Chapter XVII
Business Process Engineering

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ABSTRACT

In this chapter the authors introduce the role of a business process engineer (BPE) and necessary competencies to define, simulate, analyze, and improve business processes. As a minimal body of knowledge for a BPE we propose two complementary fields: enterprise integration engineering (EIE) and business process management (BPM). EIE is presented as a discipline that enriches business models by providing additional views to enhance and extend the coverage of business models through the consideration of additional elements to those that are normally considered by a process model, such as the inclusion of mission, vision, and strategy which are cornerstone in EIE. A BPE is a person who holistically uses principles of BPE, EIE, and associated tools to build business models that identify elements such as information sources involved, the roles which use and transform the information, and the processes that guide end-to-end transformation of information along the business.

INTRODUCTION

Business process modeling is aimed at the identification and documentation of core business processes. Core business processes are those who provide significant value to the operation of a business. Such value could be achieved by cost reductions and/or performance enhancement. Cost reduction could be a result of limiting resource utilization or introduction of information technologies. Normally resources are human operators or machines involved in the process. Information

technologies could enhance resource utilization in many ways, such as providing real-time data of business operations and detailed information on machine operation.

Core business processes are particularly important for a business; identifying and enhancing these processes could result in a significant increased return (for both stakeholders and clients) for an enterprise. Return here is associated with many aspects such as decreased costs, time reduction in operations, limited number of involved resources, or quality improvements.

A business process engineer (BPE) would be a person responsible for assessing and describing operational aspects of businesses including business processes, organizational culture and structure, facilities, and other resources. A main question that BPE should answer is how to identify core business processes. Other questions are how model these core business processes and how one can justify them as goals for increasing return for the business. There exist several proposals for business process modeling, being the standard notation BPMN (business process modeling notation) the one that is being implemented my most business process modeling tool vendors. However, equally importantly to how to model, are what to model and which models would be necessary. This chapter explores these issues.

The following sections in this chapter explain why a BPE requires more knowledge than that normally associated with business process management. Enterprise integration engineering is introduced as an important ingredient for the identification, analysis and evaluation of core business processes. BPMN is introduced as a convenient notation for business processes and a framework for conducting business process engineering is proposed. It is important to note that any particular business has peculiar goals, identifying and achieving them would be the responsibility of any business process engineer. The framework is just a generic reference of what to consider, provide general guidelines and notations to assist a business process engineer to better perform her tasks in identifying and modeling core business processes. The BPE person is cable of adapting the framework to the specific environment and needs of a particular business.

The importance of a process engineering framework is twofold. First, it helps the business process engineer in identifying core business processes. Second, it helps the business process engineer to decide how core business processes should be documented for its appropriate simulation and analysis.

It is important to note also that successful deployment of business processes involves many other issues such as cultural change. These issues are not considered here. However, the business process engineer should be aware of their importance for a successful implementation of any business process improvement effort in an enterprise.

Sections in this chapter are as follows. The next section introduces business process management (BPM) and its expectations. Another section presents a detailed explanation of enterprise integration engineering (EIE) and its goals. Special attention is assigned to introduce EIE and its role in identifying mission, vision and strategy as sources to identify core business processes. After that, other section analyzes BPM, its status and aims. BPM modeling is the core aspect of this book, thus BPMN is presented as a standard for business modeling standard. Finally, the role of a business process engineer and its basic body of knowledge is suggested as a profession for successful implementation of business process management in an enterprise to produce the business value expected by both clients and stakeholders as a result of the successful operation of the enterprise.

BUSINES PROCESS MANAGEMENT

A business is a complex organization whose operation is the responsibility of several departments or business units. To be considered as