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MEASUREMENT AND MANAGEMENT OF BUSINESS PROCESSES ALONG THE LINES OF BALANCED SCORECARD AND QPR PROCESS GUIDE – PRACTICAL CONCLUSIONS

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ABSTRACT

Processes generate results that the company provides to its customers. Customers outcomes and processes are connected in dependable interaction. The capacity of the company to provide results that customers expect, largely depends on how well managers or business analysts design and manage processes.

A key factor to ensure sustainable achievement of the organization's business process management, which inevitably requires continuous measurement of their effectiveness. Ideally, the measurement must be linked to high company goals, to ensure that the processes are oriented towards these goals and assessed according to their contribution to achieving them. On the other side, measurements should be used to assess the performance of individual employees involved in the process. In other words, the high efficiency of the steps (taken as synonymous with the activities in the project context and modeling terminology using software tools) of processes should be rewarded.

In a time when resources are more intangible, tangible shift as a tool for value creation, financial analysis of business becomes increasingly insufficient for the establishment of adequate assessment and prognosis. The new business reality provokes appearance of new methodologies to improve the management of business processes, and measuring and managing organizational performance.

Key words: improvement; business process management; modeling; measurement; software tools; high efficiency.

INTRODUCTION

Numerous references have already been addressed on the process architecture and expectations from a graphical representation of processes as a basis for their analysis and optimization. The next steps of the implementation methodology Business Process Management (BPM) are measuring the effectiveness of processes and their management, with or without the use of IT tools.

1. Measuring the effectiveness of processes.

Ideally, the measurement must be linked to the company's high-level goals, to ensure that the processes are oriented towards these goals and evaluated according to their contribution to achieving them. On the other hand, the measurement must be used to assess the performance of individual employees involved in the process. In other words, the high efficiency in the execution of steps (accepted as a synonym for activities in the context of the project and terminology modeling using software tools) from operations should be rewarded.

Balanced Scorecard (Balanced Scorecard or BSc) is a very good tool for measuring business processes, as assessed not only short-term financial performance, but also covers customer relations and quality of the activities of the company. In fact, it is essential to monitor the needs and expectations of all parties involved in the functioning of the company. Another positive feature of the BSc is that it clearly highlights the relationship of efficiency of processes with corporate goals, and also binds to them and appropriate initiatives and action plans.

Once selected performance indicators should allow employees to senior levels of the organization to act proactively, to redirect

resources and offer optimization of processes before they become real negative effects on the final performance.

When an organization develop fully the activities of measurement and performance management, the question arises how to be weighed against the performance of processes across organizational units or competitors. In these cases, it is convenient to use the technique of comparative analysis (benchmarking). However, before proceeding to compare the effectiveness with other departments and companies, it is imperative to consider all characteristics and features that would make the performance indicators comparable. Too often, organizations compare numbers together disregarding differences in scope, complexity, or even corporate culture.

Benchmarking can affect the processing time, waiting time, costs, Quality Management Systems, customer satisfaction, profit, etc. and be carried out at different levels - at the level of product, process, business unit or the entire company.

2. Business Process Management.

Business Process Management (BPM), like the customer relationship management (CRM) and other concepts is both organizational strategy and segment of the software industry. It focuses on modeling, automating, managing and optimizing business processes in order to improve the performance of the company. If you look and analyze the complete end-to-end processes, methodology eliminates the boundaries between departments, information systems and users. It also applies in and outside the company, affecting not only employees but customers, partners and suppliers. Adoption of BPM inevitable not only improves return on investment (ROI), but the visibility, accountability and predictability of operations. Put on this strong foundation, everything in the company is going faster and easier, with less wasted time and money.

The rapid development of the methodology is based on the increasingly popular perception that success in today's "customer economy“ is achieved through the efficiency of the organization and especially its business processes. Depending on the process of implementing BPM improves productivity, visibility and speed of change, but also reduces costs, errors and time to perform a business task. At full deployment business process management is a key factor for improving and financial results.

