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Implementation of Internal Benchmarking Model in Crnogorski Telekom a.d.

Abstract: *For larger organizations that have their own organizational units or branches in different places, ie. in different cities, characterized by significant differences in the way of work and level of development of business processes, resources, information technology, quality of work, etc. Because of all this is imposed in large organizations need to define a single business principles in all organizational units or branches, modeled on the best organizational unit, which would significantly improve the business.*

Keywords: *Internal Benchmarking Model, Balance Scorecard Management Systems(BSCMS), Key performance Indicators(KPIs)*

1. INTRODUCTION

Making better business process performance in the modern business is the recipe for success and prosperity of the organization. In this sense, Crnogorski Telekom must undertake activities that would be focused on achieving results of Deutsche Telecom as a strategic goal. Such a goal can be achieved by constant comparison of business processes and their improvement. First you must establish a balance between the business processes of Crnogorski Telekom, which can be best achieved by internal benchmarking, and only then carry out benchmarking with members of the Deutsche Telekom group.

The goal of internal benchmarking is set by top management as follows: "Performance of business processes telecommunication centers Crnogorski Telekom in the period of one year lead to a defined target value. Plan for achieving this goal is as follows:

- For the observed business processes, identify those telecommunications centers that achieve the best results
- Define target values for monitored business processes telecommunication centers should achieve.
- Create a short tutorial that will guide to reach the target value.

2. SETTING INTERNAL STANDARDS IN CRNOGORSKI TELEKOM – FRAMEWORK BSCMS

BSCMS has been established in all member States Deutsche Telekom Group. KPIs are grouped into four perspectives *[1]*:

- Finance Perspective
- Internal Process Perspective
- Customer Perspective
- The prospect of learning and development

Crnogorski Telekom process is at an early stage. Completed the identification of KPIs, which are classified in the four

perspectives. Some of the KPIs are standard Deutsche Telekom and some are required by the ETSI (European Telecommunications Standards Institute). For this work within the group KPIs, considered for fixed telephony Faults. Steps to more internal benchmarking KPIs are the same, and would complete a group KPIs for the interference introduced a KPI.

One of KPIs is, in fact, representative of a process. Group KPIs for the interference to summarized interference to the PSTN subscriber lines, subscriber lines, ISDN and ADSL subscriber lines and will be presented with KPI called MTTR (Mean Time To Repair). This process is followed in telecommunication centers which has 21.

Measurement data for the MTTR is done based on the review KPIs. In order to have time data collection are identified sources of data needed to calculate the KPIs to organizational units in Crnogorski Telekom.

To process the data and compare the results identified a group of KPIs created a software solution *[2]*

Software solution for data processing and comparison of KPIs consists of a time dimension (DD.MM.YYYY.HH: MM: SS), organizational spatial dimension that is related to the territory on which operates the organizational unit / branch / location, and is represented by a code, KPI value that is a function of input size, ie. F (input) and categorized according to the importance of interference and to: critical, major and minor.

3. SETTING TARGET VALUES AND PROPOSALS FOR IMPROVING THE PROCESS

After three monthly measurements carried out, collecting, processing and comparison between 21 of the telecommunications centers, at least the average time required for the removal of faults have achieved:

A. Mart 2006.
   - Mojkovac - 5h 35 min 24 sec (16 faults)
   - Šavnik – 7h 34 min 12 sec (5 faults)
   - Bijelo Polje -7h 52 min 12 sec (100 faults)
   - Berane – 9h 3 min 36 sec (164 faults)
   - Tivat – 9h 56 min 24 sec (44 faults)

B. April 2006.
   - Tivat – 4h 12 min 36 sec (47 faults)
   - Rožaje – 4h 35 min 24 sec (36 faults)
   - Mojkovac – 5h 49 min 48 sec (24 faults)
   - Žabljak – 6h 33 min 0 sec (28 faults)
   - Berane – 7h 8 min 24 sec (105 faults)

C. Maj 2006.
   - Berane – 4h 59 min 24 sec (90 faults)
   - Šavnik – 6h 8 min 24 sec (4 faults)
   - Bar – 6h 15 min 36 sec (239 faults)
   - Tivat – 7h 20 min 24 sec (53 faults)
   - Plužine – 10h 4 min 48 sec (15 faults)

A responsible person set the target value up for the removal of faults, for all telecommunications centers of Crnogorski Telekom, a value that is received in the telecommunication centers Berane and Tivat, which is about 7 hours, if you compare the values for all three months.

