WORK ROUTINE MANAGEMENT IN OPERATIONAL UNITS OF AN AGRO-INDUSTRIAL COOPERATIVE

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ABSTRACT

The present work consists of analysis of the Work Routine Management development and implementation, in a process (register) of Operational Units in an Agro-industrial Cooperative, in order to use management tools that facilitate the identification of possible problems that hamper the results and their respective causes, and the execution of routine activities. The analysis consists of process mapping, creation and review of process indicators, as well as the definition of goals for monitoring and activating Routine Management. It also includes the survey of opportunities for improvement and the definition of an action plan in order to optimize the process for those involved, making it possible to act by monitoring the results obtained, tracing future actions and not only for correcting mistakes occurred during work routines.

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1. INTRODUCTION

According to Pelissari (2011), the competitiveness scenario has made companies look for ways to improve their processes. Globalization and, political and economic instability have caused the need for constant market change and organizations need to adapt to this reality, creating the need for the performance of the process as a whole, covering the flow of information and materials, to be analyzed and constantly improved by focusing on what the customer requires.

Salgado et al. (2016) states that the search for the implementation of Quality Management aims at continuously improve its results. According to Campos (2013), the deficiency in the systemic view of managers can lead to the creation of misaligned processes, creating a slow bureaucracy that is detrimental to the progress of the actions and deliveries of the sectors, resulting in many processes that conflict between them and are incompatible with information technology systems used in organizations.

The poor understanding of the processes, the distorted view of the needs and the lack of concrete indicators that measure the results of the processes carried out in them generate waste and create unnecessary areas and systems to "meet the daily demand" (VOLPATO et al., 2011). It is in this context that the routine management of daily work presents itself as an adequate initial methodology for continuous improvement, since according to Campos (2013), it introduces the concepts of quality focused on process standardization focused on the real needs of customers.

The cooperative needs to obtain competitive advantages, improving the daily activities and developing the management of the processes of the operational units of the cooperative. Thus, it was opted for the development of a routine management project linked to the PDCA cycle, which allows operational employees to be able to solve punctual problems, through the identification, optimization and administration of the main activities that make up the processes, directing them to the viability of the strategic objectives defined for the business.

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With the routine management, it is simple and reliable to monitor the performance of processes by means of indicators because they are based on data and facts. Some benefits of this practice are anticipation of possible problems and visual identification of their root cause. This work analyzes the development of daily routine management associated with the PDCA cycle in the registering process in operational units of a cooperative.

The text is structured in six sections besides this introductory. Section 2 presents the theoretical framework. In Section 3, the research method adopted is described. Section 4 presents the development of the investigation and in Section 5, the results obtained. Finally, Section 6 presents the difficulties, limitations, and conclusion.

2. ROUTINE MANAGEMENT

Routine management is a method that systematizes work patterns and seeks organizational efficiency, through the management of employee's responsibility, to avoid changes that may, consequently, compromise established quality levels. However, it is necessary to train and raise awareness among all employees involved (CAMPOS, 2013).

Campos (2013) emphasizes the importance of routine management by defining the authority and responsibility of each employee in the process, in standardizing the execution of processes, in monitoring results through established limits, in a good working environment, in the maximum use of people's mental potential, corrective actions on these results and the continuous search for perfection. The author also emphasizes that routine management is the basis for the processes management, and should be analyzed with care, dedication, priority, autonomy and responsibility and relates the level of quality of the processes with the quality of their product or service. In order to carry out such a method, the process standardization requires the participation of the team to continuously optimize the application, monitoring and control of the processes.

Chiavenato (2011) mentions that in order to achieve excellence in product and process quality, continuous improvement and total quality are incremental approaches, aiming at continuously adding value. Campos (2013) points out that routine management is composed of actions and verifications so that responsibilities

are distributed in the fulfillment of the obligations conferred on each individual and each organization.

According to Lages et al. (2010), the implementation of routine management aims to improve the quality of the process by means of standardization actions and maintenance of these standards, always aiming at increasing internal and external customer satisfaction.

Campos (2014) also points out that there is not a rigid method of improving its management; it is based only on the standardization of critical processes using PDCA cycle (plan, do, check, action) with the support of other tools that were made necessary. Standardization is the way to achieve competitiveness at international level, being one of the bases for management.

2.1.   Quality Management Tools

2.1.1. PDCA Cycle

The PDCA cycle is a method of managing processes or systems, usually employed for the purpose of Routine Management and Continuous Process Improvement. Werkema (2014) describes the PDCA cycle as a managerial decision-making method for solving organizational problems, indicating the way to reach the stipulated goals.

