Chapter 10
Organizational Memory:
The Role of Business Intelligence to Leverage the Application of Collective Knowledge

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ABSTRACT

Nowadays, the major challenge to organizations managers is that they must make appropriate decisions in a turbulent environment while it is hard to recognize whether information is good or bad, because actions resulting from wrong decisions may place the organization at risk of survival. That is why organizations managers try to avoid making wrong decisions. In order to improve this, managers should use collective knowledge and experiences shared through Organizational Memory (OM) effectively to reduce the rate of unsuccessful decision making. In this sense, Business Intelligence (BI) tools allow managers to improve the effectiveness of decision making and problem solving. In the light of these motivations, the aim of this chapter is to comprehend the role of BI systems in supporting OM effectively in the real context of a crowdsourcing academic initiative called CrowdUM.

INTRODUCTION

Managers are facing a huge challenge of making right decisions in face of turbulent social and economic conditions. Sudden changes in markets, together with the production of big amounts of information inside and outside the organization, make the task of selecting and evaluating information quality hard. Nevertheless, decisions have to be made and the resulting actions will lead the organization to be in a thriving or declining market position (Barrows & Neely, 2012; The Economist, 2009).

Walsh and Ungson (1991) have proposed one of the first models to conceptualize how knowledge that supports organizational decisions is created and shared. According to these researchers, knowledge is stored in organizational bins

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forming a shared memory called Organizational Memory (OM). The model focuses on locations and contents. Information for decision-making is then stored as:

1. Experience in individuals;
2. Shared experience in culture;
3. Integrated sets of practices guiding transformation of inputs into outputs;
4. Structural configurations connecting formal roles played by individuals; and
5. Physical arrangements of workplace.

These bins, together with information stored in computer-based repositories, shape the kind of decisions organizational agents can make.

OM concept has evolved to account the distributed and reconstructive characteristics of shared memories. Morgeson and Hofmann (1999) proposed a functional view of OM in which the structure of OM evolves by continued interactions between organization members supported by memory artifacts. OM structure is usually linked with interactions, roles, tools, units of memory (individuals and groups), forming a web of resources, processes and connections able to hold past experience and bring it to present organizational activities. Organizational interactions are embedded in processes of probing and sensemaking that result in recall past experiences. To support them, OM must display certain functions including:

1. Adaptation;
2. Goal attainment;
3. Integration; and
4. Pattern maintenance.

Other authors have worked the integrative albeit distributed nature of OM (Kruse, 2003; Feldman & Feldman, 2006; Rowlinson et al., 2010; Schwarz, 2007). This social constructionist view of OM addresses the subjective experience of remembering. The view posits that humans and organizations reconstruct past experience from records and recreate it to deal effectively with present conditions that may be very different from past events. This is not seen as a problem to be avoided but as a core characteristic that enables development of creative solutions for new problems.

OM is the root of collective intelligence (Malone et al., 2010). Collective intelligence in organizations represents: process that will articulate and optimize individual performance (the source of expertise and agents who convey the mission); formal and informal networks; methods of communication; norms; and cultural artifacts. Organizational intelligence is the collective ability to mobilize knowledge of organizational interior and environment to create and make favorable decisions as well as to promote innovation (Boder, 2006).

In this context, Information Systems appear as connectors and supporters of the meaning processors in organizations (humans) operating in specific cultural and political contexts (Stein & Zwass, 1995; Cegarra-Navarro & Sánchez-Polo, 2011).

Business Intelligence (BI) is one of the technologies developed to help decision makers elicit meaning from huge amounts of information to which they have access. BI is an architectural, managerial concept and a set of tools that allow creation and maintenance of a large database, retrieval of information, and the use of information to make effective decisions (Timothy et al., 2009; Turban et al., 2010; Chaudhuri et al., 2011).

This chapter focuses on the role of BI systems to support OM and is an attempt to answer the following question: Can BI systems improve OM to achieve Organizational Intelligence?

To answer this question, this chapter will be structured into three sections: