Identification of inefficiencies in a complaints handling process

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ABSTRACT

Purpose – This paper aims to identify inefficiencies in the complaints handling process of a world leader company in the production of components for the food packaging sector, and propose some improvement actions to overcome them.

Methodology – The first step was to examine the complaints management process with the organizational agents, and model it using Business Process Modelling Notation. The data resulting from the organization process were later studied. From the combination of these two analyses, some elations about the process and its inefficiencies were draw.

Findings – The main conclusions were that (i) there is a need to standardize the activities in order to control the resources that are used; (ii) it is essential to increase the actors' awareness to the importance of the process improvement; and (iii) digital platforms should be implemented in order to facilitate interactions.

Practical implications – This article reiterates the need to improve business processes as a source of competitive advantages and may help organizations with similar processes and needs to implement improvements in their own processes.

Originality – This paper combines two approaches – process modelling and statistical process analysis – which are not usually employed together in the process improvement context.

Keywords: Complaint handling process, Process improvement, Business Process Modelling, BPMN.

Paper type: Case study

INTRODUCTION

Despite all the efforts made by organizations to increase market share and attract new customers, it is of utmost importance, for organizations, to provide a satisfactory service to those who have relied on them. So, an after-sales service must be provided so consumers won't be dissatisfied with the product or service, which would cause changes in their future behaviour and could reduce the attractiveness of the company with regard to other potential buyers who would be adversely affected. Customer retention capacity is therefore important, not only for profitability, but also for the image and sustainability of organizations (Filip, 2013).

As much as organizations try to provide customers with the best product and service, it is sometimes impossible to avoid a delayed flight, a damaged packaging or a failed delivery. Errors are sometimes inevitable, but customer satisfaction is not. Although they cannot foresee all the problems, organizations must have the ability to recover from them. A good recovery service can turn the customer's dissatisfaction into loyalty, in fact it can even create a better relation than if everything had gone as planned (Christopher et al., 1990).

The value of retaining customers over time for an organization is greater than the value of the products they complain about so, the concern with identifying, analysing, and solving customer problems is beneficial to organizations because it avoids their occurrence in the future, while satisfying and retaining current customers (Fornell and Westbrook, 1984).

Therefore, any opportunity that organizations have to receive feedback from customers must be leveraged, not only to satisfy those who need help, but essentially to anticipate the needs of others and adapt the product or service to market requirements. In this perspective, customer complaints arise as an extremely valuable opportunity for companies, and they should encourage the customer to do so, since it is a unique opportunity to realize what the customer wants (Filip, 2013).

Hence, the department responsible for managing customer complaints should be responsible for integrating the departments involved in the problems that were the source of such complaints, and also contribute to improve their processes, by identifying and reformulating the organizational activities related to those problems. The tasks of the department responsible for complaints management are then twofold, addressing client dissatisfaction adequately, compensating them, and finding internal means for removing the roots of discontent and their future recurrence (Fornell and Westbrook, 1984).

To fulfil the first function, manage customer dissatisfaction, according to the study of the determinant factors of management complaints in the context of Business to Business, done by Brock et al.(2013), the speedy treatment of the complaint process and the resulting fair compensation is clearly the most important thing, and the relation that employees have with the clients during this process is relegated to the background, contrary to what is often argued about the importance that is given to the interpersonal relationship. Industrial customers appear to act more rationally and more impersonally than consumers and, as a result, even with all the empathy of the employees and their customer orientation, this may not be enough if a weak compensation is given or an ineffective recovery process is implemented.

The second function is to find a way to reduce the causes of the problems. It can only be achieved if the organization has a structured system for evaluation and problem solving, following a specific set of procedures, to give real answers to the target consumers and eliminate the causes of their dissatisfaction. For this to happen, it is necessary to design a fully integrated complaint management system so that weaknesses are reduced, performance improved and similar experiences avoided in the future, establishing a relationship of trust, loyalty and commitment with the client (Filip, 2013).

