



**ENVIRONMENTAL AWARENESS IN THE IMPLEMENTATION
OF AN ENVIRONMENTAL MANAGEMENT SYSTEM: A CASE STUDY
IN A COMPANY OF MANAUS INDUSTRIAL POLE**

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ABSTRACT

This is a study about the process of awareness in a company of the Manaus Industrial Pole (PIM – *Polo Industrial de Manaus*) that aims to demonstrate the environmental results of the company studied, analyzing the influence of environmental awareness of employees in the production sector. As for the methodology, it is a descriptive research, which used the deductive method with a quali-quantitative approach, and which is based on bibliographic research and data from the company's system. Data collection was performed through a questionnaire applied to a sample of 50 employees, corresponding to 83.3% of the population of interest. The theoretical framework addressed topics related to organizational development, systems and awareness. Data analysis was performed based on data collected in 2011 and 2016, making a relationship between the economic scenarios experienced in each period and the results obtained. It was found that when awareness reaches its goal, people start to change their habits, and can positively achieve the desired results more efficiently.

Keywords: Awareness; Systems implementation.



1. INTRODUCTION

Many companies in the domestic market express interest in bidding, in which the public administration selects potential suppliers for future acquisitions for the execution of works and/or services, ensuring equality of conditions in the dispute and selection of the best proposal presented, according to Law No. 8.666/93 (Ferreira, 2010). Therefore, they are committed to becoming highly qualified, always seeking ways to beat the competition and offer a quality service or product that meets customer requirements. Thus, organizations are increasingly investing in the implementation of systems that follow current environmental standards, becoming a differentiated company. It is noteworthy that in some bids the environmental certification is required.

The ISO 14001 certification is internationally recognized and aims to define what is needed and what must be done to establish an Environmental Management System (EMS), seeking the balance between maintaining profitability and reducing environmental impact. Thus, it is understood that an EMS consists of a set of interrelated elements in order to manage the environmental issues of the organization (Dal Forno, 2017).

This certification is identified as a new requirement in some organizations' current bids, emphasizing what interested companies should have. When implemented, this system will integrate with the system already in place in most organizations seeking the certification ISO 14001, the ISO 9001 Quality Management System (QMS), giving rise to a unique system known as the Integrated Management System (IMS).

However, among the initial obstacles that normally hinder successful implementation of an EMS, there is one that needs a different focus: people's resistance to changing habits. Overcoming this obstacle is of paramount importance for the proper functioning of this system. From the moment people become aware of their actions and the impact they can have on the environment, both internally and externally, it can be said that this obstacle has been overcome, and the ethical principle of this system has been created: environmental awareness.

The company studied in this work is SL Factory, whose main business is the manufacture of consumer electronics. The environmental awareness to the employees of this establishment is a procedure delegated mainly to one sector: human resources. In this sector, together with senior management, the methods to be used and the schedule for applying these methods are defined.

Every organization that seeks to participate in bids must be concerned with having the necessary conditions to meet

the customer's interest, meeting the requirements imposed. Aiming at this fact, companies that seek to enter this public procurement market need to develop more effective strategies in the implementation of their EMS, aiming at certification. Thus, the question is: how does environmental awareness influence the implementation and development of an EMS?

Assuming that environmental awareness provides agility in the implementation of an EMS, this work is relevant, because the knowledge obtained regarding environmental awareness in an organization can help future professional experiences in any organization, either as a management or operational position or in a venture.

Regarding academic knowledge, this study presents two important points: understanding the reasons why companies invest in systems that manage the organization's environmental issues, and the importance of environmental awareness in the organization to have a more favorable result regarding deployment and development of an EMS.

The specific objectives of this study are: to know the type of environmental awareness used in the electronic plate production sector of SL Factory Ltda; to verify if environmental awareness really interferes with the SL Factory implementation process of the EMS; and describe the methods of environmental awareness of employees of the mobile phone manufacturing industry company SL Factory.

2. ORGANIZATIONAL DEVELOPMENT

As an outgrowth of behavioral theory towards organizational change and flexibility, the Theory of Organizational Development emerged in 1962. For this, other authors, besides the psychologist Leland Bradford, who for many is the creator of the theory, also added ideas for its creation, notably Warren G. Bennis, RR Blake, JS Mouton Edgard Schein, Chris Argyris, P.R. Lawrence, and William J. Reddin, with the involvement of diagnostic models and actions for the planned changes, aiming at altering the organizational structure and behavioral modifications.

The authors of this theory emphasize the fundamental differences between mechanical systems (traditional concepts) and organic systems (concepts of institutional development).

The theory was reflected in the changes within organizations, as it proposed changes in the business environment aiming at a collective awareness through clarity as to the destinations and paths to be traced to reach them. It also contributed to the Theory of Human Relations, which, according to Caldas and Roncato (2012, p. 76), aimed to an



“organization that is more people-oriented than the techniques and resources that are used to achieve greater capacity for change that are fundamental to organizational development.” The basic function of institutional development is to transform mechanistic organizations into organic organizations.

In the face of adversity, organizations plan changes due to the need for adaptation, modification, among others. This requires studying the culture of the organization to make change more effective.

