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MARKET ORIENTATION AS A PREDICTOR FOR ENGINEERING AND REENGINEERING COMPANY

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***Abstract**: It is known that there is a huge percentage of companies that have dismissed benefits of TQM implementation. TQM is especially important for companies which come from underdeveloped countries and countries in transition. This paper is the result of long-term monitoring and it tries to prove the usefulness and necessity of using a new methodology of Company Reengineering (CR). The results showed that company may have certificated quality system, or achieved TQM or is on its way to achieve it, but if it does not have marketing oriented organizational culture, than it has to undergo the entire company reengineering using a new methodology.*

1. INTRODUCTION

The second industrial and the third technological revolutions, along with the widespread usage of computer applications in all fields of human activity (since the 1970s), brought about a sudden worldwide development which introduced entirely new behavior rules in all areas of human activity, including company operations. That change has caused the rapid growth of economic capacities, imposing a competitive spirit not only to companies but also to economies of different countries, regions and the whole world. The globalization imposed to all spheres of human life, in one way or another, has been forcing many countries, their economies and the companies operating in such environment to introduce dramatic and, to a huge extent, radical changes.

In developed countries, these changes are of primarily developing character. The radical breakthroughs which happen in their companies are related to their organizing. Proper terminology and specific methodological innovations for their implementation are given in a systemized form by the world organization for standardization and are imposed to other economies around the world. All this is supported by the series of international standards. As response to the above highlighted norms, in Japan, the most advanced industrial country in the world, total quality management philosophy occurred, known as TQM. Achieving TQM in all companies in the world is the most important imperative of organizational development nowadays.

Of course, all the above are, primarily, the characteristics of trends in the developed world economies. The economy of the early 1990s in those countries was characterized by the industry in undeveloped condition, with very low level of market economy (characterized by the existence of production and planning operations and consensus economics) and with political systems which were propagating stiffness and tightness in the lifestyle and behavior. Within these economies, business collaboration followed the principles of simple economics. When such an economy found itself in the process of changes imposed by the global world at the end of the 1980s, chaos and economic stagnation and decline significantly afflicted the companies operating within it. Now it became necessary to implement a variety of universal radical changes in ownership, programming, technology, organization, market and above all culture.

Serbia is one of the countries struck with the imposed transition process.

However, the question imposed then still holds: *according to which rules should the companies behave?*

2. NEW METHODOLOGY

Some researchers reported that TQM implementation had led to improvements in quality, productivity and competitiveness only in the range of 20 to 35 percent of the firms that have implemented it [1, 4]. Most often the reason for this situation points to the lack of organizational culture quality necessary for immediate acceptance of adequate changes. It is well known that TQM can have dramatic impact on an organizational culture [2,5]. TQM is a management approach where the application of practices such as teamwork, internal

customer relationship and supplier partnership are tools for cultural transformation and involve major cultural change in the organization [3]). TQM programs have much more chances to succeed if prevailing organizational culture is compatible with the values and basic assumptions proposed by the TQM discipline [6]. The success of TQM as an organizational change will much depend on organizational culture [7].

It is well known that the companies in their business follow one of the orientations: product, sales or market. It is said that business process reengineering is a radical improvement of one or more processes, and it is a part of business process reengineering. The questions that still have not gained adequate answers are: *"What does reengineering of all processes in a company mean, what is the beginning of the realization of such reengineering, and why it should be done?*" The authors are of the opinion that there are three distinct demands for company reengineering:

- QMS is implemented and there are strives to achieve TQM, but the achieved effects are unsatisfactory, or even poor, which rises a need for implementation of radically new total process organization aiming at TQM,
- QMS is implemented and there are strives to achieve TQM, but the company is facing a great danger that can only be prevented by proper total transformation process, with a tendency of achieving TQM, and
- TQM is achieved but the company is facing a high business risk which can only be prevented by proper total process transformation with a tendency of exercising new TQM.

If the organizational culture in the company with an already organized process is at an adequate marketing quality level, then the company should arrange its organizational process using already known selective approach. However, if it is not, then the company should apply the proposed totalistic approach, referred to as company reengineering (CR).

The main factor for the successful implementation of engineering and reengineering, and successful TQM achievement, is the presence of innovative management in companies. Only innovative management in enterprises can achieve concrete innovative changes. Realization of innovative behavior in companies is possible only if its management, particularly strategic, exercises full innovation process and its reengineering.

As the final result of the persisting problems analysis, two procedures are established:

- The first one, authoritative for successful total process organization with a tendency to achieve TQM in predominantly undeveloped economies, especially in economies in transition, and
- The second one, for successful implementation of company reengineering, as a necessary and the most difficult form of radical transformation in all economic conditions.

Algorithms for performing both company engineering and company reengineering are given in further text as Algorithm 1 and Algorithm 2 and presented in Figure 1and Figure 2, respectively.

