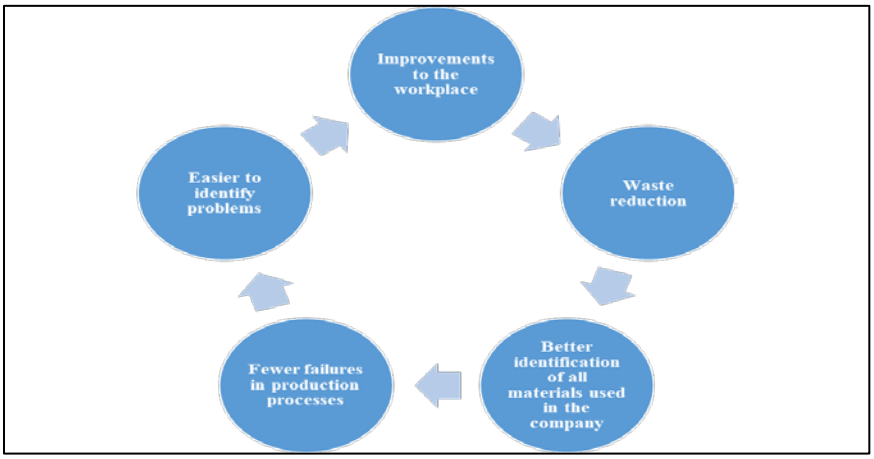

Figure 6: Results of program 5s
Source: Prepared by the authors, based on the research.

As shown in Figure 6, it is evidenced that the results related to the implementation of the 5s program, has fueled the innovation process throughout the company, which is a tool of low implementation investment and very efficient.

Software Investment (ERP): In the search to improve all its internal processes, the company increased its investment in software (ERP), in relation to 2016, as shown in Figure 7.

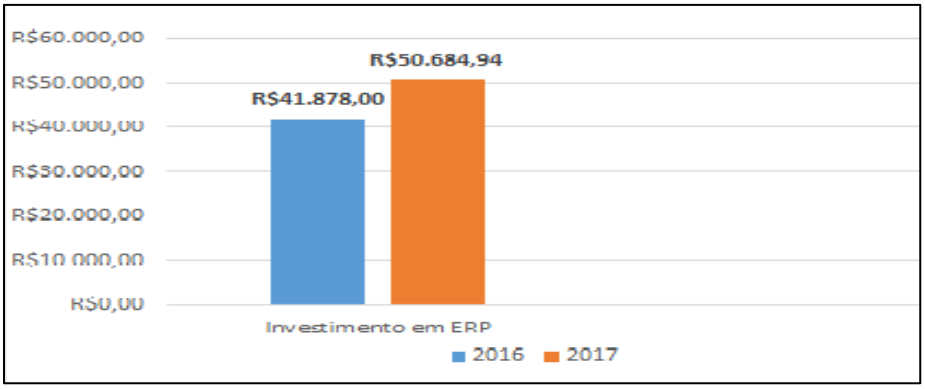

Figure 7: Comparative investment in (ERP) 2016 x 2017
Source: Prepared by the authors, based on the research.

Figure 7 shows that there was an increase in investments in software (ERP) of 21.03%, and this investment provides an improvement in all processes of the company, facilitating the issuance of reports, from different databases, so that these can be worked by the company's management, in search of better efficiency in all processes, transforming them into competitive advantages in the market.

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Maintenance of machinery and equipment: Every process improvement, needs investment in the improvement of machinery and support equipment. Figure 8 shows a comparison of the company's investment in 2016 x 2017.

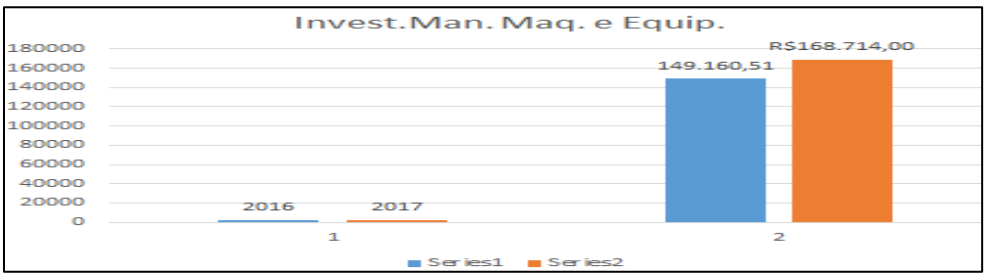

Figure 8: Comparative investment in machine and equipment maintenance 2016 x 2017
Source: Prepared by the authors, based on the research.

