

Chapter 7

Agile Approach to Business Intelligence as a Way to Success

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ABSTRACT

In this chapter we present an overview of several methodological approaches used in business intelligence (BI) projects, as well as data warehouse projects. This study reveals that some of them reveal weaknesses, since they are not specifically defined for BI projects, and thus they do not fit specific BI project characteristics or user requirements. These may be the main cause explaining that there is not a broadly accepted BI methodology by practitioners. Even though the goal to find the “best BI methodology” is difficult (or impossible) to meet, we think that any best-class BI methodology may follow an agile approach to better fit BI project characteristics and practitioners’ requirements. In this sense, we have analysed BI project characteristics as well as agile principles defined in the Agile Manifesto, and we have identified a strong relationship between these two sources. In this chapter, we show this strong relationship between the so-called critical success factors for BI projects and the Agile principles. Therefore, based on our analysis, we consider that successful BI methodologies must follow an agile approach.

INTRODUCTION

Nowadays, we are in the rise of the so-called Business Intelligence (BI) movement and nearly all organizations make some effort to create and improve their decision-making processes and sys-

tems. A lot of new BI projects appear constantly, but the overall experience in the last years is no so good. Something usually goes wrong in the execution of BI projects, since most BI projects (85%) failed to achieve their goals (Fayyad, 2003).

Business Intelligence is still a very young area (Preston, 2007), where we have found thirteen

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different methodological approaches to manage a BI project (Chowdhary & Bhaskaran et al, 2006; Chowdhary et al, 2006; Afolabi & Thiery, 2006; Stefanoc & List, 2005; Rowan, 2003; Bäck, 2002; Brohman et al, 2000; Moss, 2001; March & Hevner, 2005; Guo et al, 2006; Dori et al, 2005; Kaldeich & Oliveira, 2004; Niu & Zhang, 2008), and most of them have been defined during the last 10 years. But, which are the reasons of this surprising high failure rate in front of the high amount of methodological alternatives?

In fact, we could say that the wide diversity and heterogeneity of methodological approaches for BI projects shows the immaturity that still exists in this area. Thus, to choose a BI methodology is not an easy task, and Thomann & Wells (2000) state that each BI project and each organization must choose the specific methodology that better fits to the project and organization characteristics in order to have more possibilities to success.

The main confusion about BI projects (Jourdan et al, 2008) arises when BI is considered only a product. BI is both a process and a product. As a process, BI is a set of methods and activities that organizations must perform to develop useful information and knowledge (or “intelligence”) to survive and thrive in a global and IT based economy. As a product, BI is the information system that allows organizations to predict their behaviour and to take decisions about their future.

Agile methodologies (Agile Manifesto, 2001) are experimenting a great popularity and they have been adopted in different areas. Their use seems to provide good results in the current high competitiveness economy, through quick development and high adaptation to the organization. Agile methodologies focus on the creation of value to the business user, and they may help to integrate information systems in the core of the user's business processes. Therefore, agile methodologies seem to be a right answer to align IT with the business, which is in fact, one of the BI goals.

BACKGROUND

BI is a somewhat ambiguous term that encompasses different acronyms, tools, and disciplines: OLAP, Data Warehousing, Datamarts, Data mining, Executive Information Systems, Decision Support Systems, Neural Networks, Expert Systems, Balanced Scorecards, and many others. It is difficult to give an exact definition of all the terms under the BI umbrella, since they are very interrelated and sometimes there are confused and used indistinctly. Even if BI is a multifaceted concept and supports different interpretations, all of them have three characteristics in common: they provide information to control business activity, they give support to decision making processes and the information provided by BI is business language oriented.

BI provides *information to control business activity* regardless of where the information is stored. BI is an important component of the overall management information system, which controls the proper operation of business processes and activities. In a classical organization (see Figure 1) transformation or operational processes are affected by external events and environment perturbations (market changes, substitute products, new legislation, etc.). Under these situations, operational processes usually require some kind of control, adaptation and correction. Without this supervision, business processes may tend towards disorganization and chaos.

Business control is performed, for example, by means of some performance indicators. These indicators are properly quantified to analyse and evaluate the achievement of organizational objectives. Therefore, it is a mechanism to find out if something is going wrong, or if something can be improved in the organization. Business activities and processes generate and consume information during their execution. Part of this information (operational information) is consumed in the short term, but most of it is stored in some mostly-transactional system (ERP, CRM,

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