Both of these aspects are critical to adequately satisfy customers requirements, which is the main issue within the scope of Quality.

The objective of the work presented in this paper is to improve the quality of the product and the service provided by an industrial company that supplies the food packaging industry – in a business to business context – by analysing their current process of complaints' handling and recommending improvement actions to overcome the problems found. It should be noted that since the organization belongs to the food sector, some of the identified issues can be critical, namely those related to contamination which can have harmful consequences for consumers.

RESEARCH METODOLOGHY

To understand how the organization manages its complaints, the first step was to examine the business process associated with complaints' handling. This phase was performed through the analysis of several complaints' processes, treated in the past by the organization, and was duly validated by the organizational agents.

Since many business processes are not easily understood in all their complexity many users, aware of the necessity to properly manage them, began to describe the processes in different

graphic forms as a way of understanding them and identifying the most susceptible points of action (Chinosi and Trombetta, 2012). Thus, the concept of Business Process Modelling (BPM) has emerged as a key element in the development of processes oriented organizations, since the existence of documentation, and a standardization of the processes in the form of graphic models, allow for an easy understanding by all the agents (Gabryelczyk and Jurczuk, 2017). It was then decided to develop the proper modelling of the studied process, using the concept of BPM, in order to do a more objective analysis. BPM helps to improve the efficiency and effectiveness as its functional representation encourages the use of other continuous improvement methodologies and aspects of total quality management (TQM) (Schmiedel et al., 2014).

The modelling language chosen for this purpose was the Business Process Modelling Notation (BPMN) since it fulfils all the requirements and it is the standard in the field of modelling languages. It is chosen by most of the experts, since it has the advantage of developing graphical models in an intuitive way, being also able to handle the complexity of business processes (Arevalo et al., 2016). BPMN uses only four categories of objects to represent the whole process, namely Flow Objects, Connecting Objects, Swimlanes and Artefacts. The Flow Objects with the objective of representing all actions that take place within the process (Events, Activities and Gateways); the Connecting Objects to present different ways of relating these Objects (Sequence Flow, Message Flow and Association); the Swimlanes to locate the elements within the space (Pools and Lanes); and, finally, the Artefacts to provide additional information about the process not contemplated in the flow (Data Object, Text Annotation and Group) (Chinosi and Trombetta, 2012).

Once the process has been duly mapped and explained, the next phase was to analyse all the available data regarding it. The data resulting from all the complaints received by the organization in the year 2017 were then analysed, specifically their occurrence, and also the time it took the organization to close them, comparing the different motives, in an attempt to associate them with the performance of the process.

At a final stage, the identification of inefficiencies in the organization's current process was done, by analysing the model and by interpreting the data processing results. It was taken into account that a business process always begins with a market need and ends when that need is met, so the process should add value to the customer and should not include activities and resources that are not needed or valuable. Ideally, the well-established business process

creates value for the costumer while minimizing the organizational costs associated with its activities (Singh, 2012).

RESULTS AND DISCUSSION

This section is divided in two subsections. The first one describes the result of the process modelling and, in the second part, the statistical analyses of the data regarding the complaints are presented.

Process Modelling

All the details of the complaint handling process are presented in Table 1. There is an explanation of the main components of the process, as well as the respective sequence of events, their activities and the related actors and objects. The process mapping, developed using BPMN, is presented in Figure 1.

Table 1 – Complaints handling process' details.

