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CONTENTS

DEVELOPMENT OF THE BEST PRACTICE BUSINESS PROCESS MANAGEMENT METHODOLOGY

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Extensive literature on business process management suggests that organizations could enhance their overall performance by adopting a process view of business. Hammer (2007) states that: In virtually every industry, companies of all sizes have achieved extraordinary improvements in cost, quality, speed, profitability, and other key areas by focusing on, measuring and redesigning their customer-facing and internal processes. In reality need to change many things to harness the power of processes, but how to ensure about what exactly need to be changed, by how much, and when.

In the article is presented a developed, improved Hammer's framework and its implementation guidelines. The developed framework serves as a diagnostic tool for identification of organization process maturity level and to do reasoned optimal improvements which leads to better overall organization performance.

Keywords: *process management, organizational performance, process management evaluation criteria, optimal process maturity level, Process and Enterprise Maturity Model (PEMM).*

Introduction

One of the newest and most promising ideas opening new ways to the development of the management thinking and science is a process-focused approach to the activity of an organization. Porter (1985), Davenport, Short (1990), Hammer (2007), Champy (1993), and Zairi (1997) state that the organizations are managed much more efficiently when the process-focused approach is used.

Management of most organizations in Lithuania is of a functional type (Lodienė, 2007), though the organizations operating on the basis of process-focused management principles are dominating in Western Europe and North America already for about two decades, where all the activities are managed on the basis of process-focused approach.

Process-focused approach is most often started to be mastered by Lithuanian organizations, which are implementing quality management systems complying with international standards. According to data of the Lithuanian standardization department as of 1 April 2010, 1027 organizations are operating in Lithuania in the industrial, ser-

vices, and public sectors, which use a certified quality management system meeting the requirements of ISO 9001 standard.

Business processes of the organizations which are managed on the basis of process-focused principles reflect the main purpose of the organization since the organization is basically composed of the processes under implementation rather than of the sold products or provided services. In other words, the management of the processes (activities) is the core of the business management. However, in this case the processes as well as the results obtained could lack necessary maturity and stability.

The organizations applying process management methods understand business processes as objects and strategically important assets. In such case the processes require larger single investments and efforts for the development of their maturity, because the goal is to develop the whole business management system rather than a separate process.

However, the decisions of the board should be based also on the principles dictated by the financial market, the organization managers should know what gross benefit and when it will be obtained on the basis of initiated changes in individual processes, which always require different additional resources. With the improvement of processes, when just a single process is being improved the moment comes also when further improvement actions do not yield higher benefit, and the efficiency of the process, or even of the activity of the whole organization, is increased insignificantly. It is important to find the rational way of the organizational improvement, i.e. the optimal maturity level of different processes which would yield possibly maximum benefit to the organization.

The main *subject* of this article – practical application of the Hammer Organization and process maturity model (hereinafter – PEMM).

Scientific problem of an article – application of the PEMM methodology for the implementation of the balanced development needs of the organization.

Goal of this article – to present the application guidelines of an extended Hammer PEMM, defining the steps necessary for the practical application of the process-focused approach, in order to develop and improve balanced and uniform activity in the organizations.

Methodology – an article was prepared on the basis of systemic analysis of the scientific sources on the considered topic and the results of research performed by the author on the improvement of the organization and process maturity model. A simulation method was used to determine the guidelines of application of the PEMM model.

Hammer Organization and process maturity model

American scientist Hammer noticed that many companies which tried to rejuvenate themselves by creating or redesigning business processes have made slow or little progress. All change projects are tough to pull off, but process-based change is particularly difficult.

2001 Hammer started a research project to develop a process implementation road map which would help executives comprehend, plan, and assess process based transformation efforts. At 2007 framework was

