Business Intelligence Definition and Solutions

Business Intelligence topics covering definition, objectives, systems and solutions.

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What is business intelligence?

Business intelligence, or BI, is an umbrella term that refers to a variety of software applications used to analyze an organization's raw data. BI as a discipline is made up of several related activities, including data mining, online analytical processing, querying and reporting.

Companies use BI to improve decision making, cut costs and identify new business opportunities. BI is more than just corporate reporting and more than a set of tools to coax data out of enterprise systems. CIOs use BI to identify inefficient business processes that are ripe for re-engineering.

With today's BI tools, business folks can jump in and start analyzing data themselves, rather than wait for IT to run complex reports. This democratization of information access helps users back up—with hard numbers—business decisions that would otherwise be based only on gut feelings and anecdotes.

Although BI holds great promise, implementations can be dogged by technical and cultural challenges. Executives have to ensure that the data feeding BI applications is clean and consistent so that users trust it.

What kind of companies use BI systems?

Restaurant chains such as Hardee's, Wendy's, Ruby Tuesday and T.G.I. Friday's are heavy users of BI software. They use BI to make strategic decisions, such as what new products to add to their menus, which dishes to remove and which underperforming stores to close. They also use BI for tactical matters such as renegotiating contracts with food suppliers and identifying opportunities to improve inefficient processes. Because restaurant chains are so operations-driven, and because BI is so central to helping them run their businesses, they are among the elite group of companies across all industries that are actually getting real value from these systems.

One crucial component of BI—business analytics—is quietly essential to the success of companies in a wide range of industries, and more famously essential to the success of professional sports teams such as the Boston Red Sox, Oakland A's and New England Patriots.

Business Intelligence for the Mid-Market

Business Intelligence Versus Business Analytics What s the Difference

Business Intelligence: Not Just for Bosses Anymore

The Brain Behind the Big, Bad Burger and Other Tales of Business Intelligence

With an analytical approach, the Patriots managed to win the Super Bowl three times in four years. The team uses data and analytical models extensively, both on and off the field. In-depth analytics help the team select players and stay below the NFL salary cap. Patriots coaches and players are renowned for their extensive study of game film and statistics, and Coach Bill Belichick reads articles by academic economists on statistical probabilities of football outcomes. Off the field, the team uses detailed analytics to assess and improve the "total fan experience." At every home game, for example, 20 to 25 people have specific assignments to make quantitative measurements of the stadium food, parking, personnel, bathroom cleanliness and other factors.

In retail, Wal-Mart uses vast amounts of data and category analysis to dominate the industry. Harrah's has changed the basis of competition in gaming from building megacasinos to analytics around customer loyalty and service. Amazon and Yahoo aren't just e-commerce sites; they are extremely analytical and follow a "test and learn" approach to business changes. Capital One runs more than 30,000 experiments a year to identify desirable customers and price credit card offers.

Who should lead the way?

Sharing is vital to the success of BI projects, because everyone involved in the process must have full access to information to be able to change the ways that they work. BI projects should start with top executives, but the next group of users should be salespeople. Because their job is to increase sales and because they're often compensated on their ability to do so, they'll be more likely to embrace any tool that will help them do just that—provided, of course, the tool is easy to use and they trust the information.

With the help of BI systems, employees modify their individual and team work practices, which leads to improved performance among the sales teams. When sales executives see a big difference in performance from one team to another, they work to bring the laggard teams up to the level of the leaders.

Once you get salespeople on board, you can use them to help get the rest of your organization on the BI bandwagon. They'll serve as evangelists, gushing about the power of the tools and how BI is improving their lives.

How should I implement a BI system?

When charting a course for BI, companies should first analyze the way they make decisions and consider the information that executives need to facilitate more confident and more rapid decision-making, as well as how they'd like that information presented to them (for example, as a report, a chart, online, hard copy). Discussions of decision making will drive what information companies need to collect, analyze and publish in their BI systems.

Good BI systems need to give context. It's not enough that they report sales were X yesterday and Y a year ago that same day. They need to explain what factors influencing the business caused sales to be X one day and Y on the same date the previous year.

Like so many technology projects, BI won't yield returns if users feel threatened by, or are skeptical of, the technology and refuse to use it as a result. And when it comes to something like BI, which, when implemented strategically, ought to fundamentally change how companies operate and how people make decisions, CIOs need to be extra attentive to users' feelings.

Seven steps to rolling out BI systems:

1. Make sure your data is clean.
2. Train users effectively.
3. Deploy quickly, then adjust as you go. Don't spend a huge amount of time up front developing the "perfect" reports because needs will evolve as the business evolves. Deliver reports that provide the most value quickly, and then tweak them.
4. Take an integrated approach to building your data warehouse from the beginning. Make sure you're not locking yourself into an unworkable data strategy further down the road.
5. Define ROI clearly before you start. Outline the specific benefits you expect to achieve, then do a reality check every quarter or six months.
6. Focus on business objectives.
7. Don't buy business intelligence software because you think you need it. Deploy BI with the idea that there are numbers out there that you need to find, and know roughly where they might be.

What are some potential problems?

User resistance is one big barrier to BI success; others include having to winnow through voluminous amounts of irrelevant data and poor data quality.

The key to getting accurate insights from BI systems is standard data. Data is the most fundamental component of any BI endeavor. It's the building blocks for insight. Companies have to get their data stores and data warehouses in good working order before they can begin extracting and acting on insights. If not, they'll be operating based on flawed information.

Another potential pitfall is BI tools themselves. Though the tools are more scalable and user friendly than they used to be, the core of BI is still reporting rather than process management, although that's slowly beginning to change. Be careful not to confuse business intelligence with business analytics.

A third impediment to using BI to transform business processes is that most companies don't understand their business processes well enough to determine how to improve them. And companies need to be careful about the processes they choose. If the process does not have a direct impact on revenue or the business isn't behind standardizing the process across the company, the entire BI effort could disintegrate. Companies need to understand all the activities that make up a

particular business process, how information and data flow across various processes, how data is passed between business users, and how people use it to execute their particular part of the process. And they need to understand all this before they start a BI project, if they hope to improve how people do their jobs.

What are some benefits of business intelligence efforts?

A broad range of applications for BI has helped companies rack up impressive ROI figures. Business intelligence has been used to identify cost-cutting ideas, uncover business opportunities, roll ERP data into accessible reports, react quickly to retail demand and optimize prices.

Besides making data accessible, BI software can give companies more leverage during negotiations by making it easier to quantify the value of relationships with suppliers and customers.

Within the walls of the enterprise, there are plenty of opportunities to save money by optimizing business processes and focusing decisions. BI yields significant ROI when it sheds light on business bloopers. For example, employees of the city of Albuquerque used BI software to identify opportunities to cut cell phone usage, overtime and other operating expenses, saving the city $2 million during three years. Likewise, with the help of BI tools, Toyota realized it had been double-paying its shippers to the tune of $812,000 in 2000. Companies that use BI to uncover flawed business processes are in a much better position to successfully compete than companies that use BI merely to monitor what's happening.

More tips for getting BI right

- Analyze how executives make decisions.
- Consider what information executives need in order to facilitate quick, accurate decisions.
- Pay attention to data quality.
- Devise performance metrics that are most relevant to the business.
- Provide the context that influences performance metrics.

And remember, BI is about more than decision support. Due to improvements in the technology and the way CIOs are implementing it, BI now has the potential to transform organizations. CIOs who successfully use BI to improve business processes contribute to their organizations in more far-reaching ways than by implementing basic reporting tools.