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The New World of “Business Analytics”



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Executive Summary

Introduction

Every decade or so, the business world invents another term for how it extracts managerial and decision-making value from computerized data. In the 1970s the favored term was “decision support systems,” accurately reflecting the importance of a decision-centered approach to data analysis. In the early 80s, “executive information systems” was the preferred nomenclature, which addressed the use of these systems by senior managers. Later in that decade, emphasis shifted to the more technical-sounding “online analytical processing,” or OLAP. The 90s saw the rise of “business intelligence” as a descriptor. In the middle of 2000’s first decade, “analytics” began to come into favor, at least for the more statistical and mathematical forms of data analysis.

Each of these terms has its virtues and its ambiguities. No supreme being has provided us with a clear, concise definition of what anything should be called, so we mortals will continue to wrestle with appropriate terminology. It appears, however, that another shift is taking place in the label for how we take advantage of data to make better decisions and manage organizations. The new label is “business analytics.”

In one sense, “business analytics” is simply the combination of business intelligence and analytics. Such a combination reflects the increased importance of quantitative analysis of data for understanding, prediction, and optimization. Business intelligence is a vague term that primarily denoted reporting-related activity—certainly useful, but perhaps somewhat commoditized. “Analytics” in some organizations could be a somewhat academic activity that lacked clear business objectives, but that has changed as companies increasingly compete on their analytical capabilities. After a quick review of the shortcomings of these two terms by themselves, I’ll provide a definition of the merged term “business analytics.”

Issues with Traditional Business Intelligence

Business intelligence (BI) used to be primarily about generating standard reports or answering queries, though many viewed it as incorporating more analytical activities as well. Today it has come to stand for a variety of diverse activities. The Wikipedia definition of BI (as of February 17, 2010), for example, is rather extended (and poorly written):

Business Intelligence (BI) refers to skills, processes, technologies, applications and practices used to support decision making. BI technologies provide historical, current, and predictive views of business operations. Common functions of Business Intelligence

technologies are reporting, online analytical processing, analytics, data mining, business performance management, benchmarking, text mining, and predictive analytics. Business Intelligence often aims to support better business decision-making. Thus a BI system can be called a decision support system (DSS). Though the term business intelligence is often used as a synonym for competitive intelligence, because they both support decision making, BI uses technologies, processes, and applications to analyze mostly internal, structured data and business processes while competitive intelligence, is done by gathering, analyzing and disseminating information with or without support from technology and applications, and focuses on all-source information and data (unstructured or structured), mostly external to, but also internal to a company, to support decision making.

You know there is a problem when a definition requires that much verbiage! BI has always had its issues as a term. While surely preferable to “business stupidity,” it lacked precision as to what activities were included. One business school faculty colleague of mine suggested that it was highly presumptuous for the IT field to claim “business intelligence” as its own—aren’t all business activities supposed to add intelligence? And how

does business intelligence relate to such fields as competitive intelligence (which is described as a synonym for business intelligence in the Wikipedia definition, but tends not to involve much quantified data at all) or customer intelligence?

The problems of BI multiplied when the term “analytics” began to gain favor around the middle of the last decade. There was much confusion about the difference between these two terms. The CEO of a software vendor in this category told me he thought that “analytics” was a subset of “business intelligence;” another CEO in the same industry argued that BI was a subset of analytics. Obviously neither term is entirely clear if each can be a subset of the other in educated executives’ minds.

Issues with “Analytics”

Analytics can be used to serve a variety of business purposes, but the stereotype of the term involves back-office quantitative analysis that may lack sufficient orientation to business objectives. If a popular view of business intelligence is that it yields reports and scorecards that are commonly used by senior executives, analytics is sometimes viewed as being used by hard-core “quants” who have difficulty explaining their techniques to non-quantitative managers.

Part of the problem in this view of analytics is that the quantitative approaches are insufficiently linked to decision-making. When there is no clear process for

proceeding from analysis to decisions, many dysfunctional behaviors emerge, including:

- Data and analyses are gathered and created, but never used;
- Analyses don't fit the way the decision has been framed;
- Analyses have to be repeatedly restructured and re-performed;
- Decisions are made on intuition, rather than analysis and data.

