

The Information Fallacy

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In 2001, the Nobel Prize for Economics was awarded to George Akerloff, Michael Spence, and Joseph Stiglitz for their pioneering work in the area of Information Economics. The premise of their research was that markets often are imperfect because information ‘asymmetries’ exist in which one party to a transaction has more information than the other. The subtext here is that information has value and that benefits can accrue to those who possess it.

The views of Akerloff, Spence, and Stiglitz were simple, but profound, in that they challenge the fundamental economic assumption that markets have perfect information – i.e. that everyone has equal access to all necessary information.

Today, we find a striking parallel to the world of Information Technology (IT) and, in particular, Business Intelligence (BI). Business Intelligence initiatives often are based on the false assumption that users know exactly what information and metrics they want and need. More specifically, we have observed that BI initiatives typically focus on existing information rather than on information that truly influences decisions and their outcomes.

It is this latter set of information that has the most powerful impact on performance. Whether IT is embarking on or has completed a BI technology implementation, ultimately defining the most relevant information will help unlock the key to more effective decisions and give organizations a significant advantage.

Taking a Step Back | Why BI?

Identifying BI information and analysis requirements depends largely on how one defines the purpose of Business Intelligence and what organizational goals it seeks to support.

In the most general sense, the goals of an organization are fourfold and reflect two different time horizons - current and future:

- To perform processes in the execution of the current strategy
- To comply with current laws and policies
- To identify and pursue future opportunities
- To identify and manage future threats and risks

The purpose of BI should be to provide information that supports decisions behind all four goals. Looked at another way, BI should support decisions that not only help to *execute* the current strategy but also to *validate* whether the strategy itself is optimal and *point* to areas for change.

This set of information goes well beyond Accounting and CRM data to include relevant information from multiple perspectives:

- **Economic intelligence** – Information about the organization's financial performance and value creation. It also can include external information, such as trends in household disposable income and raw material costs (e.g. oil).
- **Marketplace intelligence** – Information about the organization's customers, distribution channels, competitors, and substitutes. This can include such information as customer behaviors, market share, and competitor initiatives.
- **Operational intelligence** – Information about the organization's operational effectiveness (including process cycle time, cost, and quality) and risks (such as the potential for supply disruptions).
- **Organizational intelligence** – The collective set of knowledge, capabilities, and experience held by employees.

The value of this information is significant. At the consumer level, Amazon provides a wonderful example. Amazon provides its customers with valuable information for making decisions on which books to buy. When we search for a book, Amazon gives us much more than the book's cover, price, and availability. It also provides user reviews and suggests other books, all of which inform our decision. Imagine if users within an organization had the same depth and relevance of information that Amazon provides its customers?

A mortgage client of ours provides an instructive corporate example. The client collected extensive information on customer transactions and website clicks. However, it was not able to understand why its offerings were not more widely adopted by the market. Looking at the problem from a BI perspective revealed the need for greater insight on customer segments and behaviors, all of which helped it achieve a multi-fold increase in originations and identify new product opportunities.

Traditional Focus | Asking 'What Do You Need?'

BI implementations typically gather information and analysis requirements by asking users 'What do you need?'. This question rarely yields important insights. We have found users typically assume they already have the information they need and instead focus on two other requirements:

- Automating reports that are currently produced manually
- Creating drill-downs or multiple views of information

As an example, the Accounting department may want a BI system to automate a manually created report for allocating expenses or the Sales department may want BI system to view sales for different types of accounts. Both requirements illustrate a technology vs. information mindset.

