Chapter 33
Open Business Intelligence for Better Decision-Making

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ABSTRACT

Decision-making is a crucial, yet challenging task in enterprise management. In many organizations, decisions are still made based on experience and intuition rather than on facts and rigorous approaches. This is often due to lack of data, unknown relationships between data and goals, conflicting goals and poorly understood risks. The success of organizations depends on fast and well-founded decisions taken by relevant people in their specific area of responsibility. Business Intelligence (BI) is a collection of decision support technologies for enterprises aimed at enabling knowledge workers such as executives, managers, and analysts to make better and faster decisions. In this paper, the authors review the concept of BI as an open innovation strategy and address the importance of BI in revolutionizing knowledge towards economics and business sustainability. The main objective is to discuss why the concept of BI has become increasingly important and presents some of the top key applications and technologies to implement open BI in organizations, which would like to enter into the new market and operate on a global scale.

INTRODUCTION

Increasing competition, demand for profits, contracting economy, and savvy customers all require companies and organizations to make the best possible decisions. With the fast advancement of both business techniques and technologies in recent years, knowledge has become an important and strategic asset that determines the success or failure of an organization (Wit & Meyer, 2003). Studies show that a competitive advantage in the business environment depends on the accessibility to adequate and reliable information in shortest time possible and the high selectivity in the creation and use of information. An effective instrument to create, aggregate and share knowledge in an organization has therefore become a key target of management.

The need to implement decision support systems in organizations is an unavoidable reality (Arsham, 2011). Currently, the majority of organizations have Information Technology (IT) systems, designed to record and store massive amounts of data resulting from the operational

activity (Kimberling, 2006). This data set has to be transformed in information and all that information will lead to knowledge useful for the organizations.

In addition, in a competitive environment, traditional decision-making approaches no longer meet the requirements of organizations for decision-making; organizations must make good use of electronic information system tools such as Business Intelligence (BI) systems to quickly acquire desirable information from huge volume of data to reduce the time and increase the efficiency of decision-making procedure. Different researchers have different definitions for business intelligence system, for example (Turban et al., 2008) defined the business intelligence system as "an umbrella term that encompasses tools, architectures, databases, data warehouses, performance management, methodologies, and so forth, all of which are integrated into a unified software suite."

Business Intelligence is one of the few forms of sustainable competitive advantage left (Burstein & Holsapple, 2008). For example, any two well-funded competitors in a market have near real access to capital, technology, market research, customer data, and distribution. People and the quality of the decisions that they make are the primary competitive differentiators in the Information Age (Lin et al., 2009). The implementation of BI components is the key to sustaining long-term competitive advantage.

Not getting or having access to information not only hinders employees' decision-making ability and affects their individual performance – but it also has tremendous effects at the organizational level as well (SAP, 2009):

- Questionable data reduces productivity and challenges wide-ranging consensus;
- Decisions are delayed, resulting in missed opportunities, lost revenue, and cost escalation;

- Reduced confidence across the organization limits momentum and helps maintain the status quo, often the least-desirable outcome.

Compounded, these effects reduce profitability for the organization and severely limit its ability to react to changes as the market evolves.

Several studies have showed how IT investments impact enterprise performance (Popovič et al., 2010). In order to capture real benefits of BI investments, as an IT investment, these studies revealed that organizations have to make a great effort (Chamoni & Gluchowski, 2004). In the earlier steps of BI system implementation the selection of the most convenient system is very important. In this paper we describe the top key systems to implement open source BI in organizations; in particular organizations which would like to enter into the new market and operate on a global scale. Thus, open source BI systems can trigger immense possibilities of accelerating knowledge acquisition, intensifying entrepreneurship development and improving business skills, therefore, leading to business sustainability. In this context open BI can be seen as another form of open innovation, which can be used by business communities, especially among SMEs.

The rest of the paper is organized as follows. First, we describe the problem of growing data volumes that organizations have to deal with. Second, we introduce the concept of BI and address the importance of BI in revolutionizing knowledge to enhance organization's response in making better and more efficient business decisions, also increasing innovation. Some BI resources are also introduced and we discuss the advantages of using the open source model. After, we present the top Business Intelligence software vendors to implement open BI in organizations. Finally, the concluding remarks are presented in conclusions section.

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