USING PRESENTATIONS: AN APPROACH TO MORE EFFECTIVELY RESOLVING CUSTOMER COMPLAINTS IN THE AUTOMOTIVE INDUSTRY

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Abstract: *The paper presents a case study in the automotive industry to identify the variables that influence the process of managing customer complaints. The process follows the 8D methodology to satisfy customer complaints; that is, to solve problems, reduce overall quality costs, and improve customer satisfaction. This paper also describes the improvement in the customer complaints process achieved by adding a presentation to the efficient use of the 8D methodology. During the case study, the problem was defined; the variables that influence the process were identified; the causes of the process failure were analyzed; improvements were planned and made. The improvement was achieved by integrating a presentation and also managing the recurrence of internal failures by involving operators in successfully solving problems. Faster and more qualified response to complaints and, therefore, to problems was achieved, reducing and preventing the recurrence of problems, representing an increase in customer satisfaction in resolving complaints. (B. Dee, 2004)*
Keywords: *automotive industry, customer complaints*

I. INTRODUCTION

1.1 From internal failure to customer complaint

This paper is based on the study of the failures in the production of a wiring harness company. The organization is the main supplier for the production lines of cars, and internal failures can easily turn into customer complaints. Internal failures in production can have various causes such as lack of information of operators, lack of standards or non-compliance, omissions by the human factor, wrong planning, wrong identification, and even intent.

What is important for the organization is the consequences of failures, which can be very serious: from extra work, rework processes, material loss, and scrap to production stoppages, customer complaints, withdrawal

actions, and even loss of order. Thus, the organizations that operate in the automotive field implement and continuously improve the mechanisms for solving failures, whether they are internal or external failures. The focus of the organizations is to stop the defects "in-house" so that customer satisfaction is not affected. For this, there are more gates where failures can be noticed and stopped.

The following figure indicates where the failures can be detected and what the reactions are, as the case may be:

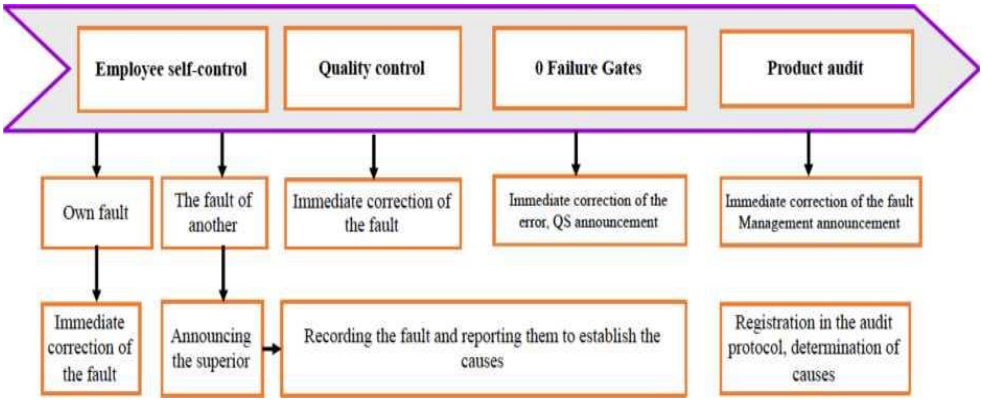

Fig. 1: Detecting failures in the company

The lack of detection of failures in the company turns in this case study into a customer complaint.

1.2 Customer complaints

Customer complaints are costly, both in terms of direct costs and indirect costs; however, companies can extract relevant knowledge because complaints are the direct "voice of the customer." If these complaints are turned into customer knowledge, they add value to businesses. To explore this capital, companies must continually design, build, operate, and update complaint management systems (Gonzalez Bosch, 2005). Understanding that complaints are an important business outcome, researchers work to create a better fulfillment of the grievance process. A definition of the grievance process, according to Dee et al. (B. Dee, 2004), is: "A process that addresses issues of concern to customers." Other authors take an additional look at complaint handling, defining it as "the remedy of policies, systems, or protocols so that the problem does not arise for future customers" (J.F. Stichler, 2003).

The satisfaction of resolving complaints is also interesting in the research on the process of resolving complaints because the implementation of a simple, report-based system is no longer enough. Such a system must guarantee the satisfaction of complaints and customer retention. Hallen and Latino (G. Hallen, 2003) showed in their case study of a chemical manufacturer that feedback on complaints can be used to identify the root causes of problems that lead to customer dissatisfaction. Furthermore, the case study's findings revealed that addressing the fundamental causes of problems improves customer satisfaction. The definition of customer satisfaction is not clear, but it depends a lot on feedback and complaints. Zaire (M, 2000) argues that weaker organizations with substandard services and products will no longer compete in the future.

