Optimization of processes using the Eficus solution

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Abstract. *This paper discusses a new solution in the field of business process management with the aim to create a time and cost-efficient organization. To achieve this goal, I use a solution called Eficus. Business process management carried out by Eficus enables complex and time-consuming organizational problem to be transferred into a set of easily manageable procedures. As a case-study, procedure for Development of new business processes is introduced.*

Keywords: *process optimization, business process management, Eficus solution*

1   Introduction

A new era has come in regard to process identification, understanding and evaluation. Companies strive towards more efficient ways of conducting business.

The purpose of this work is to present the use of a business process management solution called Eficus to identify, organize and optimize existing and to create new procedures and business processes.

In section 2, an introduction to theoretical knowledge in the field of business processes and business process management is discussed.

Section 3 thoroughly introduces Eficus solution and its capabilities, and section 4 presents the actual implementation of the solution by describing a development of new business processes.

At the end, some useful remarks and conclusions are introduced.

2   Business processes and business process management

Business processes add value to an organization, and as such, they attract attention (examples given in Martinez et al. 2001; Aguilar-Saven, 2001; Chan, 2002; Hammer, 1990; Hammer and Champy, 1993; Davenport and Short, 1990 and so forth). Consequently, business process management is on the increase as only a thorough understanding and optimization of the business processes within organizations can lead to effective, efficient and value-adding systems. According to Aguilar-Saven and Olhager (2002), it is the business processes that are the key element when integrating an enterprise.

Processes are defined as structured, measured sets of activities designed to produce a specified output for a particular customer or market (Davenport, 1993). Hence, a process converts inputs by summing their value through various activities into outputs. A business process is defined by Hammer (1990) as a collection of activities that takes one or more kinds of input and creates an output that is of a value to the customer. However, Aguilar-Saven (2003) stressed that a business process is related to an enterprise, as it defines the way in which the goals of the enterprise are achieved.

An input and output as well as entry and exit points determine process boundaries within which the relationship between a process and its environment is created through inputs and outputs. Besides the inputs and outputs, the process architecture also includes four other main features: flow units, the network of activities and buffers, resources, and information structure (Anapindi et al., 1999). Flow units are temporary entities that flow through diverse activities in order to exit as a completed output. A process is described by Laguna and Marklund (2005) as a network of activities and buffers through which the flow units have to pass in order to be transformed from inputs to outputs. To sufficiently define a process, firstly, process

activities need to be identified, and then the sequence order of the identified activities needs to be established. Resources are origins of supply, material assets required to activate process activities and are consequently twofold; capital assets and labour (Laguna and Marklund, 2005). They are exploited within the process but not consumed. As the last feature, the information structure determines the availability of necessary information for implementing the activities in the process.

There are many reasons that the field of business processes is still evolving (Armistead and Rowland, 1996; Ackerman et al., 1999; etc.):

- Business processes enable a whole and dynamic overview of an organization, which is in contrast to the broken down and static view of business-functional organizational structure. To acquire such an overview, groups of dependent activities are identified, which overlap the borders of traditional functional organisation, evolve through time and consequently add value to consumers. This is opposition to the traditional approach, where hierarchical and functional departments are responsible for the execution of a number of small tasks that may cause delays and interruptions of process completion (Armistead and Rowland, 1996).

- By observing the functioning of an organization through its business processes, the organization acquires a better ability to concentrate on its customers. Such an approach enables organizations to discover true demands and desires of consumers rather than spending time dealing with internal matters such as organizational structure or business rules (Ackermann et al., 1999). Additionally, the approach points out the needs for flexible and responsive mechanisms to efficiently meet the requirements of ever-changing consumers' needs.

According to (O'Connell et al 2006), business process management is the use of a particular kind of process automation software, typically within the commercial and administrative operations of an organization; consequently, this software does five main jobs; it:

- puts existing and new application software under the direct control of business managers

- makes it easier to improve existing business processes and create new ones
- enables the automation of processes across the entire organization and beyond it
- gives managers 'real-time' information on the performance of processes
- allows organizations to take full advantage of new computing services.

Successful employment of the above-mentioned five jobs results in enhanced understanding of as well as in a prediction of constantly changing business markets. Efficient optimization of business processes could add value to the organization in the eyes of its customers. The organization also saves money whenever it changes computerized working methods – usually an expensive and protracted rigmarole (O'Connell et al 2006); consequently, it can extract more value from its existing information technology investments by putting them to broader and more intensive use.

The IT implementation within an organization is of vital importance. Business process management specifically deals with optimization of working patterns and communication channels and the software needs to fully support this. It is not just a matter of optimizing computer programs (O'Connell et al 2006).