Werkema (2014) also states that PDCA is an iterative method of continuous improvement that makes the process systematic, as it follows a set of standard steps. The Plan phase consists of the steps of identifying the problem, analyzing the process and defining the action plan. The Do phase is to act according to the plan to block the causes of the problem. In the Check phase, the effectiveness of the plan for blocking causes is verified. In the Action phase, there are two stages, the standardization and the conclusion phase. In the standardization stage, if the blocking was effective, the causes are definitively eliminated so that the problem does not reappear, otherwise return to the Plan phase (CAMPOS, 2013).

Campos (2014) considers that to optimize it is necessary to know how to maintain the control guideline being this a basic principle of the definition of control. Therefore, the control PDCA Cycle can be used to optimize the control guidelines of a process. This method is used in pattern execution and intervention in the cause of deviations.

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2.1.2. SWOT Analysis

The SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) allows to raise in the internal environment the strengths and weaknesses and to analyze the opportunities and the threats that compose the external environment (ANDRADE et al., 2008)

According to Johnson et al. (2007), the SWOT analysis condenses the strategic aptitude of companies to persuade trends generating impacts on strategic growth. According to Appio et al. (2009) a strength is something positive, it is a feature of the company that increases its competitiveness. A weakness is something that is lacking in the company, something negative, which makes you stand at a disadvantage compared to your competitors.

Andrade et al. (2008) mention that the relationship between the internal and external environments explains the competitiveness level of the organization facing the market. Galvão et al. (2015) cite that the strategy begins with the discussion of issues related to threats, opportunities, risks and concerns, which can be obtained with SWOT Analysis. From there on, plans and objectives can be designed to achieve their expected results.

2.2. Process Modeling

An important point in companies to aid in understanding their processes and making more assertive decisions is the modeling of their processes that allows to describe, understand, analyze and even monitor existing processes in organizations by identifying opportunities for improvement (GALDAMEZ et al., 2016).

BPM CBOK® (2009) points out that process modeling consists of representing a set of activities or tasks to represent an existing or projected process. Modeling is performed by analyzing the end-to-end process.

Among several existing techniques for modeling processes, the techniques of SIPOC and BPMN were used in this study. BPMN is a standard form of representation for process modeling. Piechnicki, Baran and Piechnicki (2012), similar to Braconi and Oliveira (2009), explain that BPMN is a clear notation and easy comprehension by all those involved in the processes, from technical responsible to managers.

2.2.1. SIPOC (Suppliers - Inputs - Process - Outputs - Customers)

According to the BPM CBOK® guide (2009), the SIPOC model is defined as a form of process documentation used in Six Sigma methodology. For this technique, there is no specific pattern or notations or a table with the SIPOC elements.

For Andrade et al. (2012), the SIPOC technique should simplify and visualize the sequence of processes, representing inputs, outputs, step specifications, and process flow.

According to Werkema (2011), the SIPOC methodology is composed of the following elements:

- Suppliers (S): who or what has the input to the process;

- Inputs (I): are the inputs themselves, such as information, documents, services, applications, among others;

- Process (P): are the main steps of what form the process;

- Outputs (O): are the products of the process;

- Customers (C): for whom the results are intended.

2.3. Performance Management

The purpose of performance management is to evaluate the efficiency and effectiveness of an intervention by means of metrics that allow visualization of the performance of the system studied (BARBOSA and MUSETTI, 2011). Carpinetti, Galdamez and Gerolamo (2008) points out that the use of performance measurement systems evolved by visualizing their potential in organizations as the main point of generating significant information for management decision making.

According to Nappi and Rozenfeld (2015) with the rapidly changing demands of customers, organizations need to become more customer-sensitive and need to create sustainable market value. Thus, it is necessary access to accurate performance information about the business, which needs to be integrated and accessible, supporting improved performance of an organization and its business processes, making it a vital part of a company's management system, formed by a set of indicators that measure the efficiency and / or effectiveness of its processes and actions.

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For Caldeira (2012), indicators are tools for monitoring process performance and should show the level of the organization's achievements, to make comparisons with pre-established targets, to treat deviations and performance levels. The author also states that a good indicator must have some characteristics, such as:

- utility and reliability of data;

- acceptable effort and simplicity for analysis and calculation;

- source of data available on an internal basis;

- automatic calculation for greater agility and reliability;

- ability to audit data sources effectively and identify errors;

- establishment of monitoring frequency;

- protection of external effects and flexible update;

- and, established goal to analyze the performance of the measured process, which guides the results.