Through a complex set of ideas about man, organization and the environment in order to foster growth and development, this theory fuses two trends in the study of organizations: structural change and the change in human behavior in organizations.

The structures of traditional organizations do not stimulate change. According to the authors of Institutional Development Theory, these structures result in the sum for employee alienation, since the formal authority of the organization was focused on controlling employees and their objectives.

It can be understood that the authors of this theory identified that structural changes would lead to behavioral changes. These, in turn, go through a three-stage process:

- Thawing: detachment from old, customary ideas and habits. At this stage there is the imbalance, that is, uncertainties regarding what is new.
- Change (incorporation): learning new ideas and practices, changing perception and developing new ideas through attitudes.
- Freezing: The new behavioral pattern is consolidated.

3. SYSTEMS THEORY

Systems theory emerged from the studies of German biologist Ludwig von Bertalanffy in the 1960s, with the claim that systems should be studied globally, with an interrelation between all parties involved.

Bertalanffy criticizes the view of the world divided into different areas, such as physics, chemistry, biology, psychology, sociology, etc. They are arbitrary divisions with solidly defined boundaries. And empty spaces (white areas) between them. Nature is not divided into any of these parts. Systems Theory states that one should

study systems globally, involving all interdependencies of their parts (Palmeira, 2013, p. 27).

Systems are classified in many ways, but in nature we can say that the system is open or closed. An open system has a relationship with the environment through a variety of channels used to exchange interests, such as information, products, and services, among others. A closed system is the reverse, with no continuous interaction to receive and send something; it is a set of embedded, programmed activities, as a machine.

4. ENVIRONMENTAL MANAGEMENT SYSTEM

According to Dias (2016, p. 89), “environmental management is the term used to call corporate management that is oriented to avoid, as far as possible, problems for the environment”. Environmental management in companies is directly linked to standards that are developed by public and private institutions. These are mandatory references for companies wishing to deploy an EMS.

In the 1990s, organizations that drafted the guidelines for standardization and normalization became more effective in terms of societal needs and market prospects. Thus, the procedures aimed at quality and environmental management were unified.

These procedures were developed and became reality through the creation of EMS designed to guide organizations on compliance with certain standards of acceptance and general recognition. Over time, these systems have become important factors in organizational strategies (Wendler, 2009).

Europe was a pioneer, notably the United Kingdom, which, through the British Standards Institution (BSI), created in 1992 the Standard BS 7750, which lists a set of standards for an EMS applicable to companies in that country (Wendler, 2009).

In 1994, the European Community created its own legislation for member countries, setting standards for the understanding and implementation of an EMS as part of an eco-management system and audit plan, known as the Community Eco-Management and Audit Scheme (Eco-Management and Audit Scheme – EMAS) (Wendler, 2009).

Because the ISO 9000 Series (Quality Management System) has a worldwide acceptability as it has become a benchmark, and with the need for environmental standards around the world, the International Organization for Standardization – ISO) assessed aspects that should be addressed in an organization so that the environmen-



tal issue could be managed by creating the ISO 14000 series.

Environmental policy is defined by ISO 14001, according to Salgado and Colombo (2015, p. 7), as “the organization’s statement, which should set out its intentions and principles in relation to its global environmental performance, which provides a framework for action and definition of its environmental objectives and targets”.

Environmental policy establishes a general sense of guidance, setting the principles of the organization, and this policy is disseminated through a written document – letter of commitment from the company – addressing all values and philosophy regarding the environment, as well as pointing out the requirements to meet its environmental policy through environmental objectives, goals and programs.

The ISO 14001 Series recommends that the organization formulate a plan to comply with its environmental policy, which should include the following topics: 1) environmental aspects: to enable the company to identify all significant actual and potential environmental impacts related to its activities; 2) legal and other requirements: they clearly state their commitments, notably compliance with legislation, applicable environmental standards and other environmental requirements; 3) objectives and targets: should reflect the significant and relevant environmental aspects and impacts aiming at the unfolding in environmental goals and objectives to be operationally achieved by specific sectors of the company; 4) and environmental management programs: they must contain an execution schedule, which allows comparison between what is done and what is planned, the financial resources allocated to the activities and the definition of responsibilities and deadlines for meeting objectives and goals.

For an effective implementation of the ISO 14001 Series, the company must develop the support mechanisms necessary to meet what is foreseen in its policy and its environmental goals and targets.

5. ENVIRONMENTAL MANAGEMENT SYSTEM OF SL FACTORY LTDA.

SL Factory has a consulting firm to better advise it on the development of EMS in the organization. Through a committee composed of senior management and area heads, an environmental manager was appointed, who in turn set up a team of ten people to carry out the EMS design and development tasks.

The first task was to raise awareness of the environmental aspects and environmental impacts

occurring in the world, such as the disaster at the Chernobyl plant, where a nuclear reactor exploded and caused radioactive contamination far beyond acceptable. This accident was the result of one of the plant engineers’ experiments that ultimately circumvented a number of safety rules to save energy (Helerbrock; Silva, s/d).

Examples such as these made employees think about the need to be committed to the company’s environmental issues. There were also situations occurring in the company itself, such as the waste of natural resources.

SL Factory is currently forming its audit team and is regularizing its compliance with local and national environmental laws.

