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A QUALITY OF STRATEGY PROCESS IN TELECOMMUNICATION COMPANIES – A CASE STUDY

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Abstract: *A telecommunication services have trend of fast growing in sence of market share, innovations, offer business support etc. One of its crucial aspects is quality of services because rising global competitiveness. It is reason why is necessary to modify “classic” way of strategy development to quality strategy development using different offer approaches.*

In the paper we presented basic elements of approach designed to override difficulties of business strategy alignment to quality strategy in propose to make effective process of quality strategy development process.

Keywords: *telecommunication, strategy, planning*

1. Introduction

A key characteristic in business world is acceleration of change. Dealing in fast changing environment needs to develop appropriate strategy approach. According De Wit and Meyer (2004) to solve a strategy problem is necessary to distinguish strategy dimensions: (1) strategy process, (2) strategy content, and (3) strategy context. A strategy process covers flow of strategy activities, strategy content, and strategy content is related to results of strategy activities, and strategy context deals with conditions surrounding strategy activities.

Kaplan and Norton (2008) developed approach for linking strategy to operation for competitive advantage in six stages, starting from: (1) develop the strategy and (2) plan the strategy. They also emphasized the roles of leadership for each stage.

A process approach is recommended for strategy process (Arsovski, 2006) for all phases of it. Gruenig R. and Kuehn R. (2006) decribed process based strategic planning in four phases: (1) strategic analysis, (2) development of corporate strategy, (3) development of business strategy and (4) strategy implementation. Most of corporate strategies, including telecommunication companies, are developed on this “classic” way. In the age of fast changes the strategy concept has to deploy to quality strategy. Concept of policy development was defined in TQM concept. It is developed in Japan in the egrly 1970s (Jolayemi, 2008). This method will be explained in next chapter.

The problem for each telecommunication company is not to create corporate strategy as align this strategy to broad quality initiatives regarding stakeholder’s needs.

In the paper both approaches are presented in the case of one telecommunication company. The paper is organized as following. In

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second part some models of strategy development and planning are presented. In third part a basis of new strategic approach is presented. In fourth part some elements of practical solutions of the strategies integration are presented. In fifth part conclusion remarks are presented.

2. A corporate strategy process

A corporate strategy process consists from three sub-processes (De Wit and Meyer, 2004):

1. Strategy formulation,
2. Strategic change and
3. Strategic thinking

For telecommunication companies we distinguish four levels of strategy, i.e.:

1. Network level,
2. Corporate level,
3. Business level and
4. Functional level.

Corporate strategy is connected with formulation (deciding what to do) and implementation (achieving results), as is presented in Figure 1.

