Business BI Requirements for IT:
What Every IT Manager Should Know About Business Users' Real Needs for BI

Today's BI must provide a better and faster way to see and understand patterns and trends. State-of-the-art data visualization techniques and good design principles must be seamlessly embedded to help business users capture meaning faster and deliver answers sooner.

Business users and organizations need the ability to quickly analyze their data to identify issues, causes and opportunities for improvement. Once these analyses are identified, they need to be monitored and distributed often to others. With traditional business intelligence (BI), creating and maintaining effective and understandable analyses can take months to define and develop and require expensive resources to maintain. And by the time they are created, the business situation will have likely evolved, potentially doing harm to the business and its customers. In today's marketplace, the half-life of BI is typically shorter than the life of the project needed for its implementation. This means that companies are getting a continual negative return on their BI investment. It is time to approach the problem from a new direction and empower the business owners and knowledge workers to quickly and easily find the answers to their questions.

In response, a new BI term has emerged: Operational Business Intelligence. It promises to empower everyone within an organization to make day-to-day decisions by using better analysis of sales and marketing trends, customer interactions, manufacturing plans, inventories and other areas of the business. Some say this is a new trend in BI — except that it's not new. Many people in an organization might call it "making do with Excel" or "the secret report that my IT buddy runs for me," but these are forms of guerrilla operational BI. In fact, many organizations have already found ways to enable employees with the access and tools needed for operational BI – some sustainable and some not. The main question is, what are the business requirements of an operational BI system? What does it take to provide the environment and capabilities needed for operational BI? Can an organization afford to wait for a top-down operational BI initiative? Are there better, more rapid options than disconnected spreadsheets and disparate reports?

Following are the seven major requirements businesses need to consider when evaluating this generation of BI:

Requirement 1 — Plug and Play: Leverage existing data stores and infrastructure.

Traditional BI requires complex deployments in which data are extracted, transformed and loaded into yet another format where security may become an issue. It places a burden on IT to install and maintain these repetitive systems and data stores. Today's BI should leverage the existing investment and access data directly. There should be little for IT to install or maintain – ideally, there would be no new databases to install or configure, no new middle tier servers, no data modeling exercises, no extracting, transforming and loading (ETL) data from source systems into data warehouses, no training classes and no new certifications for IT to achieve. Most importantly, it should adhere to the existing security and authentication models and not require new security measures to ensure compliance.

Requirement 2—See the Answer: Help the business user see the answer faster.

Traditional BI tools produce volumes of text-based reports, static charts and dashboards. In fact, dashboards themselves have become the panacea for many of the ills of BI output. But as Stephen Few, noted BI author and pundit, writes, "Most dashboards that are used in businesses today fail. At best they deliver only a fraction of the insight that is needed to monitor the business." Few goes on to say:

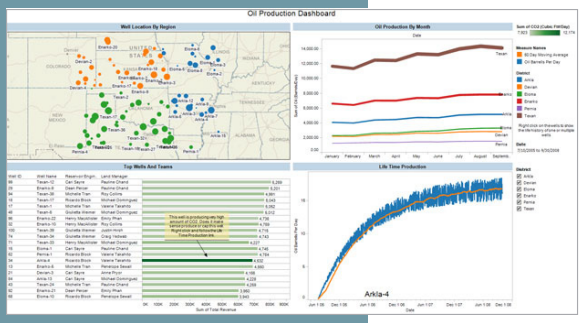
> "The root of the problem is not technology—at least not primarily—but poor data presentation. To serve their purpose and fulfill their potential, dashboards must display a dense array of information in a small amount of space in a manner that communicates clearly and immediately. This requires design that taps into and leverages the power of visual perception and the human brain to sense and process several chunks of information rapidly."

Gauges, static charts and text-based reports can give a glimpse of an answer but often are a dead-end for real understanding. They are often poorly designed so the real meaning is obscured or they don't communicate deeper answers as to why a particular pattern or trend is happening. They fail to offer the proper context needed to make discoveries and enable good decisions. Today's BI must provide a better and faster way to see and understand patterns and trends. State-of-the-art data visualization techniques and good design principles must be seamlessly embedded to help business users capture meaning faster and deliver answers sooner.