6. ENVIRONMENTAL AWARENESS

Being able to be interpreted as the act of knowing, consciousness occurs because the individual knows something rationally, involving two fundamental phases: the image and the activity. The first phase corresponds to the act of seeing, perceiving, and the second phase to the act of experimenting, acting, and practicing; the individual knows his own actions (Lago; Mattos, 2012).

Consciousness is man’s ability to know moral values and commandments and apply them in different situations; secret testimony or judgment of the soul, approving or reproving our acts; extreme caution with which work is performed; honesty and righteousness; knowledge; immediate perception of one’s own experience; general perception ability (Weiszflog, 2015).

Awareness is the preparation, through images and attitudes, where man acquires knowledge about a subject necessary for his learning. Understanding the subject ultimately avoids inappropriate habits. Beyond the act of discovering what is around, awareness is a set of sequential actions that generate learning. In responding to the challenges presented to him, man creates himself, realizes himself as a subject, because this response requires reflection, criticism, invention, election, decision, organization, and action (Freire *apud* Damo et al., 2011).

Based on the concept of awareness, it can be said that environmental awareness is the process by which man has acquired respect for others, for the universe and for himself. It is where the individual understands that acquiring this awareness prepares him and avoids bad habits, and this process is a necessary factor for his learning.



Currently, there is a growing ecological concern resulting from the production and consumption system that, according to Lima and Callado apud Aquino et al. (2013), demands high environmental costs related to natural resources, as well as in relation to non-biodegradable wastes that exceed the nature capacity of absorption of these debris and components.

With the environmental disasters caused in the 1970s and 1980s, there has been a rise in ecological awareness in society. However, the basic changes in society's lifestyle are very much rooted in economic and cultural processes. Thus, individual and collective behavioral changes are necessary, requiring time to change old habits and beliefs, requiring large but not impossible personal changes (Braun apud Reis, 2012).

As Lima apud Bezerra (2014), the repercussions of this advance of ecological awareness in the social environment, materialize through the expansion of environmental agencies, from municipal spheres to the international level.

The private sector has been concerned with introducing into its products and marketing strategies the "green appeal", albeit in a misleading and superficial way, because it has already detected in public and consumer opinion an interest in this new trend.

Environmental awareness faces some obstacles to its growth and fulfillment. From this assumption, it can be stated that, among these, the following factors can be listed: the political-economic interests of socially hegemonic groups and the prevailing type of ethics in industrial capitalist society; consumerism, a certain reductionist reading of ecological consciousness; the poverty of large populations and the low educational and citizenship levels of these same populations (Lima apud Oliveira; Accorsi, 2015).

Eco-friendly actions such as recycling waste, saving water and electricity, consuming products manufactured in an environmentally friendly manner, among others, are of utmost importance in reducing the level of environmental degradation that currently exists.

Such actions directly influence the acquisition of products; they are the so-called green or conscious consumers, who are not only concerned with satisfying their wants and needs, but are also concerned with the welfare of society and the environment.

Concern about the environment and environmental impacts is giving way to the emergence of a new type of consumer: the green consumer. According to Souza et al. (2015), green consumers are those who show their concern for the environment through their behavior at the time of

purchase, seeking products that preserve the integrity of the environment.

For Ribeiro and Veiga (2011), conscious consumers are those who tend to consciously seek to produce, through their behavior as consumption, a null or favorable effect on the environment. For this consumer niche, an environmentally friendly product is valued at the moment of purchase. In some cases this appreciation will manifest itself in paying more for environmentally responsible products (Lima; Callado apud Aquino, 2013).

When this new type of consumer emerges, companies feel compelled to manufacture their products in an environmentally friendly way so as not to lose space in the competitive market in which they operate, as individuals are acting on their values in an individual attempt to protect themselves and protect the planet. These consumers are shaping a new trend called environmental consumerism by buying only green products and leaving non-green products on the shelf.

7. ENVIRONMENTAL AWARENESS IN THE PRODUCTION SECTOR AT SL FACTORY LTDA.

SL Factory's environmental awareness process begins with strategic meetings between human resources, top management and managers, explaining the endomarketing (or internal marketing) that will be applied in the organization, the measures to be taken and the actions that will be taken in the whole organization.

The next step is to strategically spread posters, give lectures and trainings aimed to inform employees of the need to contribute to the preservation of the environment in which they work in order to improve it and improve the external environment as well: society.

Endomarketing is a process whose focus is to tune and synchronize, to implement and operationalize the marketing structure of the company or organization that aims action-to-the-market. Its purpose is to facilitate and exchange by building relationships with the internal public, sharing the goals of the company or organization, harmonizing and strengthening these relationships and thus integrating the notion of "customer" in the internal processes of the organizational structure, providing improved quality of products and services with personal and process productivity (Ilerika apud Bonfim, 2011, p. 2).

Therefore, "the purpose of endomarketing is to make the organizational objectives clear to employees, so that they



are aligned with employees' goals as collaborators (Machado, 2015, p. 16)."

A weekly industry performance survey is carried out and disseminated to the entire organization.

One of the methods applied in training is the 5R's of environmental awareness: Recycle, Reduce, Decline, Rethink and Reuse, whose benefits, among others, are: increasing recovery and reuse of materials such as paper and metals and reducing the proportion of unnecessary consumption, thinking about the real need to use a material.

