

PERFORMANT MANAGEMENT FOR CONTINUOUS QUALITY IMPROVEMENT

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Rezumat. *Strategia Kaizen se dovedește a fi una dintre soluțiile de salvare a societății în lupta împotriva crizei economice actuale. Scopul acestei lucrări este de a atrage atenția asupra unei metode de origine japoneză, care are ca rezultat un management eficient, pentru îmbunătățirea continuă a calității produselor și serviciilor Dacia, implicând tot personalul, de la management la angajați. În contextul actual, pentru a obține o calitate absolută în producție, Dacia a ales Kaizen. Astfel, regula principală a metodei este de a aplica modificările, de a monitoriza rezultatele și de a le ajusta, rezultatul final fiind producția fără pierderi. Un alt aspect important adoptat este managementul Lean și metoda 5S aplicată de compania Dacia, metode care au condus la obținerea unor produse de calitate, costurile fiind reduse semnificativ.*

Abstract. *The topic addressed in this paper can be seen as a rescue solution for Dacia as well as for other companies in the current economic conditions of the country. As we will see, the Kaizen strategy is proving to be one of the life-saving solutions for society in the fight against the current economic crisis. The purpose of this paper is to draw attention to a method of Japanese origin, which results in efficient management for continuous improvement of the quality of Dacia products and services, involving all staff, from management to employees. In the current context, in order to obtain an absolute quality in production, Dacia chose Kaizen. Thus, the main rule of the method is to apply the changes, monitor the results and adjust them, the production without losses being the final result. Another important aspect adopted is Lean management and the 5S method applied by the Dacia company, methods that resulted in quality products, the costs being significantly reduced.*

Keywords: : Kaizen, Quality Management, Lean, 5S, Change

1. Introduction

Quality is the highest priority in an organization, and improving is the goal that everyone must pursue. However, contrary to its importance, many people find quality as a rather "enigmatic" concept. As a concept, quality is difficult to define and often difficult to translate into measurable terms that can be operationalized. [1]

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The Kaizen concept, the most important concept in Japanese management, was introduced by Masaaki Imai, president of the Cambridge Corporation in Tokyo and the European Kaizen Institute. [2]

The Kaizen strategy is a variant of the innovation strategy, which consists in adopting a principle that leads to a gradual improvement, but without haste, being achieved periodically, over time.

A management that uses the Kaizen method is focused on improving each product development process, with the main goal of eliminating losses. By improving the processes is meant, therefore, an efficiency of their manufacture. Kaizen's activities will thus maximize the quality values of the products, making it more attractive to the end customer who will be interested in purchasing it. At the same time, the functions of products that are not attractive and of no interest to the customer, but which bring a significant increase in cost without a concrete concordance of its value, will be eliminated. A management system that uses the Kaizen method is based on a LEAN production system including all the methods used to implement it.

Kaizen is a "policy of gradual but continuous improvement of the quality of products or services provided by an enterprise through the optimal use of existing material and human resources within it. [5]. The Kaizen strategy is based on a number of methods and techniques such as : Deming cycle (PDCA), suggestion system, JUST-IN-TIME method, 3S and 5S method.

For a continuous development in the conditions of a strong competition it is necessary to implement a quality-oriented organizational culture, this being one of the most important factors for a guaranteed success of the organization.

The implementation of quality within an organization starts from the definition of its values and mission, followed by a plan through which values are accepted, assumed and promoted at the behavioral level of all members of the organization. Another important step is to allocate the necessary resources to promote values and evaluate performance.

Among the most important aspects that underlie the creation of a culture of quality within the Dacia company is the fact that managers must be an example to be followed by all employees. Also, the constant focus on the quality of the results will lead to a permanent contact with the end customer.

The managers from Dacia, thus empower their employees to solve some problems, considering their solutions to solve problems that are always better. This leads to the involvement of Dacia employees at every level of the company, the quality thus becoming a way of thinking for them and finally to the promotion of teamwork, thus making problem solving much more efficient.

Kaizen itself implies simplification by dividing complex processes into subprocesses resulting in their improvement. Specifically, for Dacia, Kaizen represents the reduction of the activities time and the increase of their execution speed, in a perfect way, with zero accidents, zero equipment failures, so zero defects.

