



COMPLAINT MANAGEMENT SYSTEM IN BUILDING MATERIAL FACTORY

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ABSTRACT

The scientific goal of this article was to confirm the thesis that efficient complaint management can be one of the company's competitive advantage elements in the sphere of logistic customer service. The theoretical part of the article presents basic foundations related to complaint management process as an important element of post-trade sales process in customer service. The research part presents an example of the implementation of efficient assumptions of the complaint management process on the example of a construction industry manufacturing company. Guidelines for the design and implementation of an effective and efficient complaint handling process are presented. An example of process analysis is done using appropriate quality tools.

KEYWORDS

complaint, complaint management, customer service, logistics strategy.

Introduction

Customer retention is one of the many major challenges of modern enterprises due to the increasing demands of consumers and the volatility of the decision. The method of customer service has become a factor in the competitiveness of enterprises, whose proper use can become an element of market advantage. High quality of customer service, along with the low cost paradigm, is also one of the fundamental long-term goals of functioning of modern supply chains.

Complaints are the least desirable element of economic activities, however, are always related to the conduction of these activities. The ideal solution is to sell defect-free products but in practice it is impossible. Among many factors affecting the improvement of quality, also efficient management of complaints is very important as it can become an element of competitive advantage of the company. Professional complaint handling is a factor that determines customer satisfaction and is deeply related to building

a positive image of the company. Complaints are the most effective way to obtain information about the quality of services provided. Their analysis allows to get answers to the following questions: how to improve the quality of products, services as a result of gaining new customers, keep old customers and how to maintain a significant market share?

Therefore, the scientific goal of this article was to confirm the thesis that efficient complaints management can be one of the elements of the company's competitive advantage in the sphere of logistic customer service. For this reason, the first part of the article presents the theoretical basis associated with the complaint management processes as an important element of the post-trade process of sales and care for a high level of logistic customer service. The research part presents an example of the implementation of efficient complaint management process on the example of a manufacturing company functioning in the construction industry. Guidelines for the design and implementation of an effective and effective complaint evaluation process based on standard-

ization documents were given. The presented example of the process analysis was based on appropriate quality tools.

Complaint as an opportunity to improve the quality of service

The complaint or reclamation comes from the Latin *reclamatio*, meaning call, opposition. In the colloquial sense, it means a customer's request directed to the seller or contractor of the service in order to request replacement, repair or re-performance, possible improvement of the service, as well as a request for reimbursement of all or part of the amount paid for the product.

A complaint is a statement of certain expectations that have not been satisfied [1]. In companies using a strategy based on the quality of customer service, the complaint should be treated as an opportunity to recover a good relationship with the customer, when effectively dealing with the problem of defective product or poor service.

There are many classifications of complaints, highlighting various elements of the classification, due to: the entity, the recipient, the date of notification or the opinion of the supplier to the claimed complaint.

Figure 1 [2] distinguishes different complaint types according to the customer, the subject of the complaint application and due to its priority.

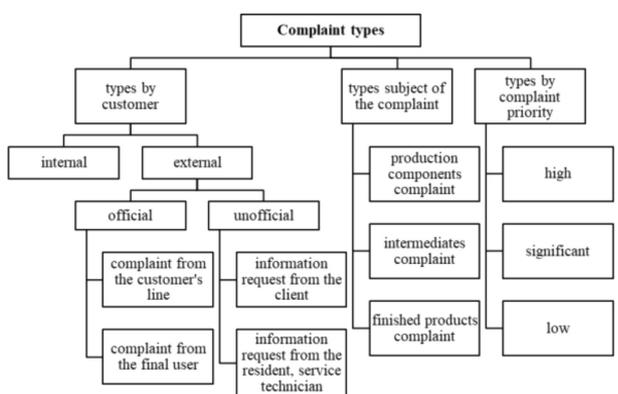


Fig. 1. Types of complaints with regard to the reasons for their occurrence [2].