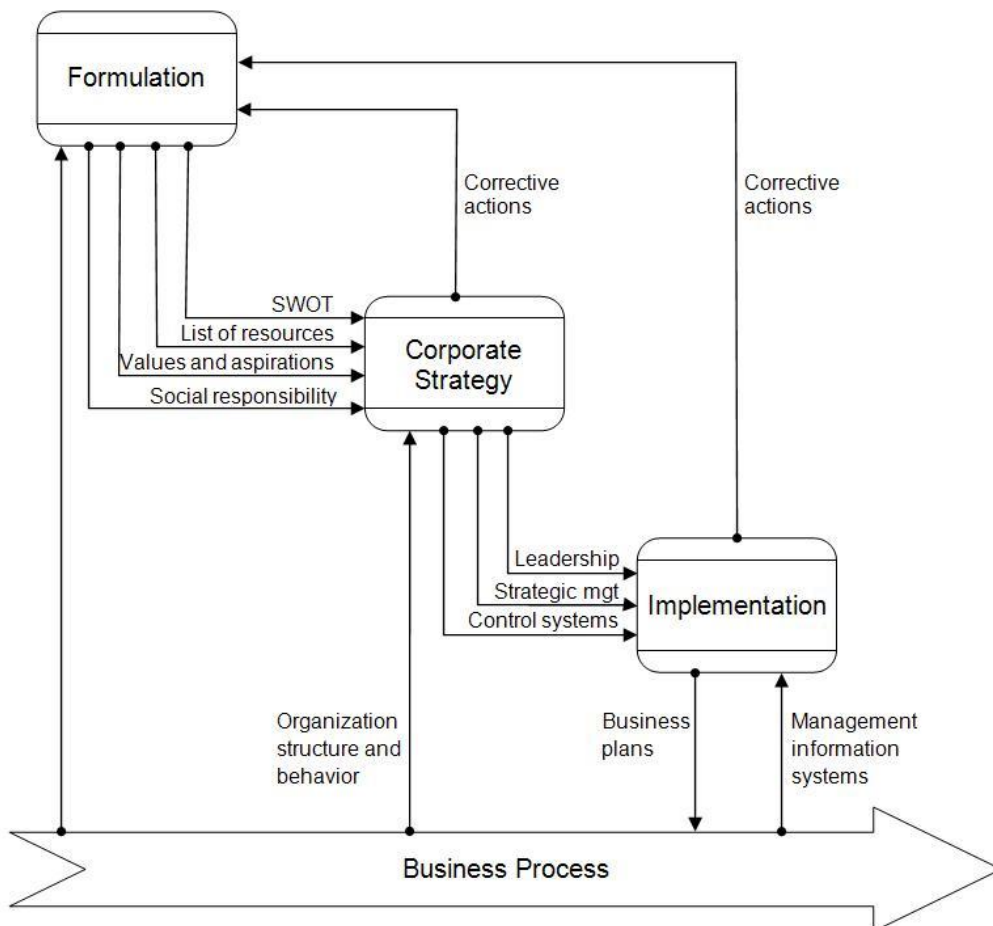


Figure 1. The strategy process phases

Formulation of strategy (De Wit and Meyer, 2004) consists from: (1) identification of opportunity and risks, (2) determining the company's resources, (3) determining personal values and aspirations of management, (4) identifying the non economic social responsibility. Corporate strategy requires considerations of what alternatives are preferred. The previous inputs have influence on the final choice. Criteria for evaluation are:

- Is the strategy identifiable?
- Does the strategy cover domestic and international environmental opportunity?
- Is the strategy consistent with corporate competencies and resource?
- Are the major elements of the strategy and program of major policies internally consistent?
- Is the chosen level of risk feasible in economic and personal terms?
- Is the strategy appropriate to the personal values and aspirations of the key managers?
- Does the strategy stimulate organisation members?
- Are there clearly identified market segments for implementation of strategy? etc.

In the paper authors emphasized the first phase: strategy formulation.

3. The basis of new strategic approach

Starting from the theory (Kaplan and Norton, 1992; Kaplan and Norton 2001; Lewenthal, 1994) and practice of strategic design process, a new strategic approach is designed, with elements:

- a) Objective: Improvement of component objectives shown in Figure 2
- b) Planned activities:
 1. Using the principles of management processes, in accordance with the principles of quality management

system (QMS according to ISO 9001:2008), there is the following:

decomposition and analysis of 10 process, namely:

- Develop policies to improve existing services and development company,
- Development of pricing policy portfolio services company,
- Develop marketing plan for the company,
- Development of company financial policies,
- Development of human resources management policy of the company,
- Procurement Management of the Company,
- Business Risk Management of the Company,
- Management of telecommunications regulation,
- Relationship Management with strategic partners,
- Management activities of defining and implementing strategic business company plan,

c) Determined processes are mapped in accordance with the Business Process Framework (eTOM) for compatibility with the standards in telecommunications,

d) For each process, which is conducted as a separate subproject, must be done:

- Analysis of strategic requirements in relation to the process,
- Identification and demarcation of the process,
- Analysis of requirements of stakeholders,
- Analysis of the interface,
- Modeling and mapping of the process,
- Design the necessary processes,
- Definition of process metrics,
- Development of procedures to manage these processes.

e) The results from each of these redesigned processes are:

- Procedure,
- Process model,
- Decomposed model of the process for later process of building a system to support decision-making and improve internal communication supported with ICT,
- Greater transparency of the process,
- Promote the objectives of the process.