According to Braz et al. (2011), reanalyzing and modifying performance measurement systems when necessary, based on internal and external environmental changes, are as important as their development and implementation.

One of the ways to outline the control and quality monitoring of a process, cited by Aleksander and Armand (2013), is from the performance management, to align the organizational strategy, defining the why, what and how often the established goals will be measured, and the means of measurement.

3. RESEARCH METHOD

The research developed is applied, since it focuses on producing understandings for practical application, oriented to solve predetermined problems, according to (KAUARK et al., 2010). As for the approach is identified qualitatively and in relation to the objectives, according to Yin (2015), the study is exploratory, and the technical procedure addressed is a case study, reproducing a way to explore an empirical point through a set of predetermined procedures, which involves a deep study of the goal that will allow knowledge in certain tools.

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The study was conducted through the implementation of the Routine Management methodology, complemented by the Process Modeling Methodologies and Performance Measurement System in the chosen process. The study applies its development steps aligned with the PDCA Cycle, described as a management method that represents the way to be followed to guarantee the achievement of goals necessary for the survival of an organization (WERKEMA, 2014).

The steps taken to develop the study were:

- Review and architecture of the process based on the collection of information with those involved in the creation of the SIPOC and process mapping;

- Creation and review of process indicators through performance management theory;

- Activation of the Routine Management methodology, through training to develop the routine of monitoring the indicators and standardization of the process;

- Survey of process improvements from mapping analysis and discussion meetings with stakeholders to identify opportunities for performance enhancements.

4. CASE STUDY

The case study addresses the development of the routine management project linked to the PDCA cycle in the registration process, through the application of modeling and control tools.

The cooperative is formed by its operating units and by the central administration. The operational units of the cooperative are composed of processes that are managed by internal departments of the Central Administration, which are responsible for supporting the processes. Based on the analysis, the registering process was selected because of its importance and the degree of impact, since it belongs to the Cooperated Attendance process, which is considered a business process for the cooperative. This process' mission is to "Attend the cooperative, ensuring the perpetuation of the Cooperative with sustainability, "because according to Ugoani (2016), the organizational mission is a statement of purpose that serves as a guide to strategy and decision making.

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Observing the organization through its processes makes it possible to establish a focus centered on the work activities, allowing a more effective way of seeing the value chain. Process Management seeks to boost strategy deployment, i.e., continuous improvement, corporate governance and routine management. From this approach, it is established the routine management development plan in the operating units.

Routine management has as main objectives the process modeling, the standardization of good practices and the management of the performance of the processes studied in the day to day, taking into account the suppliers, inputs, outputs and clients of the studied process, seeking to leverage professional efficiency and effectiveness through simple and visual controls.

For the development and implementation of the routine management project in the selected process, the logic of the PDCA cycle was used, considering the phases of project planning, analysis and application of improvements, development of monitoring indicators and survey of improvement opportunities.

In short, the main stages of research are:

1. Process modeling: identification of the sub processes of the prioritized process so that the mappings are made, identifying people, inputs and outputs, having as functional process maps and a tool that gathers its main information (SIPOC), as well as an Initial survey of improvement opportunities.

2. Creation and / or revision of process indicators: definition of the indicators for the processes, as well as the measurement system, including metrics, measurement effort and data updating time.

3. Routine Management Activation: In this stage, standardization of processes through ITRs, dissemination and training to standardize work in all units, monitoring of indicators, collection of corrective and preventive actions and activation of the Routine Management Rite.

4. Survey of improvement opportunities: it occurs during the previous stages and with the analysis of the process indicators, where the variations, characteristics and other general aspects are observed.

4.1. Stage Plan

In the Plan phase, initially, the main activities were defined for the realization of the project, according to the routine management of work, considering the analysis and modeling of the process, creation of improvement and standardization plans, and performance management.

The Process Modeling, the first activity of the stage, consisted of identification of the sub processes of the prioritized process. The registration sub process is the data entry in the cooperative, since it is responsible for retaining information of different types, enabling the creation of a rich and reliable database, since it is used as the basis for many decision making in the cooperative.