Following the submission of a complaint by the customer and finding of non-compliance, the supplier is obliged to bring goods into conformity with the contract by:

- exchange of goods for a new one, defects removal,
- free repair of goods,

- reduction of the value of the goods by the amount of difference between the price of the goods in accordance with the contract and the price of the goods, which is characterized by the non-compliance indicated above,
- withdrawal from the sales contract,
- withdrawal from the contract after the complaint [3].

Complaint behaviors are critical to customer loyalty, customer retention and profitability [4], which if used in a long-term strategy of the company may contribute to a competitive advantage in the market. Consumer research also shows that acquiring a new customer is about five to eight times more expensive than retaining an existing one [5].

A thorough analysis of the submitted complaints requires the company to build a monitoring system to control not only its course, but also the entire process from the moment of reporting such a complaint by an external or internal client to the final analysis, which is included in the concept of complaints management.

Customer complaint management

Efficient complaint management requires making many decisions [6] that can be supported by procedures and by different IT tools. Figure 2 presents a block diagram of the procedure for the complaint process.

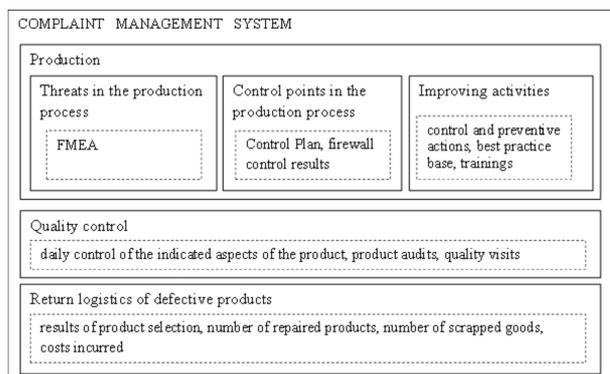


Fig. 2. Integrated areas of the complaint management system [2].

To develop an effective complaint management system in an enterprise, it is worth using ISO 9001, which provides guidelines for the design and implementation of an effective and effective complaints management process [7]. Their main goal is to provide benefits to both parties: clients and organizations. Development and implementation of the "Cus-

customer Complaint” procedure based on ISO 9001 guidelines “Quality management. Customer satisfaction” sets a policy for managing complaints in the organization.

The purpose of developing the procedure is:

1. customer satisfaction increase by creating a customer-oriented environment,
2. meeting the expectations and needs of customers submitting complaints,
3. providing customers requesting complaints, open, friendly and efficient handling of complaints,
4. correct handling of complaints,
5. analyzing and evaluating complaints in order to improve the product and the quality of customer service using appropriate, implemented quality tools,
6. evaluating and analyzing complaints in order to improve the product and the quality of customer service, using the appropriate quality tools,
7. unification and improvement of the process of complaints management.

Information on customer complaint management should be easily available to the client and other interested parties. The customer submitting a complaint should be informed at each stage in the form of an e-mail message or similar.

An example of efficient complaint management in a production company using 8D method

An example of the implementation of efficient complaints management was based on a production company representing the construction industry [8]. In the current product range the company offers: cement corrugated and classic roof tiles, various types of cement tiles and a wide range of ceramic and cement finishing accessories.

Along with the development of the company, there was a concept of the reengineering of processes related to complaints. Claims of customers were related, among others, to the quality of products, their use as well as the timely and complete delivery of products.

Complaints were divided in the analyzed company into two groups, the first related to the quality of the product, the quantity, completeness and timeliness of the order. In the second group, there were complaints related to the product usage, such as cracks in the varnished coating, faded color, and other damages caused by weather conditions.

In the analyzed company, actions were taken to improve the quality of customer service through

the improvement of complaint management processes which is shown as an algorithm in Fig. 3 [9].

