

Processes' Standardization at the "Detección, Empaque y Procesos" Organization

MBA Ever Ángel Fuentes¹, Juan Francisco Machado Guerrero²,
Juan Felipe Ruiz Álvarez³

¹Bogotá D.C., Universidad Libre, Colombia

²Bogotá D.C., Universidad Libre, Colombia

³Bogotá D.C., Universidad Libre, Colombia

Abstract: Currently, for companies it is an ever-growing challenge to remain afloat. Competitiveness tends to increase, as do customer demands and it is only those who can offer differentiating factors and high quality in their services the ones who achieve their goals. Processes' standardization is worldwide recognized tool to generate better quality when managing processes. It manages to diminish production times, to improve employee productivity, lower costs, grow profits and guarantee customer satisfaction. Hereinunder, the methodology and the fundamental factors to standardize the company 'Detección, Empaque y Procesos SAS' are presented. Its commercial purpose is importing and marketing products. An initial diagnosis, work post description, implementation of the work methodology based on the DEMING Cycle, documentation of the processes and procedures, generation of performance indicators, time and movement studies with a stopwatch and structured time and an economic feasibility study of the implementation were made, which enabled one to set up standardization at the company. Such concluded with optimizing current human resources and generating quality in products and services offered to customer, as well as, in creating a culture of adapting to changes. All of the above are part of the set of activities that were implemented to achieve a standard-based work model.

Keywords: DEMING Cycle, standardization, process management, structured times.

Date of Submission: 28-01-2020

Date of Acceptance: 13-02-2020

I. Introduction

Current globalization, catapults companies to provide proven quality in their products whether in local or international markets. Processes' Standardization within the company results in greater quality in the goods & services offer, which in turn generates trust among all customers and it enables collaborators to optimize execution times in all tasks that constitute a process. In this manner companies also benefit, since they reduce production costs and they increase sales while obtaining greater profitability.

Business process management & standardization at product import and marketing companies is of vital importance to run them properly, as well as, to optimize resources and costs. Lacking such management is the culprit of company disorder which in turn lead companies not to achieve desired results and in the worst of scenarios their dismantling due to bad operation.

Having within the company Processes' Standardization guarantees that daily activities are performed well from the onset. Such standards are the grounds for achieving goals such as continuous improvement. Likewise, they contribute to identifying flaws and errors. Also, those as well as the procedures must be flexible in nature and allow the executive to perform modifications at any time so as to increase performance indicators and levels of end customer satisfaction.

The cases of improvements and of success at companies that implement standard systems are considerable and this methodology is shown as the most important variable when orderly organizing a company, that imports and markets products, such as DEMPRO SAS. There, paper work for example, when importing a product is a cumbersome task, internally as well as externally (due to regulations), are of vital importance and must have a work flow that must be orderly to mitigate possible errors and omissions in processes so as to be competitive in the market place. The end result of all this would be effectiveness, expressed in quality service offered to customers.

Processes are possibly the most important element and extended when managing innovative companies, specially those that base their quality assurance system on the Total Quality approach. The interest in these processes has permitted coming up with a series of techniques associated with such processes. On the one hand, the processes' management and improvement skills, of which one cites the Systematic Improvement Method and Re-engineering, both of specific application to specific processes or of extended use throughout the

company. On the other, there are management models, where processes have a central role as a base for the company and as a guide on which to articulate performance indicators' system.

Of these models a processes' map and the integral command chart are reviewed. Processes are considered currently as the operational foundation of a large part of companies and gradually become the structural foundation of a growing number of companies. This trend comes after evidencing limitations in diverse organizational solutions, in subsequent attempts to bring managing structures to the needs of the moment. That way, functional companies generate high levels of efficacy in the specialized operations analyzed per function.

A fundamental principle of Total Quality is the role that customers play as absolute referees. Inherent quality of the product or service, adaptation of use and any other orientation tied directly to a characteristic of the vendor company and its market offer are subordinate to the customer's response.

Total Quality seeks customer satisfaction and, thru it, customer loyalty with the vendor company. As a result, product design, its coming to market, the way it is delivered and customer service once the product has been delivered, all these processes have been thought and executed as an objective of the first plain; What is the opinion of the customer of that which he or she is going to receive? Albeit, the environment is subject to rapid variations (originated by growing globalizations and by technological changes) and customers demand new solutions with new characteristics from suppliers and from their competitors. [1]

Practically, at all firms and companies their employees make an effort to communicate among themselves and define the best way to organize the work, questioning matters such as: What activities are really needed to run the business? How should they be performed? Who should perform them? What support, resources are needed for proper execution? What are the expected results? How should results be monitored? How to manage that thru these activities value is created for the customer and for other key players? In this framework, the focus on Process Management arises as at the operational level as a solution to maximize value creation when carrying out business operations, thru effective management and thru continuous process optimization.

