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IMPROVEMENT OF BUSINESS PROCESSES IN PUBLIC UTILITY COMPANIES

Abstract: *This paper analyzes business processes and improvements that are performed in public utility companies (PUC) with a focus on city sanitation company in Kragujevac. The importance of continuous improvements of processes, in PUC, will be explained through corrective and preventive actions that are accurately designed to respond correctly to the needs of their customers. These actions are strictly based on calculations and measurements of both customer complaints and internal audits. Complete procedure, basic description and goals of corrective and preventive actions will be given throughout this paper, as well as management of non-conformities in companies, that can influence efficiency and cause intervening checks. The aim of this paper is to draw attention on the importance of informations and data analysis that companies get and how it can guide certain process improvements in companies.*

Keywords: *Improvements, corrective and preventive actions, internal audits, non-conformities, efficiency.*

1. Introduction

Companies, as an organizational and economic system, operate successfully through the execution of a large number of business processes and activities. Success in executing business and management processes determines the success of the company. Therefore, it is significantly efficient to manage the process's performance in an enterprise. Improving and managing business processes is a complex activity that is imposed on today's enterprises, both due to various changes and environmental requirements. Dynamic environment, unpredictability situations and constant change are the only safe variables that managers must respond to. Internal

checks by the management are used to monitor the functioning of the system, monitor the effects, analyze the situation, initiate corrective and preventive actions and identify the possibilities for improvement. In case the results of measurement and monitoring and / or internal checks show that the planned results are not achieved, appropriate corrections and corrective actions are implemented, which ensure and maintain the effectiveness of the organization's business processes. Overview and transparency of processes and plans in enterprises does not only affect efficiency, but also increase productivity, reduce costs and increase profits.

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2. Improving business processes through information gathering

The organization must constantly improve the effectiveness of the quality management system, using the quality policy, quality objectives, audit results, data analysis, corrective and preventive actions and management reviews (Human Resource Management | Dr Mile Vasić, 2019). The goal of every company is to improve the quality of its services through constant measurement and analysis of process results. When it comes to measuring and analyzing objections, there are certain activities that help to demonstrate the level of effectiveness of the implementation of the process and the degree of customer satisfaction. These activities include: collecting information about the process and the satisfaction of the complainant, analyzing and evaluating complaints, monitoring the process of resolving complaints and accountability in handling complaints. Share of information sources are depicted in Figure 1. Below. (Gradska Čistoća, 2015) As shown, a

ccording to the official documents of PUC “Čistoća” from 2015. the largest share in the collection of information on business efficiency are internal audits, that are, performance checks carried out by the company itself, then in the second place according to the representation, the information that comes by direct communication with users in the form of complaints and feedback, a smaller share of information comes from the environment through surveys, media reports and data coming from other departments. The term "other" implies ideas, reports of situations and observations of workers or users on the field. as far as direct communication is concerned, continuous monitoring of customer satisfaction is crucial in order to identify early or potential situations that can lead to user dissatisfaction. In order to prevent the occurrence of such dissatisfaction, the company applies measurement and monitoring of the degree of customer satisfaction. Since internal audits represent a much bigger source of informations, and are largely responsible for initiating improvements, their importance and purpose in PUC is rated much higher.

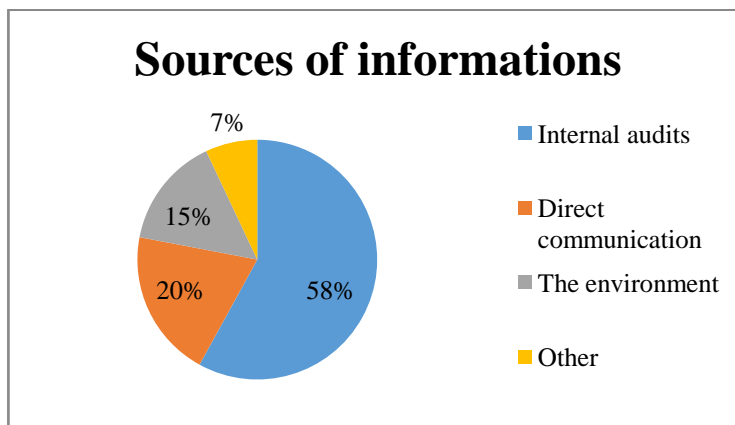


Figure 1. Share of information sources in percentages

Internal audits prescribe an independent system for verifying the validity and implementation of the established management system in accordance with the