SL Factory also has a suggestion channel through which employees are free to come up with new ideas to improve sustainability issues in the company. The ideas chosen as the best are deployed in the organization and disseminated.

8. METHODOLOGICAL PROCEDURES

This work had as its principle the deductive method of research. This is a descriptive study, using a qualitative and quantitative approach reporting existing events, based on bibliographic research and company system data (Gil, 2010).

As a research instrument, a questionnaire (Appendix 1) consisting of dichotomous, multiple choice and scaling questions was used. The questionnaire was applied in 2011 and applied again in 2016 in the same universe. Another instrument used was observation, where the author simulated cases that affected the subject and observed the attitude of collaborators in the universe studied.

According to the test and retest technique, the questionnaire was applied in two distinct periods to the same group of collaborators:

- 2011: in a universe of 80 employees, the sample consisted of 50 employees, equivalent to 62.5% of this population, using a criterion of the acceptability of the participants;
- 2016: in a universe of 60 employees, the sample consisted of 50 employees, equivalent to 83.3% of this population, using a criterion of the participants' acceptability, i.e. only those who wish to participate, without following a random choice criterion.

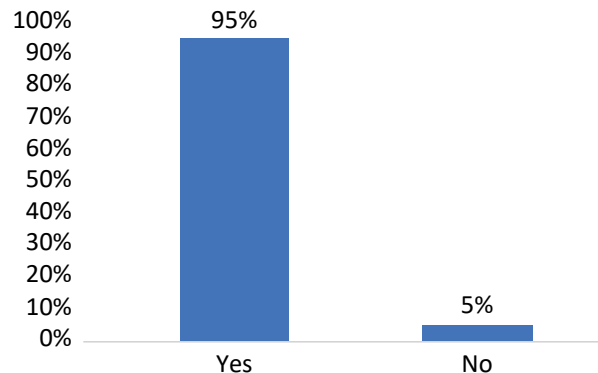
This study was validated on the basis of the following studies: "Implementation of ISO 14001 Environmental Management Systems: A Contribution from the People Management Area" of Oliveira and Pinheiro (2010), who describe barriers in the implementation of systems; and "Benefits and difficulties of ISO 14001-based environmental manage-

ment in industrial enterprises in São Paulo", of Oliveira and Serra (2010), who demonstrate ways to reduce implementation difficulties and their benefits.

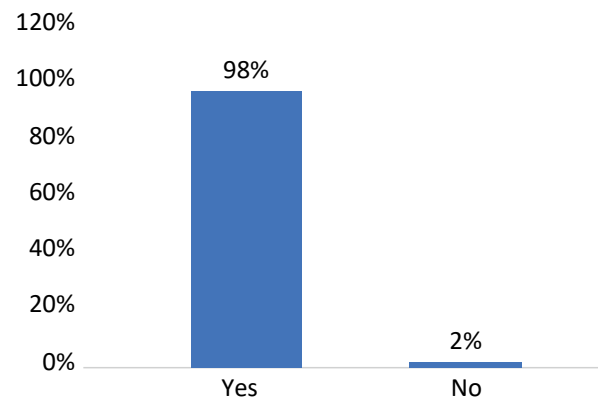
The questionnaires were reviewed for completeness before being tabulated and analyzed, maintaining the integrity of the collected data.

9. RESULTS PRESENTED

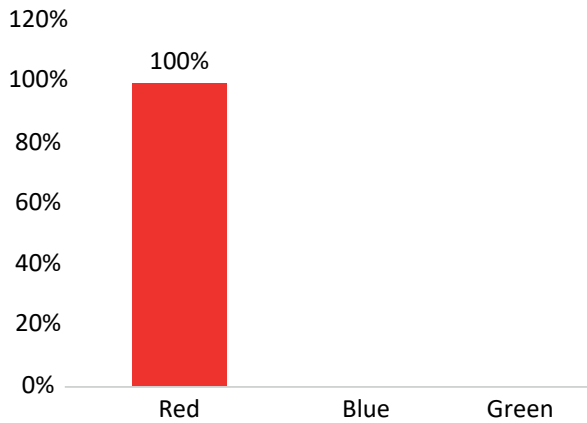
When asked about selective collection, employees demonstrate knowledge about its collection, both in 2011 (Graph 1) and 2016 (Graph 2), which shows that the concepts of selective collection are disseminated throughout the company through visual alerts, once the collection is made through the separation of waste, using colors determining its destination. This knowledge was confirmed when the employees questioned informed that the disposal of plastic waste should be directed to the red bin (Graphs 3 and 4).