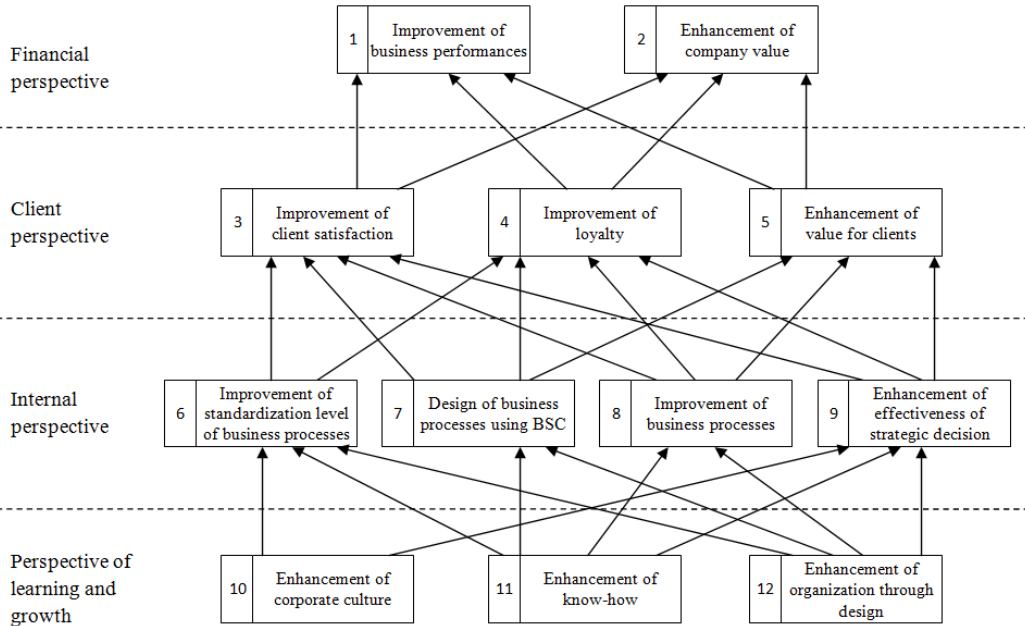


Figure 2. Strategic framework in the telecommunications business companies (Markovic and Arsovski, 2010. p.505)

Performance Management has nothing more than a legitimizing character during the implementation of a new processoriented organization.

Far from it: Without a consistent and valid Telco Process Performance Management on the basis of service level agreements (SLA), operational level agreements (OLA), and relevant key performance indicators (KPI) inefficiencies and

optimization potential cannot be discovered. SLAs describe service agreements between the telecommunications company and end customers or external partners. OLAs, in comparison, are directed inwardly and describe service agreements between various departments within the telecommunications company (Figure 3).