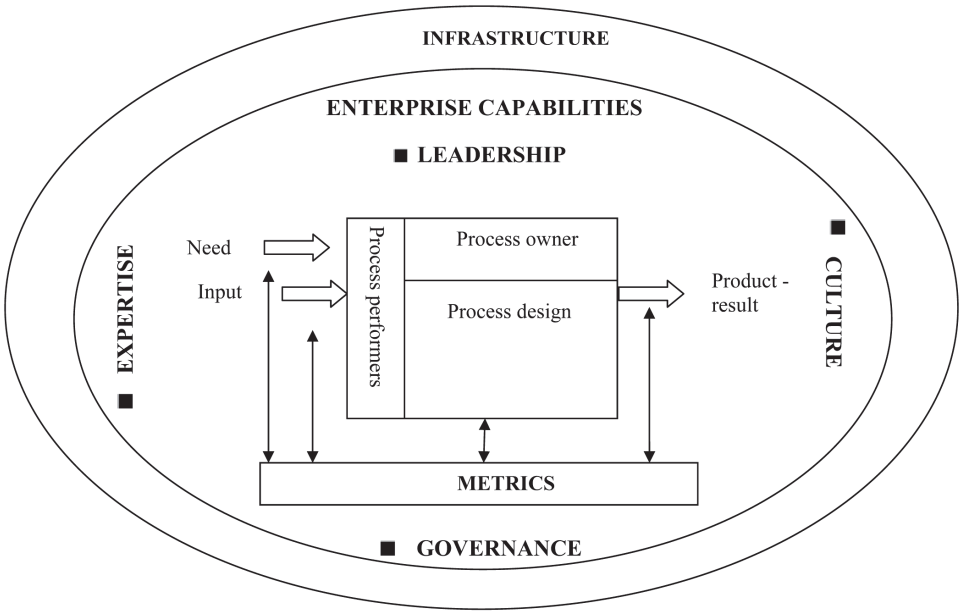

Figure 1. ***Process and Enterprise Maturity Model (created by author according to Hammer PEMM)***

presented, and originally called the Process and Enterprise Maturity Model (PEMM), shown in figure 1. PEMM centres on five characteristics that enable any process to perform well on a sustained basis and four enterprise capabilities that allow processes to take root (see table 1 „Process enablers and organization capabilities").

Five essential characteristics that enable any process to perform well are:

1) A process must have a well-specified design;
2) The people who execute the process, the performers, must be skilled;
3) There has to be an process owner, a senior executive who has the responsibility and authority to ensure that the process deliver results; otherwise, it will fall between the cracks.
4) The company must align its infrastructure to support the process;
5) Company must develop and use the right metrics to assess the performance of the process over time; otherwise, it won't deliver the right results.

These enablers give a process the potential to deliver high performance. Also worht to mention that the enablers are mutually interdependent.

Hammer defined four levels of process strength (P-1, P-2, P-3, and P-4). The stronger the enablers, the better the results the process can deliver on a sustained basis. The enablers' strengths determine how mature a process is.

In order to develop high-performance processes, companies need to possess or develop organizational capabilities in four areas: leadership, culture, expertise and governance.

Table 1. ***Process enablers and enterprise capabilities (Hammer, 2007)***

Five process enablers	
Design:	The comprehensiveness of the specification of how the process is to be executed.
Performers:	The people who execute the process, particularly in terms of their skills and knowledge.
Owner:	A senior executive who has responsibility for the process and its results.
Infrastructure:	Information and management systems that support the process.
Metrics:	The measures the company uses to track the process's performance.
Four enterprise capabilities	
Leadership:	Senior executives who support the creation of processes.
Culture:	The values of customer focus, teamwork, personal accountability, and a willingness to change.
Expertise:	Skills in, and methodology for, process redesign.
Governance:	Mechanisms for managing complex projects and change initiatives.

PEMM practical application

Direct application of the Hammer PEMM model in practice does not justify fully the organization's expectations. Process maturity was assessed by the public company National blood center on the basis of the PEMM model. It was established that the results of assessment of the process maturity level could be estimated by means of targeted sections, and to simulate the options of the process improvement on the basis thereof, however, numerous such sections exist and it is not clear which one should be selected and how to realize it in practice. Besides, the Hammer PEMM is not based on the classical financial market management principles, as it is only practical method to determine the maturity level. Using this model it is possible to determine existing organization process maturity level and to determine goals for each process maturity level. The PEMM model does not provide recommendations, methods, and priorities to reach such goals. In order to ensure the development of rational and optimal maturity of the organization's processes and quality level, application of the model requires broader adaptation of this model and its application guidelines, trying to link it with the financial and other assessment indicators of the processes.

Proposed application guidelines of the PEMM consist of ten stages, with the following logical sequence: existing situation, possible situation, and aspired situation (see Figure 2). More detailed description of the application guidelines of the PEMM follows:

(1) Assessment of the maturity level of existing processes. The goal of the first stage is to collect reliable information about existing situation. The following ways of the process maturity assessment are proposed: to interview the employees using the process maturity level assess-

ment matrix created by Hammer or compiling simplified questionnaire according to the work specifics, to perform the process audit following the PEMM matrix.

The results about the maturity level of all organization's processes will be more reliable if all process owners, process performers, and organization's management will be interviewed.

After collecting information about the organization's brand, the process maturity analysis is performed the goal of which is to determine maturity level of the processes and their enablers.

Common maturity level of all processes is determined according to the process having reached the lowest maturity level. If at least one process is on the lower level, the maturity assessment of all processes drops, and that does not allow reaching higher maturity level.

