Chapter 4.12

Optimizing IT Implementation by Using the Enterprise Architecture Approach (EA): The Case of a Telecommunications Operator

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ABSTRACT

Businesses world-wide are faced with similar challenges including changing business conditions, shrinking profit margins, and competitive pressures. An organization is affected daily by the vast amounts of information received and stored from both external and internal environments. This information when not organized or standardized in a strategic manner, leads to the fragmentation of this same information. In turn, this fragmentation negatively affects an organization’s productivity, competitive advantage and thus its profitability. This chapter discusses the importance of developing a system that not only works in support of, but hand-in-hand with the specific needs of a given business. Through the discussion of its main characteristics and its implementation, it will be shown that the Enterprise Architecture Approach (EA) meets this specific need, as it provides the “blue-prints” to strategically organize information.

INTRODUCTION

Increasing business efficiency and agility in the face of competitive pressure, shrinking profit margins and changing business conditions are top priorities for large organizations. Corporate Strategy, Organizational Structure, Business Processes and Information Systems are expected to completely support an organization in order to seize opportunities and overcome barriers that could threaten the same
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Organizations’ development or even survival. In this chapter, we focus on how process orientation, and more specifically the Enterprise Architecture Approach (EA), can support organizations to design, develop, and maintain Information Systems. Furthermore, how Information Systems can fully align with business processes in order to match the overall strategy of the company and in this way achieve Strategic Fit.

This chapter is organized into three sections: Initially outlined are the external and internal environments that affect large organizations, forcing them to incorporate new approaches and best practices for IS development. In the second part, the characteristics, implementation, and benefits of Enterprise Architecture Approach (EA) are discussed, and finally presented is a case study that shows how the implementation of a process-oriented work-flow system can be achieved through the integration of the e-TOM reference model and the EA Approach.

BACKGROUND

Challenges for Business and IT: Agility

Changing business conditions such as globalization, expansion into other markets, mergers and acquisitions, and compliance with new regulations are some of the greatest challenges for large organizations. Increasing business efficiency and agility as a solution to competitive pressure and shrinking profit margins, combined all translate into a single challenge of internal organization (structure, processes, IS and IT infrastructure, etc.). Since nowadays organizations “live and breath” because of their Information Systems, as well as their Technologies and Applications, the dynamics of the external environment raises expectations for Enterprise IT - it must be more responsive to business needs. Enterprise IT is very complex, making it difficult for an organization to respond to changing business needs (Filenet P8, 2006). Meeting changing business needs requires unprecedented responsiveness from business and in turn from IT in order to build and deploy business-critical applications and services while leveraging existing IT investments. The overall exercise becomes even more complicated due to the so-called “gap between business and IT” (Filenet P8, 2006; Scheer, 1998; Kirchmer & Scheer, 2004). The business may not understand the technology and technical constrains or challenges that IT faces, and similarity IT usually does not have the insight to appreciate the business’ issues and challenges (Filenet P8, 2006; Kirchmer & Scheer, 2004).

As a result, what IT builds quite often is neither what the business wants nor does it entirely meet the requirements of the business. In order to meet these challenges, new innovative approaches are needed together with the employment of best practices, new disciplines and technologies such as business process management, service-oriented architecture, and enterprise architecture (Filenet P8, 2006; Kirchmer & Scheer, 2004; and Scheer, July 2004).

Information Fragmentation: IS Consolidation

Many large enterprises are faced with the problem of fragmentation of information. Although many companies have achieved double digit growth rates, many have done so at the expense of relaxing rules of IT architecture, since flexibility in IT systems is the easiest enabler in meeting customer and business needs in the shortest possible timeframe. Companies collect, generate and store vast quantities of data which are usually not kept in a single repository. Information flow is spread across dozens or even hundreds of separate application systems, each housed in an individual business unit, office or desktop (Figure 1).

Most of these are the result of an end-user development effort. Each of the so-called legacy systems may provide invaluable support for a