The responsible person took into consideration the opportunities, constraints and realities with regard to technical, financial and human resources company, and taking into account the requirements of Magyar Telecom and Deutsche Telecom.

Period End Date	M
Date	31.3.2006
Customer Impact	Yes
Priority	(All)

Region Unit	Average
00-TOTAL	28,28
01-Central	26,17
01-North	41,89
01-South	25,85
R1-Gorje	59,73
R1-Dalmogrod	42,95
R1-Nikšić	56,27
R1-Ružine	29,34
R1-Podgorica	17,21
R1-Šavnik	7,57
R2-Andjelovica	52,44
R2-Bare	9,06
R2-BijeloPolje	7,87
R2-Kotšin	35,19
R2-Mojkovac	5,59
R2-Pav	10,30
R2-Pljevlja	150,99
R2-Rožaje	12,21
R2-Žabljak	37,91
R3-Bar	10,39
R3-Budva	18,79
R3-HercegNovi	19,62
R3-Kotor	30,08
R3-Tivat	9,94
R3-Ulcinj	59,65
01-Nodefined	0,68
R9-Nepoznat	0,68

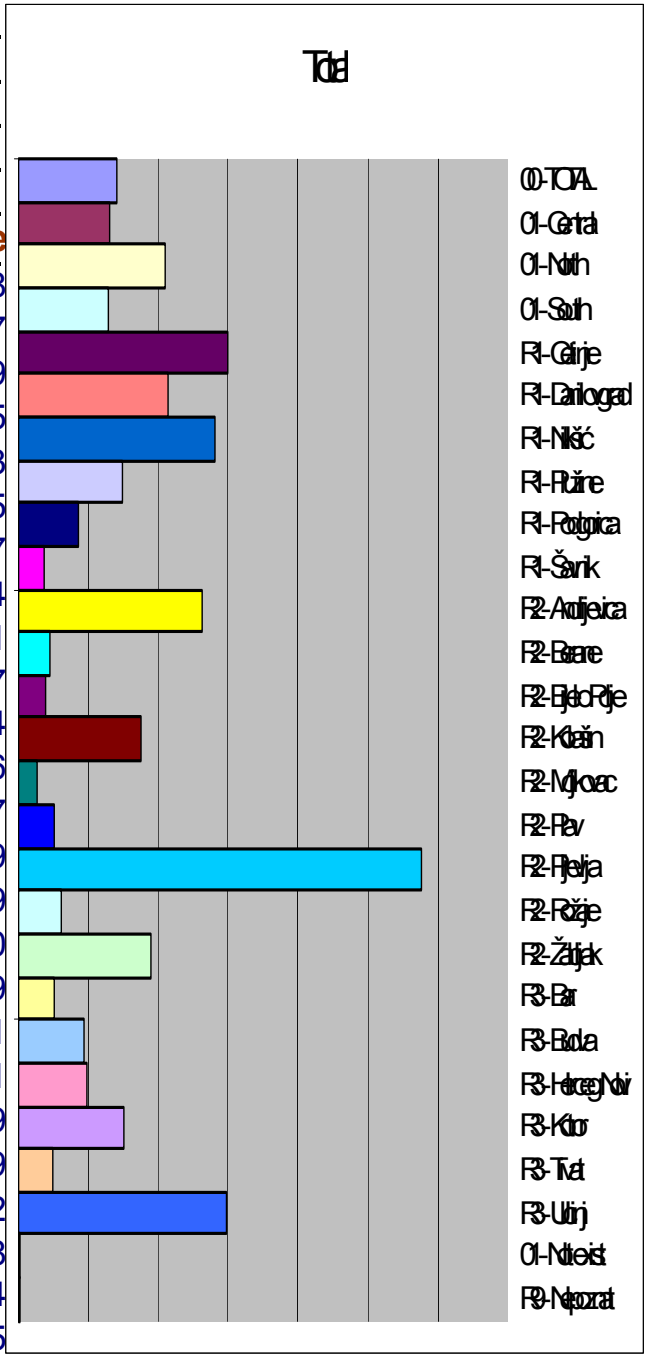

Figure 1- Rank list of telecommunication centers [2]

For other KPIs in Crnogoskom Telecom are also certain target values and in that way is rounded setting of internal standards.