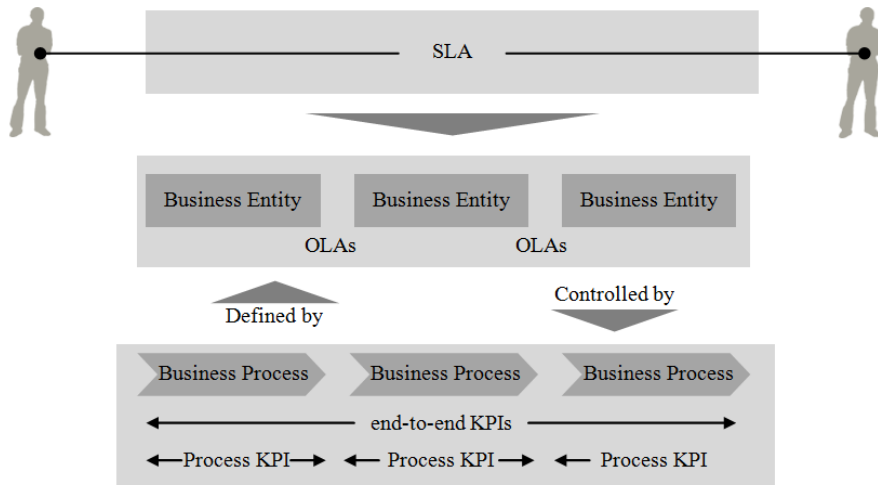


Figure 3. Overview of Telco Process Performance Management (Markovic and Arsovski, 2010. p.506)

In a process-centric organization, Telco Process Performance Management is at the bottom of all organizational development, oriented to goals and processes on the basis of strategic requirements. Neither strategic nor operational management are logically possible without Telco Process Performance Management, if the processcentric organization is to be more than an abstract ideal.

One of the most frequently applied standards is the eTOM (enhanced telecom operations map) business process framework which both models the entire process landscape of a telecommunications company and provides predefined performance indicators which can be used in Telco Process Performance Management (Figure 4).

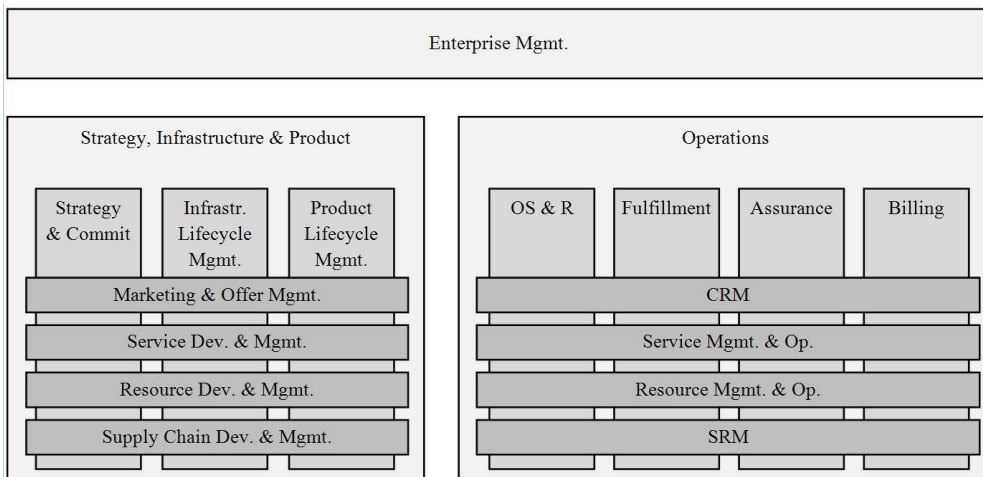


Figure 4. Fundamental Structure of eTOM (Enhanced Telecom Operations Map) (Markovic and Arsovski, 2010. p.506)

One success factor for the anchoring of Telco Process Performance Management in the organizational structure is to determine responsibilities for processes, i.e. process owners. Process owners are responsible for the analysis, design, implementation, and continuous improvement of their business processes.

4. Benchmarking the strategy processes – a case study

The formulation of quality goals and a quality strategy is based on the strategy development process and proposed in different researches (Kaplan and Norton 2008). The quality goals are defined by top managers with respect to vision (how the organization wants to be perceived by the world), mission (what the organization wants to achieve) and values (prescribing its behavior, character and culture). By measuring the strategic results we can determine performance evaluation of a telecommunication companies. The realization only acceptable financial performance is not enough, because the organization must achieve competitive advantage and improve its market position. The most relevant KPI for the strategy process are presented in Table 1. Statements of managers were described by linguistic expressions which are modeled by triangular fuzzy numbers.