Figure 8 shows that there was an increase in investment by the company of 13.11%, increasing the efficiency of the company's manufacturing area, reducing unnecessary equipment downtime, waste. This investment represents added value in the company's processes.

Carbon neutral seal: Suppry Etiquetas was certified as one of the first printers in Southern Brazil to acquire Carbon Neutral Seal, which is a significant process innovation for the company, in addition to prioritizing environmental actions. This certification ensures that the company compensates for all CO2 emissions from its production process. Table 3 presents the results for co2.

Table 3: CO2 Inventory

Year	CO2 TON EMISSION	TREE PLANTING
2016	12,46	46
2017	16,67	81

Source: Prepared by the authors, based on the research.

According to data presented in Table 3, in 2016, Suppry Etiquetas planted 46 trees, offsetting the 12.46 tons of CO2 that the company emitted in the period. In 2017, 81 trees were planted to compensate for the issuance of the period. There was an increase in the company's emission factor for 2016, for 2017, this increase was due to the company's growth of approximately 20% in revenues. It is noteworthy that all tree seedlings are planted in a location previously defined by a qualified company that performs this planting, after the seedlings are monitored for a period of ten years.

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Among the results presented with process innovation management of the company Suppry Etiquetas, it is worth noting that every innovation management action needs to be worked with the entire team involved in the process, thus generating some positive result (Woerter & Roper, 2010).

Next 2 questions to be answered were: **What results did these actions bring to the company regarding products? What percentage of increase in revenue stemming from the launch of new products?**

"Below is the response of the company manager."

Labels on loose sheets: In 2017, a new need was identified by the commercial area in the market. Initially Suppry Etiquetas produced only labels on labels on rolls, but some customers asked the company to produce the labels on sheets. At that moment, an analysis was carried out by the technical area of the company, to analyze the viability of the production of the new product. After approval it was even launched in March 2017 on the market. This innovation represented a revenue increase in the year of 3.56%.

Thermal coils: In the search to increase the mix of products in its market, after a long analysis, on January 12, 2017 company begins the production of thermal coils for water bills. Launch of this new product was due to the need of electric energy cooperatives, to find suppliers of this type of material. Launch of this new product represented an increase of 11.3% in revenues in 2017.

The two product innovations made by the company in 2017 culminated in the launch of two new products. These two new products had an impact on the company's revenue, as shown in Table 4.

Table 4: Percentage of revenue increase

YEAR	PRODUCT	REVENUE INCREASE
2017	Thermal Coils	3,56%
2017	Labels on Sheet	11,30%
TOTAL		14,86%

Source: Prepared by the authors, based on the research.

As shown in Table 4, the two new products launched by Suppry Etiquetas represented a revenue increase of 14.86% of the company's total revenue in 2017.

Resale of products: After a long analysis of results from previous years, with values related to some products that the company resold, the company's management opted for a change of

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strategy, formalized partnership with three companies from different segments, where initially these partnerships were with more than 7 companies, achieving more favorable commercial conditions. An action was made with the entire commercial area of the company, in order to leverage the sale of these goods. Following this context, figure 9 will be presented with a comparison of sales items with the year 2016.

Figure 9: Comparison of sales billing (ERP) 2016 x 2017
Source: Prepared by the authors, based on the research.

Figure 9 shows that the action promoted by the company's management had a positive impact on the billing of these items, representing an increase of 57.07% in revenues. Demonstrating that the innovation realized with the commercialization of resale products represented a differential, increased mix of products offered, not giving opportunity to competitors, becoming an important advantage in an extremely crowded market.

In 2017, Suppry Etiquetas made other innovations in relation to products and processes, but as they have not been documented, they will not be used in the research.

All the actions that represented the launch of new products, put the company in a prominent place, because there are few printers that work with loose sheet labels and thermal coils for water bill. In this way the company expands its brand, exploring new markets, and consequently galling new customers. Demonstrating that innovation management process generates added value for a company and this becomes a competitive differential in the medium term (Woerter & Roper, 2010).

After presenting the results obtained through Product and Process Innovation, we start to answer the following question: **What is the importance of the innovation process for the company?**

Manager response: "The innovation management process is a tool capable of generating competitive advantage for the company in the short, medium and long term, it is something so important that it is able to keep the company competitive in its market. In this way I can say

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that innovation management represents the success of a company, but it needs to be worked on continuously".

Therefore, innovation should not be understood as something fortuitous or occasional, and this is one of the factors that guarantees the success of a good innovation management process (Silva et al., 2014).

