Business Intelligence Best Practices

How to Support Insightful Decision Making

Data Meaning

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Introduction

Business intelligence (BI) software enables organizations to access and analyze timely, reliable corporate information to support insightful decision-making. The ability to share, evaluate, and act on real-time information can be a key differentiator. Organizations have become more responsive to meet the challenges of narrowing margins, global competition, and higher customer expectations. The need for fast, accurate BI has never been more critical. Yet companies routinely operate in silos. Information is stored in a variety of unrelated applications and databases, making it difficult for decision-makers to access critical data.

In a competitive market that is increasingly driven by technology, the ability of an organization to respond quickly and accurately can be the difference between success and failure. In retail, for example, businesses gather real-time customer data to monitor inventory, drive the supply chain, and schedule employees. If customers find shelves empty or goods unavailable, they are likely to take their business elsewhere. There is no doubt that effective BI offers organizations a significant advantage.

When first introduced in the 1970s, BI was a time-consuming process that required IT input and programming knowledge to extract reports. Developments in technology have generated a range of sophisticated BI applications that offer detailed reporting and analysis through user-friendly interfaces. However, implementing a BI solution can be an expensive exercise. How can a business ensure that the return on investment from BI implementation will justify the time and resources spent on the project? This paper contains best practice guidance that will help organizations implement BI solutions that meet their needs and add value to the decision-making process.

Identify Business Needs

All too often, management will decide that a company needs to improve its general analysis of business information and, without further evaluation, will purchase BI software intended to cover all possible requirements. Unfortunately, BI solutions implemented in this way rarely deliver a healthy return on investment. Time taken at the beginning of the process to accurately identify business needs and drivers will pay dividends when the solution is implemented.

Organizations generate vast quantities of data, which is then held in unrelated applications and databases, including financial, customer, vendor, and payroll. BI solutions give companies the tools to correlate, analyze, and interpret this data to identify trends, make connections, and improve decision-making. However, the business needs to be clear about the objectives of the project and the specific challenges that will be addressed through the provision of relevant and timely BI. This may include reducing costs, identifying a new revenue stream, or streamlining a process. Without clear guidance being provided to the selection committee, the identification of an appropriate BI solution becomes virtually impossible.

The first step in implementing an effective BI solution is to identify as clearly as possible the business need that will be addressed. This can only be achieved through IT professionals working closely with business leaders and key decision-makers to scope out the project. As with any corporate initiative, SMART objectives should be defined and communicated. Key targets and performance metrics should be identified to track and quantify the success of the implementation.

Although non-technical managers may shy away from involvement in BI projects due to the unfamiliar jargon, they should not be intimidated by the technology. As with any innovation introduced to the organization, if the BI solution does not make the task quicker, increase cost-effectiveness, or add value in some other way then it is not a useful business tool.

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Involve Business Users

Business users want to access factual information quickly and simply. They have neither the desire nor the time to design a report or write a query every time they need to retrieve information. Many business users lack the level of technical skill required to carry out these tasks and prefer user-friendly interfaces. However, even drag-and-drop functionality can be off-putting for the average end-user faced with narrowing their search from a vast array of data fields. Unfortunately, the need for simplicity and ease of use can be lost when the procurement of a BI solution is turned over to a selection committee made up entirely of IT professionals.

The BI software market offers a selection of tools for ad hoc queries, report design, and online analytical processing (OLAP). BI platforms blend these tools with integration technology, databases, and portals to create powerful BI applications. The wide range of software solutions and accompanying IT jargon can be off-putting for non-technical business users. As a result, project scoping and purchasing decisions are often left to advanced IT users with an enthusiasm for sophisticated functionality and innovative features. The complexity of the resulting systems deters the average business user. State-of-the art BI systems are then abandoned, or users resort to asking more technically able colleagues to generate information on their behalf.

The answer is to involve business users at an early stage. Take time to ask them what they need from a BI system in language that they understand, avoiding technical jargon. Include a number of end-users on the selection committee to ensure that it retains a focus on their routine needs rather than being distracted by superfluous functionality.

Neglecting to involve the business users who will routinely produce reports from the new BI system at an early stage can lead to key reports, fields, or even applications being omitted from the project. Affected business users should be encouraged to identify the reports that they currently run together with the system that provides the data. This information should be collated by the selection committee who will then need to ensure that these reports and data sets are addressed by the new BI solution.

As the implementation rolls out, training should be provided to users of the system to ensure that they fully understand it and can get the best out of it. The involvement of business users can be maintained throughout the implementation and embedding of the new BI system by setting up an end-user group. This group can provide a forum to discuss issues as they arise and provide a vital link between the IT department and the rest of the business.

Select the Right System

When the selection committee searches the market for a BI solution, it will discover a large number of potential options ranging from straightforward BI tools for report design and ad hoc queries through to multi-platform BI applications that combine reporting technology, Web interface, and email. The challenge is to identify which of the many solutions available will best meet the needs of the business and the end-users.

Advanced IT users on the selection committee may find the functionality of BI tools fascinating. There is no doubt that report design and ad hoc query tools are powerful, but they are also beyond the understanding of most business users. The majority of end-users are more interested in the usability of a BI application rather than its capability. Much of the BI system's functionality will remain unused if business users consider it too complex or if it fails to meet their basic needs.

