

Chapter 8

Integrating and Measuring Business and Technology Services in the Context of Enterprise Architecture

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ABSTRACT

The main goal of this chapter is to analyse the relationship between business value-adding processes and technology solutions (integration of business/processes and technology through service structures), and to guide measurement, control, and optimisation efforts of organisations based on the enterprise service structure. To achieve these goals is to develop an enterprise architecture model that includes business and IT services, business and IT processes, and measurement possibilities.

INTRODUCTION

Business performance and business output became more and more dependent on information technology services. Although almost everybody agrees with the content of this sentence, in practice this strong relationship is poorly explored, because of several reasons.

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A common challenge is the lack of common language that facilitates the conversation between business and IT areas. In this chapter, to solve this problem, an Enterprise Architecture-based approach is presented that provides a good basis for common understanding.

Researching the relationship between business and IT architectures is a popular, although complex and challenging research area, in which researchers can analyse the relationship between different

services, documentation of IT infrastructure or measuring and interpreting architecture elements.

In complex organisations, it is rare to see detailed models that describe business and IT architectures, or the relationship between these two areas. The description of certain architecture components is complex in itself, exploring and recording relationships and dependencies is more complex challenge.

The primary goal of IT services is to support business processes or business operations. In order to explore the specialties of IT services, business architecture elements and business expectations cannot be neglected.

Main goal of this chapter is to analyse the relationship between business value-adding processes and technology solutions (integration of business/processes and technology through service structures), and to guide measurement, control and optimisation efforts of organisations based on the enterprise service structure. To achieve these goals is to develop an enterprise architecture model that includes business and IT services, business and IT processes, and measurement possibilities.

ENTERPRISE ARCHITECTURE METHODOLOGIES

Enterprise architecture models were developed to support common and shared understanding inside organizations. Enterprise architectures describe the structure and operations of an organization, emphasizing the importance of recording the relationship between architecture components (Giachetti, 2010).

There is a long discussion on the role and value of IT in modern enterprises (Carr, 2004), and also on the methods of measuring it (Raz & Goldberg, 2006; Kang & Bradley, 2002). The problem is, that IT performance is mostly hidden for business decision makers, therefore expectations are misleading and cannot support business goals.

And even if the measurement of business and IT performance is solved, there is still a question, how can we combine these perspectives. Approaches for integration failed in the past (Sethi et al., 2003), and still immature in the present.

Although architecture descriptions always point to the IT departments, the Enterprise Architecture approaches cover both business and IT areas. These frameworks define building components, relationships that are often determined by a specific goal. In order to emphasize the importance of business and IT performance measurement, not only output indicators, but hidden factors should be also explored. Business indicators are inherited in business performance (Kellen, 2003), but fail to incorporate IT performance.

The Enterprise Architecture approach covers every aspect of an organization. The different architecture methodologies group the architecture elements into different domains. The most common approach is to differentiate between business architecture and Information Technology architecture. This latter is divided into data, technology and applications architecture (Spewak, 1993). These main groups can be identified in variations in almost every architecture description.

The approach of Cap Gemini Architecture (Mulholland & Macaulay, 2006) is a good representative of integration efforts. Introducing a grouping architecture type (solutions architecture), the methodology declares equal importance to organizational and technological solutions, moreover emphasizes the importance of conscious combination. Buckow and Rey (2010) develop the architecture approach into 3 main and 6 lesser levels, that represent already the service oriented architecture (SOA) approaches: The business model integrates the operations and capabilities, the application landscape covers applications, data and the IT integration platform, and the infrastructure issues include infrastructure services and ICT solutions. The model emphasizes the importance of service-based approach of business management. Accordingly the GERAM architecture (Bernus,

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