II. RESEARCH METHODOLOGY

2.1 Complaint solving mechanism

The 8D methodology involves teams working together to solve problems, using a structured 8-step approach to help focus on facts rather than opinions. The 8D stages are D1- team formation; D2-problem analysis; D3-limiting the failure; D4-cause analysis; D5-corrective actions; D6-checking the effectiveness of corrective actions; D7-preventive actions; D8-team recognition. The 8D methodology is effective in developing appropriate actions to eliminate the causes and in implementing permanent corrective actions to eliminate them. (Dumitrescu Constantin Dan, 2020) It also contributes to the exploration of the control system that allowed the omission of the failure. There are reports of successful use of this methodology to deal with recurring issues, mainly defects or warranty issues (Rambaud). Overall, this methodology has never been intended to replace a systemic quality system. The aim of the 8D reports is to deal with the problems and to discover the weaknesses of the management systems that allowed the problem to appear in the first place. According to Rambaud, the biggest abuse in implementing the 8D methodology involves using it only as a one-page reporting effort. This misuse is often exaggerated by requiring the report to be written within 24 hours. Some steps may take a few hours, while others may take weeks. In production, many problems can only arise with a single set of conditions, which require more extensive analysis. Also, the report is directed mainly to the customer, without being seen by the production operators. Operator awareness is the key to succeeding in avoiding further failures.

III. CASE STUDY

The challenge in the selected company, it was agreed in the contracts with the clients that the answers to the clients' complaints must be in the established time and very detailed. Ideally, these answers should also provide the quality of information needed to solve the problem according to the steps of the 8D methodology. (Sousa, 2010) The speed and quality of the customer complaint management process have not always been reached due to numerous internal and external causes deviating from the organization's aims. This low performance in troubleshooting increases response time to prevent the recurrence of nonconformities and also decreases customer satisfaction. Failure to satisfy customer expectations may increase costs related to poor product quality, such as inspection, failure, warranty, and other contract-defined charges. The challenge of this research was to investigate ways to improve the response time and quality of the investigations carried out to solve the problems triggered by customer complaints.

In this case study, an internal failure is analyzed, undetected in production, and which produces effects on the production line from the customer.

Internal failures can be identified in several stages of production, and yet the failure has reached the customer. We analyze an "illegible label" unnoticed in all stages of production.

As an internal methodology, the first step is to submit the complaint and take immediate action, following the steps below:

1. Limitation of affected parties
    - It must be determined how large the affected quantity is, only the current production or even the last production
    - The production time for a package must be determined and the quantity already produced must be from the logistics department.
2. Blocking and correcting the affected parts - meaning reprinting the labels for the entire quantity produced and registering them in the system
3. Handing over the results to the failure analysis team

The multidisciplinary team, made up of members of the production, quality, engineering, and logistics teams, analyzes the analysis of the causes of the complaint. The analysis shows a combination of an unforeseen technical problem and the operator's selfcontrol problem: the printer was not set correctly, and the operator did not position the label roll correctly.

When completing the 8D report, we will have the following fields:

D1 - Team formation: this complaint requires a multidisciplinary team consisting of employees of the various departments involved in the complaint

D2 - Presentation of the problem: the delivered label had an illegible barcode for the customer

D3 - Limitation of failure: because the failure could not be observed in the organization and was delivered to the customer, all the stock in the factory will be blocked, and all the wiring already delivered from the date of the complaint will be requested from the logistics department, possibly affected. After the internal sorting actions, the customer will be established, and the affected quantity will be corrected.

D4 - Cause analysis: The analysis results in a combination of an unforeseen technical problem and the operator's self-control problem: the printer was not set correctly, and the operator did not position the label roll correctly.

D5 - Corrective actions:

1. Training operators with label data and barcode position
    1. Create new software to implement double-label scanning (customer barcode scanning) at the packing station to detect the correct printing of the customer barcode.
    2. Update the working instructions for wiring the wiringD6-Checking the effectiveness of corrective actions: The efficiency will be checked in the internal system when the failure "illegible bar code" occurs.

D7 - Preventive actions: At the packing station, a double scanning process (scanning both barcodes: internal code and client barcode) was developed to prevent this type of malfunction.

D8 - Recognition of the team: Congratulations on the well-performed analysis and prevention of other similar failures.

Although the 8D report is detailed and the analysis performed correctly, ambiguities may arise from the client and inter from the operators. The customer does not understand why the scanned code does not correspond to the one scanned by him on the production line, and the operator does not understand the failure because the scan of the code performed by him did not return any failure. Having doubts, the client can reject the analysis, which leads to low customer satisfaction, and the operator will not notice the failure in the future because he does not follow the correct barcode.

