

Top 10 trends in business intelligence for 2008

And the emerging shift to information management



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As Hewlett-Packard began the analysis of the top trends that will shape the business intelligence (BI) landscape this year, we were struck by how the technology has gone mainstream. It is rapidly becoming the core of mission-critical applications. Indeed, most Global 2000 organizations today are acutely aware of the need to better manage all types of information.

In fact, a profound shift is occurring. More companies now regard information as a corporate asset to be better managed, shared, and used by the entire organization. However, as organizations recognize that many types of information residing in their walls have value, they are challenged to manage this veritable explosion of content—images, e-mail, presentations—all of which are messy to organize and manage.

We're also witnessing significant cultural and technology changes that have created an increasingly mobile population, a new breed of "information consumer." Whether they are customers or employees, these information consumers access information from a variety of channels, and they have high expectations about the reliability and timeliness of that access. The increase in regulatory and compliance requirements makes the explosion of information a dangerous variable that organizations need to control in order to mitigate risk.

Today these shifts color many of our Top 10 trends, including the demand for operational BI, the focus on information quality, the "googlization" of BI, and the search for new skill sets among BI professionals, for example. Over time, these shifts will drive the convergence of business intelligence with other forms of information management, and new ways to think about and manage information across the enterprise will emerge.

This year's Top 10 list includes the evolution of several trends from prior years, such as the broader use of the technology, industry consolidation, the higher profile of managing data quality, and the demand to have BI applications access and analyze more types of information. In addition, we identified several new trends that will play an important role in BI's evolution. These include the growing role of the Internet "Cloud" as the conduit for BI delivery and the rise of the data warehouse appliance to fix system performance issues in the short-term. Overall, these trends show the increased reliance on BI technology.

Trend #1. Consolidation heralds BI's maturation

Vendor consolidation was the overriding theme of the BI world in 2007. Three major BI specialists—Cognos, Hyperion, and Business Objects—were snapped up by larger technology players in rapid succession, and more acquisitions are expected this year. This type of vendor consolidation is typical of the vendor lifecycle—it happened in enterprise resource planning (ERP), customer relationship management (CRM), supply chain management (SCM), and many other technology sectors.

The consolidation offers some benefits to customers. CFOs are eager to reduce the number of IT suppliers. CIOs expect vendors to do more integration for them, but so far they have not seen many of these benefits from the consolidation.

More than anything, the consolidation of the vendor landscape represents the maturation of BI as a technology platform, ready to take its place alongside related information management disciplines such as ERP and CRM.

Trend #2. Operational BI brings new opportunities

As companies focus on spreading BI tools beyond a few analysts in finance and marketing to most departments of the organization, "operational BI" is transitioning from last year's buzzword du jour into a top priority in 2008. Operational BI pushes business decisions closer to the business event by putting timely information into the hands of operational-level workers for day-to-day decision-making. Indeed, Gartner Inc. estimates that by the end of 2009, 90% of Global 2000 companies will have mission-critical BI and data warehouse systems, up from less than 25% in 2007¹.

More companies look to widely distribute BI insights via analytics to mission-critical applications. Operational BI will be used to help call center clerks thwart identity fraud, to make supply chains more responsive to prevent out-of-stocks during the holiday rush, and to capitalize on a host of other business opportunities.

Few companies have explored the myriad of opportunities available by fully embracing operational BI. As this effort matures, companies will focus on the plethora of technical, political, and organizational challenges in 2008.

¹ Gartner Inc., "Operational Analytics and the Emerging Mission-Critical Data Warehouse, 2007," Mark Beyer, March 2007.

One offshoot of the rise of operational BI is the growing emphasis on extending the business continuity and availability capabilities of BI data stores. Historically, the back office had responsibility for maintaining BI systems. Now that BI is being leveraged for operations, these large corporate databases need to be replicated or otherwise protected to reduce the impact from natural disasters, terrorism, e-discovery, and other concerns.

