Chapter 17
Information Architecture as an Enabler for Business Development: A Case Study

Henrique S. Mamede
Universidade Aberta, INESC-TEC, Portugal

ABSTRACT

Intelligence involves knowing information about some competitive factors like competitors' profitability and turnover rate. Information technology can help organizations to seize the information available. In this chapter we will present the solution architected and developed for a Portuguese company with a starting scenario that showed characteristics like dispersed information, concentration of knowledge in a single individual, no defined architecture for data or information, simple changes involving huge efforts and lack of agility. We found that business decision makers had problems of relying on the results, as the system was like a black box and often provided not accurate data. We will describe how we solved the problem, designing and implementing a business intelligence solution and the impact of having an information architecture.

INTRODUCTION

Information systems (IS) are strategic in so far as they are used to realize strategic intent. Yet, while much has been said about aligning IS functionality with the strategic intent and how to organizationally implement strategically aligned systems, less is known of how to successfully implement strategic change associated with system use – a truly critical challenge within strategic IS implementation (Arvidsson et. al., 2014).

Information architecture is an important factor in making businesses more agile and based on factual analysis, rapidly and consistently providing company executives with the necessary information so that decisions can be made based on these analyses (Tupper, 2011; Thomsen, 2002; Inmon; Terderman; Imhoff, 2001).

DOI: 10.4018/978-1-4666-8637-3.ch017

Devising an information architecture system that enables an organization to centralize information regarding its operational, managerial and strategic performance is one of the challenges currently facing information technology (Junior & Affeldt, 2013).

If data gives us the facts and information allows us to draw conclusions, intelligence provides the basis for making good business decisions. Information technology can help organizations to seize the information that is available (Raisinghani, 2004).

According to Reinschmidt and Francoise (2000), a BI system is "an integrated set of tools, technologies and programmed products that are used to collect, integrate, analyze and make data available".

Business intelligence (BI) is the process of gathering correct information in the correct format at the correct time; and delivering the results for decision-making purposes, or have a positive impact on business operations, tactics, and strategy in the enterprises (Zeng et al., 2012).

In the present context, by "dark data" we mean the information assets organizations collect, process and store during regular business activities, but do not use for other purposes (such as analytics, business relationships or direct monetizing).

The implementation of a business intelligence (BI) system is a complex undertaking requiring considerable resources (Yeoh & Koronios, 2010).

Claims that strategic investments in information technology (IT) and information systems (IS) are instrumental to firm's long-term survival are now regarded as truisms. The truth behind these truisms, however, is that IT investments matter only as far as IT capabilities become embedded in new organizational practice (Arvidsson et al., 2014; Doherty and Terry, 2009; Galliers, 2011; Markus and Robey, 2004; Peppard and Ward, 2004; Sambamurthy et al., 2003).

BI, or business intelligence, encompasses broad concepts: a) an intelligence tool based on information and monitoring the environment using data from various sources (Petrini; Pozzebon; Freitas, 2004); b) a technological tool to support managerial business decisions in organizations by means of software. With respect to technology, systems centralize information from multiple data sources, in large quantities, stored in data warehouse systems (Inmon, 2005) or data marts (Kimball, 1998), with flexibility in accessing, structuring and navigating through information (Barbieri, 2001; Thomsen, 2002).

Within this context it is important to analyze the cases where the proper alignment between business strategy and information systems and technology is achieved. In this article we present the more specific situation of using business intelligence as an instrument for that alignment. We will describe and analyze the results for the Portuguese company Controlauto, starting from an initial situation of no consistent information or systems architecture to a fully aligned architecture to support business strategy.

The company started in 1993 with the objective of being dedicated to the study, management and operation of the car roadworthiness. By that time, as today, Controlauto was already a business group of reference in the sector. It started by opening 12 car inspection centers by 1993, 16 more by 1994 and kept growing in a consistent mode until now. Presently it owns a network of 46 centers for car inspection distributed from north to south of Portugal.

PROBLEMS WITH DATA

In 2012 Controlauto managing staff, from managers to the executive board, had several problems with lack of reliable information to support decision making processes. If the growth of the company had been supported by a strong business case and financial planning, the same did not happen to several other areas, like information systems. There was no alignment between strategic development and information systems planning and architecture. In fact, there were no architecture for information