Business processes are organization assets such as materials, human resources, technology, information... The role of business processes is to synchronize all other assets connected with an organization. Processes answer the question of transforming inputs to outputs – they are the bridge between assets and outcomes. That is why it is of crucial importance for an organization to use the "right" business processes, to maintain the control and oversight of processes, and to make sure that processes are run in a manner that ensures the shortest possible time between the first and the last stage of a certain process. Business process management software can notably help with the last two aspects, especially when considering repeating, foreseeable and time-consuming processes. Introduction of such software can also trigger the re-examination and optimization of processes already employed. The time saved, harmonized tasks and a clear overview are the most obvious benefits of using BPM software.

Eficus solution

Eficus presents an example of a solution to business problems. Eficus is a special web business process management system whose innovative approach makes a dramatic impact on the management of daily business processes. It transforms complex processes taking place at more levels inside or outside companies to fast and simple procedures saving a lot of invaluable time and money. Companies using this system can benefit from automating repeating, time-consuming business processes and controlling workflows within a company or in cooperation with other companies. Consequently, management and organization of a company becomes significantly simpler; moreover, it becomes more transparent and manageable.

Eficus is aimed at optimizing working patterns within a certain organization, so that it benefits from automated repeating, time-consuming business processes. Additionally, Eficus enables the control of workflows within a company or in the event of cooperating with other companies. Eficus as a web business process management system has developed a catalogue of pre-defined configurable business processes offering fast and tested solutions for the optimization of processes. The Eficus system is designed for running business processes within a single company or between partner companies, regardless of the location of each company.

Eficus is primarily focused on relatively simple, repeating processes that are in common to a variety of companies. Eficus also focuses on such processes between organizations. Due to a large number of processes and the time consumed by them, their automation and optimization can significantly contribute to the total cost savings.

The samples of repeating processes include the following:

- To-do. "To-do" is a process where the initiator of the process assigns a task to himself. He starts a "To-do" process and enters a task that has to be completed until a certain date. The task waits on the task list until the due date. After expiration of that date, a reminder and/or an e-mail can be sent to the initiator's superior e-mail address, if so configured. When the "To-do" task is completed, it is removed from the task list and is always available on the tasks revision page for review.

- Job interview. A candidate applies for a job in accordance with a job offer and submits necessary information to be called for an interview. The company's personnel review the information provided; if the candidate meets their requirements, he/she is called for an interview. The interview commission decides, if the candidate is appropriate or not. Such a process can easily be IT-supported. At first, candidates can apply for a job through an online application form. Applications gathered in this manner are harmonized and complete. The information provided is the information desired. An application is available to the company from the moment of submission. An e-mail containing a negative answer or interview details can be generated automatically. The company's personnel have the information about the candidate provided in a structured form, and it is freely accessible from any computer switched to the internet at any time. The final answer to the candidate can also be generated automatically, in accordance with the commission decision, and sent to the candidate's e-mail address. A final report about the candidate can be generated and stored.

- Opinions, suggestions, ideas. An automated process for gathering opinions, proposals, ideas and similar can be useful in many aspects. The first benefit is that all information is submitted in a structured form and it can be reviewed much faster. Secondly, information is transferred instantly and to competent people. Furthermore, there is a revision of information always available; anonymous where necessary, but most importantly, if the awarding system is fair, good ideas, suggestions and opinions are never thrown away.

- Orders. Repeating orders can also be packed in automated processes. For instance, there is a form for entering the quantity of suggested materials to be

ordered. By submitting this form, an order is sent to an appropriate supplier. If the order is to be confirmed by the superior, an additional task must be included in the order process. The revision of orders is always available. An order can be automated even further. The system can monitor a stock of certain materials. When a stock equals a pre-defined value, an order is automatically processed.

- Brainstorming. A certain topic can be instantly sent to more participants to brainstorm about it. There is a form for writing down ideas sent to each participant. After a given time, forms are to be submitted. Thereafter, they are processed by the system and prepared for review. Different types of brainstorming can be introduced, such as IT-supported processes.

- Planning and reporting. Daily, weekly, monthly planning/reporting can also be BPM-supported. A plan or a report task can be automatically started by the system at a given time. Employees have to write their plans/reports or complete the checklists provided. These are sent to a competent person for review. If the form is not submitted, the superior can be informed about it or the system can start sending reminders.

- Document order. Documents that are to be sent outside a company can be controlled from a centralized point. All requests for documents that are to be sent are made via the request form. The information relating to a certain document can include a document type, the recipient address, the reason for sending a certain document etc. The information is stored and is always available for review.