The reliability of the information received is of extreme importance, since all the information that the registering provides, are projected as estimates of reception and the strategies of billing, besides being the decisive factor for the release of credit for the producer who are on the unit. The registered information also allows to generate the benefits to producers, such as scheduling of technical visits, participation in the results, delivery and harvesting, in addition to all the benefits offered to those who become cooperated.

The registration process is carried out in each operational unit and, as support, has the assistance of the cooperative department and units present in the central administration of the cooperative. The registration process is divided into seven sub processes: Registration Opening; Cooperative and Uncooperative Inactivation; Renewal of Register; Admission of Cooperated; Resignation of Cooperated; Elimination / Exclusion of Cooperated; And Cooperate Death.

4.2. Stage Do

Stage Do proceeded with the execution of the four activities presented previously, from routine management, through discussion meetings for alignment and some participants from operational units as process specialists.

For the creation of the SIPOCs, meetings were held with the Cooperativism department, responsible for supporting these processes to the units, for construction, revision and validation of process. SIPOC allowed visualizing the process and all involved in a macro way, with the main points identified, as in Figure 2, which

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represents the process with all its inputs, outputs, suppliers and clients, identifying in the process column the sub processes defined.

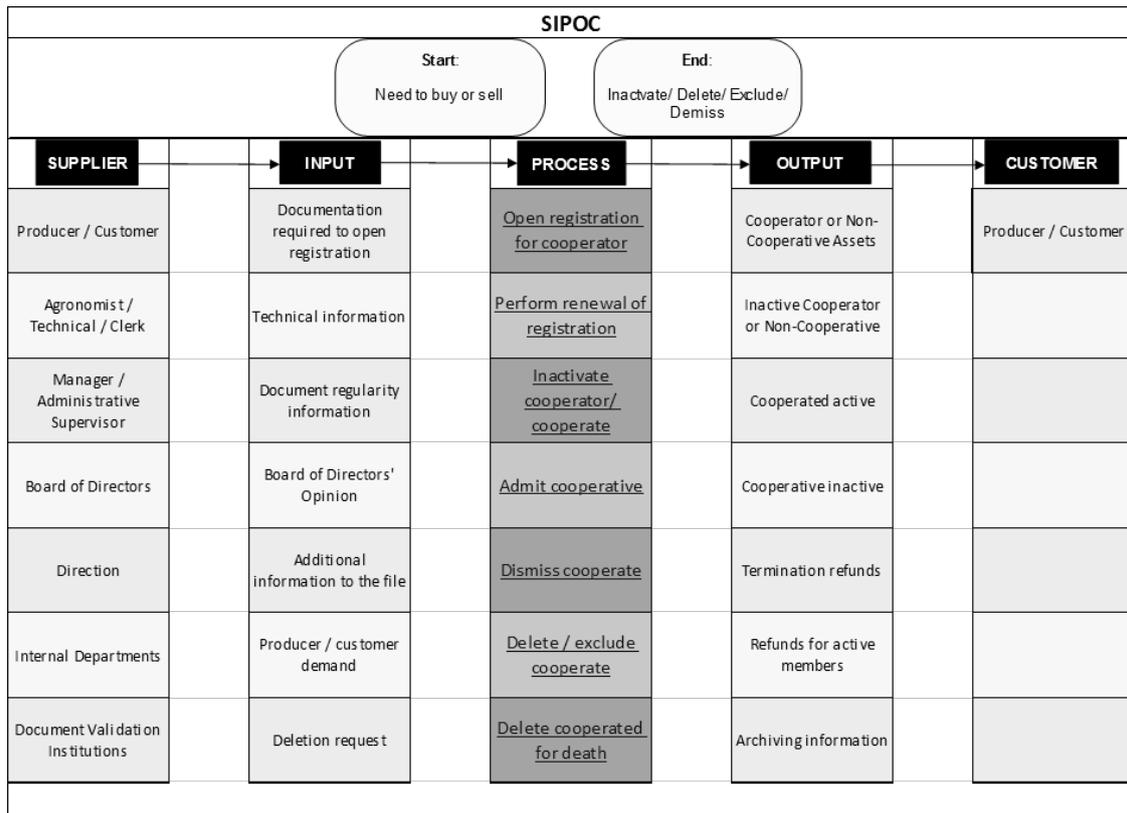| SIPOC				
Start: Need to buy or sell		End: Inactvate/ Delete/ Exclude/ Demiss		
SUPPLIER	**INPUT**	**PROCESS**	**OUTPUT**	**CUSTOMER**
Producer / Customer	Documentation required to open registration	Open registration for cooperator	Cooperator or Non-Cooperative Assets	Producer / Customer
Agronomist / Technical / Clerk	Technical information	Perform renewal of registration	Inactive Cooperator or Non-Cooperative	
Manager / Administrative Supervisor	Document regularity information	Inactivate cooperator/ cooperate	Cooperated active	
Board of Directors	Board of Directors' Opinion	Admit cooperative	Cooperative inactive	
Direction	Additional information to the file	Dismiss cooperate	Termination refunds	
Internal Departments	Producer / customer demand	Delete / exclude cooperate	Refunds for active members	
Document Validation Institutions	Deletion request	Delete cooperated for death	Archiving information	

