

Chapter 1

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Overview

Business Intelligence (BI) is reaching more and more constituents inside and outside your organization. Information demands, data volumes, and audience populations are growing and will continue to grow exponentially. As the demand increases, so does the imperative for a sound strategy that meets your short-term needs and that provides the foundation to meet your long-term vision.

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Current spending is changing focus from products that help control costs to those that can help grow the business.

In a recent article in CIO-CONNECT Magazine, Frank Buytendijk said, “The pressure from cost cutting and compliance has put a greater focus on BI, but businesses are still using it very tactically. Successful organizations realize that having a real vision for BI is the key to business performance and they use information as a resource implemented in their business culture. BI applications require a clear and intimate understanding of the business itself and it is only by working on business and IT issues in tandem that the real value of BI is realized.”¹

Key Questions

Are you thinking about how to get the most out of Business Intelligence? Are you wondering how to best sustain your investment in BI? Do you worry about how to ensure that every business decision made in your organization is backed up by the correct information? Are you asking yourself how to implement a comprehensive Business Intelligence strategy that supports organizational goals and addresses the information requirements from the business? Do you wonder how to get information when you are sure the data must be there, but you just don't know how to get a meaningful report?

The BICC Concept

More and more organizations are forming a Business Intelligence Competency Center (BICC) as an answer to those questions. A BICC is a cross-functional team with defined tasks, roles, responsibilities, and processes for supporting and promoting the effective use of Business Intelligence across the organization. The hope is that a Business Intelligence Competency Center can act as a center of expertise for Business Intelligence and drive and support its use throughout the organization. This more holistic approach to Business Intelligence encompasses more than just the technology—it is part of an overall BI strategy that addresses the following organizational dimensions:

¹ Frank Buytendijk, “Analyst’s View: Avoiding the Seven Deadly Sins of Business Intelligence,” CIO-CONNECT Magazine, 11 (Summer 2005): 8.

- **Human Capital**, i.e., the people tasked with delivering Business Intelligence to the business and the business users consuming Business Intelligence (see Chapter 5.)
- **Knowledge Processes**, i.e., the processes required for information to flow through the organization in the right way (see Chapter 6.)
- **Culture**, i.e., how organizational culture affects the use of Business Intelligence and how it is affected by the use of Business Intelligence (see Chapter 7.)
- **Infrastructure**, i.e., the technology used for Business Intelligence (see Chapter 8.)

While the concept of a BICC sounds very straightforward, the details might not be so easy to tackle. This book is designed to help you establish a BICC effectively. It describes the BICC concept, explores benefits and potential pitfalls, and looks at what you need to consider when setting up a BICC. In doing so, it examines the above-mentioned dimensions of Human Capital, Knowledge Processes, Culture, and Infrastructure. It provides you with a plan for the BICC setup and advice on the functions and roles required in a BICC. The book also details how a BICC can best work together with software vendors and contains some descriptions of BICC implementations from SAS customers.

Business Intelligence as a Competitive Differentiator

Like most organizations today, your organization measures success in many different ways, and those measures vary greatly from industry to industry. But for every business in every industry, revenue growth remains the most fundamental indicator — and by far the most critical.

Unfortunately, marketplace realities are making revenue targets harder and harder to reach. This tenuous environment is placing a huge premium on the ability to focus scarce resources in every corner of your organization on the strategies and tactics most likely to result in success. To gain this focus, your organization must infuse strategic and tactical decisions with the knowledge necessary to maximize revenue, reduce costs, minimize risk, and achieve competitive advantage.

What Is Business Intelligence?

Business Intelligence is defined as getting the right information to the right people at the right time. The term encompasses all the capabilities required to turn data into

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intelligence that everyone in your organization can trust and use for more effective decision-making.

Business Intelligence is the one true source of sustainable competitive advantage. It allows your organization to drive revenues, manage costs and realize consistent levels of profitability. An “intelligent enterprise”—one that uses Business Intelligence to advance its business—is better able to predict how future economic and market changes will affect business, and such an organization is better poised to adapt and thrive under those new conditions to foster a culture of innovation and adaptation.

Business Intelligence versus Gut Feel

The key to this vital knowledge lies in the mountains of raw data your organization already collects. Business Intelligence uncovers innumerable competitive advantages by transforming that raw data into actionable intelligence, and creating knowledge to implement winning strategies and deliver information that can be leveraged by your entire organization.

One of the greatest inhibitors to competitive advantage is acting solely on “gut feel” or “intuition.” So many decisions have been made based on what someone feels versus what the data say. These decisions cannot be measured. They cannot be repeated. They cannot be easily understood or shared. Many domain experts have specialized knowledge: this knowledge and context needs to be joined with the data to improve future decision-making and provide competitive advantage. Unstructured content needs to be considered as part of the overall information architecture.