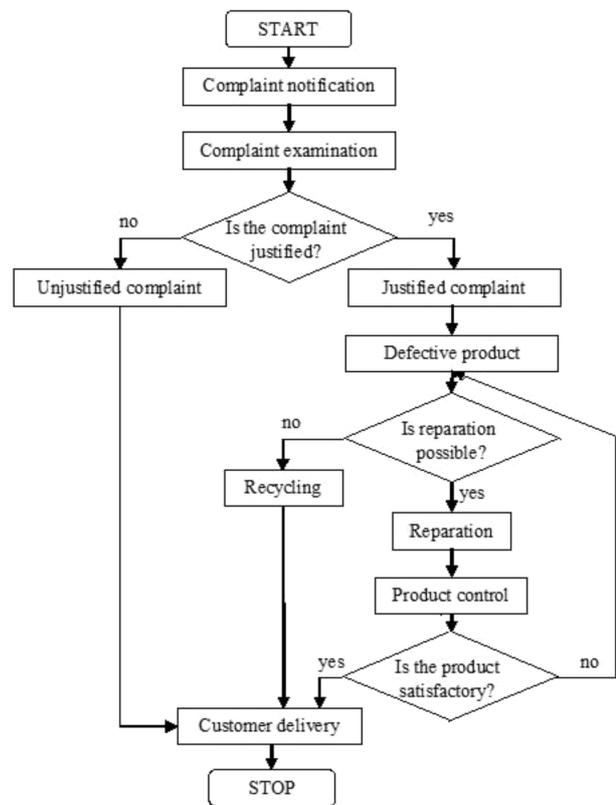


Fig. 3. Block diagram of proceedings in the complaint process [9].

The company acknowledged that complaints are the most effective way to obtain information about the quality of services provided. It was considered that a rational approach to complaints will allow to get answers to the following questions: how to improve the quality of products, services as a result of acquiring new customers, keeping old customers and how to maintain a significant market share. Analyzing in detail the needs of customers, what they want, what pleases them, the functioning of the company can be improved and making one step ahead of competition. In the first phase of complaint management process improvement was identification of the basic guidelines of this process. Table 1 presents the analyzed improvement activity guidelines in the area of the complaint management process.

One of the methods of group problem solving used in the manufacturing company is the 8Ds (eight disciplines) problem solving method [11, 12] developed at Ford Motor Company, but is used in many other manufacturing companies [13].

Table 1
Guidelines of performance improvement of in the complaint management process [10].

No.	Guidelines for improvement	Basis for improvement
1	Knowledge about the client, showing that the client is not anonymous	<ul style="list-style-type: none"> • creation of a customer database, • analysis of the contacts history contacts with clients, • trade department training.
2	Definition of what has been done to solve the problem	<ul style="list-style-type: none"> • improving the flow of internal information, • analysis of records and documentation, • implementation of a modern quality tool, • implementation of the new ISO 9001 procedure.
3	Definition of what has been done to prevent a problem in the future	<ul style="list-style-type: none"> • procedures implementation in the process, • establishment of complaint team, • complaint team collaboration, • applying quality tools to the analyzes, • implementation of detailed complaint statistics.
4	Showing interest to clients, inspiring trust	<ul style="list-style-type: none"> • application of an individual style of communication with the client, • implementation of active listening techniques, • trade department training, • change in employees' approach to reported complaints.
5	Accepting responsibility for actions in the customer service system and their effects	<ul style="list-style-type: none"> • mission, vision, strategy.

The name of the method comes from the eight steps that the team will reach a more effective solution [14]. Each of the team's participants works independently. The method emphasizes the indication of both immediate solutions to the problem: temporary restraining actions, as well as determining the root causes and then determining permanent corrective and preventive actions (system actions) enabling definitive elimination of the problem and process development [15]. The 8D method is based on fact analysis. Hence the requirement for employees to possess the appropriate skills as well as the direction for continuous improvement of the company's (organization's) functioning. The use of the 8D method can be used to consider complaints [16], but using this method you can identify any problems related to different areas of the company's operations (employment, finance, procurement, production, sales, etc.). We may find some examples of the 8D methodology presentation and its performance in influencing the customer complaints management process throughout a case study in the automotive industry [17] or solving industrial problems [18].