Figure 2: SIPOC - Registration Process

The SIPOCs of the sub processes were also built between the team and validated with the experts. Since the creation of the SIPOCs, visits were made to some selected units to gather more detailed information on the day-to-day execution of the process. The process mapping of how it is currently occurring, based on the information collected, was created using the BPMN methodology.

The map was discussed and reviewed by the project team and validated in a discussion meetings with the participation of supervisors and responsible for the process in the units. These meetings allowed the survey of different points of view. The macro map of the process can be visualized in Figure 3. The detailed maps of the sub processes of registering were also designed using the Bizagi tool for surveying and identifying the improvement opportunities.
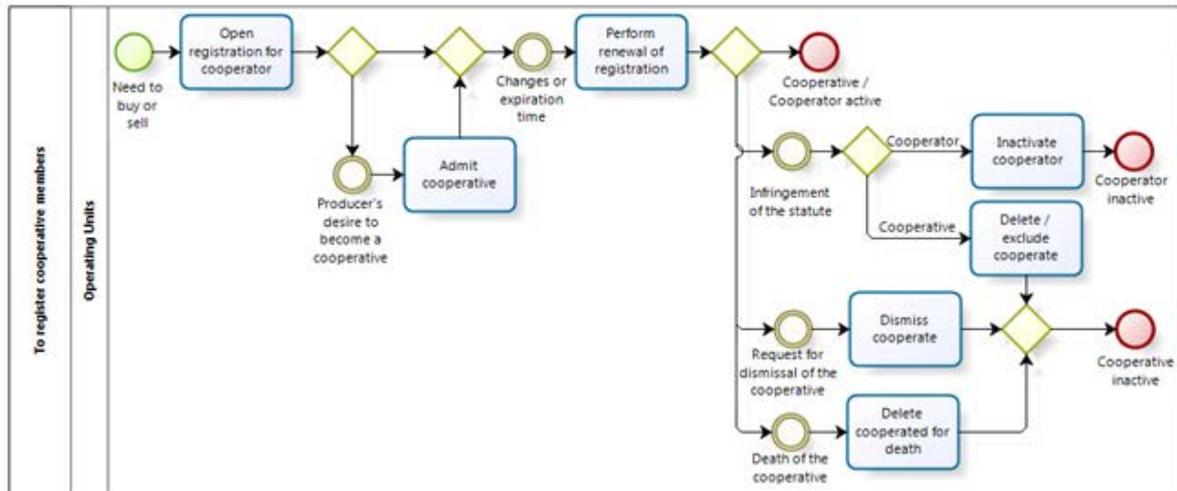
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Figure 3: macro map of registering process

Based on the different points of view observed in the meetings held for information gathering, process monitoring, mapping, alignment with the units, a SWOT analysis was developed compiling all the opportunities, threats, strengths and weaknesses raised. The SWOT analysis can be observed in Figure 4.

INTERNAL ANALYSIS		EXTERNAL ANALYSIS	
STRENGHTS	WEAKNESSES	OPPORTUNITIES	THREATS
It has all the necessary data for any type of need	Many fields	Perform analysis of really needed fields	Fields involve the use of various areas
Internally Consolidated Process	Too many windows to fill in	Perform general updating of entries	Lack of support from other collaborators
It is interconnected to various systems	Many technical data to be inserted by the person responsible for the registration	Responsible for using documents to review them	Lack of stakeholder support
Main database		Join new technologies for the registration system	Limitation of financial and human resources
		Simplify presentation of data	
		Train registration officials	
		Technical information to be inserted by technical area	

Figure 4: SWOT Analysis of Registering Process

This analysis sought to include the main points raised by the employees involved in the process, the areas impacted with the information generated by the process and the area that should manage this process, seeking to obtain a better detail of the main considerations of people involved, being possible to identify restrictions and, opportunities for improvement and criteria for the subsequent optimization of the process. With twenty-three improvement opportunities identified in process mapping and SWOT analysis, these were unified for treatment in

partnership with the Information Technology Department (IT) to eliminate activities that did not add value to the process, making it more agile and easier.