Solution market for business process management is formulated from the merger of several niches, each of which relates to the settlement of a separate part of the problem prior to the development of BPM:

- Automation of work processes (Workflow Automation) - the application of information technology in the process based on human labor;
- Integration of enterprise applications (Enterprise Application Integration) - to ensure the exchange of information between heterogeneous systems;
- Modeling and analysis of business processes (Business Process Modeling Analysis) - awareness of the details of the business processes and the potential effect of the introduction of the changes;
- Monitoring of business operations (Business Activity Monitoring) - measuring and analyzing the effectiveness of business processes and individual activities.

Too many people still have no clear view of what includes BPM methodology. This should not be the subject of a surprise due to the fact that the community of scholars, consultants and practitioners working in the field of business process management is not reached common definitions and approaches. BPM includes everything that is relevant to the effective and efficient management of processes in the company. At the center of these processes are people, so naturally it would be to try to make them part of the solution to existing problems.

"We are implementing optimization, but the real difference was evident when we decided that this activity is no longer a project and business strategy" (Stephen Schwartz, former vice president of IBM)

This way of thinking of managers is one of the keys to understanding the nature of business process management and key success factor related methodology endeavors. Without discounting the work on the realization of a project, it is the easy part of the task. The real challenge for companies is to institutionalize

BPM and make it a fundamental management practice based on the ability to manage the process faster and predictable.

- **Milestones in the theoretical sense**:

Implementation of initiatives for business process management usually pass through seven stages:

1. Modeling and documentation of processes to increase their understanding and initially identifying opportunities for optimization.
2. Redesign of business processes running on paper into electronic processes, eliminate paper forms, records and other documents, as well as inefficiencies associated with them.
3. Full automation of the process step by integrating them into corporate information systems.
4. Adding intelligent automated checks on data in electronic form in order to avoid gaps (blanks) or errors - for example, the selection of merchandise from the code instead of manually filling in her item number.
5. Introduction of automated control procedures to ensure the continuity of the process and to ensure functionality in the event of technical problems or human error.
6. Providing visibility of the status of processes in real time.
7. Analysis of the efficiency of processes in order to facilitate their subsequent development.

- **What is the situation in practice.**

To illustrate the capabilities of business process management can be considered a simplified diagram of the process for the implementation of applications for modification of the characteristics of a product or service from the customer. (example QPR Process Guide)