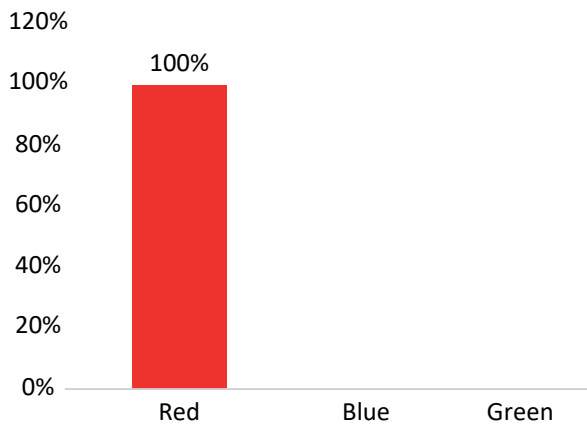
Graph 1. Can you tell if the company performs selective collection? (2011)



Graph 2. Can you tell if the company performs selective collection? (2016)



Graph 3. Used plastics should be discarded in which color bin? (2011)

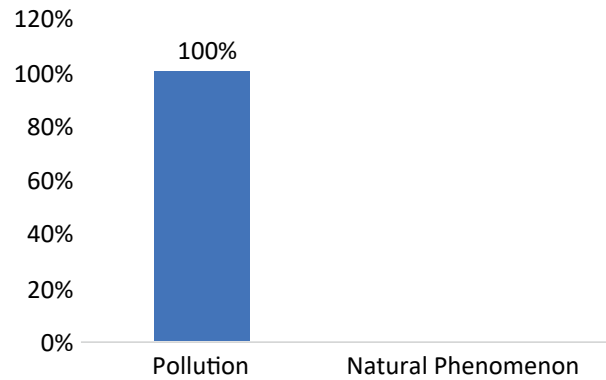


Graph 4. Used plastics should be discarded in which color bin? (2016)

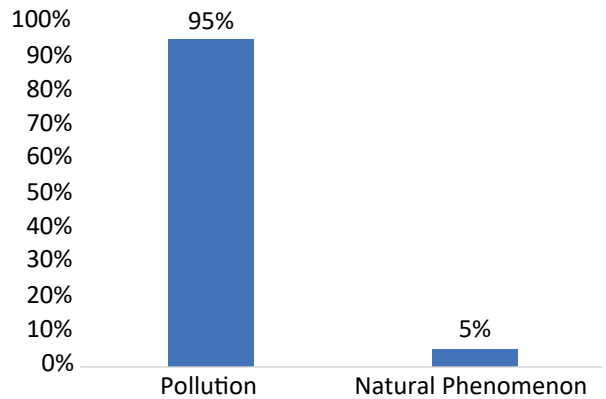
Since the past decade, global warming discussions have been dealt with more fiercely, raising a question: are the causes of this warming related to human activities or is it a natural phenomenon?

Global warming, called the rise in the average temperature of the oceans and the air layer near the Earth’s surface, can occur due to a natural phenomenon (without human intervention), such as changes in solar radiation and Earth’s orbital motions, or as a consequence of human activities. However, the Intergovernmental Panel on Climate Change (IPCC), a United Nations body that has as one of its responsibilities to produce scientific information, states with 90% certainty that the rise in temperature on Earth is being caused by human action, since, from the Industrial Revolution, man began to emit significant amounts of greenhouse gases (GHG), especially carbon dioxide (WWF, s/d).

For employees, the main cause of global warming is man and over time this mentality has not changed (Graph 5 and Graph 6), since awareness programs focus on attitudes that humans may have to as to minimize effects caused by them.



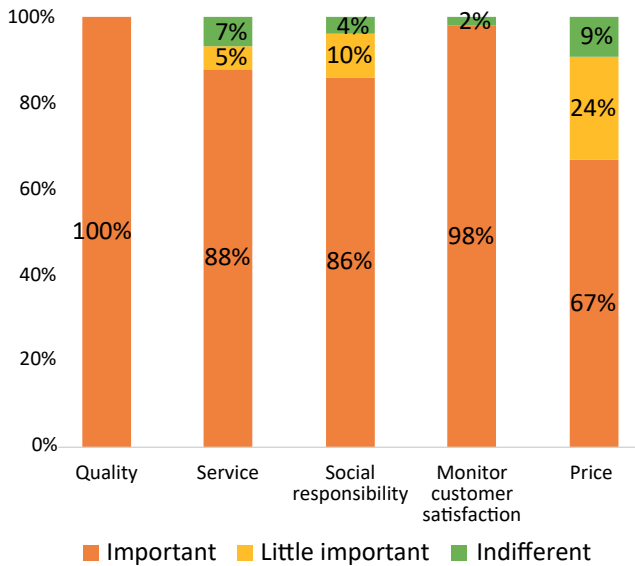
Graph 5. What do you think is the main cause of global warming? (2011)



Graph 6. What do you think is the main cause of global warming? (2016)

As for the economy in 2011, Brazil was experiencing a positive moment, with a trade balance with a closed balance in February of approximately one billion dollars, revenue growth three times higher than the spending growth and gross domestic product (GDP) of 3.9% over the previous year, which was already 7.5% over 2009, the year in which countries were recovering from the housing crisis in the United States. The dollar was quoted at R \$ 1,593 (Ministry of Economy, 2016). With a positive economy, what would come to the mind of a worker in a scenario favorable for growth? The answer can be found in Graph 7.