To achieve this, there are key drivers that assure organizational agility and efficiency, increasing response capacity in respect of changes in the environment, enabling and integral management of transactions with customers and suppliers, reducing response times and optimizing costs, simplifying the decision-making process and improving customer service levels. In essence, Business Process Management (BPM) challenges traditional operational models by introducing a new model, that conceives business processes as a key strategic asset for the company, permitting improvements when assigning resources and when performing consistent management throughout the different functions performed at the company. [2]

Business process management in the current world market is considered a fundamental basis for companies to prevail in time and to position themselves as leaders in each field of action. The successful incorporation of a management focus based on processes requires the sustained commitment of leaders and project sponsors, thru time, as well as of the conscientious assessment of the capabilities and possibilities of the company to take them to practice. Processes' Standardization is of vital importance within their management.

Maintaining a standard on the company operations contributes to performing the work in the same manner always, to making it simpler and to guaranteeing the optimization of all the factors involved within the operation. Currently, generating Processes' standardization is the first step to achieving quality certifications as granted by the world standardization organization ISO as per the 9001: 2015 standard; a certification that provides a great backing to companies and that drives its commercial relationships, as well as, its products and services. Such changes and accreditations of companies generate trust and credibility among consumers.

A standardized system facilitates the certification process in respect of any norm. Nonetheless, the most interesting operational value of being certified is creating a discipline that permits documenting all actions performed and certain pieces of fundamental data, such as costs of quality and of none quality. An assurance system enables creating a structure with which one may obtain information and process standardization. [3]

II. Methodology

Hereunder, Fig. 1 describes the steps to be followed in performing the study of Processes' Standardization at DEMPRO SAS, evidencing the methodology used to capture and analyze the information

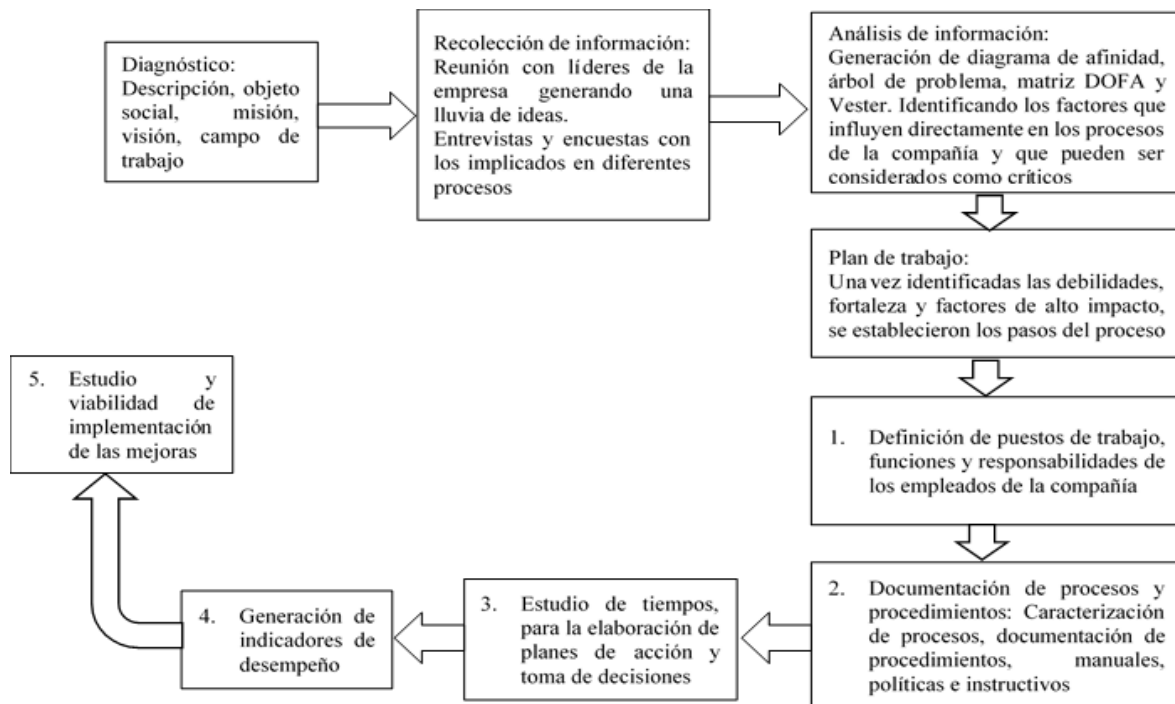


Figure 1. Methodology

Source: Authors, 2020. Based on the article "Succeeding in process standardization: Explaining the fit with international management strategy" [4]

