

7th IQC

**QUALITY
RESEARCH**

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7th International Quality Conference

23.05.2013. Center for Quality, Faculty of Engineering, University of Kragujevac



Culture of Quality

**Quality and Social
Responsibility**

**From knowledge
to quality**

**Competition and
globalization**

**Innovation: A key of
quality in
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**From knowledge
to quality and
safe food**

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**Defining and
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**Management of
sustainable
development**

**ICT challenges
for future society**

**Excellence of
society organization**



23.05.2013., Kragujevac, Serbia



7. International Quality Conference



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AN ASSESSMENT AND OPTIMIZATION OF QUALITY OF STRATEGY PROCESS

Abstract: In order to improve the quality of their processes companies usually rely on quality management systems and the requirements of ISO 9001:2008. The small and medium-sized companies are faced with a series of challenges in objectification, evaluation and assessment of the quality of processes. In this paper, the strategy process is decomposed for one typical medium size of manufacturing company and the indicators of the defined sub processes, based on the requirements of ISO 9001:2008, are developed. The weights of sub processes are calculated using fuzzy set approach. Finally, the developed solution based on the genetic algorithm approach is presented and tested on data from 142 manufacturing companies. The presented solution enables assessment of the quality of a strategy process, ranks the indicators and provides a basis for successful improvement of the quality of the strategy process.

Keywords: strategy process, quality management, fuzzy sets, genetic algorithm, indicators

1. INTRODUCTION

Under the competitive pressure, many manufacturing companies continuously seek ways to improve quality. The Quality Management System (QMS) is a central activity associated with continuous improvement in the performance of organizations. Quality management includes all the activities that organizations use to direct, control, and coordinate quality. These activities include formulation of a quality policy and setting quality objectives. According to the literature review [1-3], it could be stated that achievement of quality objectives leads to improvement of the competitiveness, effectiveness and flexibility of a company. This is a reason why the considered problem has become a topic of research for both industry and academia in the last decades.

The quality goals and objectives could be considered as part of the strategic goals and objectives. Identifying and defining strategic objectives and strategies of the organization are included in the strategic approach to managing manufacturing companies. It is based on a continuous process of constant adaptation manufacturing companies to a variable environment. Strategy subsystem defines ways to address future situations and problems. In order to manufacturing company achieves its goals is not enough just to has formulated a strategy, it is necessary to implement the strategy in all operational and budget plans and continuously improve.

Performance and quality measurement is an essential element of effective planning, improvement and control as well as decision making. The measurement results reveal the effects of strategies and

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