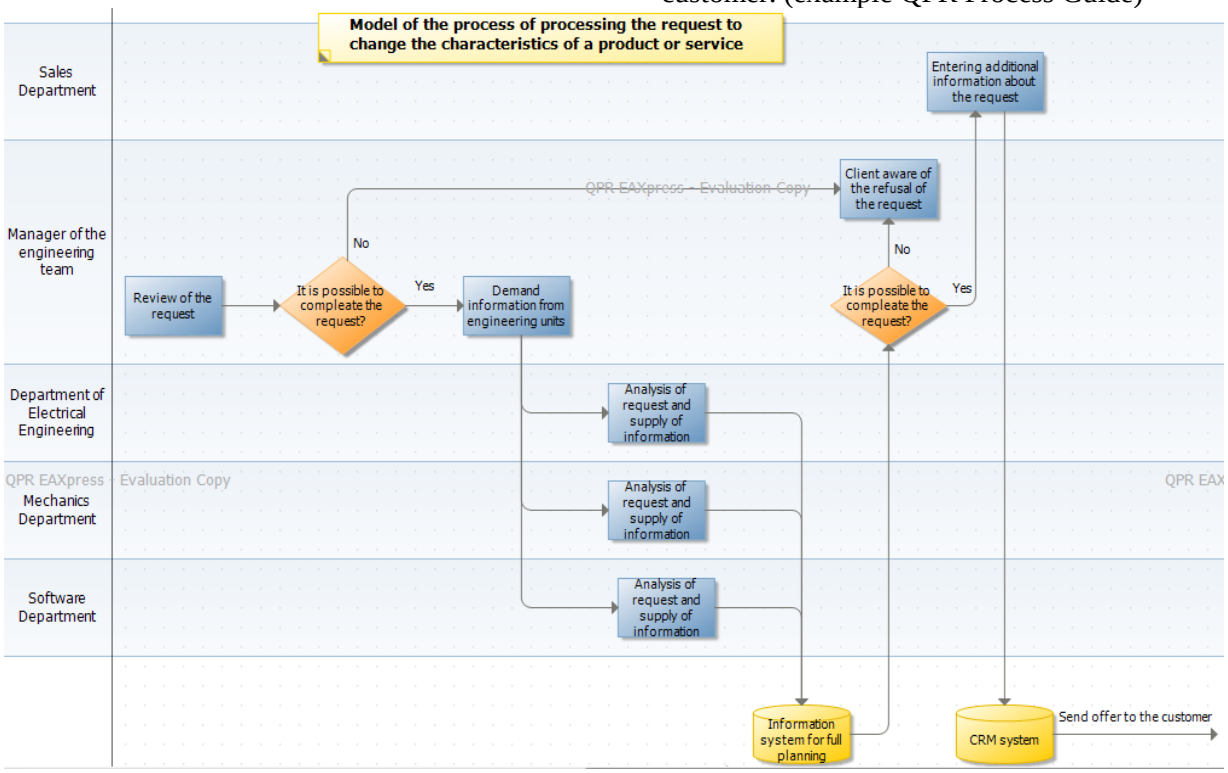

Figure 1. Process to implement the change requests on the characteristics of a product or service

The process begins with the receipt of the request from the client, which is viewed by the head of the engineering team of the company. It may either reject the application, which will cause the sending of e-mail notice to the customer or to request simultaneous analysis of the application of one or more of the engineering departments - Electrical, Mechanical and Software. When you answer all departments are ready, the process is reversed to the corporate information system planning. It processes the data and the calculated estimate of the time and costs required for the requested change. This information is returned to the head of the engineering team that

has the opportunity to once again consider whether to refuse the application if its implementation requires too many resources. Otherwise, the information is transmitted to the sales department, which can add additional information about running the application. The company's CRM system automatically prepares bid based on the information and send it by email to the customer.

This process can take a close look and analyze opportunities for adding value through BPM according to its description, by means of the software tools - Balanced scorecard and QPR Process Guide. **(Table 1)**

Table 1. *Analysis of the possibilities for adding value through BCs and QPR Process Guide*

Element of the description of the process	**Ability to manage the process**
Processing of the request for change is a sequence of activities - from initial customer notification, review by the head of the engineering team and engineering departments, references to information systems, etc.	Modeling allows to identify the individual steps, and thus the opportunities for optimization, eg automate sending of e-mail or using the information sent by the client for automated assessment of who paid to be included in the analysis of the application (thus eliminating the first step in a review by the manager).
The sequence of steps in the process is clearly structured. Tasks are carried out in accordance with a logic or set of rules. In this process:-incoming requests must be reviewed by the head of the engineering team;-head to determine which departments to analyze the request and to provide information;-If the application is refused, the shipper must be notified by email.	With the help of automation system ensures that each of the steps will be executed according to the real data coming into the process. In addition to providing speed and ease of transfer of the implementation of activities from one unit to another. If delays occur, it is possible to generate notifications or automatic corrective action.
Assurance that all activities are carried out according to plan, one of the main ways in which BPM eliminates many errors encountered in manual work.	
Activities can be performed sequentially or in parallel according to the logic of the business process. In this example, three engineering departments analyze the client's simultaneously (in parallel).	Designing parallel tasks can be achieved by significantly reducing the time required for their implementation. The sequence of steps can often be changed on the basis of the received process in real data. These specific situations conveniently handled in a process using automated information systems.
In almost all business processes involving two or more employees or organizational units. In the case involved the head of the engineering team, employees in engineering and sales department. Besides their important role in the play and several technological solutions - e-mail, text editor and information systems planning and CRM.	With the availability of tools to manage all the processes involved in them can review the status of the various stages of implementation without the need to interact with another participant. Different departments and even clients if they wish, to know what is happening with each request at any time. This level of transparency is difficult to achieve with traditional manually performed processes.
The sequence of activities in the process must be oriented towards a common goal or result. In our example, the purpose of the process is to be sent to the customer accurate offer.	If the organization implements computing the process, it can monitor the fulfillment of other goals: for example, how long it took the preparation of the tender and which organizational units were the fastest and slowest in the performance of their tasks. The analysis of this information will assist the organization to evaluate its operational performance. Depending on the findings and conclusions that can be added or removed from the process steps are simple some forms or to change the rules of business logic in it. Taking these actions would be much more difficult if the process was not automated.