requirements that are placed before it (requirements arising from all standards in relation to which the integrated management system and the requirements from the

internal documents - procedures, instructions, rules are developed. ..), through unified and controlled methods for planning, scheduling, coordinating, performing and reporting on checks, as well as establishing responsibility for audit activities. Internal audits represent direct catalyst for business improvement by managing non-conformities and initiating corrective and preventive actions.

3. Managing non-conformities

The management of non-conformities aims to define the activities and the manner of their implementation in case of occurrence of nonconforming products or services caused by the organization or suppliers, from noticing to the solution of non-conformity, in order to prevent the reception / delivery / use / disposal of an unformatted product or service. Non-conformity management is carried out in the realization of identified business processes of the organization, and it is realized through the following activities:

- Identifying and recording non-conformities
- Identify the status of non-conformities products
- Review and eliminate non-conformity
- Reporting non-conformities
- Initiating corrective actions

Managing potential non-conformities is done by analogous procedure through the following activities:

- Identifying and recording potential non-conformities;
- Reviewing potential non-conformities
- Reporting of potential non-conformities;
- Initiating preventive actions.

The complete procedure of non-conformity management is done in five well defined steps:

3.1 Recognizing and recording non-conformities

All employees in the organization are authorized and responsible within their competence and expertise to determine the nonconformities in the processes in which they participate. A person who notices the non-conformity / cause of potential non-conformity, reports to the immediate manager, who is transferred to the manager-owner of the process, as well as to the owners of the process responsible for resolving nonconformities

3.2. Identification of the non-conformant products

Non-compliant products in the areas: are separated into a separate, predefined space for non-compliant products organized within the warehouse / landfill.

3.3 Reviewing and removing non-conformities

Responsible owner of the process or person delegating that responsibility is responsible for reviewing nonconformity. He may, if necessary, engage competent representatives of other organizational units to assist in these activities.

3.4. Reporting on non-conformities

The process holders are obliged to report to the IMS Management Representative when there are inconsistencies in the process. The IMS Board monitors trends in non-conformities occurrences through monitoring:

- Number of non-conformities by area;
- Representation of the manner of resolving nonconformity;
- Estimated cost incurred by disagreement.

3.5. Initiating corrective / preventive actions

The enterprise must take actions to eliminate the causes of (potential) non-compliance in order to prevent their (occurrence) repetition.

4 Improving business processes through corrective and preventive actions

Corrective and preventive actions are one of the ways to improve business processes and reduce the risk of emergencies. The purpose of implementing corrective and preventive actions is to define the organization's response to the causes of actual and potential nonconformities, with the aim of eliminating them. The definitions of corrective and preventive actions are as follows: **Corrective actions** – Actions taken to eliminate the causes of discrepancy or other unwanted situations. **Preventive actions** – Actions taken to eliminate the causes of potential non-conformities or other potentially unwanted situations. The procedure is applied by all participants in the process of determining, defining, executing and verifying corrective and preventive actions, but responsibility is mainly on quality control management. The complete procedure of initiating corrective and preventive measurements is done in six well defined steps:

4.1. Identification of input elements

The initiation of the procedure begins with the need of corrective and preventive actions. Information from the input elements is obtained, and the need for CA / PA can occur as a result of the following activities:

- The results of the inspection;
- Internal audit results;
- Measuring customer satisfaction;
- Customer complaints by direct communication;

- By processing complaints;
- Confirmed inconsistencies in the processes;
- Feedback results.