Once the kaizen method was implemented, the production system of Dacia became different from one day to the next and will continue to be different, as it is constantly evolving. In the language of Dacia, it can be said that the term quality means meeting customer requirements, having as a unit of measure its cost, quality being for the company, the main responsibility of all its employees.

2. The current stage

According to the statute registered at the Chamber of Commerce and Industry, S.C. AUTOMOBILE DACIA S.A. carries out the following object of activity: production and marketing of cars, spare parts, machine tools and installations for the automotive industry, energy and technical agents for companies on the Colibași industrial platform, promotion and implementation of initiatives of national interest, in the field of automobile manufacturing and related fields and the realization of benefits.

Dacia's objective is to produce at Renault quality standards and at Romanian costs a range of robust, reliable and accessible vehicles for Romanian and foreign customers. Dacia's current business plan is ambitious and integrated into the national economy. Dacia contributes to the modification of Romania's image in the world, supporting its integration process in the European Union. The changes also aim to support the Renault group's globalization process.

The mission of the Human Resources Department (DRH) Automobile Dacia is to create a favorable environment in which people develop, perform and are motivated to achieve sustainable results for a successful business.

Starting from the recruitment process, training and development programs, and performance management.

Dacia is a company open to international, having all the skills of a car manufacturer, recognized for its performance, for the quality of management and for the professionalism of its people. It is made up of responsible, ethical teams that put people at the center of their concern and who have high-level partners.

In the DACIA enterprise, there are three main activities that are directly related to obtaining benefits: research-development, production, sales [4]. The role of the management of Automobile Dacia is to lead the employees by ensuring the

policies and resources necessary for the most efficient development of the company's activities.

Lean management is that leadership style whose system is able to adapt to all changes in the environment, very quickly. Production in this context involves reducing the time between the customer's order and the manufacture and delivery of the required product by eliminating losses. Therefore, in order for such a method to be effective, Dacia has chosen to set medium and short-term objectives, intangible and achievable by all members participating in the company's activity. At the same time, the production of Dacia has two engines of progress: continuous improvement and improvement in segments of quality., the Human Resources department of Automobile Dacia is the strategic partner that ensures that the organization has the human resources to meet the requirements and needs of the organization [3].

Also regarding the production of Dacia, in the context of Lean, they have an elementary principle that would translate something like this: by increasing the yields of jobs, the improvement of productivity takes place. At Dacia, for the production of Lean, it is proposed to pay attention to the activities of the jobs, in other words, the expenses with the salary of a worker from a mechanized position represent only a very small part of the total production cost.

In the Lean approach, at the Dacia company, the other methods and strategies of continuous improvement such as Kaizen and 5S have a very important role.

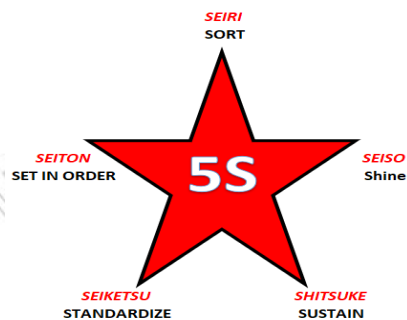


Fig. 1. 5S

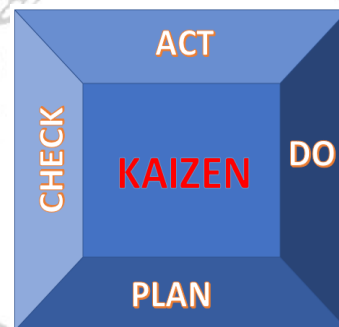


Fig. 2. KAIZEN

Kaizen is a system of continuous improvement and is generally applied in large series industries, its basic idea being to eliminate losses, reduce costs but also increase production by 50-100%. In Kaizen, solutions come from the bottom up,

ie from employees (gemba) to managers, who thus play a key role in the company, helping them find solutions to improve the work process. Kaizen employees will therefore become aware of their role in the process of improving work in the company, making them more responsible and more disciplined. We can say that the emphasis must be on motivation, communication and rewards.