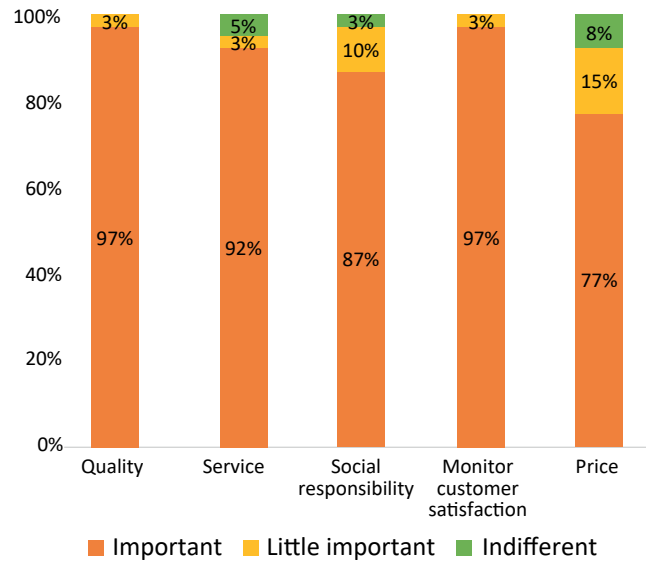
In 2011, when asked about the importance of quality, service, social responsibility, customer satisfaction monitoring, and price, employees demonstrated that quality and customer satisfaction were indispensable for the company to emerge victorious in today’s competitive market. Both service and social responsibility were also considered important by approximately 88% of respondents, while the price of the product, in the view of respondents, was of little importance, as only 67% of respondents considered it important (graph 7).



Graph 7. How important is each item for the company? (2011)

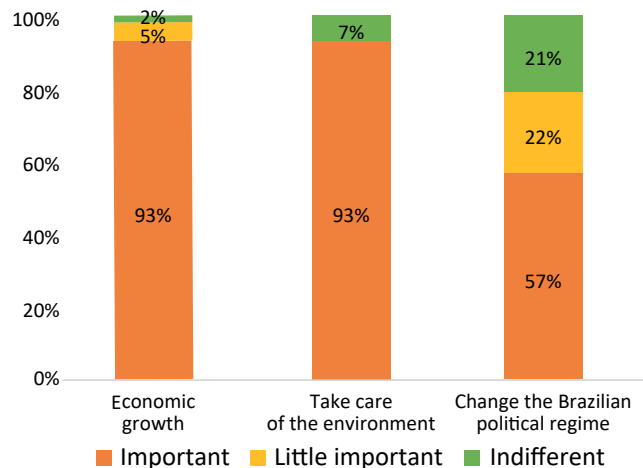
In 2016, the economic scenario in Brazil was different, as the results of 2014 and 2015 were not positive when compared to 2011, as the trade balance closed February with a negative balance of approximately 2.8 billion dollars, besides a GDP of -3.8% in 2015 compared to 2014. The dollar even hit the price of \$ 4,068. The scenario was one of economic uncertainty, with the unemployment rate increasing in 2016 to 7.6% (Ministry of Economy, 2016).

When asked in the same way as in 2011 about the importance of quality, service, social responsibility, monitoring customer satisfaction, and price, the employees demonstrated that quality and customer satisfaction are still essential. However, service has become a differentiator as competition has increased and customers have become more demanding. With the economic scenario shaken, the focus on social responsibility has reduced and 10% already consider it unimportant, while the concern with price increased by 10%, and it was classified as important by 77% of respondents (Graph 8).



Graph 8. How important is each item to the company? (2016)

As for the questions asked in 2011 regarding the importance of economic growth, care for the environment and the Brazilian political regime, 93% of respondents considered the first two aspects important. Because it was a period in which the economic crisis had not significantly impacted the country, only 57% of respondents considered the change in the Brazilian political regime important, 21% considered unimportant and 21% were indifferent. It is observed that in Brazil, when the economic scenario is positive, environmental initiatives and disregard for the political regime emerge (Graph 9).



Graph 9. What is the importance and priority of each item below for Brazil? (2011)

In 2016, 87% of respondents said they considered both economic growth and environmental care important, with a 6% reduction compared to 2011. However, with the increase



in unemployment and the increase of some rates in force in Brazil, the dissatisfaction of people with the Brazilian political regime is noted when 97% of respondents consider it important, with a growth of 40% compared to 2011. Therefore, it is noted that in Brazil, for respondents, economic growth is the result of the Brazilian political regime and that environmental care becomes impacted by these two factors (Graph 10).