D0: Preparation and Emergency Response

Actions: it is sometimes referred to as the initial/zero step of the 8D method to make a plan for solving the problem and determine the prerequisites. For the protection measures introduced, evidence should be recorded regarding the effectiveness of the protection measures taken, in order to verify them later.

D1: Use a Team: Establish a team of people with sufficient product or process knowledge. The size of the team and its composition depends on the nature of the problem and the actions taken. It is im-

portant to ensure the appropriate permissions team, which will enable it to acquire and use information relating to the analyzed problem and take the necessary decisions. Because the method is an important part of preparing the report, the team must have a designated person or persons who will document the work of the team. The team should have the right structure with the leader. In the analyzed company, efficient complaint management is carried out by a team of five employees of production, logistics, sales, complaints and quality control departments.

D2: Describe the Problem by specifying the problem by identifying in quantifiable terms. In the case of describing the process of product implementation, which is related to the complaint, the actual state, and not only use the process documentation must be taken into account. Correctly described problem is the starting point for further stages of analysis and accurate understanding of the essence of the problem.

In the manufacturing company each complaint is reported in terms of: customer, product, product index, order number and date of complaint receipt, which is crucial in terms of controlling the duration of the complaint consideration and its finalization. This is followed by detailed description of non-compliance, e.g.: "The roof tile is not in a solid color. There are 150 pieces of tiles matt instead of glassy in the batch of material. Problem: incompleteness of the order suspends work on the construction of the customer".

For example, the 5 Whys method for the analyzed problem of roof tiles complaint is presented in Table 2.

Table 2
An example of the roof tile complaints analysis with 5 Whys method.

1 why	Why the tile is not glassy?	Because it was not covered with glaze.
2 why	Why was not it covered with glaze?	Because the glazing feeder did not work properly.
3 why	Why the feeder did not work properly?	Because of its bearing seizure.
4 why	Why was the bearing of glazing feeder seized?	Because it hasn't been replaced.
5 why	Why was not the bearing of glazing feeder replaced?	Because the service technician did not place orders for new bearing because of health absence. He did not give information to his supervisor

Table 3
An example of 5W2H roof tile complaints analysis.

How was a person contributed to the non-compliance?	Service technician did not place an order for bearing.
How did the problem arise?	The glazed feeder stuck – did not put any glaze on some tiles
How was the problem identified?	04/03/2016 (I shift)
How many defective pieces were identified?	150 items reported by the customer
How many times did the problem occur?	only once

Another qualitative method that can be used to analyze the cause of the complaint is the 2H (how? how much?) method, complementary to 5 Whys method. The 5W2H method (who, what, where, when, why, how, and how many) is used in 8D problem solving to specify the problem by identifying in quantifiable terms the for the problem. For the analyzed problem, it is presented on example in Table 3.

D3: Develop Interim Containment Plan by definition and implementation containment actions to isolate the problem from any customer. These are temporary activities which aim is to protect clients from further effects of the problem until permanent corrective actions are introduced. Restraining actions are to prevent the development of the problem, further production of non-compliant products (deficiencies) and, worst of all, the transfer of non-compliant products to the customer. If necessary, the service activity should be started at this step. Examples of containment actions applied company producing roof tiles are containment actions: introduction of additional controls, selection of goods broken down into defective and good, stopping the shipment of goods, stopping production.

D4: Determine and Verify Root Causes and Escape Points. At this stage of the 8D method, a description of the problem should be verified and updated (if new information was identified), the information about the temporary stopping actions introduced review, statistical data collected and analyzed, the situation analyzed and the root causes of the problem determined, with a percentage in causing the problem and indicating places in the process in which the problem could have been detected earlier, but it was not).

To effectively address the problem, the actual causes of the problem should be identified [19]. This

is not a simple task. Often the real causes of many problems lie deeply in the management of the organization. If the composition of the team is insufficient to identify the source causes explaining the problem, it should be supplemented with additional people.