In order to resolve without any doubt these possible ambiguities, in addition to the 8D report, a visualized presentation was introduced, containing concise and explicit data to present on the basis of photographs of the problem to the customer and the problem in domestic production. This presentation is based on photos and contains five simple steps:

1. Submission of the complaint

Fig. 2 - Submission of the complaint

From the picture received from the client, you can see the bar code is positioned incorrectly on the left side of the label and not centered. However, it is not clear to the responsible operator that the failure occurred, as it scanned the barcode and had no failures.

2. Immediate action

Fig. 3 - Defect awareness

An explicit visualization is performed for the operator to understand what is wrong. This results in the incorrect position of the barcode.

3. Fault analysis

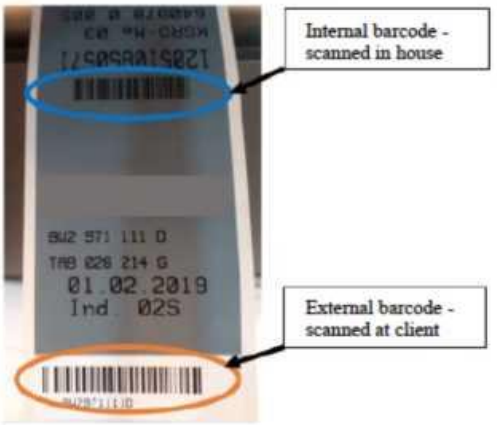

Fig. 4

The analysis shows that the label contains two barcodes: one internal, which is scanned in the factory and was scanned correctly by the operator, and a second barcode, external, which is scanned by the customer. Only now can the failure be understood: the customer understands that the external barcode is not scanned in the factory and, therefore, no failure has been detected, and the operator understands why his scan did not return any failures.

4. Cause analysis

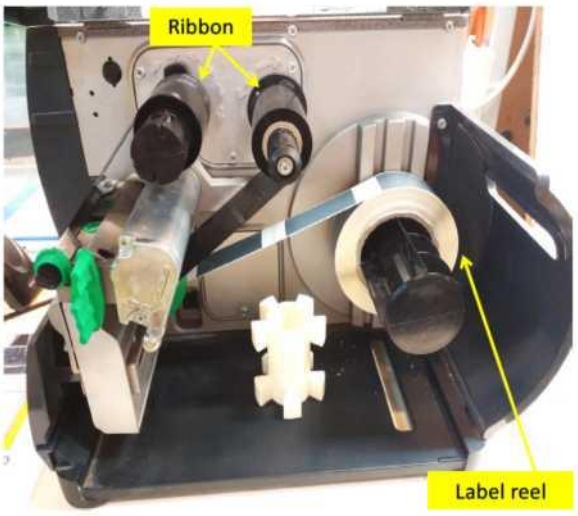

Fig. 5 - Printing process

The analysis shows a combination of an unforeseen technical problem and the operator's self-control problem: the printer was not set correctly and the operator did not position the label roll correctly.

This part of the presentation comes with additional details and is meant to clarify the printing process and the cause of the failure. These are the details that clarify the corrective actions described in point D5 of the 8D report.

5. Corrective actions

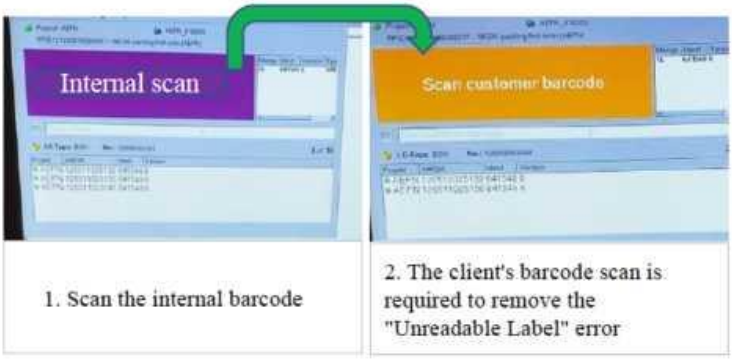

Fig. 6 - Double scan

Consecutive scanning of the internal bar code and later of the client bar eliminates the occurrence of future failures.

IV. CONCLUSION

Customer satisfaction must always be one of the most important goals of the organization. Efficient resolution of customer complaints is the most important part of maintaining customer satisfaction. Customer complaints should be viewed as an opportunity to collaborate and solve production-related issues. By introducing presentations as a point in addition to the traditional solution of complaints with 8 D reports, a greater understanding is obtained from the clients and thus an increase in satisfaction. By understanding the exact cause of the problem and the solution offered by the organization, the clients' expectations in the future avoidance of failures are increased and lead to a successful collaboration. Complaints resolved to customer satisfaction are the most important point of collaboration and understanding. Such presentations will always be welcomed and appreciated so that the work submitted will be appreciated both by the client

and internally, at the production level, because a presentation has a greater impact among the operators and leads to a better awareness, which in turn they lead to increased attention and avoidance of future failures.

V. Bibliography

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