

# Quality as an Approach to Organizational Change and Its Role in the Reorganization of Enterprises: Case of Four Moroccan Small and Medium-Sized Enterprises

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**Abstract**—The purpose of this paper is to analyze and apprehend, through four case studies, the interest of the project of the implementation of the quality management system (QMS) at four Moroccan small and medium-sized enterprises (SMEs). This project could generate significant organizational change to improve the functioning of the organization. In fact, quality is becoming a necessity in the current business world. It is considered to be a major component in companies' competitive strategies. It should be noted that quality management is characterized by a set of methods and techniques that can be used to solve malfunctions and reorganize companies. It is useful to point out that the choice of the adoption of the quality approach could be influenced by the circumstances of the business context, it could also be derived from its strategic vision; this means that this choice can be characterized as either a strategic aspect or a reactive aspect. This would probably have a major impact on the functioning of the QMS and also on the perception of the quality issue by company managers and their employees.

**Keywords**—Business context, organizational change, quality, reorganization.

## I. INTRODUCTION

THE power of quality inevitably becomes a performance tool in companies. Around the world, quality is considered a major variable in organizations' competitive strategies. Today, it is seen as an imperative for development, competitiveness and sustainability. It also promotes the contribution of all managers and functions to the continuous improvement of the company. Therefore, it can be said that quality management is required as a necessity in the current global context. It is worth noting that standards for quality management are generally based on the same general management principles. Principles such as organization, results measurement, planning, management and staff involvement, continuous improvement, auditing, evaluation, etc. are found. This could have a major impact on the management style of companies.

Guilhon and Weill, Debruyne, Debeche [1], [5], [9] claimed that any company adopting the project of the quality approach, is engaged in a process of organizational change. The latter is necessarily generated by the implementation of the QMS at the company; if not, the certifying organizations will not issue the ISO certificate. Obtaining this certificate is proof that a change has occurred at the company, touching several aspects

of his organization. Debeche [9] supported the idea that the importance of this project of the quality approach is measured by two categories of indicators, the intensity and the implementation. This is a project that is systemic. This means that there is a change in the practices and methods of work, organizational structure, division of labor, determination of responsibilities and powers, attitudes and behaviors, etc. In fact, we can say, in a general way and if we want to summarize this idea that we have just mentioned, that three main elements are affected by the changes that are generated through the quality approach.

Guilhon and Weill [1] emphasized that said elements are the following: behavior of the individuals belonging to the company, performance especially with regard to each process (from an economic, financial or organizational point of view) and structure of the company. It should be noted that the impact of these changes differs from one company to another because each company has its specificities that distinguish it from the others and also because each of them begins its approach in a certain way that differs from that of others.

We can then ask ourselves the following question: Is it possible to say that the implementation of the quality management system could probably contribute to changing the management style and organization of companies?

This general question can be broken down into a set of questions that represent research axes:

1. What is the impact of quality management on the operating mode of companies?
2. What is the style of management that is adopted by the companies that have set up the quality management system?
3. What is the nature of organizational change promoted by quality management?

Indeed, our objective through this article is to analyze the importance of quality management at the companies and its role in overcoming to cross organizational difficulties, thanks to the changes it has achieved; these affect the entire organization and its components.

## II. CHANGE FAVORED BY THE QUALITY

The quality approach can be considered as a process of change. In this sense, Crozier [3] claimed that the quality approach can have implications in terms of organizational change. To understand this change, indicators can be used they are about the structure, behaviors and performance. These indicators apply at three levels: the activity, the department

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and the actor. According to these two authors, the implications of the quality approach, on structure and behavior, differ from one organization to another depending on the way in which this approach is put in place. To understand the quality approach, we can refer to two categories of indicators, namely intensity and implementation.

Guilhon and Weill [1] emphasized the importance of the objectives of leaders and the role of activities in determining the degree of integration of the quality approach in the organization. These two authors have identified two categories of quality approaches in SMEs, namely the Unicist quality approach and the pluralistic quality approach. According to these same authors, SMEs that have embarked on a change approach are characterized by average sizes. Their purpose is, of course, to improve their performance through the question of involvement. The quality approach promotes the training of actors at all levels of the organization. It has significant implications for the strategic behavior of organizations.