III. Findings

One of the greatest problems of companies is to have personnel perform their activities in an identical manner every time it is required. Achieving consistency or similarity every time tasks are performed is very important to maintain conformance in product and service requirements when delivered to customers. Furthermore, having standardized processes controls costs more effectively and thus optimizes the operation. [5]

The diagnosis of 'Detección, Empaque y Procesos SAS', was performed, in accordance with the methodology illustrated in Figure 1, undertaking the data recollection and analysis via the use of statistical tools that permit data classification and as result identify company needs, as well as flaws and omissions that it had when performing their activities. Also, one may identify common errors committed among employees in operational processes. Setting an established order when performing activities at the company was identified as a priority to improve results at DEMPRO SAS.

The study made concluded that results, unawareness and lack of clarity by employees in respect of their duties and their role at the company leads to not performing all the activities under their watch and lack of appropriation of their responsibilities, as inherent to their work post.

Work post description is an important Human Resources' tool that as was mentioned before, consists of listing functions and responsibilities that are part of the company, defining the purpose that each one has. Likewise, it is important to list the knowledge, skills, attitudes, aptitudes and experience that people should have or that potential candidates for the openings should have.

Not documenting processes and procedures, as well as formats that support them are among the factors that influence companies in lacking the awareness of their activities, the increase in errors and the omissions, as well as, the loss of corporate knowhow as former employees leave. At DEMPRO SAS, although they had company processes identified, there was confusion generally speaking and specifically so given that there was only one process was documented, without any recent updates.

The benefits of documenting processes are many. They enable all areas of the companies to work jointly towards common end, to strengthen the company in adopting changes with greater ease, to help to identify bottlenecks and inefficiencies in processes that otherwise may go unnoticed, to diminish the time to perform tasks to, mitigate omissions and reduce errors, to reduce costs and unnecessary expenses, to establish process automating controls, among others. [7].

DEMPRO SAS, has controls on some of its activities that enables it to have knowledge in respect of where the company stands and that, contributes to decision making. However, such controls do not have an established structure. There was no documentation and there was not sufficient coverage to encompass all company processes. Likewise, the lacked the measuring means to be able to evidence their effectiveness in

terms of employee productivity. An indicator is the measure of the condition of the process or event at any given point in time. Indicators as a whole may provide a snapshot of the process situation, for example, of a business line, of the health of any patient or of the windows of a company.

By employing them optimally and updatedly, the indicators enable the firm to have adequate control of any given situation; the main reason of its importance lies on possibly predicting and acting based on the positive and negative trends observed in global performance. The indicators are a key way to give feedback on the process, to monitor progress or to execute a project or strategic plans, among others. And, they are still more important if their response time is immediate, or short, given that in this way corrective actions are performed without delays and in a timely manner. [8]

Finally, establishing the time it takes to perform activities at DEMPRO SAS is key to properly plan and optimize resources. The time and movement studies play an important role on productivity as is the case at any company. Measuring and establishing how long it takes to perform a task that for any reason influences negatively the company yield and therein, design strategies to correct them. Also, it is useful to solve execution problems of the process, to know the capabilities of operators, to organize the work post and to exploit efficiently materials and machinery.

In turn, establishing manufacturing time for a product, for service provision and in performing a task it is possible to standardize processes, improve planning implementing incentive programs, calculating costs and scheduling deliveries among other general benefits. Thus, those companies that seek competitiveness should look at these studies carefully and implement them. [9] The time invested by the DEMPRO SAS employees to perform a task was completely unknown, therefore such was not included in the decision making of the company or in the planning cycle of the different areas.

Managing processes, documenting and standardizing, also are part of a culture that companies should adopt. They would become in axis of the central work that all employees should have. Said thought is novel within the organization, however, it is a change process and a means of adapting that flows as time passes while it enjoys continuous support from the company and from its managers.