It is realistic to assume that decision makers use linguistic expressions for their judgments instead of precise numbers. In this paper, the fuzzy rating of each decision maker is described by linguistic expressions which can be represented as triangular fuzzy number $\tilde{W}_k^e = (x; l_k^e, m_k^e, u_k^e)$ with the lower and upper bounds l_k^e, u_k^e and modal value m_k^e , respectively. Values in the domain of these triangular fuzzy numbers belong to a real set within the interval [0-1].

In this paper, the fuzzy rating of each

decision maker can be described by using five linguistic expressions which are modeled by triangular fuzzy numbers:

very low important - $\tilde{R}_1 = (x; 0, 0, 0.2)$

low important t - $\tilde{R}_2 = (x; 0.1, 0.3, 0.5)$

moderately important -

$\tilde{R}_3 = (x; 0.2, 0.5, 0.8)$

high important - $\tilde{R}_4 = (x; 0.5, 0.7, 1)$

most important - $\tilde{R}_5 = (x; 0.8, 1, 1)$.

The aggregation of individual opinions into group consensus is given by average value method. The algorithm of proposed method is presented in the following:

Step 1. Input fuzzy matrix of relative importance of sub-processes of strategy process

$$\tilde{W} = \begin{bmatrix} \tilde{W}_k^e \\ \tilde{W}_k \end{bmatrix}_{K \times E}, k = 1, \dots, K; e = 1, \dots, E$$

Step 2. Calculate to average value of fuzzy rating of decision makers,

$\tilde{W}_k = (x; l_k, m_k, u_k)$ by using fuzzy arithmetic operations:

$$\text{where: } l_k = \frac{1}{E} \cdot \sum_{e=1}^E l_k^e, m_k = \frac{1}{E} \cdot \sum_{e=1}^E m_k^e,$$

$$u_k = \frac{1}{E} \cdot \sum_{e=1}^E u_k^e,$$

Step 3. The representative scalar of fuzzy

number $\tilde{W}_k, k = 1, \dots, K$ is denoted as W_k and it is given by moment method. The weights vector is represented as $W_p = [W_k]_{1 \times K}$. After normalizing W_p , we get the normalized weights vector $W = (w_1, \dots, w_k, \dots, w_K)$

W is a non-fuzzy number and this gives the priority weights of one sub-process over the other.

Table 1. Strategy Process KPIs (Nestic et al., 2013)

Strategy sub process	KPI	Indicator	Target value	Description
Development of strategy business plan	KS1.1	Time	20-40	The time required for the development of SBP in relation to the planned time (weeks)
	KS1.2	Effectiveness	4%	The effectiveness of human resources involved in the process, expressed as the number of SBP's audit %
Implementation and control of company SBP	KS2.1	Implementation of company SBP	8	The level of SBP implementation, expressed a number of strategic initiatives
	KS2.2	Action Plans	8	Number of action plans to achieve the strategic objectives
	KS2.3	BSC	8	Number of BSC for parts of the organization
	KS2.4	Success	12-16	Number of specific actions undertaken in the company during the SBP implementation stage, based on the deviation from the target value
Improving of business processes and performance of company	KS3.1	Approved proposals for improving	16-18	Number of approved proposals for process improvement
	KS3.2	The success of improvement	8%	Percentage of improved processes for the reporting period based on the ratio of the number of improved processes and the total number of processes (x100)
	KS3.3	The success of the process	105%	Performance ratio of improved and existing processes
"Know-how" transfer and knowledge management	KS4.1	Percentage value of KPI	103%	Percentage value of KPI for knowledge management in relation to the previous period (x100-100)
	KS4.2	Intellectual capital	103%	The level of intellectual capital in the previous period
	KS4.3	Success	10-45%	Percentage of employees covered by the knowledge transfer in relation to the total number of employees (x100)
Corporate risk management	KS5.1	The level of corporate risk	115%	The level of corporate risk in relation to the plan

Strategy process	sub	KPI	Indicator	Target value	Description
		KS5.2	Success	5%	Reduction of corporate risk on an annual basis
		KS5.3	Proposals for improvement	8	Number of proposals for improving the process

According to the procedure, the weight values of all strategy process indicators have been determined:

- Development of strategy business plan $w_1 = 0.25$;
- Implementation and control of company SBP $w_2 = 0.3$,
- Improving of business processes and performance of company $w_3 = 0.15$,
- Know-how transfer and knowledge management $w_4 = 0.15$ and
- Corporate risk management $w_5 = 0.15$.