The source causes can be divided into two categories: the reasons that caused the problem to be revealed and the reasons that caused this problem. Therefore, in the analysis of root causes, one should pay attention to two important aspects of root cause analysis: why the problem appeared and why this problem was not detected immediately where it was currently exposed. During the work, Ishikawa diagram, 80/20 method (Pareto method), risk analysis (FMEA) can be used. It may also be helpful to analyze the distribution of events related to the problem over time. The analysis must necessarily include: material, machines, methods, people and the environment for the problem under consideration. Using 5Whys methods, you should ask the next “why” questions a minimum of five times to get to the right root cause.

On the basis of the analyzes carried out and presented in Tables 2 and 3, the result is determined. In the analyzed case, the lack of glaze on roofing tile was caused by the improper operation of the feeder (the feeder was blocked because of the seized bearing). Since the problem did not apply to all but only selected (150) tiles, the defect was also not detected by the control department. The improper operation of the feeder was caused by the lack of repairs and the absence of service technician as well as the lack of procedures regarding regular equipment inspections. During the procedure it was also concluded that poor communication in the company also contributed to the problem.

D5: Verify Permanent Corrections (PCs) for Problem will resolve problem for the customer. In the fifth stage of the 8D method, the team should use the idea search techniques as well as develop solutions. Team members should consider several solutions to the problem described, as well as assess which ones will be the best. Solutions should be considered in terms of input methods (in the context of risk analysis, speed and ease of implementation, benefits as well as impact on the client). Optimal solutions that guarantee lasting results should be sought. Similarly to the source reasons established in the previous stage, it is possible to divide permanent corrective actions into two categories: corrective actions that eliminate the occurrence of the problem and corrective actions that eliminate the source cause of the problem). From the perspective of solving the problem, this step is the most important in the 8D method.

Examples of corrective actions undertaken by manufacturing company are: introduction of an additional process (e.g. test and repair of defective products detected), introduction of additional control in the process, introduction, notification to the supplier about defects in the material provided and replacement of defective material. Using pre-production programs, quantitatively confirm that the selected correction will resolve the problem.

D6: Define and Implement Corrective Actions. In the next step of the 8D method, an action plan should be prepared (indicate the responsible person, specify the date of the action introduction and describe the actions taken). These activities relate, for example, to changes in procedures, structural changes, changes in supply and training of relevant employees, etc. It is necessary to check the effectiveness of the measures implemented by monitoring the results of achieved indicators (for example, statistical analyzes and laboratory tests etc. can be used). Prior to issuing permanent corrective actions, it is necessary to remove previously introduced temporary restraining actions.

If it is not possible to implement corrective actions or this implementation requires a longer time, then a re-analysis, possible modification and further application of the introduced temporary restraining actions is necessary.

The implementation and verification of temporary activities in the scope of the description of the temporary activities undertaken, the place of action, the date of implementation and the person responsible for it are very important in the complaint management procedure of the producing company. It is

especially important at this stage to verify the effectiveness of the actions taken.

For the analyzed case of complained roof tiles, the following activities were planned:

- supplying the client with a new batch of missing tiles,
- consolidation and then returning to the customer defective tiles,
- control and consolidation of 10 pallets of defective roof tiles being in stock,
- checking and controlling roofing tiles orders from the complaint period – contact with customers who bought a roof tile from that period,
- glazing machine control – technical inspection including bearing replacement.

D7: Prevent Recurrence/System Problems. The purpose of the next step of the 8D method is to establish preventive actions to be taken to prevent the recurrence of the problem. This step should identify system actions that will capture, refine or replace permanent corrective actions. It is necessary to check the operation of the applied solution in terms of achieving specific goals. It should ensure that the problem does not occur again. In complex cases, it may be necessary to reuse the 8D method, for example with regard to management methods. Examples of preventive actions taken by the manufacturing company: specification or change of incorrect specification or entire documentation, change of process parameters, modification or implementation of appropriate instrumentation, change of technology or tools by a co-operator, introduction of factors motivating employees and discouraging return to old practices, change of organizational procedures. In this step the complaint management system, operation systems, practices, and procedures to prevent recurrence of this and similar problems should be modified.