Always in the sense of the importance of quality, as an approach that can generate changes in organizations, Debruyne [5] argues that the quality depends on the leader's conception of the organization's structure. The leaders may adopt a rationalist vision or they may have a point of view of complexity. According to this author, quality assurance is based on the rationalization of the organization through the formalization of procedures and the practice of control. It should also be noted that it promotes innovation by involving all staff in the preparation of procedures and in self-monitoring.

The practice of quality can be apprehended through certain indicators, namely formalization and control as well as participation and self-control. These indicators will give an idea about the degree of consideration of the proposals that come from different actors of the organization.

### III. ORGANIZATION AND THE IMPLICATIONS OF ORGANIZATIONAL CHANGE

#### *A. The Importance of the Organization*

Information systems and communication skills have an indispensable place in the modern organization. Their contribution is evident in the development of processes and the achievement of already defined objectives.

A change in one of these elements (i.e. the information and communication systems, the internal processes and the objectives of the organizations) will, of course, lead to changes in the other elements, but with different types of impact [7], [4]. In other words, it is not easy to imagine organizational change that does not have significant implications for information and communication systems. A change, at the level of the latter, will necessarily call into question the whole organization.

Concerning the organization's objectives, we can say that the impact of organizational change has an intentional aspect. Any intentional model describes what the organization wants to accomplish or conversely what it wants to avoid. This impact also affects the internal processes of the organization.

They have a specific interest in relation to the actors concerned and their interrelations, the tasks performed and their order of execution, and so on.

Focusing on the intentional model of the organization facilitates understanding of the various issues raised, as well as making communication easy about the most important elements. This attention, focused on the intentional aspects of the organizations, makes it possible to carry out organizational analyzes and debates about the evolution of these organizations and also about the development of their information systems.

#### *B. Organizational Change Management*

Organizational change is the process of restructuring an organization. This change differs depending on the circumstances and objectives of each organization. It can be radical or progressive, as it can be total or partial. A multitude of aspects are influenced by change. This has impacts on the organization as a whole, i.e. on processes, products, services, objectives, and so on.

Change is described as radical when it has a great effect on the overall goals of the organization. Lalanne [12] argues that the various theoretical approaches in management are constructed, most often, from research on management styles. These develop the capacity of organizations to meet the requirements of their managerial contexts by trying to reduce their harmful implications. In relation to this question of the managerial context, authors such as Yu and Mylopoulos, Jarzabek and Ling, Rolland and Prakash [20], [10], [14], assert that the engineering of information systems, especially the engineering of needs, is developed towards the development of information systems able to acclimate easily to changes.

Several theories concerning the question of change are based on the three elements determined by Lewin [13]. This author considers that any process of organizational change must go through three stages. First, the thawing of organizational processes as an index of openness and willingness to change, then put in place the change, and finally, the standardization of new processes, structures and organizational systems. After the change and thanks to these three main steps, the organization can find its stability. To manage change, the team can take action by carrying out three essential actions.

First, determine the nature of the change and its implementation. To determine the change, one must understand the managerial context in which the organization exists and therefore opt for the different possible choices.

In a second place, change must be implemented on the basis of the strategic choices already made.

Finally, it is necessary to consolidate the change to ensure its identification by the organization. These three actions, which we have just mentioned, constitute the life cycle of a process of organizational change.

#### IV. THE EXTENT AND PROPERTIES OF ORGANIZATIONAL CHANGE

##### *A. The Extent of Organizational Change*

The change can be made and implemented at different levels of the organization. As a result, it can be described as global if it is implemented at the entire organization. In case its implementation concerns only certain levels, we can say that this change is local. On the other hand, if it is done in a mixed way, we can say that it is coordinated.

##### 1. Global Change

Proponents of the organizational development approach argue that taking actions at the one subsystem leads to failure. This comes down to the fact that the different issues raised concern all the subsystems of the organization. These are intimately related to each other. According to this approach, it would be necessary to intervene jointly in all departments of an organization.

To carry out a change, one must choose the best possible solution. This is a multi-level intervention strategy, which corresponds to the rational action model. In this sense, there are some organizations that claim to control all subsystems to avoid the negative effects of events. This can generate some energy to build sophisticated and well-planned projects [11]. For its part, Crozier [3] specifies that it is not a question of identifying the best solutions for imposing them later, but it is in fact about creating an agreement about the perception of the issues raised. So when there is this consensus, we can easily find a solution.