Trend #3. Analytics becomes critical to executing business strategy

Dovetailing with the rise in operational BI, analytics has emerged as a mainstream business topic this year, especially for marketing and other areas outside of finance. The 2007 publication of Thomas Davenport's influential book, *Competing on Analytics*, stresses using analytics as a strategic differentiator; and we are beginning to see companies use applied analytics as critical to executing their business strategy, not just for financial or process efficiency.

The rise in operational BI also drives the increased use of analytics. Companies are starting to link their enterprise resource planning, customer relationship management, and supply chain management systems with analytics tools. The product of this linkage is real-time decision-making to optimize processes, production, pricing, and other variables.

Over the next three to four years, we expect to see analytics applied to "grand challenges." Using analytical tools such as data mining to explore hundreds of terabytes of data can yield game-

changing results. For example, a large retailer can review SKU sales data over several years to optimize the price of all items per store in 1,000 locations. Each store would be given guidance on how to price items based on local factors in a way that would maximize sales and profits. This type of approach can reap hundreds of millions of dollars in additional revenues annually.

Trend #4. Business driving data quality

For the past two years, master data management (MDM) and data quality have been prominent trends on our list. As companies first embraced the notion of building a common data language, they then struggled with the organizational and technology barriers of achieving this. In 2008, MDM remains a front-burner issue, but now data quality is moving beyond IT to become a part of the business agenda. As the strategic importance of information such as BI becomes more apparent, IT and business are becoming more than partners—they realize they must be joined at the hip.

Previous efforts in MDM may have failed due to their IT-centric approach or because the technology couldn't deliver against expectations. The previous "toe-dipping" into MDM is now giving way to major commitments. In fact, we hear more questions from customers about governance than about BI technology issues. This year companies will accelerate the governance process by having master data strategies relevant to their industries.

As the intensity of interest in MDM increases, this year will see the divergence of vendor strategies. Customers and vendors realize product data and customer data require different approaches. Vendor positioning will evolve as customers expect MDM vendors with product data solutions to have specific industry expertise. Other MDM vendors will shift to a customer-centric data focus.

Trend #5. Governance shifts into three-part discussion

Last year governance occupied the top spot on our trends list, with companies making a firm decision that governance was a crucial element of their BI strategy. Despite this consensus, the number of well-formed governance committees and processes remained few. In 2008, however, companies will begin to move from theory to practice, accepting that governance in the real world is neither tidy nor linear.

At the same time, companies will recognize that governance plays out in strikingly different ways at the three levels within the organization: enterprise; intra-divisional; and local. The overriding conflict is that differing business needs can cause each of these levels to implement governance that is at odds with the other levels. Consequently, as companies implement real-world governance, they must not allow the three levels to implement processes that subvert each other. The starting point is to prioritize at which of the three levels governance is the most important. To navigate through the different interests and points of view, many companies will benefit from using an unbiased facilitator.

Trend #6. Recognizing the value of unstructured information

In C-level suites, executives now realize that some of their most valuable information about customers, suppliers, and the market reside outside their database servers. This valuable information is buried in e-mails, instant messages, PowerPoint presentations, audiocasts, webcasts, and other unstructured data.

New federal court regulations involving document discovery also require companies to find better ways to manage and search unstructured data. The combination of regulatory pressure and opportunity are propelling the next phase of BI information value—turning unstructured data into actionable insight. This new phase reflects a growing appreciation that managing unstructured information with the same discipline and rigor that BI solutions bring to structured data offers great opportunities. BI technologies will evolve to address some aspects of this challenge.

In the past year, we saw the first wave of companies take the initial steps to develop a framework to deal with their unstructured data. Throughout 2008, many more CIOs will face heightened pressure to find the unstructured data, inventory it, classify it, assess it, archive it, and figure out a way to properly exploit it, while at the same time demonstrating a return on investment. While the amount of talk about unstructured data will soar this year, action will lag due to the technological and financial challenges.