As Walter McIntyre writes in *Lean and Mean Process Improvement*, "If managed properly, standardized work establishes a relationship between people and their work processes. This relationship can enhance ownership and pride in the quality of work performance. The result is high morale and productivity." [10]

IV. Results

Table 1, evidences the status of the documentation at the firm before and after applying the techniques of Processes' standardization, identifying the status of the documentation and the different factors:

Table 1. Before and after standardizing

ITEM	BEFORE	AFTER
Description of work posts	0	10
Characterization of processes	1	6
Procedures	0	14
Formats	4	32
Flow Diagrams	0	14
Performance indicators' resumé	0	34

Source: Authors, 2020

Changing to standardized work creates a positive scenario and brings 4 main benefits to DEMPRO SAS:

1. Description of work posts: Now the company has 100% of documented work posts, with general information regarding the post: purpose, duty and responsibilities, specific knowledge required, contacts with internal and external agents of the company, competencies and skill needed to perform their work. Also, they now have the requirements in terms of levels of study. This enables employees to appropriate themselves of their responsibilities and to have clarity in respect of their role within the company. Furthermore, it enables DEMPRO SAS, to have clarity in finding new vacancies, in establishing means of measuring the work based on the duties of the post, ease in the process training of new personnel. Having a job description of the work posts provides protection both for the company as well as for the employees. [11]

2. Documenting processes: a process map was generated of DEMPRO SAS where one can identify procedures that constitute it, leaving evidence of the relationship amongst them and documenting such as per the DEMING Cycle methodology (Plan, Do, Check and Act). This generated important changes in management and among employees who are starting to think as per these parameters of planning their activities, doing them and having the necessary control points to guarantee quality when performing them. Such, contributes to knowing how to do things in a better manner from the onset, optimizing times, costs and company profits. Likewise it provides a

systematic vision of all activities of the company, reducing operational ambiguities, also those of quality, productivity and continuous collaboration.

Documentation guarantees that a specific process may be duplicated among different people and throughout all areas of work. Also, it enabled the implementation of performance indicators, each with its resumé and destined to measure the efficiency of each process and of who performed the work. Furthermore, it enabled the establishment of the times that activities take at the company, identifying which are that require more work and that way analyze the results and they become the basis for decision-making.

3. Reducing variability. Once processes are standardized, the variability of product & services' characteristics as well as quality by DEMPRO SAS was reduced considerably. In this manner, value is offered to the customer; that they may trust products and services finished with consistency. Additionally, the company now is prepared to confront changes in an easier and safe way, generating entrepreneurial competitiveness and better market positioning.

4. A base line for continuous improvement. Finally, standardized work facilitates continuous improvement by establishing a performance base line. Given that a documentation process has been assessed and approved, all may visualize quickly improvements. Furthermore, different areas may work together to assess all variables before determining if a change is necessary or not.

Standardization does not mean that a company turns inflexible; much to the contrary. Standardization is the best structure to guarantee positive results to promote creativity and productivity of the work team in the most significant and measurable way. [12]

Finally, it was determined that the implementation costs require an initial investment such as human capital, infrastructure improvement, dissemination of the new processes and software improvements, which has return on investment by the fourth month, through income increase as per normal activity of the company and as per cost reduction.

V. Discussion

Another of the methodologies that yield processes' continuous improvement is Six Sigma, which focuses on reducing and eliminating defects or flaws in the processes, different from Standardization which is geared towards creating a model to be followed, so as to thus preserve uniformity in performing company activities. These two methodologies seek to mitigate or eliminate errors or omissions that arise in company processes. However one can evidence that the core of the Six sigma methodology is geared towards specific processes, while standardization is a general approach that seeks improvements not just via error reduction or elimination.

In their article titled "Plan de implementación de six Sigma en el proceso de admisiones de una institución de educación superior" (*Plan to implement Six Sigma in the admission process at a higher education institution*), Daniela Arango and Beatriz Ángel, conclude that using such a plan of implementing the Six Sigma methodology it is possible to classify the main causes of errors of a process so as to find the best solutions and thus avoid from them reappearing; with the aid of preventive control measures it is possible to preserve the company's processes, as complaint and under constant improve. The lack of regular control on processes and on products lead to a loss of trust by customers in respect of the service provided, which translates into higher costs, lost times, information loss and customer loss, among others. [13] In contrast this document shows the importance of generating standardization processes, where it does not only cover error reduction, but also, encompasses in general terms the entire company so as to guarantee benefits in all aspects, areas and processes. In contrast to the article by Ángel and Arango, where the Six Sigma methodology diminishes the occurrence of frequent errors in an specific process, standardization evidences that it is an adequate tool that solves not only error reduction or flaws in the process, but rather to the contrary, it is capable of systematizing all companies, generating value in each activity performed. Also, it enables one to remain under constant improvement and to transmit such quality via offered service to customers.