The overall approach to change is, most of the time, faced with strong resistance, which can be seen by the management team as a misunderstanding of the benefits of this new strategic direction. But, this results in fact from a lack of negotiation between all the actors, as well as from a lack of consideration of the inconsistencies between the representations and the intellectual capacities of the various actors and the various subsystems.

##### 2. Local Change

The local change means the one that the lessons of which can, in another time, serve the organization as a whole. Sainsaulieu [16] specifies that this change is based on the interactions between the actors. This, in a small and controlled area, which will lead to new representations, which will help to gradually build a structural form considered reliable and sustainable. We have stated above that in the case of a so-called global change, the best possible solutions are defined a priori, which is not the case in the context of a local change. On the other hand, we can have these best solutions in a progressive way based on experiments in which the actors integrate, more and more, in this process of change. In relation to this subject of experimentation, Guyon [8] claims that it would be necessary to implement at least two experiments; this, in order to make a comparison and also to avoid agreeing to say, in case of success, that it is just a specific case or to say that the activity concerned by this change is particular.

The big problem facing an organism is the phase following

that of experimentation. This is where this process, for which the organization has opted, can confront a failure; because it is a matter of analyzing the reasons for local success in order to overcome the fact of copying an already existing model. This is why we must ensure that there is some cohesion between the two aspects, global and local. Sainsaulieu [16] determines five essential phases in order to guarantee a certain evolutionary articulation in time between the two local and global levels:

- The first phase concerns the emergence of new social identities, which involve the implementation of interesting interactions in the areas most conducive to innovation;
- The second phase relates to recognition. This can be achieved through surveys, social data studies, etc. or by practices that develop in a gradual manner;
- The third phase relates to the confrontation of new logics. This means that all actors, old and new, should be linked to develop their behavior within their social system;
- The fourth phase is inherent to cultural learning, which is a result of a change in representations. This change itself is embodied in a transformation of the means of communication, information, expression and training;
- The fifth and last phase depends on institutionalization. It helps to establish a new model to ensure good organization. For this, a participatory approach is essential to build this project.

##### 3. Coordinated Change

The theoretical approach of local change aims at collectively implementing this process of change. This means that little by little allies to this change are appearing in the organization, something that is not always assured. In this sense, Savall and Zardet [17] affirm the same idea that it is not always easy to assemble allies to this project. To alleviate this problem, these two authors have developed an approach according to which two actions must be conducted jointly, as soon as the intervention has begun. A first action on the horizontal level will concern the management team. A second action, this time at the vertical level, that is to say that this action will be conducted on one or two units of the organization.

Barel and Frémeaux [19] argue that what must characterize this process of local change is that there must be a great involvement of the management team from the stage of experimentation, and not only during the generalization stage. The training of this management team in the "socio-economic method" must be carried out even before the said phase of experimentation. If this is the case, the management team will be informed of the results obtained through the various studies that are conducted in the experienced units. After there is analysis and exploitation of these results, the lower levels of the organization will be in a position to define desired objectives; this, thanks to the support provided by the team that is at the highest level of management. This practice aims to reduce certain costs that are known to be hidden, such as non-quality, absenteeism, etc. The practice can also concern other types of change, since it seeks to detect the different

dysfunctions that can happen at the organization.

### *B. The Properties of Organizational Change*

The characteristics of the change may include the possibility that it is ascending, that is to say that alternatives may be proposed by the collaborators. On the other hand, the change can also be carried out according to a top-down approach; in this case, it will be implemented within the usual hierarchical framework.

#### **1. The Bottom-Up Approach to Organizational Change**

Leading the change with a bottom-up approach is to focus on the lower levels at the organization or at the concerned subsystem.

Any change may be resisted by certain actors belonging to the organization. It should be noted that there are actions to follow to reduce or avoid this resistance. The change can be implemented in a direct way accompanied by information of the actors concerned. Secondly, we can involve these actors indirectly in the process of implementing change, with a definition of staff representatives. A third choice is that of a direct participation of the actors. According to Barel and Frémeaux [19], this last choice can be more effective by arousing the least conflicts and a greater pace of learning and relearning. Taking into account the active participation of stakeholders in the decision-making process can be a great chance for the success of the change project [19].