Event Sequence	Activity	Actor	Object
1	Complaint requests are submitted by clients in the organization specific software and the product manager receives a notification via email, whenever a request is submitted, marking the beginning of the complaint handling process.	Client	Complaint request on software
2	A pre-analysis of the complaint request is made, to confirm if it really corresponds to a complaint. If it does not correspond to the criteria the request is cancelled. If it corresponds, it is determined if the information necessary for the handling of the complaint is complete. In case the information is incomplete, all necessary information is requested to the client, and the process only continues when all the information needed is gathered.	Product Manager	
3	Once the information is available, the product manager opens the complaint on the system, that is, assumes the request as valid and all the data related to the complaint are inserted in a software to support its resolution (the complaints database).	Product Manager	Insert complaint on complaints' database
4	If a deeper analysis is required, depending on the motive of the complaint, an internal analysis is carried out in the department responsible for the type of problem claimed. This analysis is performed by the product manager and results in a technical report issued by the department in question, where it gives its technical opinion on the complaint.	Product Manager Responsible Department	Technical report

5	A proposal for the final resolution of the complaint based on the information presented in the technical report, together with the requirements presented by the client, is then prepared by the product manager. This proposal, due to the impact it can cause in the organization, may have to be validated by the administration, a communication that is promoted by the product manager. If the administration does not validate it, the proposal must be reformulated by the product manager, and only when it obtains administrative validation, the process proceeds.	Product Manager Administration	Final resolution proposal
6	After the final resolution proposal is prepared and, if needed, duly validated, it may be necessary to promote a negotiation with the client. If the client does not agree with the proposal, different terms are negotiated until a consensual proposal is reached.	Product Manager Client	
7	Finally, the product manager closes the complaint in the software, where it was initially opened, and an answer with the summarization of the whole process is sent to the client. The data related to the complaint resolution process is updated in the complaints database, so it can be properly stored.	Product Manager	Complaint closed on software Update complaints' database