Hindsight versus Insight

Many organizations have adopted Business Intelligence applications, in the hopes of extracting greater insights from all the data generated by their operational and transactional systems. Unfortunately, even after acquiring traditional BI, true competitive differentiation often remains elusive. For one, the competition is probably doing the same thing, with the same tools.

Furthermore, hindsight query and reporting—the typical offering that is labeled as “Business Intelligence”—cannot deliver the predictive insight and deep understanding that is required to outperform the pack. Past trends tend to be poor predictors of future possibilities. Organizations need a way to distill predictive insights from a multitude of interrelated factors, far beyond simple trend analysis. Otherwise, revenue opportunities might reveal themselves too late for positive action — or it might not be possible, given current processes, to mobilize resources quickly enough to take advantage.

If a Business Intelligence solution cannot help you make sound decisions about your organization’s future – easily, reliably and at every level of the organization – it is neither

good business nor intelligent. How can your organization leverage these advancements for competitive advantage? How can you best support your corporate strategy with a BI strategy that advances the business on a continuous basis? Who in your organization is going to be entrusted with that task? What opportunities will innovations like Radio Frequency Identification (RFID) mean to your organization? And finally, how do you achieve more with less—more intelligence for the organization at less cost? The answer—at least in part—lies in establishing a Business Intelligence Competency Center.

Criteria for True Business Intelligence

According to SAS' definition, a platform doesn't offer true Business Intelligence unless it satisfies all of the following criteria:

- **Breadth. It integrates functions and technologies from across the organization.** Truly integrated Business Intelligence integrates data from every corner of the organization—from operational / transactional systems, multiple databases in different formats, and from all contact channels. The information flow can then transcend functional silos, organizational boundaries, computing platforms and specialized tools.
- **Depth. It reaches all who need it, in a way that is relevant to them.** A true BI solution provides appropriate interfaces and tools for users at different levels of the organization, who have profoundly different needs. The results of analysis should be easily disseminated across all functional areas and organizational levels, so everyone can contribute to the organization's success.
- **Completeness. It is a comprehensive, end-to-end platform.** BI success doesn't just happen at the application layer. And it isn't just query and reporting. It depends on a chain of applications and technologies working together from a common data foundation to create a single, verifiable version of the truth.
- **Advanced analytics. It delivers predictive insights, not just hindsight.** Online Analytical Processing (OLAP) is a valuable part of the picture, but it is not your optimum source of competitive differentiation. Historical query and reporting—what many vendors call “BI”—merely tells you where the organization has been. Going beyond BI requires predictive analytics, such as forecasting, scenario planning, optimization, and risk analysis.
- **Data quality. It gives applications one validated, verified version of the facts.** Data is vital to the decision-making process, and ensuring that you have the RIGHT data is imperative. All major IT analysts recognize the importance of data quality to the return on BI investment, yet many organizations are restricted by their choice of solution.
- **Intelligence storage. It meets the information needs of intelligence applications.** The data storage platform must be able to draw on information

from many sources, prepare it for analysis, and deliver it quickly to the applications and platforms that need it.

However, Business Intelligence is not just about software. Many BI projects fail because no provisions are made for a sustainable environment for BI, which includes the appropriate processes, the people with in-depth Business Intelligence skills, and an organizational culture that fosters fact-based decision-making.

The Business Intelligence Competency Center

Six Challenges in Exploiting Business Intelligence

Increasingly, organizations are realizing that there is more to BI than simply employing technology. There is a need for a comprehensive, strategic approach to BI that addresses technology as well as human capital, knowledge processes, and culture. A lack of strategy will result in inconsistent BI deployments; difficulties in managing, implementing, and supporting BI initiatives that span multiple departments; and a lack of standardization of methodologies, definitions, processes, tools, and technologies as well as insufficient BI skills. These challenges can be defined in the following categories:

Data Challenges. Data is at the heart of all BI initiatives. The data required and the time and effort necessary to collect the necessary data and to ensure its accuracy are often underestimated. Data issues are typically the leading cause of failure and the most costly element of BI implementations. It takes a lot of time, resources, and effort to identify, map, and create the necessary rules and processes to ensure that the data are being used consistently and accurately across the organization, promoting a single version of the truth.

The many disparate data sources usually do not “speak” to each other, and each might be owned and managed by different groups that report to different organizational entities. In many cases, just getting to the data is extremely labor-intensive, with no assurance that the data will be accurate or timely when you get to it.