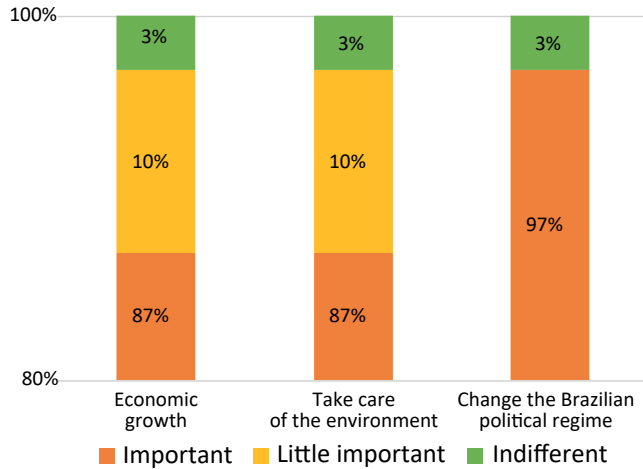
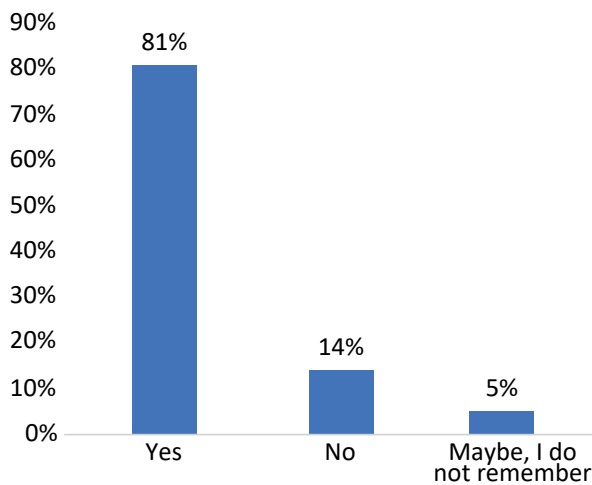
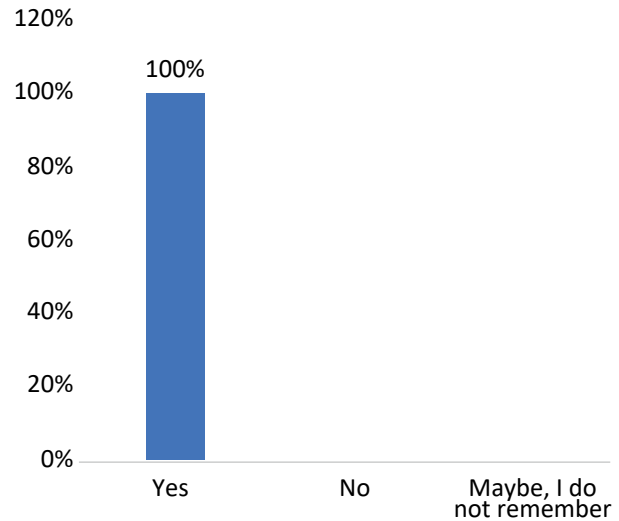


Gráfico 10. Qual o grau de importância e prioridade de cada item abaixo para o Brasil? (2016)

When asked about participation in an awareness lecture (Graph 11 and Graph 12), 81% and 100% of respondents indicated having participated in 2011 and 2016, respectively. This indicates the availability of environmental awareness talks not only at the company but in other media after the impacts that global warming has had on the environment and how it has affected civilizations.

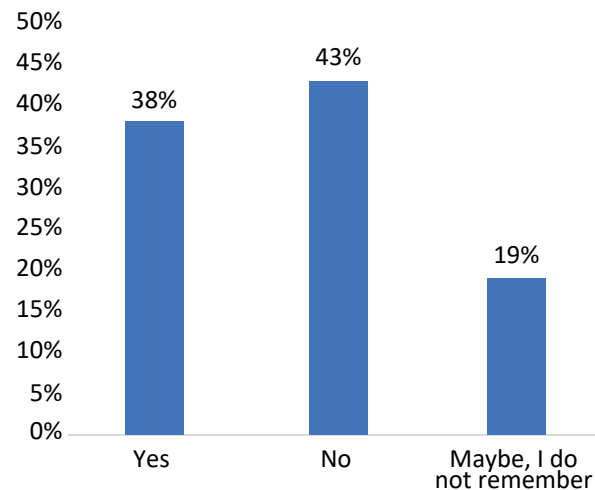


Graph 11. Have you ever attended an environmental awareness lecture? 2011

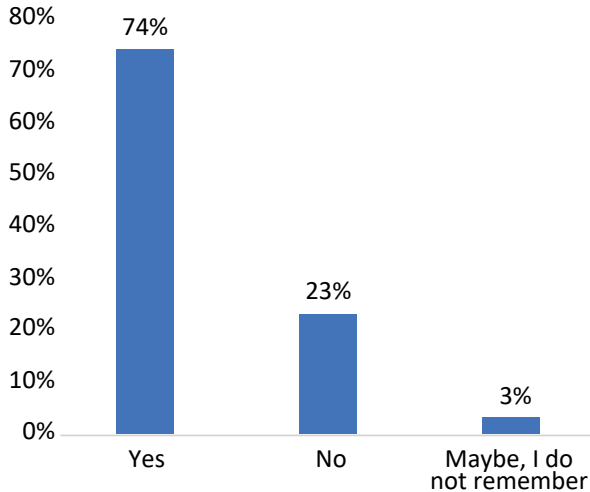


Graph 12. Have you ever attended an environmental awareness lecture? 2016

Participation in programs, plans and/or projects makes creating environmental awareness more effective. When asked about participation in environmental awareness plans or projects (graph 13 and graph 14) it is possible to notice an increase in participation: 38% in 2011 to 74% in 2016.



Graph 13. Have you ever participated in an environmental awareness plan or project? (2011)



Graph 14. Have you ever participated in an environmental awareness plan or project? (2016)

10. FINAL CONSIDERATIONS

Competing in bids is an advantageous way to make a profit as the government is the largest buyer in the country. However, for this initial advantage to become profitable, organizations need to cut costs and expenses in order not to affect the margin and not cause problems that delay delivery, as these delays often result in significant fines that can not only diminish an organization's profit but eliminate it. (Bonavolontá, 2016).