VI. Conclusion

Henry Ford, stated that "today's standardization... is the necessary foundation on which tomorrow's improvement will be based. If one were to think of standardization as that which typifies what is known today as best practice but which will be improved tomorrow... you will reach far. But if one were to think of standards as boundaries, then progress will stop. [14] Throughout the document one may evidence multiple benefits from generating standardization processes at companies, of positioning oneself as market leader in a very competitive market, generating quality in services offered and profits for companies must be the goal of all those who wish to have the best results. Standardization may be an arduous process, even more so when one must start from scratch. However, the methodology to achieve it is clear: identifying activities and responsibilities, documenting processes, measuring times of said processes with indicators are key within the methodology's steps. At the "Detección, Empaque y Procesos" company, standardization of its processes was the most thorough

organizing methodology that it could have taken, to guarantee in that manner the proper running of its processes, having quality in its products and services offered and in positioning themselves as market leaders, in respect of competitors and clients. Also, that would enable them to have continuous improvement and to adapt to changes in an orderly as well as systematic manner, while generating trust among all players of the process, clients, suppliers and employees. This standardized system enables the organization to have the fundamental results to make decisions. The veracity of the information is the only trait that enables one be one step ahead and the only way to guarantee having accurate information in the least time possible is by working with standardized processes.

Acknowledgements

Thanks to 'Detección Empaque y Procesos SAS – DEMPRO SAS', their managers and employees for allowing us to carry out the standardization of their processes' study and for facilitating the necessary information to culminate such study.

References

- [1]. Zaratiegui, J.R. La gestión por procesos: Su papel e importancia en la empresa. *Economía Industrial*.
- [2]. Hagel, John. Brown, John. Maar, Andrew. Wooll, Maggie. Beyond process. How to get better, faster as "exceptions" become the rule. Deloitte Insights, November 2017. <https://www2.deloitte.com/us/en/insights/topics/talent/business-process-redesign-performance-improvement.html>
- [3]. Vazquez Peña, Claudia. Labarca, Nelson. Calidad y estandarización como estrategias competitivas en el sector agroalimentario. *Magazine Venezolana de Gerencia*, vol. 17, núm. 60, octubre-diciembre, 2012, pp. 695-708. Universidad del Zulia Maracaibo, Venezuela.
- [4]. Rahimi, F., Møller, C., & Hvam, L. (2016). Succeeding in process standardization: Explaining the fit with international management strategy. *Business Process Management Journal*, 22(6), 1212-1246. <https://doi.org/10.1108/BPMJ-12-2015-0180>
- [5]. Alzate, Fernando. Cómo estandarizar y optimizar los procesos con ISO 9001. Colombia, 2015. <http://iso9001-calidad-total.com/como-estandarizar-los-procesos-bajo-la-norma-iso-9001/>.
- [6]. Guía metodológica para el estudio de cargas de trabajo, Dirección Nacional de Talento Humano, guía para el estudio de cargas de trabajo 2013. Universidad Nacional de Colombia.
- [7]. Athuraliya, Amanda. What is Process Documentation [The Easy Guide to Process Documentation]. July 2019. <https://creately.com/blog/diagrams/process-documentation-guide/>
- [8]. Rincon, Rafael. Los performance indicators Organizacional: Una Guía para su definición. *Revista Universidad EAFIT*. Medellín, Colombia, 1998.
- [9]. Pinilla, Luis Fernando. Estudio de tiempos y movimientos: la medición de la productividad. *Revista M&M. Administración* Edición 85, Colombia, 2014. <https://revista-mm.com/administracion/estudio-tiempos-movimientos-medicion-productividad/>.
- [10]. Brandall, Benjamin. Why Process Standardization Improves Quality, Productivity, and Morale. *Business Processes*. Mayo 2018. <https://www.process.st/process-standardization/>
- [11]. Wolfe, Lahle. The Importance of Having Written Job Descriptions. October 2019. <https://www.thebalancecareers.com/importance-of-written-job-descriptions-3515485>
- [12]. Tidwell, Terry. Five Benefits of Standardized Work. June, 2015. <http://www.qualityindustries.com/news-and-events/2015/06/30/five-benefits-of-standardized-work.1652673>
- [13]. Arango, Daniela. Ángel, Beatriz. Plan de implementación de Six Sigma en el proceso de admisiones de una institución de educación superior. Diciembre 2012
- [14]. Wheeler, Christine. 18 Lean Manufacturing Quotes (#5 is Amazing). January, 2015. <https://www.newcastlesys.com/blog/bid/337009/lean-manufacturing-quotes-for-education-and-inspiration>

MBA Ever Ángel Fuentes, et.al. "Processes' Standardization at the "Detección, Empaque y Procesos" Organization." *International Journal of Engineering Science Invention (IJESI)*, Vol. 09(02), 2020, PPO 17-22.