In most workplaces, BI platforms tend to have a better success rate than BI tools alone. BI platforms blend BI tools with integration technology, databases, and portals to create BI applications that business users can operate with confidence. By incorporating web interfaces and user-friendly features, the usability of the system is increased for non-technical employees. This adds value and helps ensure that the BI system delivers a return on investment by driving information collection, analysis, and reporting.

The needs of most users can be met by incorporating standardized report generation methods into the BI application. Users can easily customize reports based on standard templates by adding filters, sorting, grouping, and charts. This has the added advantage of reducing the possibility of conflicting information being generated by individuals applying different query methods and functions. It can also be advantageous for business users if the BI application can automatically generate regular reports; saving time and adding value.

Decide on Integration Method

No matter which BI solution the selection committee selects, a decision will need to be made about the best way to integrate data from existing databases and applications. Many organizations assume that the only option is to establish a data warehouse. This is not necessarily the case. The business may be better served by installing integration and portal technology, allowing data to remain in its current location and to be pulled through to the BI application when required.

As much as 80 percent of the BI implementation budget may be spent on establishing a data warehouse. While they do offer some advantages, a business needs to be certain that it is the right solution for them before committing to this level of expenditure.

Data warehouses are beneficial when speed of processing is critical or when the number of users requiring simultaneous access to data would significantly impair the online processing time or the performance of the system. In addition, when organizations have a need to analyze and report on historical data no longer available in current operational systems, a data warehouse can be an appropriate solution.

Even when a data warehouse is necessary, it is important that the set up supports business needs. For some companies, it will be sufficient for a data warehouse to be updated once in every 24-hour period. For others, a tricklefeed data warehouse may be required to ensure that real-time data is available. When timing is crucial, BI applications can provide transactional alerts delivering updated information directly to business users immediately after transactions are logged.

Lower-cost alternatives to data warehouses are available which may provide organizations with the functionality they require. Data can be pulled directly from its operational location via an integration module or information from internal and external sources can be combined to provide reports through a Web services application.

Incorporate Familiar Environments

Business users prefer BI applications that provide them with a familiar environment in which to work. Most users are now familiar with the web-based tools used by online retailers and it can be beneficial to build similar interfaces into the BI application. For example, pull-down menus limit the number of available choices and guide business users to the information they need. By taking the time to design a user-friendly interface, IT professionals can make report generation as easy as ordering a book from Amazon.

In the workplace, one of the most commonly used data storage and reporting applications is Microsoft Excel. The simplicity and utility of Excel have led to many organizations using it to store, calculate, and present key business data. Unfortunately, the very functionality that makes Excel a useful tool can lead to data integrity issues. Errors can creep in after spreadsheets have been developed, shared, and manipulated by users.

The use of personally developed spreadsheets has become so prevalent that, in his 2002 article "Taming Spreadsheet Jockeys", Wayne Eckerson identified the concept of spreadmarts; the tendency for individuals within organizations to create and rely upon their own bank of spreadsheets. Information collected and stored in these unregulated and unconnected spreadsheets is unverifiable and can quickly become outdated if the spreadsheets are uncoupled from the data source. In addition, these spreadsheets may not be stored in an accessible area and may become unavailable if the individual who created and maintained them leaves the organization.

Flawed data contained in Excel spreadsheets can lead to incorrect assumptions, which in turn can drive defective decisions; some of which may have costly implications for the company.

However, Excel remains an environment in which business users are comfortable. IT professionals can take advantage of the familiarity and functionality of Excel while maintaining the integrity of the data by developing the BI application to include Excel as a viewer rather than a tool. Spreadsheets can be populated on request with standardized data from a controlled source. If the data has already been formatted and calculated, this reduces the possibility of error in manual inputs or faulty spreadsheet logic.

In addition to familiar working environments, business users need to be able to produce and share BI reports in a format that they can recognize and understand. Reports may need to be shared with individuals or external organizations that do not have access to the same BI software. It is important that any BI application has the functionality to produce reports, including charts and graphs, in formats that can be shared.

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Summary

In the absence of reliable, up-to-date information, business leaders are unable to take effective action to resolve business issues and respond confidently to changing demands. Even in organizations that appear to have BI solutions in place, executives and managers may struggle to extract the information they need. This can stem from poor planning or flawed implementation, resulting in a BI system that fails to meet the needs of business users.

It is essential that decision-makers have access to accurate and reliable BI reports. If they do not, decisions made on the basis of the reports are likely to be flawed. By following the steps outlined in this paper, an organization is likely to be successful in sourcing and implementing a BI solution that meets the needs of both the business and the end-users.

Clarity around the business drivers, involvement of business users, and identification of the most suitable BI package are the building blocks for a successful BI project. BI platforms packaged as user-friendly BI applications with familiar interfaces are more likely to be adopted as part of the daily routine. Only then can they truly add value to the business.

About Our Group

Data Meaning utilizes cutting-edge technologies to build innovative and effective Business Intelligence and Data Warehousing solutions. Our experienced, professional staff can design and deliver pioneering reporting systems to give you a unique perspective to your data and an edge in your decisions.

Along with the world-class consulting services Data Meaning offers, they also are an official licensed reseller of the award-winning MicroStrategy Business Intelligence Reporting Suite, a fully integrated BI platform that makes Business Intelligence faster, easier, and more user-friendly. Data Meaning has MicroStrategy certified consultants available to help you deploy MicroStrategy with ease. For your BI and DW design, install and implementation and training needs please visit us at **www.datameaning.com** or email **info@datameaning.com.**