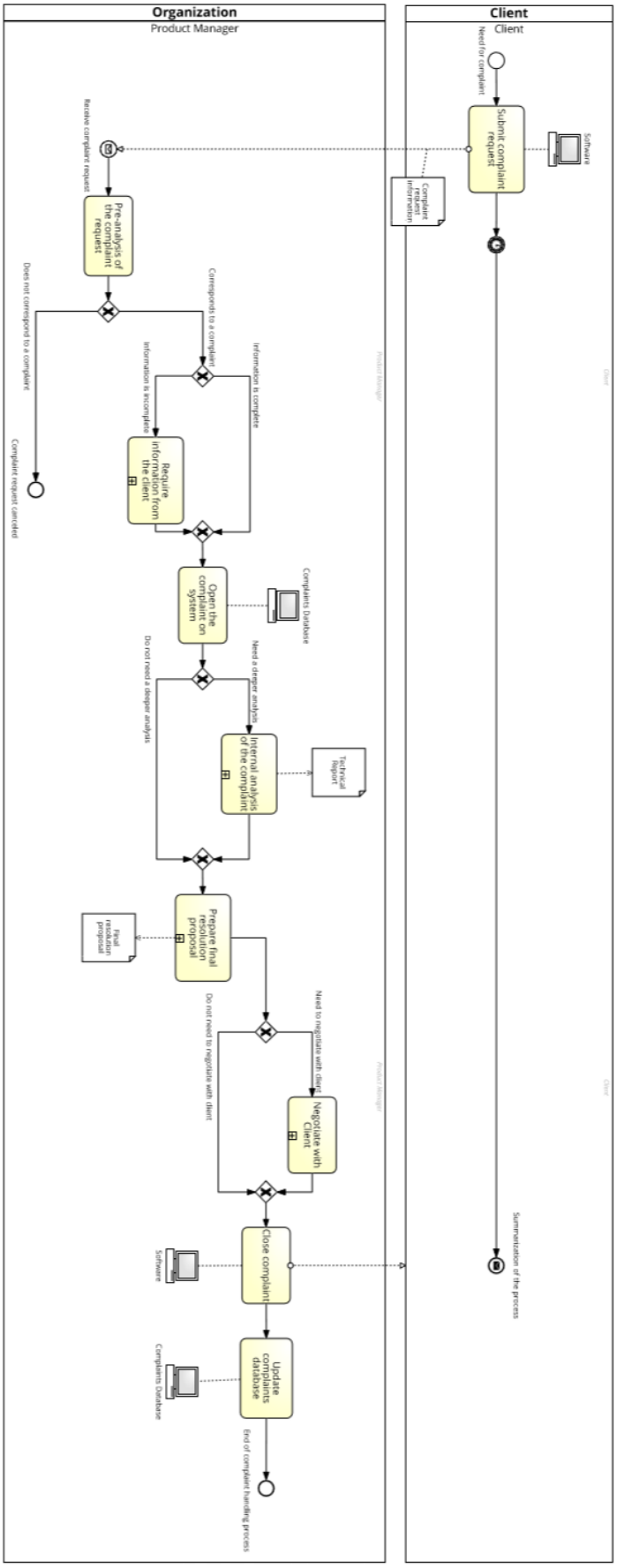

Figure 21 – Mapping of the complaint handling process with BPMN.

Analysing the model of the process in BPMN it is possible to verify that documents are generated in 3 moments, the complaint request information, the technical report, and the proposed resolution, but in practice, and with the unfolding of the process, more versions of these documents, as they are being updated and reformulated, are generated. At the moment, documents are sent by email between the actors, and this diversity of information is not beneficial for the efficiency of the process. In an ideal situation, the documents should be managed on a platform with document management functionalities and where it would be possible to make changes and submit updates, avoiding the redundancy of information and its inherent wastes.

It is also possible to verify that the client does not interact with the process. The client submits the complaint request, but only is informed of the process when it is closed. Promoting a more frequent communication with clients and keeping them up-to-date of the state of the process can be a good policy, increasing the satisfaction of those who complain and, in some cases, assisting with the resolution of the complaints.

Since the complaints are submitted by the clients in a specific software for the purpose, it is very time consuming for the product manager to evaluate if the request corresponds to a complaint and ask clients for additional information if needed. Although these activities cannot be completely eliminated, it is possible to incorporate part of them in the software as an automatism that requires that clients insert all the necessary information according to the motive of their complaint. Additionally, it should make a first filter of the request, verifying if it corresponds to a complaint or not. If this happens, much of the current process's activities would disappear, and that would be an important step to make the process simpler and more efficient.

Complaints Data Analyses

In this subsection, some results about the complaints and their resolution time are presented. This indicator was chosen by the company because it is considered crucial within the context of the relationship with the customers.

Data from the four classes of complaints used within the company are compared. Those classes were defined taking into consideration the department that is responsible for the problem claimed, and are: product in general (Motive 1), sensory characteristics (Motive 2), product classification (Motive 3) and service associated with the transaction (Motive 4).

In 2017, there were a total of 1214 closed complaints, with resolution times that varied from less than 1 day to 1 year (there was only one complaint that took more than 1 year to close). Figure 2 shows the resolution time distribution for all of the 1214 complaints and Table 2 presents the average and the standard deviation of the referred time.

