Chapter 1
Business Intelligence and Organizational Decisions

Thomas H. Davenport
Babson College, USA

ABSTRACT

The focus on transactional systems in the earlier decades of information management is beginning to shift toward decisions. In order to study the relationship between information and decisions, the author interviewed 32 managers in 27 organizations where an attempt to use information to support decision-making had been made. A framework involving three different relationships between information and decisions is introduced: loosely-coupled, structured human, and automated. It is suggested that loosely-coupled information and decision environments, while productive for information providers, may require too much knowledge on the part of information users to be effective. A four-step process for bringing information and decisions in closer alignment is also advanced.

For most of the five-decade period beginning in the mid-1950s, the primary focus of information systems has been on automating core business processes. The era began with custom-developed narrow-purpose applications and concluded with broad enterprise system packages provided by external vendors, but the purpose was the same: develop control and efficiency over processes by automating and capturing information from key business transactions. Whether a general ledger entry, a customer order captured, or a vacation

balance debited, the transaction has been the primary unit around which this world revolved.

By now, however, many organizations have mastered basic transactions, and are attempting to use the accumulated information from transaction systems to optimize decisions about the management of the business. From the early 1970s (Gorry & Scott-Morton, 1971), the idea was that better information would lead to better decisions and better ways of managing organizational processes. Whether this idea was called decision support, executive support, online analytical processing, or business intelligence (Power, 2007), there was

always another goal waiting to be achieved. Because organizations' efforts and attentions were being spent on automation, to improve decision-making was never the primary focus. Today it has taken center stage. Business intelligence applications have become the top spending priority of corporate information technology organizations (Gartner, 2009).

If the goal of better information and better analysis is ultimately better decisions and actions taken based on them, organizations must have a strong focus on decisions and their linkage to information. Businesses need to address how decisions are made and executed, how they can be improved, and how information is used to support them. And they must look at all types of decisions: from strategic planning decisions made by senior management to every day operational decisions made by employees on the front line, or automated by back end systems.

There are obvious benefits to improving decision processes. Many organizations suffer from poor decision processes and outcomes. There is a growing body of knowledge on optimal decision processes and decision biases to avoid (Hammond, Keeney, & Raiffa, 1998; Garvin & Roberto, 2001), but it is often ignored or misapplied within organizations. Information that is available to inform decisions isn't used, or information is captured and managed that is unsuited for decision purposes. Information is valued and analyzed differently across different contexts (Tversky & Kahneman, 1974.) Decisions frequently take too long to make (Eisenhardt & Brown, 1998), and organizations lack clarity on who should make them (Rogers & Blenko, 2006). In assessing decision processes we hardly know the extent of the problem and the potential benefits, for few organizations identify, assign clear responsibility for, or track the results of their key decisions.

A STUDY OF DECISIONS AND INFORMATION

In this article I describe a study of attempts by organizations to improve decision-making through the use of information, among other interventions. Using telephone interviews in the second half of 2008, I spoke with 32 managers in 27 organizations about specific initiatives their organizations had undertaken to improve decisions or decision processes. In each interview I asked about why the initiative had been undertaken, how the decision process varied before and after the intervention, and what steps were taken to provide the decision process and decision-makers with better or more trusted information. The research sites were selected based on press accounts of decision-oriented business intelligence applications, or references from business intelligence vendor personnel.

My intent was to understand how information is being applied to improve decision-making in a broad range of contexts. A list of the decision types and organizational contexts is provided in Exhibit 1. Most of the decisions listed are made frequently and involve core business processes of the organization. I sought out such core processes because it seemed that they would be the most likely to be the subject of initiatives to supply information for decisions.

While most of the managers interviewed were comfortable with talking about attempts to bring about better decisions, the topic was not yet "top of mind" in most companies. It was clear in the discussions that most firms had not focused consciously on better decisions as an area for business improvement. Some had not initially viewed their efforts as decision-oriented; this was true, for example, at a testing and research firm, which was attempting to improve its new product development processes. The manager interviewed stated, however, that the key issue in the process was making decisions about which products to develop.

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