

Chapter 15

Do Users Go Both Ways? BI User Profiles Fit BI Tools

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ABSTRACT

A challenging task for a data warehouse team is identifying users by their information needs and skills, and then providing the BI (Business Intelligence) tools that support each group to do their job effectively and efficiently. Recent studies have shown that the BI market place is saturated with a bewildering array of capabilities, functions and software suites. The current lack of consistent interpretation of Business Intelligence has created some confusion in the market place. This paper defines a framework to identify different user groups in an organization and map their needs and requirements to the different functionalities offered by different BI tool vendors. Through literature review, clear definitions of users were created and a set of BI tools that identifies functional needs was established. From that information, a questionnaire was developed that probed for the relationships between user types, tools, functions and other perceived values. Responses from 154 professionals were then used to develop a road map for the data warehouse project team in BI tool selection.

INTRODUCTION

As the global competitive landscape intensifies, organizations are forced to restructure, reengineer, downsize and/or streamline to become more competitive. The competitiveness of the new

global economy requires immediate decision capability. This relentless environment compels enterprise decision-makers to eliminate inefficiencies, optimize internal operations, and maximize relationships with all organizational stakeholders (employees, customers, partners, and shareholders). To assist in this endeavor, a growing number

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of organizations are frequently leveraging their key corporate assets. In recent years organizations have realized the value of data as a critical corporate asset and the essential role it performs (Kumar & Palvia, 2001). Multiple studies have been conducted (Niederman et al., 1991; Brancheau et al., 1996) revealing executives ranking data as a top priority organizational resource. Similar research (Rockart & DeLong, 1988; Watson et al., 1991) has also revealed that data is an important part of a decision support system since it forms the basis of the information that is delivered to decision makers. The formidable challenge facing organizations involves the collection, management, and presentation of its data to enable management to make well-informed and timely decisions. A recent study of over 800 U.S. business decision-makers found that most respondents are making more decisions in the same amount of time but are missing opportunities because their decisions are not made quickly enough. In addition, these decision-makers are not fully utilizing available resources and are often unable to gather sufficient information to make a fact-based decision (Wessel, 2002). Research from IBM also reveals that organizations use less than one percent of their data for analysis (Brown, 2002). As noted in the preface, this is the fundamental irony of the Information Age we live in – organizations possess enormous business information, yet have so little real business knowledge.

In the past, companies have struggled to make decisions based on the lack of data. But in the current environment, more and more organizations are struggling to overcome “information paralysis” — there is so much data available that it is difficult to determine what is relevant. Organizations today routinely collect and manage terabytes of data in their databases, thereby making information paralysis a key challenge in enterprise decision-making. Once the essential data elements are identified, the data must be reformatted, processed and analyzed to generate knowledge. The resulting knowledge is then de-

livered to the decision-makers for collaboration, review and action. Once decided upon, the final decision must be communicated to the appropriate parties in a rapid, efficient and cost-effective manner.

Companies besieged with data are challenged to organize that data into meaningful information to aid their decision making process. Various strategies have emerged to manage the organization of data, such as using ERP (Enterprise Resource Planning) systems and creating a central data warehouse (DW). While the task of organizing the data can be exceptionally burdensome, those tasks are generally handled by information technology professionals in a manner that hides the complexity from the user. The specific application providing access to the data is what the user perceives as the ‘system’. While the right data may have been collected and organized, it is this user interface that can determine the success of a particular data warehouse implementation.

When computing began with ‘green screen’ applications, the emphasis was on the operational side of computing, making sure that the transactions were properly captured. Reporting was limited to reports that created reams of paper in some standard layout applied to the data. Finding anomalies, extracting partial elements and performing root-cause analysis was a daunting, time-consuming task. With the maturity of computing, decision support systems (DSS) have been created to organize these massive amounts of data and create insights through a variety of techniques. These techniques, while they involve complex statistical and computational methods, have been implemented through applications that can provide users with parameter and selection driven analysis. Common techniques include crosstab analysis, drill-through, dashboards, scorecards, and using statistics to find hidden relationships (data mining). Technologies behind these techniques are often based on managed SQL (structured query language) and OLAP (online analytical processing). Collectively, these tools

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