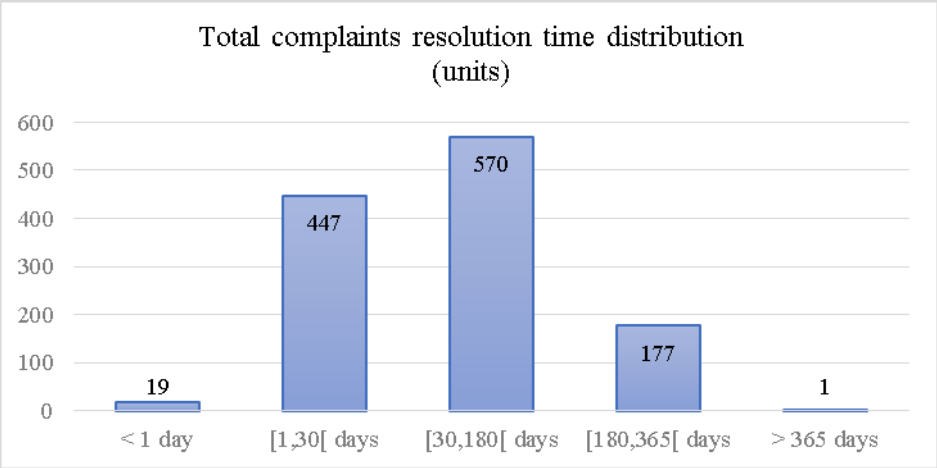

Figure 2 – Total complaints resolution time distribution, in units.

Table 2 – Average and standard deviation time of the total complaints closed, in 2017.

$\bar{x}$	80 days
s	86 days

The complaints are divided in classes, according to their motives. The four different classes of motives, as mentioned previously, are related to the organizational department where the deepest analysis is made, if necessary. In this exploratory study, it is assumed that the complexity of the complaints' analyses and their temporal extension are similar for all classes. Table 3 presents the number of complaints closed in 2017, for each of those classes.

Table 3 – Number of complaints closed in 2017 by type of motives.

Motive 1	Motive 2	Motive 3	Motive 4	Total
310	398	395	111	1214

It can be noticed that the number of complaints is quite similar for Motives 1, 2 and 3, while Motive 4 has a smaller frequency of occurrence.

Figure 3 presents the resolution time for each of the motives, and Table 4 shows the average and standard deviation of those times' distribution.

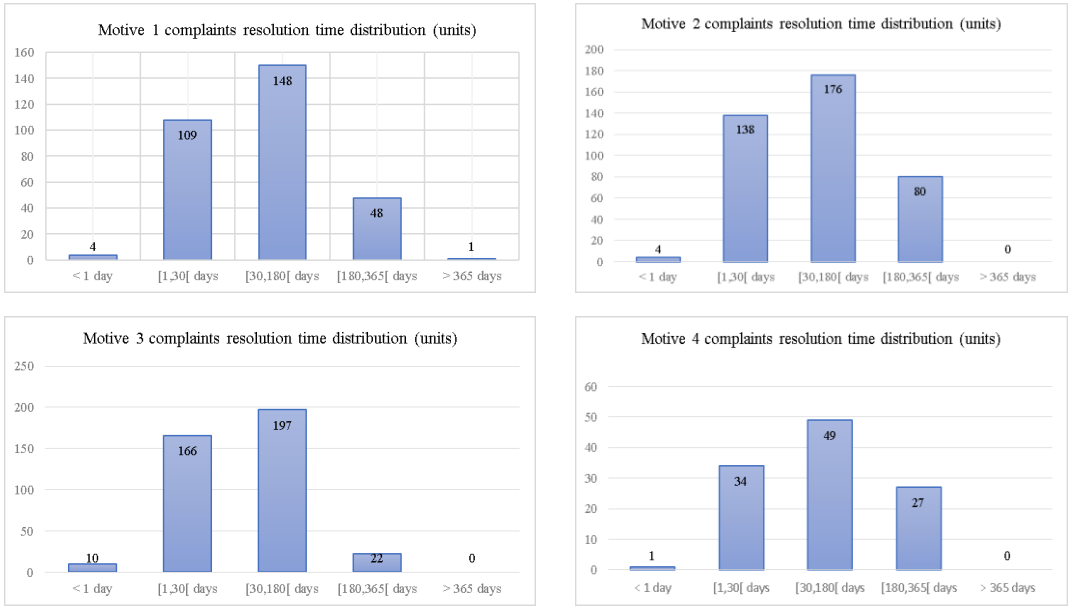

Figure 3 – Resolution time distribution, in units, per motive.

Table 4 – Average and standard deviation time of the complaints closed, in 2017, per motive.