Trend #7. Appliances shift into second gear

As companies move to narrow down vendors and consolidate BI tools, they still need to find creative solutions to immediate problems. The surge in installations of data warehouse appliances in 2007 largely reflects lines of business dealing with system performance issues. The vast majority of appliances have been sold as disposable or recyclable technology, sidestepping IT's concerns for increased manageability.

With appliances continuing to make headway in 2008, companies will be looking for appliances that are built on industry-standard technology and that easily integrate with their existing systems management tools. Look for appliances that speed time to value, while simply integrating into existing BI infrastructure.

Trend #8. Managed spreadsheets signal new pragmatism

Many users have refused to give up their familiar spreadsheets for modern BI tools, which they find cumbersome. Consequently, spreadsheets have been primary culprits in the proliferation of unmanaged data. In the year ahead, BI tools and Excel spreadsheets will become a duet, not continue as competing soloists. Improved integration of back-end BI systems and Excel spreadsheets as the user interface, coupled with other initiatives, will provide the opportunity to truly implement "managed spreadsheets." This will allow workers to use their desktop tools to analyze data, viewing it in a familiar, productive manner. However, the spreadsheets won't be used to assemble and integrate the data, preserving the underlying data's audit trail.

IT departments will continue to see spreadsheets as a disruptive influence. Spreadmarts will not disappear anytime soon, but top-down support for peaceful harmony of spreadsheets and BI will eliminate many renegade IT projects. The upshot: BI projects will increasingly put more emphasis on how users want to "see" information, realizing that BI will only be fully embraced if it becomes a seamless element in the way users work with all types of information, leveraging the desktop tools they prefer.

Trend #9. BI joins the Internet cloud

As BI expands to new types of users, the way those users will expect to use and manage information is being shaped by their use of the Internet in their off-hours. Portals and other technology represented the first tentative steps of the “googlization” of BI. This hugely empowering shift will play a key part in the rise of overall information management.

In the year ahead, a combination of Web 2.0 technologies—including blogs, Wikis, social networking, instant messaging, and other Internet-based forms of computing and communicating—will become part of the BI delivery mechanism. Web 2.0 tools will translate into increasingly interactive reports, analysis sharpened by blogs, and Wikis used to disperse information. Web 2.0 technologies accessed via the Cloud will reshape how BI is experienced.

A service-oriented architecture (SOA) will be the means of delivering these enhanced capabilities in the BI Cloud. SOA has moved from a topic of conversation last year into the long-term plans of many companies this year. Adoption of SOA will provide organizations with the crucial underpinning to successfully exploit the potential of Web 2.0 technologies, the Cloud, and operational BI. The adoption of SOA to enable operational BI in 2008 will also quash any lingering questions of BI as a service.

Trend #10. The magic mix: meeting the need for BI talent

As BI is more broadly distributed throughout the organization to enhance decision-making on critical issues, from the executive suite to the factory floor there is a growing need for qualified personnel to drive this evolution. As BI solutions mature, top managers and data architects will need BI breadth as well as depth in 2008. Broader and deeper BI deployments demand senior BI practitioners who are both computer scientists and MBAs, able to deeply understand statistics, data analysis, business processes, and their specific industry.

The growing demand for BI skills, along with top-down pressure to reduce costs, is forcing senior officials at many companies to reconsider offshore outsourcing. Increasingly, offshore firms are building up sophisticated BI/analytics offerings. We are beginning to see deep analysis that has historically been done by in-house analysts offshored on either a one-off or ongoing basis.

Conclusion

Our Top 10 trends for BI in 2008 demonstrate a maturation of technology, products, and vendors. BI has become integral to day-to-day operations, propelling the technology into mission-critical status. As a result, companies are moving from simply recognizing the importance of issues such as governance to taking major steps to address them, while also keeping an eye on future opportunities such as leveraging their unstructured data.

This year's trends indicate that BI has entered a new era in which companies are increasingly dependent on BI at all levels. Executives, customer-facing employees, and knowledge workers in between are routinely applying actionable insights derived from vast data stores to support growth, reduce costs, and minimize risks within their businesses.

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