The weight values of KPIs of Development of strategy business plan:

$$w_{11} = 0.5, w_{12} = 0.5$$

The weight values of KPIs of Implementation and control of company SBP:

$$w_{21} = 0.25, w_{22} = 0.25, w_{23} = 0.25, w_{24} = 0.25$$

The weight values of KPIs of Improving of business processes and performance of company:

$$w_{31} = 0.3, w_{32} = 0.3, w_{33} = 0.4$$

The weight values of KPIs of Know-how transfer and knowledge management:

$$w_{41} = 0.4, w_{42} = 0.3, w_{43} = 0.3$$

The weight values of KPIs of Corporate risk management:

$$w_{51} = 0.4, w_{52} = 0.4, w_{53} = 0.2$$

Every company can change these weight values slightly according to their experiences and needs because they are not strictly fixed.

5. Benchmarking the strategy processes – a case study

The critical role of product development in the survival and success of business organizations and the need for managing it strategically is being recognized increasingly in both the academic and practitioner literature. To succeed, companies need to define a customer-focused product strategy, capitalize on the ideas, identify the areas they will focus on and where they have limitations, and develop a product using an iterative approach that maximizes flexibility. The new vision of product development is that of highly disaggregated process with people and organizations spread throughout the world. These plans and their implementation are critical to achieving success in the marketplace. The insights drawn may be helpful in constructing useful guidelines for specific situations and purposes. It is however noted that there is no defined method to ensure product development success. The fuzzy multiple criteria decision analysis has been widely used in both academic research and practices used to address critical and key issues in new product development strategy and success. There are methods that can help define and implement a strategy for integrated approach, but which ones to focus on and how to apply them is not well defined. However, exposure to a variety of different new product successes can provide insights on the range of success factors that if considered for any particular new product may positively affect its market performance and hence achieve the desired goal. The synergistic combination of the concepts and techniques along with some new

developments has produced a process whose power is indeed far more than the sum of its parts.

According Nestic et al., (2013) performed benchmarking analysis is related to one Serbian telecommunication company. Results of analysis are shown in Figure 5.