#### **2. The Top-Down Approach to Organizational Change**

Garfield [6] argues that in the world of American organizations, there is the predominance of an idea that is rooted in their culture; that is, that a leader has the ability to lead an entire team behind him to implement place a change. This is the top-down approach to organizational change. As previously stated, this approach is inspired by North America. In this sense, Scott [18] argues that much more emphasis is placed on workers' participation in the decision-making process in some European countries than in the United States.

It can be said that a rational view of the conduct of organizational change characterizes this top-down approach. In the context of the latter, the leader tries to convince his team of the benefits that can be derived from the action that will be taken. But, it should be noted that the protagonist, leading the project of change, can be a charismatic person, an organizing team or a group of experts involved [15], without denying the primordial role that can be played by the element of leadership.

As we have already mentioned, any company adopting the quality initiative project is called upon to launch a process of heavy change, which is of a continuous nature and which will constitute a general framework for the other changes that will follow it. This initial change will affect several aspects at the company. Thus, the procedures will be formalized, the company's culture will eventually be modified, new methods and rules will be established, the company's policy will be defined, a new organizational structure will be adopted, responsibilities and authorities will be determined, etc. [2]. This is a change that is significant and brings the company to a

new situation other than where it was before. However, to succeed in this process of organizational change, the company must develop its knowledge, its expertise and its know-how. This means that the company is called upon to develop learning and communication so that it can lead the organizational change in which it is engaged [2].

### **V. RESEARCH METHODOLOGY: THE QUALITATIVE APPROACH**

Qualitative research involves a set of investigation techniques whose use is very frequent. It helps to study a particular topic in more depth, based on an overview of people's behaviors and perceptions and the study of their opinions about the same topic. This research can generate hypotheses or ideas, which can help to understand how an issue is perceived by the actors concerned; it can also help to identify all the options related to this issue.

#### *A. Justification for Choosing the Case Study*

Several authors have made extensive use of the case study method, particularly in certain areas such as strategy, research on process of change or those of the decision, etc.

The case study method requires the researcher to proceed with a set of actions. In order to write a case study, the researcher must formulate the research problem first; this has to be broken down into a set of questions or areas of research. Then, the necessary data needs to be collected. The collected data must be analyzed and interpreted. Finally, some implications on the case study is to be explicated.

In order to fully understand and explain a phenomenon, the case study method constantly uses the combination of various data collection techniques, namely interviews, document analysis, and finally observation. This observation can be either a participant or a non-participant.

#### *B. Data Collection Techniques*

Data collection is an essential tool in the management research process. It helps the researcher to gather all the necessary empirical elements on which to base his research. Three data collection techniques were used as part of our research work:

- Analysis of the documents of studied companies. We used the following documents: the quality manual, the internal quality audit results, the quality diagnosis after certification, the internal quality audit documentation procedure, the internal communication procedure, examples of process defined indicators, etc.
- Conducting interviews with the leaders and with certain managers, namely the head of quality management, the HR manager, the production manager, the purchasing manager, etc.
- Observation at the organization. For example, we attended the quality internal audit of the production sub-processes related to folding-bonding in the first company, etc.

## VI. SEARCH RESULTS

### A. Presentation of the Studied Companies

The first company (A) operates in the paper and paperboard processing sector and also in paperboard and flexible cardboard printing. It was created in 1960 and passed through several stages of development. In fact, she began her business with small machines and simple techniques to make paper and cardboard packaging. The business has grown to other activities such as corrugated cardboard or transparent film. In fact, the company now specializes in the packaging business. It supplies cardboard, corrugated cardboard and printed plastic film for biscuits, confectionery and all activities that use this kind of packaging.

The second company (B) was created in 2002 by a Moroccan group to develop its market share especially in the food marketing sector at the service of catering professionals, commercial and collective. Today, Company B is the leader in this field thanks to know-how, commitment and also to human and logistical resources with references in 4 sectors: hotel, catering, communities and catering.