All the results presented, respond to the general objective of the study which is to understand how innovation management can generate added value and also to the research problem that is to understand how this value is generated.

In this sense it is emphasized that for the innovation management process to generate added value and competitive advantage it needs to be managed correctly, and be understood by all the people who are part of the organization. The research also showed us that the graphic segment has peculiar characteristics, which differentiate it from other segments, and innovation is one of the few ways companies in the sector remain competitive.

Proof of this was an increase of 57.7% increase in product resale revenues, compared to 2016, a reduction of 14.35% in investment in the purchase of cutting knives and 26.58% reduction in the purchase value of master boxes, compared to 2016 x 2017.

On this path, Nagano et al. (2014) and Mello (2010), say that innovation has the ability to directly impact the competitiveness of a company, generating added value in all its processes, because from the moment that it is seriously faced, there is a very great possibility of the company gaining competitive advantage over its competitors. This being one of the main contributions of this process.

5. FINAL CONSIDERATIONS

This research aimed to understand how innovation management can generate added value in the flexographic processes of the company Suppry Etiquetas, presenting how this process can generate added value in different areas and identify the advantages that these innovations represented in 2017, in terms of products and processes. Highlight the importance of innovation management for all companies, as a way to remain active and solid in the market, and present how the innovation process of the company under study occurs, and identify what added value this process represented and consequently its competitive advantages.

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Through the interview with the manager of Suppry Etiquetas, it was possible to identify how the process of managing the company's innovation works. With analysis of the DRG of the company it was possible to prove the veracity of the results presented, in the analysis of the results. The investment in waste treatment and maintenance of machines and equipment stands out in the process innovation, another important fact in this process is that all actions represented some kind of financial gain. In product innovation, in addition to the launch of two new products in the market, we can highlight the importance of changing the company's strategy of operation, regarding the resale of some items, because this attitude represented an increase in revenue sums 57.07%, becoming an advantage of Suppry Etiquetas before its competitors, since its product mix became more solid.

As a proposal for future studies, it is recommended to do a longitudinal research on the innovation management process of the company Suppry Etiquetas, because in this way it will be possible to have a more solid analysis of the results presented, with comparisons of results presented in different periods. Identify whether these actions will present the same results over a longer period of observation and whether they will consolidate over the years.

Finally, the accomplishment of this work provided to deepen the theoretical knowledge of innovation management, bringing this knowledge to practice, since what was previously a mere deduction, today through this work can be proven with concrete data.

REFERENCES

Ambrose, G., & Harris, P. (2012). **Fundamentos de Design Criativo-2**. Bookman Editora.

Bautzer, D. (2000). **Inovação**: repensando as organizações. Editora Atlas SA.

Barbieri, J. C. (2003). **Organizações inovadoras**: estudos e casos brasileiros. FGV Editora.

Bessant, J., Tidd, J., & Pavitt, K. (2008). **Gestão da inovação**. Porto Alegre, 3.

Carreteiro, R. (2000). **Inovação tecnológica**: como garantir a modernidade do negócio. Grupo Gen-LTC.

Carlomagno, M. S., & Scherer, F. O. (2000). **Práticas dos inovadores**: tudo que você precisa saber para começar a inovar. Editora Atlas SA.

Cervo, A. L., Bervian, A., & Silva, R. (2006). **Metodologia científica**. São Paulo: Pearson Prentice Hall.

Crossan, M. M., & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation: A systematic review of the literature. **Journal of management studies**, 47(6), 1154-1191.

Cruz, C. (2011). **A importância do design na embalagem**. Cobi Design.

ISSN: 2236-269X
DOI: 10.14807/ijmp.v13i2.1606

de Alencar Monteiro, J. J. B. (2015). Inovação sistemática aplicada a sistemas industriais de polimerização. **RAI Revista de Administração e Inovação**, 12(2), 200-237.

de Sá Machado, P. (2014). SIG na análise ambiental: susceptibilidade erosiva da bacia hidrográfica do córrego Mutuca, Nova Lima–Minas Gerais. **Revista de Geografia (UFPE)**, 31(2).

Dogan, I., & Aydin, N. (2011). Combining Bayesian Networks and Total Cost of Ownership method for supplier selection analysis. **Computers & Industrial Engineering**, 61(4), 1072-1085.

Drucker, P. F. (2000). **Inovação e epírito empreendedor**. Cengage Learning Editores.

Dyer, J., Gregersen, H., & Christensen, CM (2019). DNA do inovador, atualizado, com um novo prefácio: dominando as cinco habilidades dos inovadores disruptivos. **Harvard Business Press**.