With defined internal standard in the company joined the measurement, data collection, processing, and compared to defined terms.

The results of treatment are shown in Figure 1, where one can see the rank list of telecommunication centers in relation to the target value.

Measures for improving the process based on results of KPIs, compared to a target value, perform the analysis process to remove obstacles to be exercised in the appropriate service.The analysis process will be done *[1]*:

1. Reviewing the process flow diagram for the removal of obstacles
2. Chart review of causes - consequences.

4. FLOW CHART FOR THE PROCESS REMOVING FAULTS

The process of removing faults for all telecommunications centers in Crnogorski Telekom is the procedure that is implemented in the same way.

The reasons for the different time achieved should be found in the conditions under which the process is carried out which will best represent the diagram causes - consequences.

5. CHART CAUSES - CONSEQUENCES

5.1 Identifying problems

The process of removing faults in the telecommunications traffic is caused by a number of impacts of different character, size and manner of action. Given the observed effects were from the standpoint of:

- Opportunities to ensure the quality of the work process in this case the time required for the removal of faults in the telecommunications traffic - the conditions of the work process.
- Occurrence of deviations from the required time for the elimination of telecommunications traffic - are the causes of the problem.

From the previous follow-defined problem: The increased time for the removal of faults to the target value, which is defined by internal standards!

5.2 The causes of the problem

The main influence on the time needed to remove faults to the target value emerge as disrupt of size - causes, leading to unsatisfactory levels of output given the size stated in the increase of time required for the removal of faults as well - the consequences.

5.2.1 Identifying causes

Collecting comments on the implementation process of eliminating interference in telecommunication centers enabled the identification of the basic set of causes - the impact is as a result they have achieved during the disturbances in telecommunication centers. In total there are 75 causes. Some of them were shown a table T.1

Table T.1 – A set of causes - the impact of the implementation process, avoiding faults [1]:

ASSEMBLY CAUSES	
1.	Bad weather
2.	Untreated snow
3.	Natural terrain
4.	Inaccessibility of the terrain

5.2.2 Classification of causes

The classification of the causes listed above was carried out to their location in the four main groups: the impact of the

environment, telecommunications infrastructure maintenance organization, participants in the process of removing obstacles and ordering process.

5.2.3 Format a chart causes - consequences

For the basic structure of the diagram causes-result is a structure selected from the four main branches:

- Environmental Impacts
- Organization of maintenance of telecommunications infrastructure
- The participants in the process of eliminating faults
- Ordering process

which is presented in Figure 2.

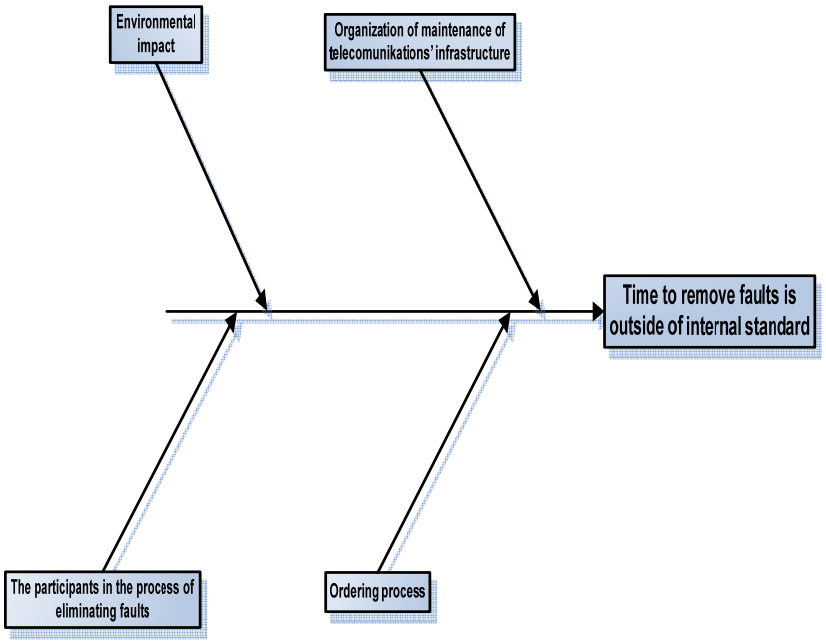

Figure 2. - The basic structure of the diagram causes- consequences during the removal of faults [1]