Here can be established that the ability to optimize the performance of business processes by introducing a methodology for managing them are significant:

- Modeling of processes leading to promotion and better understanding of the activities of the employees, and often brings opportunities for the immediate improvement.
- Automate the process reduces the number of errors and the time for one cycle, and increased transparency and accountability.
- Process management ensures their implementation with maximum efficiency and supports their projects further optimization.
- The optimization of processes becoming their constant improvement of the life of the company.

3. **Systems for resource planning in the company**.

One of the biggest phenomena in business over 90 years is the emergence of so-called. Systems for enterprise resource planning (ERP). These software products provide customers with an integrated set of modules (for finance, manufacturing, logistics, etc.) using jointly shared database and are compatible with one another.

Many companies bring the ERP specific technical objectives: to replace outdated systems already difficult to maintain, reduce the cost of the hardware platform required for the operation of their software, etc. Companies that have already started their initiatives, taking into account such purposes are starting to have problems. The reason for this is that they do not appreciate the true nature of ERP - its modules are so closely integrated that such a system is virtually maintenance tool for a complete business process. An ERP system leads to cross-functionality and teamwork (element along the process). On the other hand, this system requires discipline in the company (organization element). It requires the execution of processes within a company, whether she wants it in the way they are or not, and whether it is ready for them or not. When companies prepare effectively for this by switching to process-oriented, they succeeded with the ERP system. If not - their life becomes more difficult.

4. Target business process management and automation:

Each company run a large number of processes. They define the tasks, rules, systems and employees engaged in the provision of goods, services or information to internal and external customers. Although undoubtedly BPM can cover any process, it can be applied primarily to those who possess certain characteristics and hidden value to be unlocked:

- Volume - the processes that occur most often are a source of significant costs for companies. With their skillful management incremental optimizations can have great value. If in addition to the frequency of these processes, and have any of the other features described below (below), the benefits of their management should be even greater.
- Transfer of implementation (steps) - the more employees are engaged in a process, the more likely it is during its execution to occur errors or delays. Automating processes reduce delays and improve coordination among the participants. If processes involve employees from different organizational units, value added increased further.
- Ability for automating - in some processes quickly becomes apparent that some activities can be completely automated, allowing the systems and technology to carry out all the work. Automating the steps creates significant added value and still can not be counted on to eliminate any human intervention.
- Errors - many business processes suffer from errors during execution. Some errors are unintentional, while others are due to insufficient information and understanding of the process.

Prioritization of BPM initiatives based on their described features can be further and identification and analysis of those processes that are the biggest problem for the company. It is sometimes difficult to be recognized, but most companies have such a problematic and difficult to implement processes. Often the problems are felt by all stakeholders - from employees to customers who expect the result of it. Focusing efforts on problematic processes will allow you to avoid the typical resistance to change, as employees are ready to help improve their work. By taking action to optimize processes problematic not only increasing the chances of success, but the readiness of the company to use the methodology of its other processes increases, creating organizational (corporate) culture of

perfect execution of activities oriented towards internal use and satisfaction of the customer.

It is vital that the company does not undertake activities automating those business processes that are not sufficiently optimized and efficient. The launch of the project in this way will not solve the occurred problems in the process - and just help them occur faster in a much larger scale and more often.

"The first rule in the implementation of any new technology is that automation of an effective action will multiply its effectiveness. The second rule states that automating an inefficient operation will multiply its inefficiency. "(Bill Gates)

The reason for the failure of many business ventures to automate business processes lies in the inherited inefficiencies in these processes. In these cases much more accurate would be to carry out a thorough analysis of the process, including an assessment of their effectiveness and pre-optimization before taking the next steps of the project. This would prove quite difficult for companies with established from decades practices that are zealously protected by the participants and their managers. A careful approach to overcoming resistance and creating a belief that each participant in the process would benefit from its optimization and automation is the key to success in these cases.

IN CONCLUSION

Continuous optimization of business processes with help of BSc and QPR Process Guide is a key competing advantage for many companies. Those who actually are process-oriented experience the following:

- Work more quickly;
- Operate more predictable and consistent;
- Had pride theirs employees, better understand their roles and the roles of others;
- Perform fewer projects to reengineer information systems;
- Adapt better to new business expectations much easier than other competing companies.

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