(2) Analysis of the process maturity, determination of the maturity level. Data of the summary table are used for the analysis of the process maturity level. It can be analyzed by means of different targeted sections in accordance with several aspects:

- it is possible to determine least and most mature processes;
- weaknesses of each process are determined separately, authorizing in this way to improve and raise the maturity level of each individual process;
- it is possible to determine the least developed enablers of the process maturity level, which do not let the organization's processes to reach higher maturity level.
- it is possible to determine the weakest organization's processes which do not let the common maturity level of the organization's processes to reach higher level;
- it is possible to determine and compare the maturity of the main and auxiliary processes.

(***3) Selection of options to improve possible processes.*** It is possible to select several options of the process improvement, but only one option is selected taking into account strategic goals of an organization and expected benefit. The following main options are possible:

- increase of the maturity level of the main process;
- increase of the maturity level of several processes;
- increase of the maturity level of the weakest process or increase of the maturity level of the enablers of the least developed processes.

(4) Modelling of the process (es). It is necessary to model the processes or enablers of different maturity levels in order to plan the optimal maturity level process. For example, the process "x" is of the second maturity level; with the modelling of this process it should appear on the third or fourth level.

The modeling helps to identify the problems, restrictions, obstacles for the development of the processes, and to find optimal solutions in order to improve the operation of the whole system.

When improving the processes according to the PEMM, it is proposed to use the process flow diagrams and IDEF0 or IDEF3. The simulation result is the creation of the schemes of different maturity level processes.

(5) Determination and measurement of the process assessment criteria. It is pro-

posed to determine the process assessment indicators following the activity measurement system model created by Zairi and Sinclair (1995). The advantages of application of this model are as follows: the activity measurement system will be coordinated with the process measurement system, the critical success factors and main activity indicators will be taken into account, and the whole system will be linked to the organization's strategy and goals, as well as with the action plans.

It is proposed to determine the following universal process assessment criteria: the process costs, process quality, process duration, and satisfaction of the process clients. These indicators are interdependent, so the priority should be determined according to the organization's strategy.

(6) Planning of the process maturity increase. After determination of the factors which are missing, the plan of actions and measures is prepared in order to reach higher maturity level and necessary investments are calculated.

(***7) Calculation of investments.*** Calculation of investments is a very individual task depending upon many criteria. However, the standard project management steps should be used in principle for the calculation of investments. It is not recommended to restrict oneself in the PEMM model with any one of the project management methodology or good practice. Any project management methodologies can be used according to the needs of an organization or provider of services. However, it is important that the main steps would be performed which are used during the predesign and planning phases of many project management methodologies. The main goal of this step in the end to have a project plan with calculated effort.

(*8) Simulation of processes and (9) analysis of results.* Assessment indicators of existing processes are measured before the process simulation. This stage is necessary to ensure possibility later to compare the indicators of existing processes with the possible results of the indicators of the processes of higher maturity levels.

The stage of analytic simulation follows the simulation of processes and measurement of the indicators of existing processes, the goal of which is to create a dynamic view of the process, and to record the effect upon the measurement indicators of the processes.

Analytical Hierarchy Process method (AHP) allows converting both quantity and quality results of indicators into the common single quantity process assessment. It is proposed to find maximum value of the ratio between determined process assessment results and required investments in order to determine optimal process maturity level.

Namely, the proposed AHP method helps to evaluate the importance to the process of each process assessment criterion, or its weight. Also, this method allows systemic assessment of all process assessment criteria, since after evaluating the importance of each criterion it is possible to obtain general expression, or a single figure which could be compared with the process simulation options for each maturity level. In other words, this method allows transforming the quality evaluation of the process assessment criteria into a quantity evaluation. Also, with the assessment of several figures it will be possible to decide which process improvement option is an