Requirement 3—Beyond Reporting: Provide the ability to rapidly analyze and problem-solve – not just report.

Fundamentally, traditional BI provides basic access to information that is only the start of the answer. These BI interfaces are not built for problem solving. A typical BI report or view may answer one question but it rarely answers the next question. Today's BI must allow for the user to rapidly explore and analyze their data by asking not only the question at hand, but also the next question and the one after that and so on – essentially, today's BI must be able to answer every possible follow-on question, and do it quickly and easily. Today's solutions must be able to query, summarize, cross-tab, hypothesize, visualize and report on-the-fly depending on where the analysis leads them.

Next generation BI solutions should connect to and read the usual data warehouses but also be able to utilize desktop data or other data stores that reside outside of BI, without having to reformat or migrate that data into the data warehouse.



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- Stephen Few

Requirement 4—Any Data, Any Time: Access data that IT doesn't have.

Because each employee's analytical needs are different, not all of the data needed for every analysis will be in the data warehouse, regardless of size. In order to be effective, today's BI needs to recognize this and offer solutions for accessing and analyzing that external data. Next generation BI solutions should connect to and read the usual data warehouses (OLAP, ROLAP, HOLAP) but also be able to utilize desktop data such as text files, Excel files, or other data stores that reside outside of BI, without having to reformat or migrate that data into the data warehouse.

Requirement 5—Self Service: Enable the business user to create new reports and views without IT.

Generating the exact views and reports that each employee needs to be successful in understanding and utilizing information requires far more resources than any IT department has available and creates an IT bottleneck for new reports. And even if the resources were available, most business users cannot anticipate every possible view or report they will need going forward. So today's BI must enable the user to define new views and reports for themselves – in other words, there must be an element of self-service.

Requirement 6—Collaboration: Deliver means for sharing and updating analyses and findings in real time.

Traditionally, BI has excelled at generating automated reports that could be distributed across an organization. In fact, one could argue that automated report creation and distribution were the major benefits of traditional BI. But today's BI needs to go three steps further. First, not only must it create and distribute automated reports, it must also allow business users to define those reports. This means they must be able to not only design and set up the report or view themselves but also be able to easily configure which recipients can see which views of which underlying data. Then they need to be able to publish them where recipients (with the proper permissions) can access them.

Second, it must allow the recipients to engage in light-weight Q&A sessions with those reports and analyses. The intended audience often has additional questions which must be served without having to rerun the entire analysis or involve the publishing analyst. And third, these analyses must update in real-time in order to make sure everyone is getting the right answers to the right questions each time they look. On-demand updates also eliminate the need to constantly re-generate analyses.

Requirement 7—Simplicity: Require no training to start and only minimal training of sophisticated business users.

Traditional BI often requires multi-day, in-person training courses even for business users who would only be light users of the BI system. In today's world, this isn't just unrealistic, it's a guarantee that only a fraction of potential BI users will ever get any value. So, today's BI must be easy enough to use that nearly any business user can conduct a broad range of inquiries without any training. Naturally, for people who want to learn more sophisticated functions, training should be available pervasively via means that are easily accessible, such as: online training courses, on-demand training courses, tutorials, etc., and not just high cost in-person classes.

In the end...

In most of today's business environments, two things are clear: people want the ability to ask questions of their data and get answers real-time, and they are disappointed in the status quo. Analysis is a crucial part of any business and any job title-from an HR representative at a Fortune 500 company to a sales rep at a small start-up. In this day and age of endless information, it's crucial that businesses take the necessary steps to update or deploy BI solutions that will be accessible, useful, effective and easy to understand for the entire organization. Operational BI promises to be a core part of the answer but only when it meets the 7 key requirements of business users. Tableau allows companies to leverage their data assets in unprecedented ways.