The third company (C) was created in 2000; it started its activity on the basis of a long experience accumulated since 1974 by its founder, when he was the representative in Morocco of a Swedish manufacturing company of machine "OFFSET-Printing". The participation and the follow-up of exhibitions concerning the field of printing and graphic art allowed the founder to accumulate a very fine knowledge of the sector, and to develop a vision based on the transfer of competence. He has thus formed a young and dynamic team, to ensure the succession and to accompany the changes on the managerial level.

The fourth company (D) operates in the agri-food sector, its activity mainly concerns ovo-products. The latter are practical, modern and natural, which move the egg from the shell state to the transformed state, according to very strict standards of hygiene and safety. They are obtained from the whole egg, its various components or their mixture, after removal of the shell and membranes. Transformed, the egg becomes easier to store, to keep, to transport and to use. It takes the form of a practical product, safe and healthy and especially does not lose anything of its natural qualities.

### B. The Perception of the Importance of the QMS by Business Leaders

Currently, the QMS plays a key role in the four companies studied. In this context, we can mention the quality control that is done at several stages of the internal chain of the company, from the upstream; that means from the receipt of the raw material, to the downstream; that is to say when the production of the finished product. This control is done with the objective of ensuring that the second purchase is successful (B), as this company does not proceed with the processing of the goods purchased, whereas for the other three firms (A, C and D) it is done in order to ensure a smooth production process.

Today, the leaders of the three companies (A, C and D)

consider their QMS as a system that is relevant and a necessary tool for any company that exists on the market. It is perceived as an essential means to meet the requirements of the clientele. It is no longer a means of demarcation compared to other companies, but a tool to ensure the smooth running of the production process, which is considered as one of the key processes, especially with regard to the quality control that is practiced at the workshop. The Deputy Director General of the first company (A) has stated the following answer:

"The QMS is very relevant because today, apart from all its paperwork, there is a part of the quality management that covers the operational operations and those at the workshop. So people of quality are there during the print and at the finishes, they also manage customer records and compliance with customer requirements. Today for me, quality control is essential and it should not be denied, it is no longer a luxury today".

The response of this leader, when he said that the quality control is interesting and "it is no longer a luxury", shows that before, the question of the quality or obtaining the ISO 9001 certificate has been made only in order to show a certain image or to give some impression to their partners. But currently, the issue of quality is of great importance- it has become a strategic component in their policy.

The QMS is today oriented towards continuous improvement and efficiency. First, because it has proven itself and business leaders are aware of its interest. They consider that the QMS has an impact on several aspects. Indeed, the managing director of the fourth company (D) confirmed that there is a positive effect of the adoption of the QMS on the operation of the company. We asked him the following: Does the QMS have a real impact on management, product quality, customer satisfaction, staff satisfaction and profitability? The answer was stated as follows:

"All these elements that you have cited complement each other. If the customer is satisfied, it means that the quality is good, I'm happy too and my workers are happy too. So today the quality management system is there and I think it is essential".

To improve and monitor the QMS, the internal quality audit is always used, which is above all, a requirement of the ISO 9001 standard. However, if it is done in the right way and is oriented towards efficiency, it could play a vital role in making the QMS effective and relevant. Today, the practice of audit is part of this approach of efficiency of the four companies studied. Indeed, this system has gained a lot in terms of maturity; this has a positive impact on the organization of these companies in the present and will always have it in the future through the results and the relevant recommendations of the audit. Therefore, this could first generate good actions to put in place, and finally it could help to drive and generally improve the organization of these companies. The managing director the third company (C) said:

"Today at the company, we have set up a team of internal auditors, who carry out their mission each time there is a need to carry out an audit. We have a team of

auditors made up of, for example, a financier, a qualitative person, someone from the production department, someone from the HR, and so on. So, we really made a complete team that, in quotation marks, cross-fire all the trades we have today”.

### *C. Organizational Change Generated at the Studied Companies*

This question of organizational change is taking place at the companies that are the subject of our research. Indeed, by adopting the quality approach, their organization has undergone significant changes, these have a continuous aspect. This is the general case in any organization engaging in such an approach. However, this does not prevent ad-hoc changes from time to time depending on the need identified and the requirements to be met. In this sense, the general manager of the second company (B) told us this:

“Today we have defined indicators and we ask for elements to make a decision, and if they are not good then we have to redefine them. There is no harm in this, it is something that must evolve with the evolution of the relevance and requirements of the manager. So, today, our mindset changes every year and the overall strategic vision can also change depending on the context conditions of our society. The adopted approach is based on the fact that small adjustments are made for which the QMS has been used for correction”.