The final structure diagram with assigned causes of interference is presented in Figure 3In the end, a reconciliation target all three dimensions of sustainable development (social, economic, environment) is a complex problem that requires a multidisciplinary and interdisciplinary in research and can not be the focus of a single scientific field. One must realize that the laws of money can never be above the laws of nature and the latter certainly be taken into account in order to achieve success and prosperity of human society. Reviewing the process flow diagram for removing faults and chart causes - a consequence, determine the following *[1]*:

- Defined process flow corresponds to the reality that is. in practice the activities implemented as it was presented in the diagram..
- The analysis of the causes that may lead to increased time required for the removal of faults to the internal standard was followed by a list of activities for improving the process for the removal of faults at the level of Crnogorski Telekom. Some of them are represented in the table T. 2
- The list of activities handed over responsible persons with the proposal that every manager of telecommunication center should:

- Record activity from a list of activities for the promotion relating to the telecommunications center in the jurisdiction.
- Submit a list of activities to promote the necessary resources for their execution on the grounds manager for the maintenance of telecommunication networks.

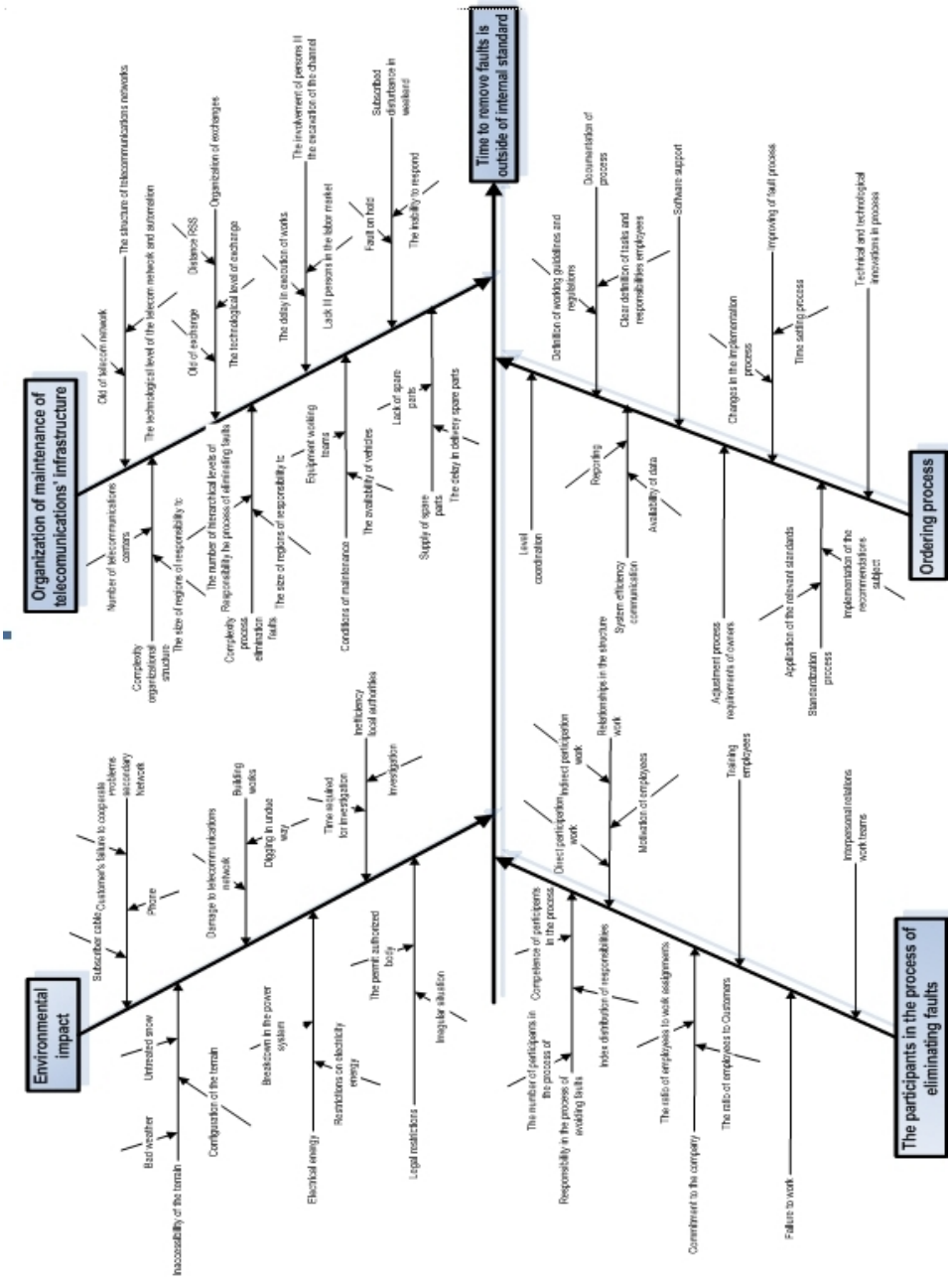

Figure 3. – Ishikawa diagram or cause-consequence diagram for during the removal of faults [1]

Table T.2 – The list of activities to improve the process for the removal of faults [1]:

THE LIST OF THE ACTIVITIES FOR IMROVEMENT OF THE PROCESS FOR FAULTS ELIMINATION
Activities
Markenting activities inform the customer that the secondary network is not the responsibility of Crnogorski Telekom, but is the responsibility of subscribers.
By the Government of Montenegro to ask for regulations governing the protection of telecommunications network during the construction works
Negotiations with the MUP of Montenegro and municipal inspection about expediency

6. ONGOING PROCESS-PERFORMANCE COMPARISON PROCESSES IN CRNOGORSKI TELEKOM

From one such example of an internal comparison processes in Telekom Montenegro, as the question arises: How to ensure efficiency in implementing process improvement list? I suggest a short guide for which i think that should allow the efficient implementation of activities to improve business processes and successful business process improvement, which consists of *[1]*:

- Meetings of managers of telecommunication centers responsible for the given business process twice a month. Forcing communication between the managers of telecommunication centers.
- Recording implemented improvements to the defined list - from meeting to meeting
- Presentation of the telecommunications center managers with the best score in the previous month at a meeting of managers and publication of the results achieved at the information portal..