A Definition of Business Analytics

A new term, of course, will not in itself solve any problems with previous terms or the activities they encompass. However, if a new term denotes a new set of emphases and meanings, it could influence people and organizations to adopt more effective behaviors.

In that sense, then, “business analytics” can be defined as the broad use of data and quantitative analysis for decision-making within organizations. It encompasses query and reporting, but aspires to greater levels of mathematical sophistication. It includes analytics, of course, but involves harnessing them to meet defined business objectives. Business analytics empowers people in the organization to make better decisions, improve processes and achieve desired outcomes. It brings together the best of data management,

analytic methods, and the presentation of results—all in a closed-loop cycle for continuous learning and improvement.

As the Wikipedia definition (as of March 11, 2010) of “business analytics” suggests, “In contrast with Business intelligence, business analytics focuses on developing new insights and understanding of business performance whereas business intelligence traditionally focuses on using a consistent set of metrics to both measure past performance and guide business planning.” This suggests a greater focus on statistically- and mathematically-derived insights in business analytics. If business intelligence typically stopped at performance reporting, business analytics encompasses both the reporting of performance and the attempt to understand and predict it.

Despite the name, business analytics is not restricted to private-sector, profit-seeking businesses. The meaning of “business” here is that of “an immediate task or objective,” with analytics being a means to achieve that objective. Governmental and non-profit organizations can use business analytics to advance their objectives as well, and in fact many do just that.

The effective use of business analytics within organizations may require some changes from the activities and organizational structures that supported BI. For example:

- Many organizations have developed “business intelligence competency centers,” or BICCs. In an organization focused on business analytics, a

“business analytics competency center” or center of excellence, which incorporates expertise on analytical tools and approaches, may be desirable—perhaps in addition to traditional BICC functions. Many BICCs failed to address the needs of the analytical community within their organizations.

- In the traditional analytics world, analysts may have lacked the ability to work closely with decision-makers to frame decisions appropriately, engage stakeholders, and structure decision processes and actions. Decision analysts in a business analytics environment need to move from back-office decision support to front-office decision consultants.
- In order for business analytics environments to function effectively, scarce support personnel need to work on important analytical problems. This means that users will need to take over most of their own standard reporting and query activity.
- Since a business analytics focus requires high-quality and distinctive data, organizations need groups that attend to data governance, data management, and the creation of proprietary data.
- The effective use of business analytics requires considerable resources, so organizations that employ them will need to prioritize what data, strategic targets, and decisions are most important to the organization.

Business Analytics at SAS

At SAS we have been around long enough to employ all the different terms that Tom Davenport describes. SAS has certainly been used for classic “business intelligence”, but our greatest strength has been in enabling a wide variety of analyses, including robust data management that is required for analysis. After all, “Analysis” is our middle name. Therefore we’ve embraced the term “business analytics” as a good description of our category.

Jim Davis, our Chief Marketing Officer, put it this way:

Business intelligence is an over-used term that has had its day, and business analytics is now the differentiator that will allow customers to better forecast the future, especially in this current economic climate...I don't believe [BI is] where the future is, the future is in business analytics. Classic business intelligence questions support reactive decision-making that doesn't work in this economy, because it can only provide historical information that can't drive organizations forward. Business intelligence doesn't make a difference to the top or bottom line, and is merely a productivity tool like e-mail.

We’ve had a good response thus far to our use of the term. I think our customers appreciate the emphasis on prediction and quantitative analysis that “business analytics” implies, and they were already doing much of that work anyway. I have noticed several of our competitors have adopted the term as well. Who knows how long it will last, but at the moment we have a close alignment between what we actually do and the terminology used to describe it.

**Anne Milley is Senior Director of Technology
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Conclusion

What’s in a name? Using the term “business analytics” instead of prior terms may help to inspire organizations to use analytical decisions for business problem-solving and competitive advantage. Just as the term “supply chain management” created a sense of process and interdependence that was not conveyed by “shipping,” a new term for the widespread analysis of data for decision-making purposes may assist in transforming that function. We live in a world in which many amazing feats of data manipulation and algorithmic transformation are possible. The name for these activities might as well reflect their power and potential. “Business analytics” seems the term with the best fit, at least for the moment.

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