When that data has been correctly identified and collected, data quality has to be taken into account and cannot be taken for granted. This is another very common and costly mistake. Not all data values are accurate or valid. Analysis must take place to ensure that the data collected is correct and suitable for decision-making processes. The closer a data quality process can be inserted to the source, the better. Resolving data quality issues requires communication and working together with various groups and experts to resolve the root causes and underlying issues. By including a Data Stewardship function into the BICC, data quality topics can be adequately addressed.

Data storage is another consideration and obstacle to BI. Data is often stored in multiple formats, in multiple places, and in multiple databases. Data must be accessed and consolidated into consistent business views that support a “fit for use” approach for delivery despite storage complexities and limitations.

Technology Challenges. The proliferation of disconnected information silos poses another obstacle to the successful creation of knowledge within an organization. Since individual departments historically have been run like separate businesses, each has often been free to pursue its own IT infrastructure. This has resulted in the use of disparate hardware, platforms, systems standards, and databases throughout the organization — as well as often unfathomable difficulty in establishing and measuring progress toward enterprise-wide objectives. The BICC provides a means of addressing the whole information value chain, not just isolated parts of it. Often the success of a particular piece of BI technology rests not only on its use in the organization but on what precedes it in the value chain.

Over time, organizations have accumulated a complex set of heterogeneous tools and infrastructure technologies that are not very well integrated. In some cases, there is also a duplication of technologies used in various divisions of the same organization resulting in development and maintenance skills being thinly spread across all these different products. Therefore, the Total Cost of Ownership (TCO) for managing this kind of complex environment is often much higher than it should be. Perhaps a bigger problem is that while this piecemeal approach has resulted in rapid deployment with good Return on Investment (ROI) in single business areas, the lack of coordination across projects has resulted in unintentional issues for the enterprise or the organization as a whole, making it more difficult to share information and incurring costs.

Process Challenges. Business Intelligence is a process, not just a software product. No BI product, no matter how sophisticated or advanced, can address, fix, or replace processes alone. Process is a key to driving successful Business Intelligence and successful organizations. Processes can be changed and measured and are documented, making them repeatable and able to adapt to changing business requirements. And the key to successful processes are people. Organizations that marry their Human Capital, Culture, Knowledge Processes and Infrastructure by creating a Business Intelligence Competency Center are most successful and are prepared and poised to meet the continuously changing demands of their customers and maximize potential.

Strategy Challenges. Aligning all BI initiatives in the organization so that they support the organizational strategy should be the goal. Yet, it is often difficult to achieve that—different groups in the organization have different BI needs and start their own independent BI projects. It is difficult to align all of them under a common BI strategy. Even if there is a strategy, often it is not executed effectively. Tasking a group of individuals—i.e., a BICC—helping to define and subsequently support and monitor the

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success of the BI strategy is key. The BI strategy represents the way in which information delivery needs from management and operations are addressed and met.

Challenges for Users. BI can enhance everyone's decision-making across the organization. Understanding the different audiences, their information needs, skills, and goals is vital for a successful BI implementation. A BICC can be instrumental in helping to identify the different audiences, understanding their needs, helping shape their requirements and training, and coaching them so they can draw the right conclusion from the data available to them. The goal is to raise the overall maturity of the organization so it uses BI to its greatest effect.

Cultural Challenges. An organization's culture can be one of the single largest inhibitors to the successful use of BI. The culture needs to be such that it encourages fact-based decision-making—that is, people can get to the information they need to make their decisions in an easy and timely fashion. Because every organization is unique, understanding its culture and how to best leverage it to the advantage of the organization is one of the contributions of the BICC. The BICC can help ensure that the strategic use of information becomes a core competency for the organization.

What Is a BICC?

SAS defines a BICC as a cross-functional team with a permanent, formal organizational structure. It has defined tasks, roles, responsibilities, and processes for supporting and promoting the effective use of Business Intelligence across an organization. It is staffed with employees from the organization itself, although some roles or functions might be outsourced. The BICC is tasked with driving the use of Business Intelligence throughout the organization, making it available in the appropriate form to business users at different levels, and providing advice and support for all BI-related questions, including assistance with the interpretation of information.

A BICC enables the organization to coordinate and complement existing efforts in the area of Business Intelligence, while reducing redundancy and increasing effectiveness. The centralization of these efforts ensures that information and best practices are communicated and shared through the entire organization so that everyone can benefit from successes and lessons learned.

A central mandate for the BICC is to enable knowledge transfer and enhance analytic skills. The BICC can coach and train business users to empower them with new skills that drive innovation and discovery. It can also be instrumental in turning analysis into action and ensuring greater information consumption and higher levels of ROI from Business Intelligence.