	Motive 1	Motive 2	Motive 3	Motive 4
$\bar{x}$	91 days	87 days	56 days	102 days
s	97 days	85 days	66 days	96 days

It is interesting to visualize the discrepancies in the resolution time of different motives. Motive 4 presents a mean resolution time and a standard deviation with high values, with most of the processes solved between 1 and 6 months. As this is the motive with the least associated complaints, and, consequently, the organizational department should spend less time solving them, is interesting to verify that it does it less quickly than the others. On the contrary, Motive 3 has shorter resolution durations, despite being one of the motives with more associated complaints. It follows that the internal complaint handling process can be improved, and guidelines should be created to standardized the way different departments analyse complaints.

The standard deviation values can be considered high (86 days, for the total), which shows that there is potential for the implementation of improvement actions.

The high variability of each of the four processes and between them, can show that the control over the resources involved is not adequate. It is vital for the organization to have a clear sense of all the resources it needs to resolve a complaint, for each motive, and how much time they are spending on this activity, only then they will have the ability to monitor and improve it in the future.

Based on the results presented and taking into consideration the inputs obtained from different agents involved in the process, it is assumed that the activities that have a higher impact on the duration of the process are those where it ceases to depend solely on the product manager, either because validation of the administration is required or because a negotiation with the client is needed. Whenever one of these activities occurs, the process becomes discontinuous and, since communication is done indirectly, and there are no stipulated deadlines to complete each activity, complaints' treatment is postponed by the other departments, that give priority to other functions. It is considered then that most of the complaints that were closed on the same day or that had a duration of less than one month were mostly those that were treated continuously and where the product manager did not depend on others to proceed with the resolution.

Finally, it is considered that there is the need to carry out an in-depth study of each activity of the process and create deadlines for the different activities, establishing a standard on how complaints should be handled, ensuring not only a better performance in terms of response time, but also facilitating the internal control of the process and promoting its continuous improvement.

CONCLUSIONS

In this study, the complaints handling process of a company that belongs to the food packaging sector was analysed using two approaches, namely process mapping and statistical analyses.

Organizations must have a structured system of complaints evaluation and problem solving, following a specific set of procedures, in order to answer customers adequately, and to eliminate the causes of their dissatisfaction. It is then necessary to design a fully integrated complaint management system so that weaknesses are reduced and performance is improved.

The study of the process in question revealed that there are many inefficiencies in the organization's current complaints handling. This work highlighted some of those, namely: (i) the high duration of the process; (ii) the variability of the resolution durations; (iii) the lack of contact with the clients; (iv) the discontinuity of the process in certain activities; (v) the excess of documents generated; (vi) a poor process control; and (vii) the lack of standards.

In order to fill these gaps, a number of possible solutions have been outlined. The adaptation of computer systems, so that they are able to manage the information generated and automate

some of the activities should be implemented. The processes should also be standardized in order to: provide the actors with instructions of what they should do, allow the monitoring of the activities duration, assign responsibilities and thus enabling the organization to manage its resources and optimize their use. These proposals are considered important but to become viable and effective should be explored in a greater detail.

Although the graphic modelling in BPMN and the data analysis performed were effective and useful, it is worth mentioning that the use of a different approach to study this process, whether by using an alternative mapping method, or by studying additional data, could lead to the identification of other inefficiencies and findings.

As such, as future work, it is intended to continue this study, making more statistical analyses that should support the implementation of some of the suggestions and enable the emergence of more process improvement proposals. The cost/benefit relationship of the proposed actions should be performed and those that prove to be advantageous for the company should be implemented.

AKNOWLEDGEMENTS

This work was supported by Portuguese funds through the CIDMA - Center for Research and Development in Mathematics and Applications, and the Portuguese Foundation for Science and Technology (“FCT - Fundação para a Ciência e a Tecnologia”), within the project UID/MAT/04106/2013 and by National Funds through FCT - Foundation for Science and Technology, in the context of the project PEst-OE/EEI/UI0127/2014.

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