In order to establish a way to control and monitor the performance of the process, indicators were defined in line with the organizational strategy, evaluating the strategic objectives of the departments involved with the registering process, identifying the main points that needed control and why, and the frequency the measurements should be carried out, the targets or limits established and the means or calculation formula for the measurement.

For the definition of the indicators, the team met with the Cooperativism department and the Units department and verified what, from the point of view of these areas, it is extremely important to be measured in order to be reached the high reliability of information for the decisions and the high quality and performance in the execution of this process.

Four indicators of performance were then presented, which are shown in Table 1, with indicators 1 and 2, respectively, "% of the mapping of the areas" and "% of registering due" respectively, representing the quality of the information 3: "% of letters sent with errors" represents the process performance in the unit and the indicator 4, "% of active properties shortly after the activation of the cooperative" brings the reliability of the execution of the process in the Unit.

It should be emphasized that from the monitoring of indicators, occurrences, failures, nonconformities and together with the critical analysis, new ideas and opportunities must arise that will lead to incremental improvements, which can be dealt with immediately, as well as corrective actions and prevention that must be implemented in the emergence of problems and risks detected, in addition to potential transformation projects.

	What to measure?	What is the frequency?	How to measure?	For what?	What is the goal or limits?
Indicator 1	% of gap in area mapping	Monthly	System Area / Satellite Area	Correct area of performance	Goal: 0%; Upper limit: 3%
Indicator 2	% of expired registrations	Monthly	Cadastros expired in the month / Total entries with maturity in the month	Effectiveness in updating the cadastre	Goal: 0%
Indicator 3	% of letters sent in error	Monthly	Letters with error / Total letters	Effectiveness in structuring of admission letters	Goal: 0%
Indicator 4	% of properties activated after activation of the cooperative	Monthly	Amount after 10 days of activation / Amount on activation day	Check if the capital payment rate is being circumvented	Limit: ≤ 50%

Quadro 1: Sistema de Medição de Desempenho - Indicadores do Cadastro

As the changes were being carried out in parallel, the updating of the ITRs and procedures would be performed upon completion of the procedures and ITRs. However, it was defined the person responsible for making the changes due in the documents and informing all those involved.

The training for the standardization of all the improvements treated would be applied after the formalization of the update of the documentation with the completion of the requests sent to IT. The training will be applied to all supervisors and those in charge of registering in all the operational units, with the support of the department of Cooperativism and Units. Non-compliance treatment training against performance indicators was applied to all supervisors and unit managers, emphasizing the importance of reaching established goals and the need to have up-to-date and reliable information.

The implementation of Daily Meetings was carried out with the purpose of creating the habit of monitoring and fast discussions about the results achieved by the process indicators developed, aiming at drawing action plans to achieve the best performance. In order to activate routine management, it was necessary to engage the employees involved in the process through training and lectures that sought to clarify the importance and need to have this updated data, showing that one can transform the organization from one-off improvements in its work routine, and that

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these improvements can be identified by the process indicators for monitoring the results.

The activation of routine management was consolidated with the implementation of the monthly monitoring indicators of the process and passed on to all units, allowing everyone to stay up to date on the performance of their process, and thus help build actions for improvement.

4.3. Stage Check

The Check stage was started after the daily meetings were implanted. In this step, the measured performance indicators are executed and the results and their deviations are checked through the updated data according to defined periodicity. This verification allows the identification of improvement points by means of deviations visualized, controlling the process from the predefined limits and verifying the effectiveness of the progress of the implanted daily meetings. This stage belongs directly to the Unit Department, which is responsible for monitoring the performance of the operating units.

4.4. Stage Action

All process needs, opportunities for improvement, identified deviations and fall under the Action step, acting correctively in the process, seeking to achieve greater and better performance and quality of service. This step should be started whenever necessary to obtain continuous improvement of the process, the departments involved and the organization as a whole.

5. CONCLUSION

The application of the Work Routine Management methodologies and Performance Measurement System contributed to the achievement of a positive and perceptible result by all employees of the units and departments involved.

The project allowed the registration process to be understood, mapped and detailed in sub processes. Their improvements were raised and punctuated through the search for applicable solutions and that allowed to optimize the process, to then be standardized and applied to all operational units.