Why do users not know or reveal all of their information needs? Clearly, there are many reasons, but three of the most common ones we've observed include the following:

- **Focus is on technology:** BI projects often arise as a technology or database initiative. This origin sets a tone around how technology can be used to view and analyze information. As well, the BI projects are typically led by IT and technology vendors, who often assume that the business users know what they need.
- **Answers are in the Drill-down:** There is often an instinctive assumption that a greater understanding of performance comes from having more detailed or different views of the information they already have. For example, when sales are not meeting goals, users frequently want breakdowns of sales by customers, products, regions, and other views, assuming the detail will quickly reveal the underlying problem. This information is useful for identifying where a particular problem may be but will not provide insight into why the problem exists.
- **Users rely on the quantitative:** Typical corporate systems – e.g. Accounting, CRM, and Manufacturing systems – contain information that is inherently quantitative and relatively easy to define and report. More qualitative information – e.g. customer behavior and product quality – aren't easy to define and require significant time to collect. As a result, individuals will rely on intuition and conventional wisdom to guide them.

There has been a greater push towards using Balanced Scorecards, which do incorporate qualitative information. Scorecards, however, are not sufficient: they have yet to be used within and beyond the executive suite in any meaningful way; they often lack depth around what is driving performance' and they focus on measuring strategy execution rather than whether or not the strategy itself is effective.

Recognizing the symptoms

How do you know if your organization is not collecting the right kind of information? From our experience, some of the more prominent warning signs are as follows:

- **Users keep asking for more reports.** Users will hope that analyzing the same information in different ways ultimately will lead them to the answer. This rarely works well and points to a need to re-assess fundamental drivers behind performance instead.

The IT group at one client suspected this issue when users began severely straining IT resources with more and more report requests. All the while, profit continued its decline. Before investing more in BI technology, the client asked us to examine their true business drivers and information needs. We came up with revealing findings: half the information that collected was not useful or redundant to key decisions; 1/3rd of the information they needed was not collected; and 1/3rd of the information they needed was collected but not accessible by users. The quality of information – not technology – clearly was the issue.

- **Strategy keeps changing.** When an organization's strategy doesn't seem to be working, certain managements quickly change direction, hoping that this new direction will work. Rapid changes,

however, are a poor surrogate for spending time to create a fact-based, well thought-out strategy. Without such a strategy, customers ultimately will abandon the company.

This situation was prominent at one of our other clients. When we determined what information was relevant – particularly around customer behavior and competitor offerings, the client was able to understand where to focus and quickly realized increased revenue.

- **Decision makers rely heavily on anecdotes and intuition instead of facts.** Information is not as easy to collect as the typical transactional, such as sales and expenses. In the absence of readily available information, there is a bias to rely heavily on personal experience, intuition, or anecdotes.

Making it Work | Identifying the Right Information

IT groups include terrific technologists but usually lack the strategic skill set to identify many critical information needs. Likewise, users often have deep process or functional skills rather than strategic skills. So how do BI teams – with IT and/or Business line members – identify information that truly helps users make the range of strategic, tactical, and operational decisions they face?

To solve this challenge, the best course is to engage a strategic resource or advisor who can excavate and translate user needs. The BI team, along with this strategic advisor, should conduct the following critical steps:

- **Understand overall objectives.** Overall business objectives are the starting point for any initiative. However, objectives often are implied rather than stated and can vary from person to person. As a result, it is important to start with an articulation of and consensus on them.
- **Identify key decisions for each major process and role.** Ask individuals what are the primary decisions they make. Decisions will be either strategic, tactical, or operational by nature. Since information must ultimately inform these decisions, it is critical to catalog them.

Understanding why and how users make the decisions they do is just as critical to the decision itself. Answers to these questions will reveal a wealth of information that reveals what drives a good decision. Often, individuals' responses will include information that is not captured but should be.

- **Derive information needs.** Once the above steps have been completed, it is then possible to derive what the important information needs are. One will find that many critical needs are not collected or accessible.

Of course, not all critical information needs can be embedded into a structured BI database for later reporting and analysis. Certain information may be too expensive to collect or too unstructured. In the latter case, other tools, such as portals, may be most effective. These are judgment calls that will have to be made. Nonetheless, focusing the lens more closely on true information needs will enable IT and BI teams to contribute to more certain decisions, more effective strategy execution, greater opportunities, and, in turn, much better on-going performance.