Through this statement, we can say that a significant organizational change actually took place with the establishment of the QMS at the studied companies. By monitoring the functioning of the organization, and with the evolution and development of the needs and mindsets of leaders, this system eventually leads to small changes to adapt to the circumstances and conditions imposed.

### *1. The Evolution of the Organization Following the Implementation of the QMS*

Before, the studied companies did not have the adopted organization of today thanks to the establishment of the SMQ. She was traditional before. That is, there were no procedures, no methods, no structured mode of operation, and so on, which are already defined by each process and with objectives to be achieved. On the other hand, we find all these elements currently, especially with the arrival of the quality management. In this regard, the purchasing manager of the second company (B) told us the following:

“The QMS gives rise to procedures and there is a mode of operation. We will say at the beginning that we will work in this way, we want to work in this way and we want to achieve this objective. So now we set goals and we put the necessary means. Quality management will always require a team that is responsive and means too. For example, we talk about control at the store level, we have to put the right people, at the level of purchases we must put the right people, who will work and follow up the requirements of quality”.

As a result, the adoption of the quality approach has favored

a set of organizational practices. This goes through a definition of the objectives to be achieved and also by an assignment of teams reacting and pretending to carry out their mission correctly. For her part, the quality manager told us this:

“The QMS is a system that is followed by standards.

These standards tell us these are the rules that must be followed. Concretely, there are changes in the processes, we must apply the repository for each process. Of course there is a change through the requirements of the standard”.

The quality manager emphasized the demanding nature of the standard. The latter provides all the rules necessary for the proper performance of operations at each process and also at the entire organization in general.

### *2. The Areas Affected by Organizational Change Realized as Part of the Quality Process*

Several areas are affected by these organizational changes at the studied companies. The organization is affected as a whole. This means that all processes are affected by the change; because each of them has its procedures, its means and its objectives to reach. This is entirely normal since the quality approach is considered to be a systemic approach that affects all aspects and levels of the organization. Each company has its own specificities and key processes. Indeed, there are often processes that are greatly affected by changes as others, given their importance to the business. In this regard, the Deputy General Manager of the first company (A) told us the following:

“Essentially, the area that was affected is the production, each time there are small adjustments; this is where the QMS intervenes to change the indicators or to make changes even at the level of human resources, to put all tools for us and to make those changes happen”.

We can then understand that organizational changes are characterized by a certain frequency. In general, the latter differs from one process to another, depending on the importance of each in the system of companies implementing the QMS. The frequency of change may also differ from one situation to another depending on needs and circumstances.

Processes can be particularly affected by organizational change. But also and in general, the shape of the organizational structure, as a whole, can be affected. We have already said that key processes and those that are most important are greatly affected by the changes. It should also be noted that processes, which interact strongly with key processes and can also affect the effectiveness of processes, are in turn deeply affected. For example, this applies, at the three studied companies (A, C and D), on the production process (key process), and also on the quality control process, mainly in relation to the role of this process in terms of receiving raw materials in stores. This is where the interest of the famous process approach is expressed, which presents possibilities to master the interactions between the various processes and also to ensure good communication between their teams. Every company makes changes to improve its

organization. These changes must be made in a way that is relevant for them to be effective, and also so that they can achieve the expected results in terms of improvement of the QMS and in terms of the development of the organization as a whole. In this regard, the managing director of the third company have stated:

“These changes have been positive, if we change the previously defined indicators, it’s because we have a good reason to make this change. If this change gives satisfaction, so it’s good for us. And I think quality management is going in this direction”.

Through this response, it turns out that these organizational changes play a key role in an effort to improve business organization. The positive impact of these changes may even affect other aspects than the organizational one, such as the economic aspect. In this context, the quality manager of this company stated the following:

“Changes! Of course they are effective. At the system level there is an improvement, it appears in the sales revenues that has increased, there is also an increase in market share, and the company has become very competitive”.