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Four process indicators were created to establish controls to measure the performance of the results achieved in the day-to-day execution of the process and to detect occurrences, failures and / or nonconformities. Routine Management has been activated through the establishment of Daily Meetings, which count on the employees' engagement to follow up and discuss the results achieved through the interpretation of the indicators, in order to draw up action plans to achieve the best performance in the Registering process.

The results achieved by the project show that the association between PDCA cycle and Routine Management methods was effective. It is possible to understand how Routine Management is necessary to understand the process and its variables and how the PDCA cycle is a managerial method of numerous benefits for the implementation of Routine Management, enabling the direction of the analysis and the treatment of opportunities for improvement with a focus on continuous improvement.

It is of fundamental importance, for a good management of the processes, that the results are measured, analyzed and translated into action plans to improve their performance more and more, because if a manager who cannot measure the performance of their processes, neither is able to manage it, and there are no ways to improve its performance. This way, it can be concluded that the objectives were achieved through the execution of the defined steps and the involvement and dedication of the team formed for the project.

The literature on the subject is very limited, although it is an optimization tool and helps the management of day-to-day activities, it is still not well known and widespread. Its use is well done in companies, but there are few publications on the basis of it. Even with these restrictions, the project was developed and the validated steps, which can be replicated to all other processes of the Operating Units, as a suggestion for future work in the cooperative.

According to the internal departments, the implementation of routine management brought benefits such as the possibility of monitoring the performance of the processes in relation to the goals and the analysis of improvement points from the deviations found. Thus, it is possible to work looking forward and not only looking at the past mistakes. It is a means of guaranteeing the results traced and expected

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by the area, through the control and standardization of the process, considering five basic elements indicators, information, ideas, analysis and action plans, focusing on continuous improvement.

REFERENCES

ABPMP BPM CBOK™, V2.0. (2009) Guide to the Business Process Management Common Body of Knowledge.

ALEKSANDER, J.; ARMAND, F. (2013) **Instruments and methods for the integration of company's strategic goals and key performance indicators.** Kybernetes, Vol. 42 Iss: 6, pp.928 – 942.

ANDRADE, G. E. V.; MARRA, B. A.; LEAL, F.; MELLO, C. H. P. (2012) Análise da aplicação conjunta das técnicas SIPOC, fluxograma e FTA em uma empresa de médio porte. **XXXII Encontro Nacional de Engenharia de Produção, Bento Gonçalves**.

ANDRADE, J. C.; OLIVEIRA, V. M.; MOTA, H. C. M.; LOPES, E. M.; FONTÃO, H. (2008) Aplicação da análise SWOT para identificar oportunidades para o desenvolvimento econômico e social. **XIII Encontro Latino Americano de Iniciação Científica e IX Encontro Latino Americano de Pós-Graduação – Universidade do Vale do Paraíba, São Paulo**.

APPIO, J.; SCHARMACH, A. L. R.; SILVA, A. K. L.; CARVALHO, L. C.; SAMPAIO, C. A. C. (2009). Análise SWOT como Diferencial Competitivo: Um estudo exploratório na Cooperativa Muza Brasil. **Revista Interdisciplinar Científica Aplicada, Blumenau**, v.3, n.3.

BARBOSA, D. H.; MUSETTI, M. A. (2011). The use of performance measurement system in logistics change process: Proposal of a guide. **International Journal of Productivity and Performance Management**, v. 60, n.4, p. 339-359.

BRACONI, J.; OLIVEIRA, S. B. (2009). **Business Process Modeling Notation (BPMN)**. Editora Atlas, São Paulo.

BRAZ, R. C. F.; SCAVARDA, L. F.; MARTINS, R. A. (2011). Reviewing and improving performance measurement systems: An action research. **International Journal of Production Economics**. Vol. 133, Issue 2. http://dx.doi.org/10.1016/j.ijpe.2011.06.003

CALDEIRA, J. (2012). **100 Indicadores da Gestão.** 8. ed. Coimbra: Conjuntura Actual Editora SA.

CAMPOS, V. F. (2014). **Qualidade Total: padronização de empresas**. 2. ed. Editora Falconi, Minas Gerais.

CAMPOS, V. F. (2014). **TQC: Controle da Qualidade Total (no estilo japonês).** 9. ed Editora Falconi, Minas Gerais.