Fórum de Inovação FGV/EAESP. (2014). **Modelo de diagnóstico da organização inovadora**. RJ: Editora da FGV.

Gil, A. C. (2008). **Métodos e técnicas de pesquisa social**. 6. ed. Ediitora Atlas SA.

Gil, A. C. (2010). **Como elaborar projetos de pesquisa**/–12. Reimpressão.–São Paulo: Atlas, 2009. _. Como elabora projetos de pesquisa./5. Ed.–São Paulo: Atlas.

Lean Enterprise Institute**.** (2011). **Léxico lean**: glossário ilustrado para praticantes do pensamento lean. São Paulo: Lean Institute Brasil.

Marconi, M. A. & Lakatos, E. Ma. (2015). **Técnicas de pesquisa**. 7. ed. São Paulo: Atlas.

Mello, A. M. D. (2010). **Contribuição aos critérios de projeto organizacional para inovação em empresas consolidadas de setores maduros-o caso da indústria petroquímica brasileira** (Doctoral dissertation, Universidade de São Paulo).

Mestriner, F. (2005). **Design de embalagem**: curso avançado. Pearson Prentice Hall.

Michael, O. B. (2013). Strategic cost management as a recession survival tool in the Nigerian manufacturing and financial service industries. **Research journal of finance and accounting**, 4(11), 71-81.

Nagano, M. S., Stefanovitz, J. P., & Vick, T. E. (2014). Innovation management processes, their internal organizational elements and contextual factors: An investigation in Brazil. **Journal of Engineering and Technology Management**, 33, 63-92.

Negrão, C., & de Camargo, E. P. (2008). **Design de embalagem-do marketing à produção**. Novatec Editora.

Ponomariov, B., & Toivanen, H. (2014). Knowledge flows and bases in emerging economy innovation systems: Brazilian research 2005–2009. **Research Policy**, 43(3), 588-596.

Popai – The Global Association for Marketing at Retail. (2004). **Estatísticas**.7

Prahalad, C. K., & Ramaswamy, V. (2004). The future of competition: Co-creating unique value with customers. **Harvard Business Press**.

Ramos, A., & Zilber, S. N. (2015). O impacto do investimento na capacidade inovadora da empresa. **RAI Revista de Administração e Inovação**, 12(1), 303-325.

ISSN: 2236-269X
DOI: 10.14807/ijmp.v13i2.1606

Ropelato, M., Silveira, A., & Machado, D. (2010). Inovação: análise da produção científica brasileira: 2006-2009. **Simpósio de Administração da Produção, Logística e Operações Internacionais**, 13.

Robertson, P. L., Casali, G. L., & Jacobson, D. (2012). Managing open incremental process innovation: absorptive capacity and distributed learning. **Research policy**, 41(5), 822-832.

Salerno, M. S., Marx, R., Gomes, L. A. V., Mello, A. D., & Lima, W. D. (2009). Organização e gestão da cadeia de valor exapandida da empresa. Encontro Nacional de Engenharia de Produção-**ENEGEP**, 29, 2009.

Sebastiany, A. P., Pizzato, M. C., Del Pino, J. C., & Salgado, T. D. M. (2012). Visitando, pesquisando, aprendendo e brincando: uma revisão de atividades para o ensino informal de ciências. **Revista brasileira de ensino de ciência e tecnologia**. Ponta Grossa. 5(2), 69-98.

Smith, M., Busi, M., Ball, P., & Van Der Meer, R. (2019). **Factors influencing an organisation's ability to manage innovation**: a structured literature review and conceptual model. Managing Innovation: What Do We Know About Innovation Success Factors?, 69-90.

Villas-Boas, A. (2008). **Produção gráfica para designers**. 2AB.

Vergara, S. C. (2006). **Projetos e relatórios de pesquisa**. São Paulo: Atlas.

Wittmann, M. L, da Fontoura, F. B. B., da Silva, L. C. A, & Wittmann, M. B. (2017). Estratégias e práticas socioambientais em processos flexográficos. **Revista Eletrônica de Estratégia & Negócios**, 10 (2), 181-200.

Woerter, M., & Roper, S. (2010). Openness and innovation—Home and export demand effects on manufacturing innovation: Panel data evidence for Ireland and Switzerland. **Research Policy**, 39(1), 155-164.

Yin, R. K. (2015). **Estudo de Caso**-: Planejamento e métodos. Bookman editora.

Zukowski, K. (2011). **Linguagem visual e cultura de consumo no Design de embalagens**. São Paulo: Universidade Anhembi Morumbi.