The proposed solutions take into account the specific conditions of enterprises' economies, and especially the conditions of underdeveloped economies, which are characterized by the following facts:

- Low financial solvency,
- Significant technological obsolescence,
- Unsatisfactory manifestation of market-oriented organizational culture
- Unsatisfactory level of work quality and behavior
- Social unwillingness to accept and interpret the essential norms and standards of behavior in developed economies, and
- Pressure from economically developed countries (to accept world globalization, with corresponding norms and standards).

The proposed methodological solutions take care that company engineering and reengineering must: be planned, have a long-term realization, start by introducing a new basic model, include complete workforce, and be managed and directed by an innovative management team.

3. CONCLUSION

The conducted study was done because there was a real need to find a solution for all those companies in the world whose business is not satisfactory. Achieving TQM is today`s business imperative because business excellence is realized through its implementation. During the last fifteen years process organization was implemented in all companies trying to achieve TQM. Companies from developed countries were leaders in these projects. Companies from undeveloped countries are trying to implement such changes using the same methodological solutions. However, the results are not so efficient, even for companies in developed countries. Business process reengineering, made to radically improve one or more processes in a company, provided benefits to small percentage of companies which started it.

Here presented methodology offers the solution for companies from all around the world. Business process reengineering is perhaps a solution for successful companies from developed countries, but the presented totalistic approach is much more suitable for all other companies. Such an approach, called company engineering, in its basis has the establishment of a new market-oriented organizational model and total process organization aimed at achieving TQM, based on incidentally achieved QMS. The crucial factor is whether to apply a selective or totalistic approach, and that decision depends on the level of marketing orientation of an organizational culture.

The level being acceptable, selective approach should be applied. Otherwise, a totalistic approach should be put in practice. Whenever the level of marketing orientation attains unsatisfactory level, company reengineering should be applied.

REFERENCES:

[1] Benson, T.1993. "TQM: a child takes a first few faltering steps", *Industry Week*, Vol.242 No.7, pp.16-17

.[2] Deming, W.E. 1986. Out of the Crisis, *Center for Advanced Engineering Study*, Massachusetts Institute of Technology, Cambridge, MA.

[3] Entrekin, L.V., & Pearson, C.A.1995. " A comparison of values espoused by quality and other managers", *Asia Pacific Journal of Human Resources*, Vol.33 No.3, pp.130-9.

[4] Gatchalian, M.1997. "People emprowerment: the key to TQM success", *The TQM magazine*, Vol.9 No.6, pp.429-33

[5] Juran, J.1989. Juran on Leadership for Quality, *Free Press*, New York, NY

[6] Kujala, J.& Lillank, P. 2004. "Total quality management and a cultural phenomenon", *QMJ*, Vol.11 No4, pp.43-55

[7] Rad A., M. 2006. "The impact of organizational culture on the successful implementation of total quality management, *The TQM Magazine* Vol. 18 No. 6, pp. 606-625