Therefore, we can say that any company can achieve good performance; provided that it makes relevant organizational changes, which will improve its QMS and help it cope with the various dysfunctions and difficulties encountered.

### 3. Defining Indicators and Objectives by Each Process: A Tool for Developing Processes and Resolving Organizational

#### Dysfunctions

Changes are made to make the organization more efficient. We change just at the level of a process or at the level of the organization as a whole. It depends on the needs and conditions imposed by the business context. We must change when we need to change and also to follow the evolution of this context. So these organizational changes can play a vital role in achieving good results. In this context, the Deputy Director General of the first company (A) stated:

“The organization has used the QMS extensively to evolve, and everyone is aware of the importance of the decisions made within quality management, as well as the reports and information presented by the latter. So, I would still say that the QMS is ubiquitous and indispensable”.

For its part, the quality manager has reported the following:

“Of course there is a positive impact, the management has achieved a positive result, it means that the changes have been effective; and how are they measured? They are measured by the indicators that have been defined. There are indicators that measure this improvement in a numerical way. Each process manager has their indicators. Lately, and by way of example, we have a table of new indicators for society, in this way we have changed all the indicators of the system. For each mapping process, new indicators were set with a frequency and an objective. If we achieve this goal it is good, if not we establish an action plan to achieve this goal”.

TABLE I  
EXAMPLE OF INDICATORS MONITORED BY THE HUMAN RESOURCES (HR) PROCESS AT THE FIRST ENTERPRISE (A)

|            | Economic indicators                          | January | February | March | ... | Goals |
|------------|--|---------|----------|-------|-----|-------|
| Activity   | Number of people recruited                   |         |          |       |     |       |
|            | Number of trainees (% of staff)              |         |          |       |     |       |
|            | Number of applications to fill a position    |         |          |       |     |       |
|            | Number of departures during the trial period |         |          |       |     |       |
| Quality    | Turn-over                                    |         |          |       |     |       |
|            | Social climate                               |         |          |       |     |       |
|            | Rate of Absenteeism                          |         |          |       |     |       |
|            | Number of resignations                       |         |          |       |     |       |
| Time limit | Average time of recruitment                  |         |          |       |     |       |
|            | Rate of achievement of effective training    |         |          |       |     |       |

Source: This table is extracted from the internal documents of the first studied company (A).

TABLE II  
EXAMPLE OF INDICATORS FOLLOWED BY THE PRODUCTION PROCESS AT THE FIRST ENTERPRISE (A)

|            | Economic indicators   | January | February | March | ... | Goals |
|------------|---|---------|----------|-------|-----|-------|
| Costs      | Cost of products (standard, real)                                     |         |          |       |     |       |
|            | Cost of production / unit produced                                    |         |          |       |     |       |
|            | Total value added / by product  |         |          |       |     |       |
|            | Consumption of hours (productive, not directly productive) by product |         |          |       |     |       |
| Activities | Quantities produced (units)   |         |          |       |     |       |
|            | Number of complaints, customer returns                                |         |          |       |     |       |
|            | Number of out of stock  |         |          |       |     |       |
|            | Quality index   |         |          |       |     |       |

Source: This table is extracted from the internal documents of the first studied company (A).

These are examples of indicators defined by process so that there is regular monitoring of their results and their evolution.

Through the figures and the resulting percentages, which are then obtained by the managers, the necessary improvements are implemented through the establishment of action plans and improvement that are relevant. Afterwards, the managers rigorously monitor the results and the application of these action plans, which would probably allow them to face a set of difficulties at the organization. It should also be noted that these indicators can be modified according to the needs, so that they can be adapted to the current situation and to follow the changes of the context in which the companies develop in a general way.

## VII. CONCLUSION

Quality management includes techniques and methods that can be used by managers to deal with organizational dysfunctions encountered. You can find tools to analyze the performance and the operation, frame the control, look for the causes of defects, and optimize a process, and so on. This would be achieved through the famous principle of the Deming wheel, or through the universally recognized tools and other principles of quality management.

We found, through the results of this research, that the implementation of the QMS could lead to changes, which could change several characteristics of companies and help them solve their organizational problems.

An example of this is the encouragement by quality management of planning, control and decentralization. Another example is the change in strategy and also the objectives of the company, which is precisely favored by the advent of quality management.

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