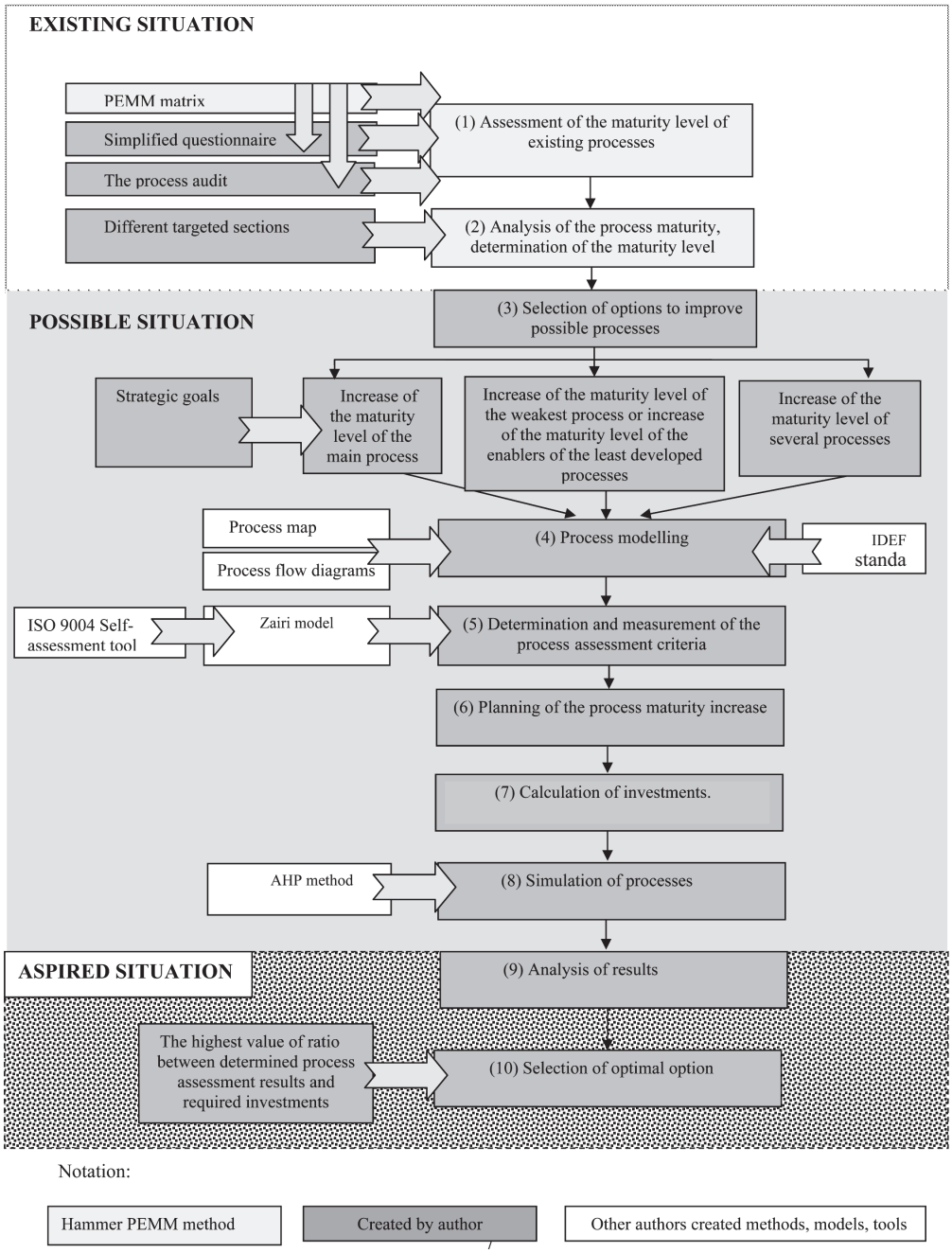

Figure 2. ***Application guidelines of the PEMM method (created by author)***

optimal one according to determined assessment criteria.

(10) Selection of optimal option. Optimal maturity level of the processes can be determined by the return on investments and changes of the results of the process measurement indicators.

The application guidelines of the created PEMM method let the organization to determine and select an optimal process maturity level and improvement option. Diagram of the application guidelines of the PEMM method is shown in Figure 2.

The goal of the application guidelines of the created PEMM method is to find an optimal process improvement option. Optimal maturity level of the processes is determined by the highest value of ratio between determined process assessment results and required investments. Generally speaking, an option of the process improvement and maturity increase is selected according to the payback of investments and the greatest benefit.

Conclusions

Universal Hammer PEMM model was selected as a basic one for the assessment of the process maturity level, due to it allows to determine easily and accurately the maturity level of the organization and processes and PEMM does not require that the process would contain any specific features.

Hammer PEMM model was extended in order to ensure the development of rational and optimal organization's processes and quality maturity level. Also were developed its application guidelines, to link the financial and other assessment indicators of the processes.

The extended Hammer PEMM model includes the Zairi, Sincliar models, total quality management principles, and is based on the activity measurement system model, and is structurized according to the PDTV cycle, on the ISO 9004:2009 standard, IDEF standard family of the simulation and functional representation of the processes, and analytical hierarchy process method (AHP). Using extended PEMM is possible to adjust the process assessment criteria with the organization's strategic goals, and to ensure one of the main principles of the process-focused organization – processes assessment criteria should be agreed upon with the organization's strategy, its goals, mission, vision, and main indicators of the activity".

Expanded Hammer PEMM allows the optimal development of an organization and maturity of its processes. And it is expected that an efficient and broad process assessment system can be developed following the PEMM model which was created

The defined application guidelines of the selected and extended PEMM (practical application of the extended organization and process maturity model) set all the steps necessary for the actual practical application of the extended PEMM within the organization using the process-focused approach. The PEMM model which was created allows determining and simulating the maturity level of each process according to selected criteria, and determining which process maturity development level is an optimal one to the organization, which would bring maximum benefit according to required investments. One of the most important principles of good business practice is implemented in this way, meaning that correct decisions of the board should be based also on the principles dictated by financial market.

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