The introduction of the kaizen method in Dacia did not imply the need for financial resources but, on the contrary, the desire to change and improve, to observe its quality and statistical data, and this required open minds oriented towards new and performance.

Dacia managers understood that they need to form teams of intelligent people, who want to continuously improve and improve their working methods. Thus, any positive change will affect the whole and the production stem in a positive way. Employees, by implementing the kaizen method, can always express their dissatisfaction and problems and can come up with solutions and improvements that can be applied later in the company, thus creating the satisfaction and pleasure of working there.

In the case of Dacia, the application of Kaizen principles has led to an increase in production by 30-50% frequently and this is because, through Kaizen, the time of any activity has been reduced and its speed has increased, making it almost perfect, with zero accidents and zero equipment drops, so with zero defects.

The Kaizen manager involves the whole team in carrying out the proposed activities, including the place where they are performed, ie the production space, workshop, hall, which requires the application of kaizen principles, called 5S. For many managers and not only, the 5S method is misinterpreted as just a cleaning activity. However, cleanliness is also very important, but 5S has a much wider scope, its purpose being to organize the workplace, thus involving employees in using new standards and practices, but also to develop them.

The use of the principles of the 5S method leads to an assessment of the workplace, thus making it possible to create a clear picture of the company's ability to take continuous improvement actions.

The application of the 5S method to Dacia implies the observance of its 5 stages. The first stage Sorting (SORT), consists in eliminating the objects that are no longer necessary and become useless, the result being the gain of space, the stored objects being thus sorted for a maximum efficiency.

Therefore, the purpose of the first S is to clarify the situation and eliminate the losses due to the movement of things but also to eliminate the loss of time that employees used to look for a tool or material.

The next 2S aims to develop the habit of discipline in the workplace, usually otherwise, very important in implementing the next phases of the method.

The second stage, Systematization (STRAIGHTEN) in the Dacia company, involves the organization of the workplace according to tasks, thus, the things needed to perform the tasks become easier to find and more accessible when needed. Specifically, it consists in maintaining a precise production and transfer order, and ensuring that the first object that enters a storage process is also the first to leave.

Basically, the goal is to always have a neat working environment, where there is always everything necessary to carry out the activity and in the amount needed when it is needed. So, the ordering is limited to Dacia, to placing cars and things on the shelves, in the right place to be found quickly and used as soon as possible.

The third stage, SHINE, consists of cleaning the workplace and work equipment. Of particular importance in the Dacia company is the maintenance of machines and work equipment both for health and safety and for reducing waste. This stage thus helps the Dacia company to minimize the time lost due to the slowdown in production and the stops for repairs, thus leading to a greater focus on high quality production.

For the third S, cleaning at Dacia, is a form of control that requires the disposal of garbage, dust and foreign objects, thus creating a clean job, by acting on its source. Also here, a good control of the equipment and subsequent remedial actions are required. Dacia employees separate and dispose of waste and scrap and check daily that all tools and materials needed for the workplace are in place.

Stage four, Standardization (STANDARDISE) consists in setting standards in terms of tasks, Dacia optimizing them in simple steps, but easy to follow for each part of the process. It therefore involves the efficient use and combination of different resources such as time, technology, tools and materials.

The standardization of working methods in the Dacia company, aims to standardize the rules regarding the organized and clean storage of things and equipment. Specifically, people are trained to follow the rules of management by having detection and early action devices. Practically, they are not allowed any deviation and the rules are followed by all employees.

The fifth and final stage, SUSTAIN, is to maintain the standards they have previously set. Specifically, for Dacia, in addition to monitoring and adjustment, the processes must be analyzed and optimized by applying various Lean techniques, their role being to achieve cost savings but also the support of high standards and efficiency for continuous improvement. .

Support practically means, for Dacia employees, to do the right thing, and everyone's participation for a good development of habits and compliance with the rules and discipline at work has become a routine. Specifically, every Dacia employee is obliged to clean and tidy the workplace at the end of each shift before handing over the shift.

For continuity in terms of compliance with all the steps of the 5S method, at Dacia, managers establish and organize weekly audits and all employees are regularly trained to ensure that they independently comply with the rules of management at work.