## 4 Case study: DEVELOPMENT OF BUSINESS PROCESSES

Process description:

This procedure is used for submitting ideas relating to development of new processes. The initiator starts the procedure by submitting a description of his/her process idea. He forwards it to the designer who checks its description. Based on it, the designer may return the description to the initiator requesting further details or he can either approve or disapprove the idea. In the latter case, the initiator receives an e-mail with the designer's decision about the process. If the designer approves the idea, it is sent to the programmer. A notice on the approval is emailed to both, the programmer and the designer. Once the programmer completes the task, the process is uploaded, a diagram is made and both is sent to the designer for a checkup. Consequently, the process is either returned to the programmer or sent to the initiator. If the process is approved by the programmer, he is also given a task to inform others about the developed process. To finish the process, a document is generated and emailed to the initiator.

5 Conclusion

To conclude, the advantages of the developed and optimized process are listed. The process deals with the organization of work, starting from an analysis to programme development, where the manager and programmer cooperate in establishing the process configuration. The process is aimed at assisting companies trying to implement a business process management solution in order to identify as many business processes as they can. The process illustrates an organized approach to development.

Figure 1. Diagram of the procedure Development of business processes
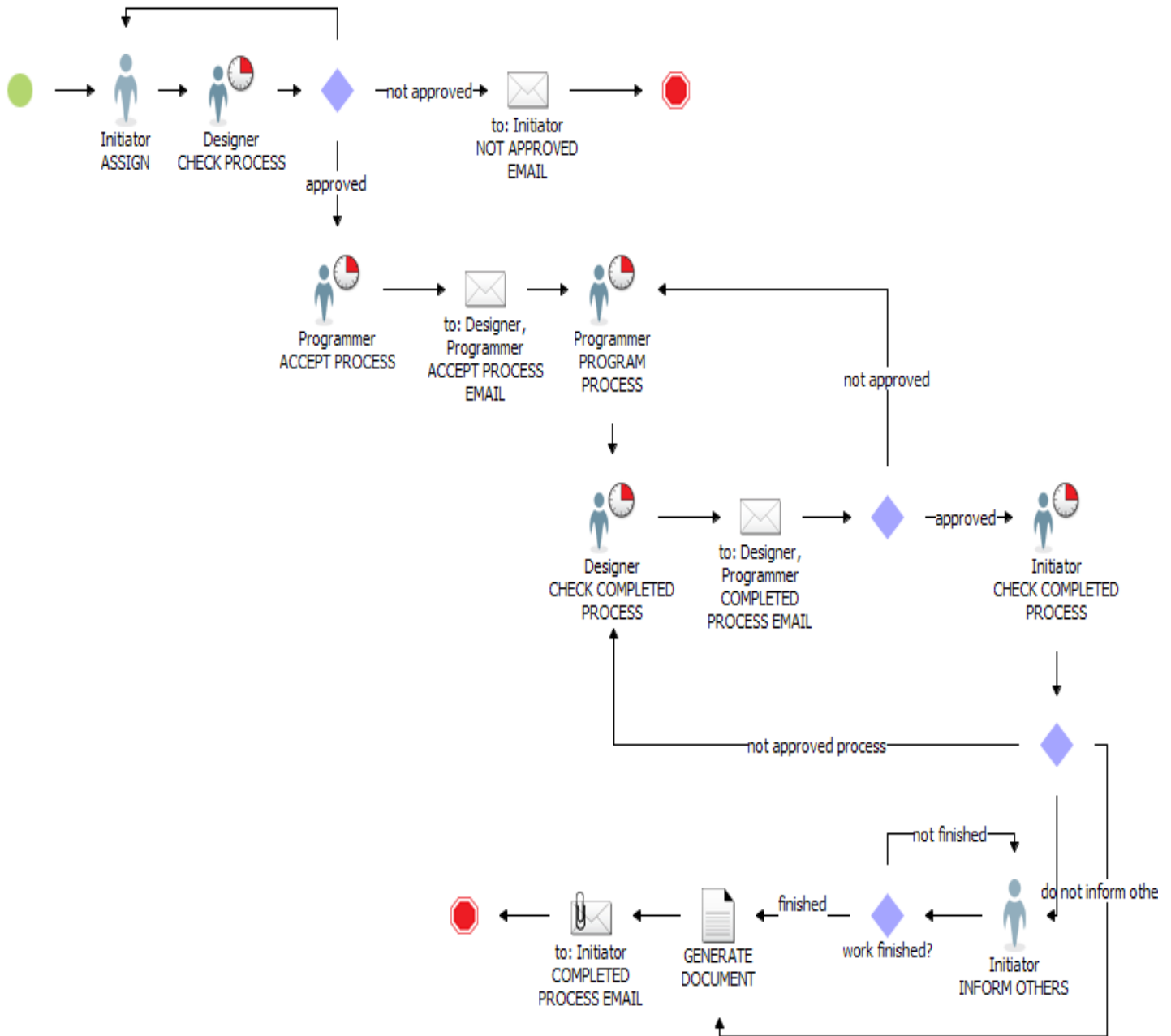
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