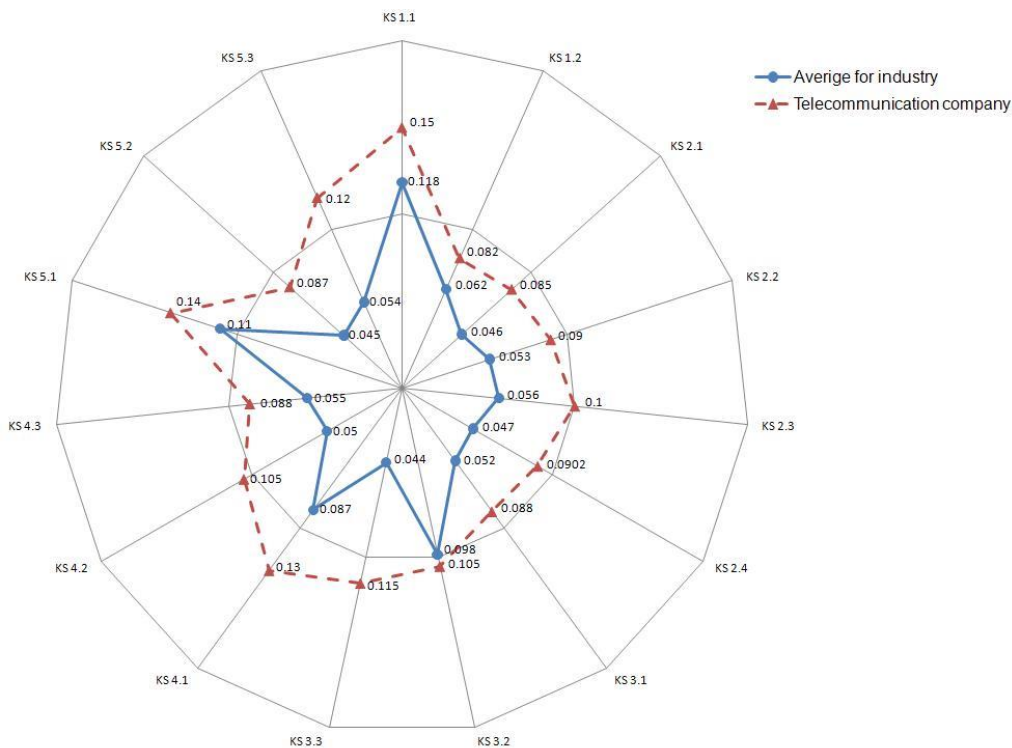


Figure 5. Benchmarking results for one Serbian telecommunication company and SMEs in industrial sector

The indicators value for telecommunication company is performed using expert assessment and its statistical analysis. From Figure 5 is obviously that all indicators have greater values related average value for industry (30%).

6. Conclusion

The relation between implementation of quality management system and quality of processes and outcomes is clear and

identified in many researches. The effective ISO 9001 system can significantly improve performance of the companies. Strategy process evaluation and improvement is a comprehensive approach to organizational change and typically yields the greatest return on investment. So the measurement and ranking of process indicators and their improvement is an important task in any company.

In this paper the approach for assessment and evaluation of the quality of a strategy

process is proposed. The procedure started with decomposition of the strategy process for telecommunication company. Key performance indicators for each sub process are defined, accompanied by a specific metric for each sub process. The specific metric is defined. In addition, the defined indicators and metrics need to align with requirements of ISO 9001:2008. The weight values for KPIs are defined based on expert opinion using fuzzy sets. The approach is based on evaluations of KPI weights by experts (the fuzzy rating of each decision maker was described by using five linguistic expressions which are modeled by triangular fuzzy numbers).

The next step was the development of a model in order to perform the following tasks: ranking of indicators, ranking of specific companies according to the quality of their strategy process, and the possibility to compare and contrast the strategy processes in different organizations. This approach enables assesment of the quality of a strategy process (according to ISO 9001:2008).

All indicators for telecommunication company are higher than average level in Serbian industry. Differences are highest in area of KS2.3 (BSC), KS3.3 (The success of the process), KS4.2 (Intellectual capital) and KS5.3 (Proposals for improvement). The differences are expected because existing strategy function in telecommunication company, with long experience in strategy process establishment.

The solution is flexible so it is easy to include other indicators, to change weights for specific indicators and to play with different scenarios. The presented

approach provides the possibility to graphically present the current status of the quality of strategy process compared with the average value.

The limitations of the specific research are around the selection of companies. This limitation is mostly present in the area where a specific company compares itself with the leading one, or where the upper limits for specific KPIs are defined (even they could be manually increased in the software). In further steps, analyzed companies will be ranked based on their strategy process performance evaluation. The general task will be to provide support for optimization of selected the KPIs according to the desired level of strategy process performance. In that case, it is possible to have constraints for each KPI (or their constraints could be set as a KPI in low/average and average/best companies). Each optimization could be stated as a single or multi-objective optimization. Since each company could calculate its own rank according to the values of its indicators, another important issue is to find a way for optimization of the selected KPIs. The goal could be to assess its own KPIs, identifying its strengths and weaknesses by comparison with the leading and average one. In addition, each company could develop its own scenario for improvement of learning from the leading organizations.

In next step, monitoring of the implementation of strategy process in telecommunication companies and the impact of knowledge and risk to business performance will be discussed.

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