Among the advantages of the 5S method that Dacia noticed was the safety which improved considerably, the team members thus acquiring a sense of involvement and responsibility, which led for the company to a considerable reduction of waste and improved performance. In terms of productivity, quality and team involvement, the biggest advantage remaining by far, increasing the company's profitability.

In conclusion, the 5S are very important for all Dacia employees, as they offer personal safety and health, leading to the prevention of fires and accidents due to oil spills or other flammable and dangerous substances, but also safety in everything. which means preventing things that can be dangerous to everyone's health.

Work safety is a priority for Dacia employees, educated in kaizen and 5S, so wearing protective equipment is mandatory, and they become even more careful when transporting things. Although they seem insignificant, they do make a difference. Thus, educated in 5S, Dacia employees know how to make a difference in being a good professional who takes care of the tools and equipment they work with and a simple uneducated employee in kaizen.

Modern equipment today requires high handling precision and cleaning is a must. Seemingly minor things such as leaking things in the assembly line can mean mixing defective parts with good ones and then there is the risk of being sent to the end customer do not have their place in the production activity of Dacia, where 5S and kaizen methods were implemented.

Therefore, the implementation of 5S results in obvious improvement in the areas described above but also a major importance in changing people's attitude towards their workplace and work performed. For this, it was necessary for everyone in the company to be involved, through perseverance and communication, giving a new meaning to the work teams and the company's climate.

Thus, taking into account those written above, by redesigning the kaizen-style production line, lately, Dacia has managed to double its productivity. Improving

the quality of its products and productivity has resulted in the development of an implementation plan throughout the company, thus leading to a huge transformation within the company.

The general managers of Dacia management, through Kaizen, aimed to change the mentality of employees, where they acted in three directions, in this sense, thus, for a first basic level, employees and operators, they proposed awareness of losses, streamlining the process. production and identification and elimination of waste, for the middle category, middle management, proposed new concepts of communication and leadership, and for the top, top managers, a better vision of things and objectives to be achieved and team building.

Once the Kaizen method is implemented, the vast majority of Dacia employees have a common basis for continuous process improvement, but also awareness of the need for their daily involvement in continuous process improvement at all levels of the company. In this context, at Dacia, there is a significant increase in production lines compared to previous years, complaints both internally and externally being reduced to a low level today.

Thus, employees were trained in the kaizen system in order to identify and eliminate the seven losses (MUDA), later they can apply kaizen methods such as the 5S.

At first, not all employees were open to this type of management system, Kaizen, but as the first improvement sites were developed, the mentality of employees began to change, and the results did not take long to appear. Today, within the Dacia company, which operates on the basis of Kaizen methods, the new employees are included from the beginning in a solid integration program, in which they have contact with everything that represents Dacia, they know from the first days the company's values and its development prospects.

Conclusions

The management through Kaizen at Automobile Dacia is oriented on the improvement of each process in the technological file of the product, the main goal being the elimination of losses. Improving processes ensures manufacturing efficiency, Kaizen activities ensuring a maximization of the value of the product in accordance with customer requirements, a qualitative differentiation of it, which makes it more attractive, making the customer more interested in buying it.

As I said, it is a method that originated in Japan for organizing, cleaning, developing and supporting a productive job. The 5S method is the basis of any process of continuous improvement of the quality of products and services, a method also implemented by Dacia, having as objectives: elimination of waste

resulting from uncontrolled processes, better control over the location and position of equipment, materials and other inventory items; application of control techniques to avoid deterioration of previously gained improvements.

At a higher level, in terms of teamwork, in the company Automobile Dacia, everyone has a say, Kaizen being applied from senior managers to cleaners. Thus, all employees are encouraged to come up with ideas for small improvements, and this on a regular basis. As well as the effects of this process, it was observed that: they feel taken into account, they humanize the team, they raise their morale, they feel as if they belong to that place, they feel somewhat at home.

Kaizen is the ideal management system for the continuous development of the quality of products and services for Dacia and, through its application, the company could considerably reduce the negative impact of possible economic and financial crises.

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