Five Reasons to Establish a BICC

What are the arguments for establishing a BICC?

Preserve and exploit the full value of technology investments

Usually BI projects start out with great expectations for improvements to the business. However, whether this can be achieved depends on many factors. It depends on how well the Business Intelligence solution is understood, used and supported in the organization. If the business users do not know how to use it, and if they are not able to get support when they have questions, then they will likely stop using it altogether or not use it to its full potential. One of the aims of the BICC is to provide the business with solutions that fit their requirements and support them in using them appropriately. The BICC is a group of BI experts who know the potential of Business Intelligence and can make recommendations as to what to use, how, and why.

Integrate and consolidate business and analytical intelligence processes and initiatives

Often BI projects start in isolation. They are not in sync with other BI projects occurring elsewhere in the organization. Therefore, the result is a lot of overlap, redundancy, and information silos that don't allow the organization to connect different sources of information. What is worse, different solutions might provide inconsistent answers to the same question. This patchwork requires costly integration efforts. The BICC is an ideal instrument to oversee all BI-related initiatives at the enterprise level and can guard against this scenario. The BICC should be involved in defining the overall BI strategy so that the approach to BI shifts more and more from tactical to strategic. It should evaluate which tools and technologies are fit for the purposes of the organization and standardize on those.

Reduce overall risk of implementation projects and project realization

Typical project risks include lack of the right project resources, lack of coordination, and prioritization between BI projects some of which might not fit into the overall BI architecture. The BICC should analyze and prioritize BI needs, design the overall BI architecture (and see to it that all projects fit with that), and make sure that the organization makes best use of its BI skills and resources. Of equal importance is the consistency of definitions, processes, and methodologies to ensure smooth project implementations and repeatability.

Support business users in fully understanding data and acting properly on analyses

In many cases, business users need help with understanding what data is available to them for analysis, which techniques to use for the analysis, or with understanding and acting properly on the information they are getting. An important part of the BICC's work is therefore to provide BI training and coaching to business users to make sure they use BI technology effectively and efficiently.

Ensure that BI knowledge (BI value, concepts and technology) is shared throughout the organization

An organization might not clearly see all the benefits it could gain from exploiting BI. The BICC should educate the organization about the value and the possibilities that BI can bring to the organization. This is not restricted to the decision-makers or the business analysts – many other business users can gain a lot of value from BI.

Most organizations are tasked with doing more with fewer resources. A BICC provides an optimal solution for meeting the increasing demands of business users with fewer support staff and provides a forum for repeatable results, best practices, and collaboration across your organization. Thus, your successes can be documented, measured, and monitored for optimal performance. By streamlining operations, your organization can reduce overhead and information silos while increasing effectiveness. BI that delivers context based on the past—as well as current and forecasted—information, coupled with the unique expertise and experience of your workforce, enables competitive differentiation.

What Gartner Says about BICCs

Gartner (www.gartner.com), a leading provider of research and analysis about the global information technology industry, is a strong advocate of the concept of BICCs and has published numerous papers and research notes on the subject.

In his presentation, “How to Organise for Success in BI,” Bill Hostmann describes the mandate of a BICC as follows:

“The CC develops the overall strategic plan and priorities for BI, defines the requirements (including data quality and governance), and helps the organisation to interpret and apply the insight to business decisions.”²

² Bill Hostmann, “How to Organise for Success in BI,” Gartner Business Intelligence Summit, London, January 2005, 6.

Gartner regards the existence of a BICC as instrumental for the success of a BI strategy. “Organizations that do not have a BICC should establish one, because it will increase the likelihood of success.”³

One very obvious reason for setting up a BICC is the centralization of skills that might exist in different parts of the organization but that could be used more effectively and efficiently to increase the value of BI. The BICC should be the “center of gravitation,” where different skill sets are combined for one common goal: to better understand the business and interpret current business results, and to more accurately predict the future. In order to do this, a combination of business, IT, and analytical skills is required (Figure 1.1).