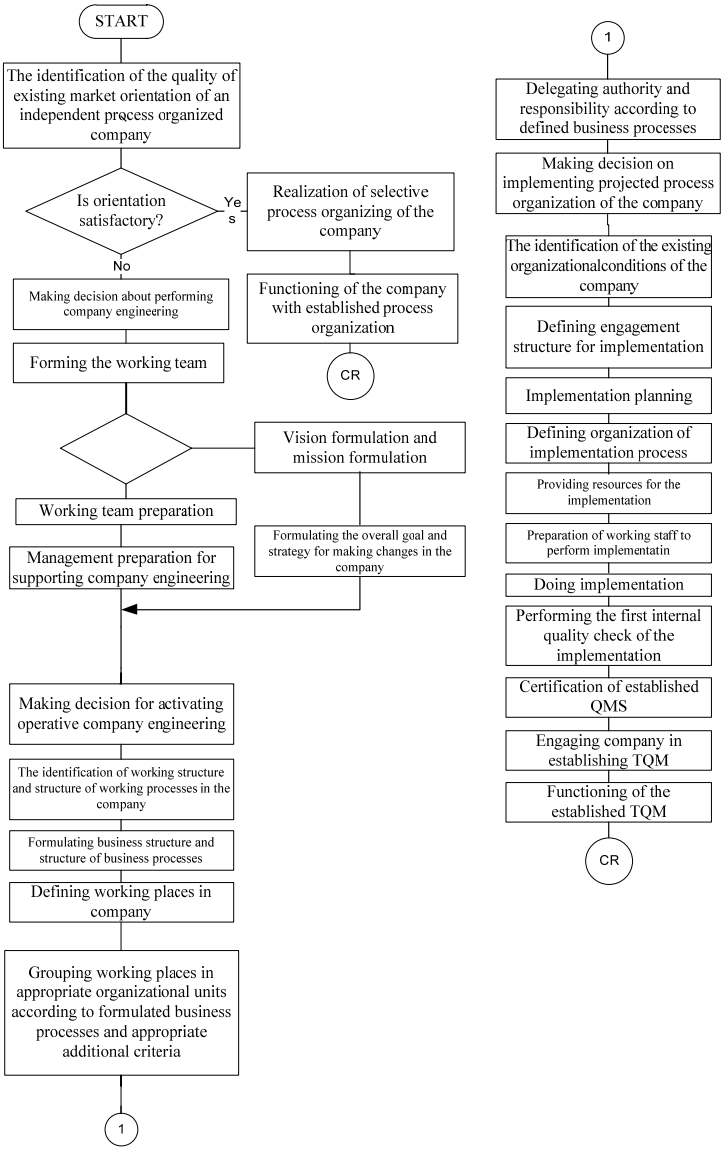

Figure 1: Algorithm for implementing engineering in the simple independent company

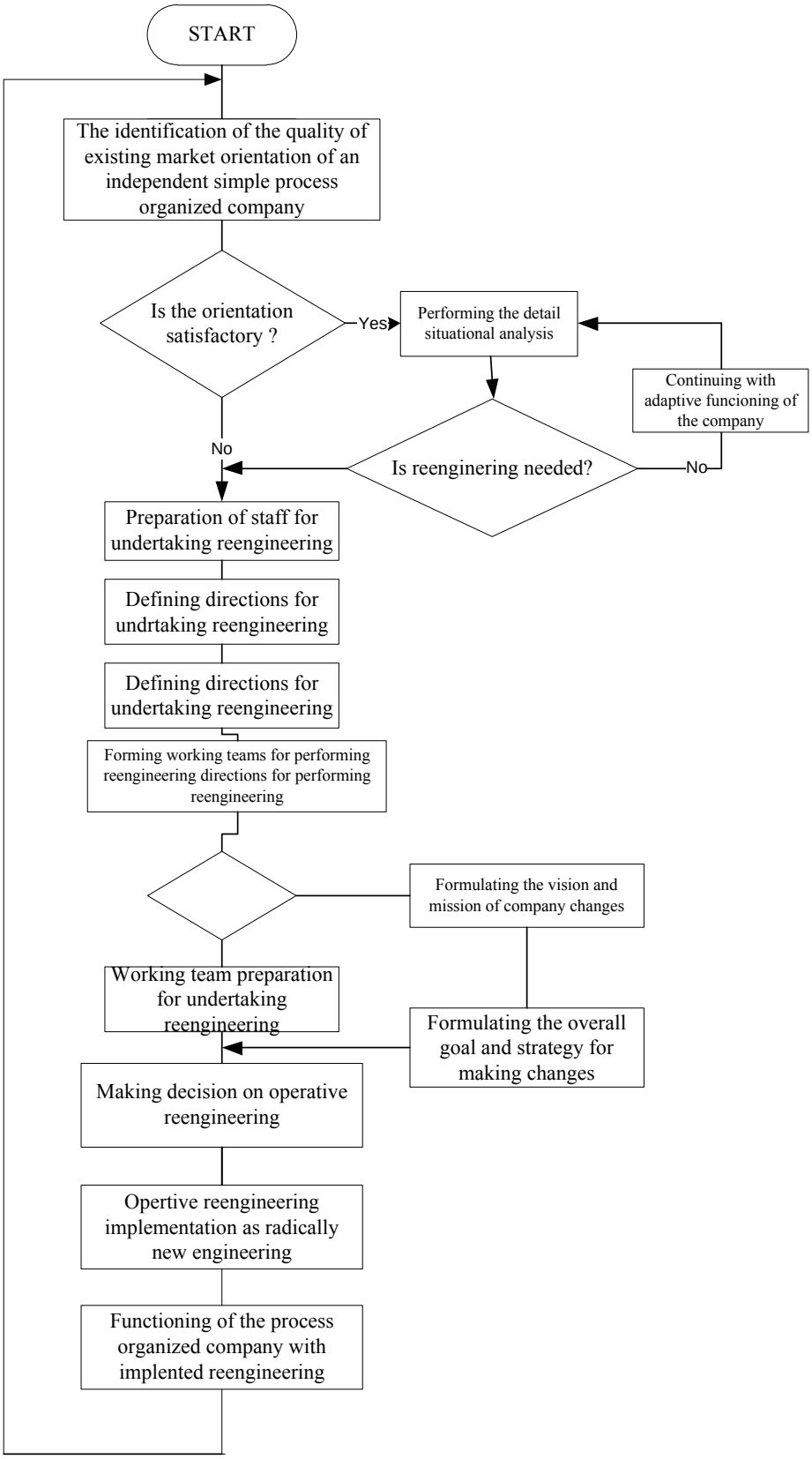

Figure 2: Algorithm for reengineering the simple independent company