- Presentation of the managers with the best result - that the conditions for the realization of the process created in the telecommunications center under its jurisdiction.
- Physical monitoring process by all managers in the telecommunications center with the best result..
- Providing bonuses for managers who scored a best result of three months in a row.
- Providing bonuses for managers who scored the best result in three months in order.

Base of this guide is the human factor, because I believe that large differences in the performance of business processes, such as shown in Telecom Montenegro telecommunication centers, should be found in the chain of cause-related communication activities for the given business process.

Instruction is provided by the principle of continuous improvement of business processes to improve cycle Demingovom: planning improvements - improving the implementation of activities - assessment of results (measurement and comparison) - List of improvements.

7. CONCLUSION

The paper presented the application of internal benchmarking model for larger organizations with regard to the QMS in Telekom Montenegro. The model is leaning on BSCMS, which is based on KPIs, which actually represent the connection with the application of ISO 9001 / Application 8th Measurement, analysis and improvement. Effects of the proposed model are *[1]*:

- Establishing internal standards creates a competitive spirit in the company and increasing desire of managers and

employees to meet all the required goal.

- Creating the conditions for successful development of the organization, because the application of this model is actually the company is creating a climate where all employees can learn from each other and develop a positive understanding on mutual cooperation and communication.
- Achieving positive effects in terms of employee motivation, because now through the KPIs and their performance can be expressed numerically benchmarking method that works very stimulating to employees in companies that have a problem with excess labor.
- Allows you to manage the company according to the identified objectives expressed through KPIs, which are coupled in feedback with the strategy of the company.
- Continuous improvement and review process, the principle of Kaizen, which certainly creates the conditions to progress and prosperity of the company.
- Reduce the differences in performance of the same business processes in different locations, organizational units or affiliates, thereby creating the conditions for external comparison and external benchmarking, to compare with the best in the branche.

As a special value of this benchmarking model should be pointed out that it applies in the case of Crnogorski Telekom, and it was already in certain business segments gave good results.

Working as a management company needs in the current economic conditions of a society in transition, which includes the privatization of companies and adjusting strategic partners, owners, shareholders and society at large, which can effectively express the internal benchmarking and the presentation of the actual status of business processes and their improvement.

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