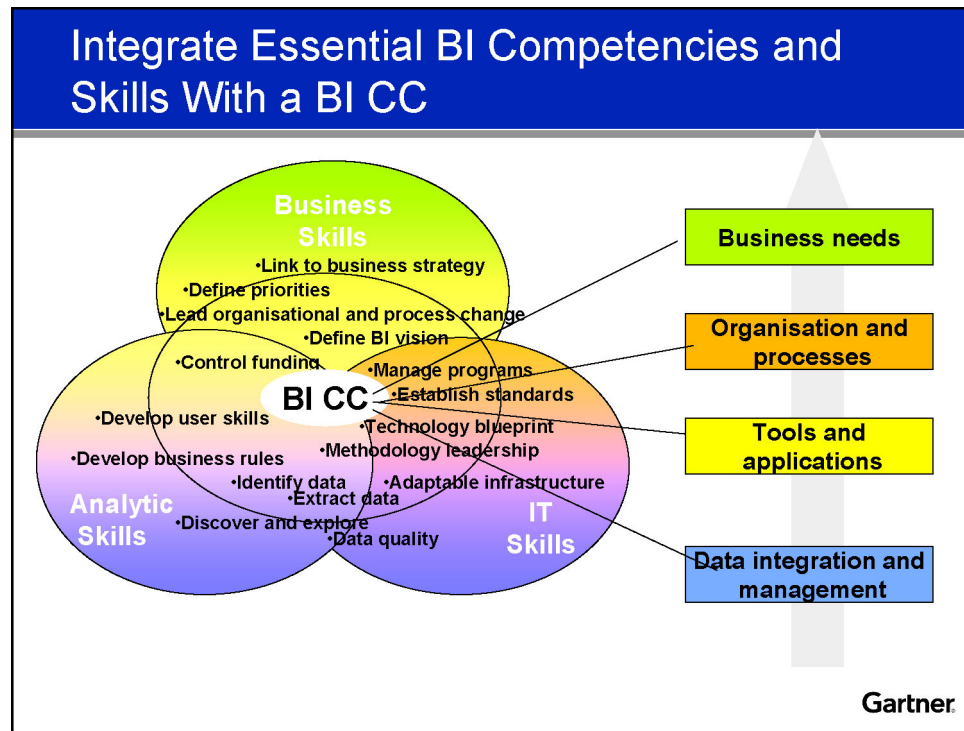


Figure 1.1: Integrate Essential BI Competencies⁴

³ Alan Tiedrich, “The BI and Data Warehousing Tools Selection Process – A Recipe for Success,” Gartner Business Intelligence Summit, London, January 2005, 8.

⁴ Bill Hostmann, “How to Organise for Success in BI,” Gartner Business Intelligence Summit, London, January 2005, 6.

Gartner points out that although there will be costs involved in the setup of a BICC (for staff, for creating standards and methodologies, for building skills and for program management), those will be outweighed by the benefits organizations will obtain through BICCs, which include “higher levels of insight and impact, better use of skills and information, reduced costs, better data and increased agility.”⁵

Gartner also stresses how important it is that the BICC work with a software vendor that understands the purpose and mandate of a BICC and is therefore able to form a positive relationship with it. This forms part of their BI vendor selection list, “Issues to Focus on When Selecting a BI Vendor.”⁶

Summary

- There are a lot of issues that it is assumed a BICC can help fix—more and better Business Intelligence for the users, a BI strategy that supports the corporate strategy, standardized Business Intelligence processes and initiatives, consistency of definitions, processes and methodologies, and higher ROI from Business Intelligence.
- How does the BICC need to be set it up so that it can deliver on these promises? Obviously, many factors come into play here and we will explore them in more depth throughout the book. However, there are three key elements that will set the BICC off to a sound start.
 - First, the BICC needs a clear mandate and strategy. It is not sufficient to say that the BICC is supposed to drive the BI strategy in the organization if there is unclarity about what that strategy really is. Some time and effort needs to be invested into understanding the Business Intelligence requirements of the organization in support of the corporate strategy.
 - Second, if the organization is serious about this more strategic approach to BI, then the BICC needs support from very high up in the organization—ideally, executive sponsorship. Otherwise, it will not be visible and influential enough to play the crucial role that it should assume. The aim must be the alignment of Business Intelligence goals across various functional areas, in support of the organization’s strategy.

⁵Bill Hostmann, “How to Organise for Success in BI,” Gartner Business Intelligence Summit, London, January 2005, 11.

⁶Alan Tiedrich, “The BI and Data Warehousing Tools Selection Process – A Recipe for Success,” Gartner Business Intelligence Summit, January London, 2005, 8.

- Third, it is important to staff the BICC with representatives from both IT and the business. This combination ensures that both business understanding and IT know-how work in concert to address the BI requirements from the business.
- While a BICC is an excellent forum for addressing many tactical issues efficiently and effectively, it is imperative not to lose sight of the strategic value of a BICC. It is easy to be tactical. The results are easily quantifiable and there is a never-ending list of problems to be solved and issues to tackle. Too often, however, organizations focus on the details and can quickly lose sight of their vision.
- The BICC is the initial contact point in the organization for any questions or problems that relate to BI strategy or software. In cooperation with software vendors, the BICC provides optimal support for project teams, system administrators, and business users in the organization.

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