Proposition of preventive actions end the company's complaint management process. This includes the preparation of a description of the procedure for regular inspections of equipment or the development and implementation of a procedure to improve communication between employees.

D8: Congratulate the Main Contributors to your Team. The final step of the 8D method is related to the summary and documenting in the form of an 8D report of the team's performance results and recognition of team efforts. One of the elements of the summary should be the assessment of the effectiveness of the measures implemented. It is recommended that the assessment should be made by comparing the description of the problem and the current state and that the assessment should be car-

ried out by the customer quality department, e.g. by comparing the quality parameters of subsequent deliveries (for example by analyzing the number of deficiencies from subsequent production batches) or based on the results of supplier audits. A good rule is to give credit to the team members (appreciating the work of the team). For example, publishing the results of the team's work in the form of an article, so that the members of the team feel how important their work is. Recognition should be unique – not a template, and above all, adequate to the weight of the problem being solved. It allows enhancing the effectiveness of problem-solving processes through employee motivation and involvement [18].

Implementation of the complaint management procedure of the manufacturing company in accordance with ISO 9001 and assisted by information or quality tools (5W2H method and other used, like Ishikawa diagram, 8D solving/report method [8]) allowed to reduce the time of complaints considering. It resulted in shortening the time of complaint analysis below 14 working days. According to the assumptions of reduction of time allowed to improve the company's and improved customers service level. As shown to Fig. 4 [9], in 2014 the average complaint considering time was 21 business days, and after the implementation of the advanced procedure in 2016, the average time has been reduced to 10 business days.



Fig. 4. Comparison of the number of days of customer complaint considering process in 2014–2016 [9].

It is one of the most important elements of an effectively conducted customer service strategy, of which punctuality and efficiency are important elements.

Implementation of a new approach to complaints in the company contributed to the reduction of their number (Fig. 5).

Undertaking corrective and preventive actions enabled quick and efficient elimination of the identification of the causes of problems which contributed to the efficient treatment of complaints and, as a result, to the increase in customer satisfaction. This, on the other hand, contributed to the improvement

of the overall image of the company and increase of income.

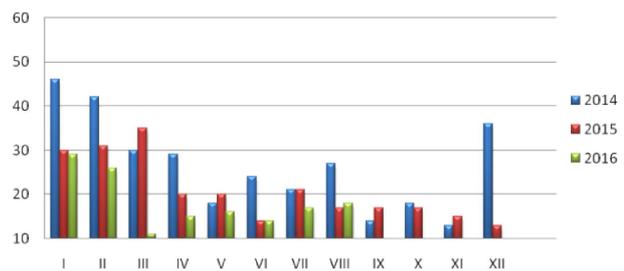


Fig. 5. Comparison of the number of complaints in the years 2014–2016 [9]

Conclusions

Each complaint contains valuable information for the company. Information obtained through the process of complaints management can lead to the improvement of products or service. If the complaints are considered properly, they can lead to an improvement in the organization's reputation and, consequently, to increased customer satisfaction. Professional examination of the complaint is a factor that determines customer satisfaction and is deeply connected with the building of a positive image of the company. Therefore, complaints should be treated as a strategy tool and a way to obtain information about unique products or services, not as a problem or cost. Customer complaint is one of the most effective and most direct ways to tell the company what area needs improvement.

The actions undertaken in the area of complaints management allow the company to implement corrective and preventive actions. Application of tools such as brainstorming, 5xwhy method, Ishikawa diagram, problem solving/8D report allows for quick and efficient elimination of the identification of causes of quality problems. This, on the other hand, contributes to the efficient handling of complaints and, as a result, to the increase in customer satisfaction, as it is one of the most important elements of an effectively conducted customer service strategy.

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