CAMPOS, V. F. (2013). **Gerenciamento da Rotina do Trabalho do dia a dia.** 9. ed. Editora Falconi, Nova Lima.

CARPINETTI, L. C. R.; GALDÁMEZ, E.V.C.; GEROLAMO, M. C. (2008). A measurement system for managing performance of industrial clusters: a conceptual

model and research cases. **International Journal of Productivity and Performance Management**, **v. 57, n. 5**, p. 405-419.

CHIAVENATO, I. (2011). **Introdução à Teoria Geral da Administração**. 8. ed. Editora: Elsevier, Rio de Janeiro.

GALDAMEZ, E. V. C. ; COTRIM, S.L. ; GALVAO, E. M. ; CURSE, J. S. ; LEAL, G. C. L. ; BAIOCHI, S. F. (2016). Melhoria da Produtividade por meio do Mapeamento de Processo e Balanceamento da Produção: Impacto em uma Indústria de Vassouras PET. **Revista SODEBRAS, v. 11**, p. 154-159.

GALVÃO, E. M.; COTRIM, S.L.; LEAL, G. C. L.; ARAGAO, F. V. (2015) Sales Performance Management: a strategic initiative to the growth of micro and small enterprises. In: **XXI ICIEOM- International Conference on Industrial Engineering and Operations Management, Aveiro**.

GIL, A. C. (2008). **Métodos e Técnicas de Pesquisa Social.** 6. ed. Atlas S.A., São Paulo.

INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA DA BAHIA. (2014). **As organizações como um sistema**. Disponível em: < http://www.ifba.edu.br/professores/antonioclodoaldo/001%20SLIDES/1S%C3%8DN TESE_GR_SIPOC.pdf> . Acesso em: 15/05/2016.

JOHNSON, G; SCHOLES, K.; WHITTINGTON, R. (2007). **Explorando a Estratégia Corporativa.** 7 ed. Bookman, Porto Alegre.

KAUARK, F. S.; MANHÃES, F. C.; MEDEIROS, C. H. (2010). **Metodologia da Pesquisa: Um guia prático.** Editora Via Litterarum, Itabuna.

LAGES, P. G.; ZVIRTES, L.; BITTENCOURT, E.; ARAUJO, N. G. A. (2010). Implantação do Gerenciamento da Rotina do Trabalho do Dia-a-Dia em uma Empresa do Setor Moteleiro. **XXX Encontro Nacional de Engenharia de Produção, 11f. São Paulo.**

NAPPI, V.; ROZENFELD H. (2015). The Incorporation of Sustainability Indicators into a Performance Measurement System. **Assembly Technology and Factory Management/Technische Universität Berlin.**

PELISSARI, A. S. (2011). Management competence: a study in small companies of confections. **Revista eletrônica adm. vol.17 no.1 Porto Alegre Jan./Apr.**

PIECHNICKI, F.; BARAN, L. R.; PIECHNICKI, A. S. (2012). Proposta de modelagem de um processo de manutenção industrial baseada no padrão BPMN e na norma ISA-95. **XXXII Encontro Nacional de Engenharia de Produção. Bento Gonçalves, RS**.

SALGADO, E. G.; SILVA, C. E. S; MELLO, C. H. P. (2016). Reasons for Technology-Based Companies Contemplated By the First Company Program to Seek ISO 9001:2008 Certification. **Independent Journal of Management & Production (IJM&P). V.7. ISSN: 2236-269X; DOI: 10.14807/ijmp.v7i1.387.**

UGOANI, J. N. N. (2016). Emotional Intelligence and Organizational Competitiveness: Management Model Approach **Independent Journal of Management & Production (IJM&P). V.7. ISSN: 2236-269X; DOI: 10.14807/ijmp.v7i3.427.**

VOLPATO, F. B.; LEAL, G. C. L.; de SOUZA, F. A.; CARDOZA, E. (2011). Mapeamento de Processos: Um estudo de caso em uma Indústria de Produção de Fios Singelos. **XXXI Encontro Nacional de Engenharia de Produção, 14f. Belo Horizonte.**

WERKEMA, C. (2011). Lean Seis: **Sigma Introdução Às Ferramentas do Lean Manufacturing**. Editora Elsevier.

WERKEMA, C. (2014). **Ferramentas Estatísticas Básicas do Lean Seis Sigma Integradas ao PDCA.** Editora Elsevier.

YIN, R. K. (2015). **Estudo de caso**: planejamento e métodos. 5. ed. Editora Bookman. Porto Alegre.

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