10 Principles to Ensure Your Data Warehouse Implementation is a Failure

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ABSTRACT

Demand for business intelligence solutions continues to grow in the industry at record rates to combat competitive pressures and to attain business agility. Still organizations continue to struggle on how to implement successful business intelligence solutions. Despite its growing popularity and maturity as a field, it appears that organizations follow key guidelines that ensure the failure of their business intelligence implementation. This paper highlights ten major principles that organizations follow to ensure the failure of their BI solution and in so doing describes how to avoid BI failure in terms of strategy and design, implementation management and communication, and technology and resource investment for BI solutions.

Keywords: BI Design, BI Implementation Failure, BI Resource Investment, Business Intelligence, Implementation Management, Implementation Strategy

INTRODUCTION

At present, organizations compete in a dynamic, hyper competitive business environment characterized by a massive influx of data. Business intelligence (BI) is seen as the ultimate solution that will help organizations leverage information to make informed, intelligent business decisions (Turban et al., 2008). Consequently, the demand and interest in BI as a critical solution for organizations continues to grow. According to Gartner, the worldwide BI platform revenue is forecast to grow at a compound annual growth rate of 8.1 percent through 2012, reaching $7.7 billion in 2012 (Knight, 2008). An IBM global survey of over 2500 CIOs revealed that business intelligence is the top visionary plan for enhancing their enterprises’ competitiveness (IBM, n. d.).

Thus, as companies grow over time and acquire increasing masses of information, having a solid BI foundation in place becomes an essential means to organize the large quantities of data in a way that fits with the company’s specific business needs. The data warehouse, the core component of a BI infrastructure foundation, is a copy of transaction data specifically structured for querying and reporting. Using a
Data warehouse an organization can extract the key insights that will help shape their strategic and tactical business decisions more easily (Watson, 2009). Data warehouses are also critical enablers of current strategic initiatives such as customer relationship management (CRM), business performance management (BPM) (Frolick & Ariyachandra, 2006), and supply chain management and a must have in almost every industry in business (Watson et al., 2004).

Several past research have investigated the critical success factors involved in the creation of a data warehouse (Wixom & Watson, 2001; Ariyachandra & Watson, 2010) to gain key insights to successfully complete in various business industries. Less exists on what not to do. While data warehousing is now a mature market (Ariyachandra & Frolick, 2008), historically, failure rates have been high (Kelly, 1997). A more recent assessment of data warehouse failure in 2007 suggests data warehouse failure rates can be as high as 50 percent (Embarcadero, 2008). With such high failure rates, there is ample opportunity for mishaps. According to data-quality software company Trillium, “60% of data-integration and data-warehouse projects get delayed, exceed budget or fail because of poor quality” (Fest, 2005).

Since numerous types of data warehouse failure are possible and definitions of such failure vary from one study to the next. This paper will adopt the definition proposed by Lindsey and Frolick (2003, p. 49.) as “the formal or informal cancellation of a data warehouse project, or the condition where a completed project’s performance falls significantly short of the business need.” Using this definition, this paper aims to provide ten principles a company should follow if it would like its data warehouse implementation to join the ranks of such failures by running over time, exceeding budget expectations, and underwhelming all parties involved.

Key steps to having one’s project canceled or performing short of the company’s business need will include a fuzzy focus on the goals of the data warehouse in initiating the project and planning its design, followed by a lack of communication and benchmarking, and finally a laissez-faire attitude toward resource investment. Following each principle is an explanation of what a company should do in order to beat the odds and successfully implement a data warehouse. Thus, the paper outlines principles to ensure the project’s demise as well as the success measures to be adopted as an alternative.

DATA WAREHOUSE IMPLEMENTATION FAILURE

Based on past academic and practitioner literature on factors leading to data warehouse success and failure, ten principles emerge as being key factors that lead to data warehousing failure. These principles are organized according to the following three key aspects of the data warehousing project: strategy and design, implementation management and communication, and technology and resource investment.

STRATEGY AND DESIGN

In researching both data warehouse implementations that failed and succeeded, it became evident that one key differentiating factor was the level to which due diligence had been performed at the onset of the project concept. A successful implementation required a premeditated strategy and design phase, which included identifying the key goals of the data warehouse and testing pilot a portion of the project. The following four failure principles provide direction as to how one might butcher this key phase, followed by more sound advice on how to create a more reliable strategy and design.

Failure Principle #1. Create Now, Strategize Later

Before creating a data warehouse, it is essential to consider the corporate vision and mission associated with the project. This includes
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