For the requirements of a bid to be fully met, the organization's intellectual body must understand them; however, when we reach the level at which employees have the habit of performing activities focused on these requirements without their perception, causing the company to perform and meet them, it can be said that these employees already have an awareness of their actions and that the result will flow naturally.

Thus, it is understood that during implementation and development for the creation of an EMS, people may create barriers that hinder its creation in a timely and effective manner, as their actions may be linked to experiences and difficulties previously experienced in other situations, which generate the perception that its execution will not be satisfactory. However, the formation of environmental awareness in employees will allow the change of some negative habits that influence a behavior that confronts past attitudes naturally, which would increasingly facilitate the results linked to EMS. Table 1 shows that in 2011 there were still 19% of respondents who did not attend lectures and 38% who were involved in projects involving environmental awareness. In 2016 these installments underwent significant changes, rising to 0% and 74%, in that order.

Table 1. Comparative Index, 2011 and 2016

Index of respondents who rated the items below as "Yes"		
Item	2011	2016
Attended lectures	81%	100%
Participated in projects focused on environmental awareness	38%	74%

When asked about the importance of the environment, the vast majority in 2016 came to consider it less important than in 2011, as shown in Table 2.

Table 2. Comparative Index on Environmental Care, 2011 and 2016

Index of respondents who rated the item below as "important"		
Item	2011	2016
Care for the environment	93%	87%

In the view of respondents, environmental factors are no longer seen as more important when the economy in which they live negatively influences their daily lives, since in 2016, 97% of respondents considered policy a priority when compared to economic growth and care for the environment. Explanation: Is it possible to assess whether the results with lectures and environmental awareness programs have had an effect on the implementation and development of the EMS? Yes, through the indicator linked directly to the employee: the disposal of unproducibile and organic materials. Does the economic factor really have a direct link to the company's environmental results? If it affects the habits of employees, this effect can be positive or negative. Does the fact that respondents will participate in more lectures/programs and still not consider, in its entirety, "important" care for the environment, makes these employees people without an environmental awareness? If their habits have changed and reflected in the company's results or socially in a positive way, it is noted that there was a formed awareness, but a misperception caused by the scenario in which these employees live. Thus, how does environmental awareness influence the implementation and development of an EMS, even though there is a reflection of the economy when we compare a positive scenario in 2011 with the 2016 scenario? Once the formation of conscience in an environment conducive to its practice is instituted, bad habits are replaced by good practices that can be performed with or without the employee's perception. In this understanding, an economic scenario can influence the perception of this employee without having a direct connection with their



habits. Thus, awareness influences people's resistance to change in various areas.

Stressing Freire's definition apud Damo et al. (2011, p. 6) as awareness is a process of preparation, in which, through images and through their attitudes, man comes to know about a particular subject, and provide an understanding of this subject that results in avoiding inappropriate habits. Therefore, respondents who have participated in programs and lectures may have a misunderstanding as to the level of importance of caring for the environment as a reflection of an unfavorable economy, as it influences experiences in society. However, if awareness has been formed, its inappropriate habits will decrease, generating a direct reflection on environmental outcomes such as energy consumption, disposal of recyclable materials mixed with non-recyclable materials and water consumption.

These results presented in Table 3 show that, although the interviewees do not fully consider the care of the environment as important, their habits show that there was the creation of a conscience, because in 2011, the percentage of industrial waste was 38%, while in 2016 it was 13%. Therefore, the economy influences the interviewees' understanding; however, the programs/lectures provided an awareness that positively influences the development and improvement of the EMS, preventing people's resistance to changes in habit from becoming a significant barrier that hinders the achievement of results by the company.

Table 3. Environmental Results 2011 and 2016.

Industrial Waste	
Year	Percentage of Industrial Waste
2016	13%
2011	38%

Thus, it is understood that the economy starts to influence the results of the organization and people's lives; however, if there is maintenance of environmental programs and top management's interest in addressing environmental issues because they are favorable to the company, the EMS will be minimized to external factors.

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Appendix 1: Questionnaire Applied to Employees

Research Project: The importance of environmental awareness in the cell phone production sector of SL Factory Ltda. in Manaus

Function/Position:
Sector:

1. Do you know if the company performs selective collection?
() YES () NO

2. Used plastics should be discarded in which color bin?
() Red () Blue () Green

3. What do you think is the main cause of global warming?
() Pollution () Natural phenomenon

4. How important is each item to the company?

	Important	Little Important	Indifferent
Quality	()	()	()
Service	()	()	()
Social responsibility	()	()	()
Monitor customer satisfaction	()	()	()
Price	()	()	()

5. What is the importance and priority of each item for Brazil?

	Important	Little Important	Indifferent
Economic growth	()	()	()
Take care of the environment	()	()	()
Change the Brazilian political regime ()	()	()	()

6. Have you ever attended an environmental awareness lecture?
() Yes () No () Maybe, I do not remember

7. Have you participated in an environmental awareness plan or project?
() Yes () No () Maybe, I do not remember

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