4.2. Identifying the problem

Upon recognizing that there is a need for CA / PA, the representative management for the IMS, analyzes the information obtained independently or with the involvement of the managers / staff competent for the specific problem, identifies the problem and the consequences and makes decisions on the need to define the elimination of the cause of nonconformity / potential nonconformity and implement corrective / preventive actions.

4.3. Defining causes

Since the main causes of the problem are often not easily noticeable, a careful analysis of product / service specifications, process specifications, monitoring plans and quality records is needed. Based on the input information of the cause, the degree of criticality of a measure is defined, which is defined according to the following criteria:

- Critical actions – if the non-conformities anticipated by CA / PA threatens the safety of people or the environment;
- Important actions – if non-conformity leads to violation of legal and other binding regulations;
- Ordinary actions – for other cases

4.4. Determining and implementing actions

The process of identifying and implementing corrective or preventive actions allows the problem to be resolved by fixing the cause of the problem and acting on it. The management of the company analyzes the systematized data on the identified nonconformities, and the

actions for preventing the repetition of nonconformity are defined on the basis of the status and importance of the problem (individual case or systemic problem) and possibilities to determine and implement effective and efficient solutions.

4.5. Implementation control

After CA/PA implementation, appropriate data must be collected and analyzed (data must be qualified wherever possible) in order to confirm that the set goal has been achieved. The data confirming it are collected and analyzed in the same way as the data collected for the purpose of investigating and establishing the causes of the cause - effect. Also, the performance of corrective and preventive actions can be collected through regular and extraordinary internal checks.

4.6. Reporting and assessment of CA/PA

After control of the implemented measure, the responsible person is informed about the situation. After the implementation of the activity, the representative of quality control management, inspecting the conducted field activities and the results of the process / product, decides on the effectiveness of the CA/PA and, in the case of a positive decision, signs the appropriate section after which the data are updated. The IMS Management Representative for the Management Review Session prepares the CA/PA Summary Report which brings the CA/PA aggregate data between the two reviews, their status and the areas to which they relate. The results of the previous effects are compared in order to improve efficiency and effectiveness.

Figure 2. depicts the complete procedure of corrective and preventive actions in PUC.



Figure 2. Procedure for performing corrective/preventive action

5. Conclusion

Improving business processes performance of enterprises is crucial for increasing the effectiveness and efficiency of the company as a system. Bearing in mind the

complexity of the organization, which is maintained through the number of organizational units, the activities, the number of products in the production program, the management levels, the complexity of the technological process, etc., the vertical organization and the

functionally oriented management do not yield adequate results and cause numerous problems that are reflected on the effectiveness and efficiency of the company's operations. For this reason, the importance of process orientation in enterprise management is growing. As Sekulić V. states in Their book (Performance management of public enterprises in the conditions of deregulation of the business environment, 2015). Public utility companies, at the city level, in extremely difficult conditions, with exceptionally low economic activity, made maximum efforts to keep the level of efficiency of communal economy and infrastructure facilities and social activities at a satisfactory level, ie optimal provision of services and functioning of all activities from the jurisdiction of the city, which are irreplaceable condition of life and work of citizens. Thanks to the methods of conducting business processes, providing

services and solving the problems caused by the discrepancies, public utility companies have managed to ensure a comfortable and quality life for their citizens. It can be concluded that the way public utility companies operate is very complex but effective and that the key to the success of an enterprise lies in how it is structured within the organization itself and how effectively it processes its processes, whether it is doing the right things and effectively, that is, to do these things in a fast, high-quality and proper manner. Vision of city sanitation company in Kragujevac states that (JKP Šumadija Kragujevac, 2019) public utility companies will always remain recognizable by quality of service and with this kind of communication with the environment and their employees as their driving force, goal is to stay as leader in terms of constant improvement and business managing capabilities.

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