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Analytics Alerts

Next-Gen BI Is Here

Predictive analytics, real-time monitoring, and the speed of in-memory technology are changing the value proposition of business intelligence.

Contents

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Next-Gen BI Is Here

By Doug Henschen

PAST PERFORMANCE is no guarantee of future results. This investment-prospectus lingo has never been more apt for business in general than in this post-financial-meltdown, pre-recovery economy. Yet now more than ever, top executives, corporate directors, and financial markets want no surprises.

So it's pretty clear why business intelligence initiatives continue to top CIO priorities, as executives from the boardroom on down demand better visibility. The problem is that BI often has fallen short of ideal, delivering insight into the past but not into up-to-the-moment performance or future prospects.

That's about to change. Next-generation BI has arrived, and three major factors are driving it: the spread of predictive analytics, more real-time performance monitoring, and much faster analysis, thanks to in-memory BI. A fourth factor, software as a service, promises to further alter the BI market by helping companies get these next-generation systems running more quickly.

Predictive analytics is a white-hot growth segment that got hotter with IBM's $1.2 billion deal to buy SPSS, a company that uses algorithms and combinations of calculations to spot trends, risks, and opportunities in ways not possible with historical reporting.

Between the extremes of rearview-mirror reporting and advanced predictive analytics lies real-time monitoring. Front-line managers and executives increasingly want to know what's happening right now—as in this second, not yesterday or even 10 minutes ago. This is where stream processing technologies are moving beyond niche industry uses. Real-time monitoring detects

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events or patterns of events as data streams through transactional systems, networks, or communications buses. Proven on Wall Street and in other data-soaked industries, stream processing technologies deliver subsecond insight that conventional BI can't touch.

Forward-looking and real-time analysis aren't brand-new BI concepts, but in-memory processing is making them more practical. Until next-generation in-memory products emerged, you usually needed pre-built cubes, pre-defined queries, summarized data, and long-running queries for "what if" exploration. All those requirements killed spontaneous exploration. In-memory products, unlike tools that explore historical data on disk, load vast data sets into RAM so people can perform queries in seconds that would take minutes or even hours with conventional tools.

The fourth factor in the next generation of BI addresses another place where speed is needed: in the deployment phase. With software-as-a-service options, BI doesn't always require the months-long distraction of building a data warehouse or a new data mart application, something particularly attractive for small IT shops (see story, below).

This next generation of BI technology is still evolving and comes with plenty of risk. Prediction typically requires statistical expertise that's scarce and pricey. Real-time monitoring of stream processing technology can be a lifesaver, but only if you can respond as quickly as you detect opportunity or risk. Fast in-memory-analysis tools are selling briskly, but they may require companies to pony up for higher-performance 64-bit hardware. And if you're going to expose these powerful BI tools to new users, be mindful of misinterpretation.

Avoid these pitfalls, however, and there's no turning back to guesswork forecasting, weeks-old reports, and glacial querying.

PREDICTIVE ANALYTICS GOES BIG

Analytics and predictive capabilities have been around for decades, but interest has mushroomed in recent years thanks in no small measure to the 2007 bestseller Competing On Analytics, by Tom Davenport and Jeanne Harris, with its examples of companies profiting by peering into the future. (The book came a year after *InformationWeek* published an extensive cover story on the subject—you can read that at *informationweek.com/1091/predict.htm*.) BI vendors that lacked analytic tools have rushed to integrate them into their BI suites, with SAP BusinessObjects and IBM Cognos cutting integration deals with SPSS. In May, IBM launched an Analytics & Optimization practice, and then last month took the plunge with the SPSS deal.

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With less fanfare, interest in analytics has also fueled popularity of the open source R language for statistical analysis, which proponents say is used by more than 250,000 programmers. For example, R serves as the foundation of an RStat predictive analytics module released in June by Information Builders.

One of the first beta customers for RStat is Dealer Services, which wants to use predictive analytics to screen potential customers. The company offers inventory financing for used-car dealerships. Of course, big banks and finance companies have long used statistical and predictive analytics in lending, "but the ratings and scores the credit card companies use have never worked for us," says Dealer Services CIO Chris Brady. "We're working on a model to score used-car dealers when they first apply for a loan."

FAST, FLEXIBLE

SaaS Makes Its Mark In BI

Fast, flexible, and affordable—three words never used to describe a major business intelligence deployment. That's why BI software as a service stands to transform the market.

"Fast" applies to deployment cycles in SaaS more than to speed of analysis. With all the complexities of building data warehouses and developing reports, conventional BI is notorious for months-long implementation projects. The delays can be trying for the largest companies, and the IT burden has prevented many small and midsize firms from embracing BI.

SaaS-based BI vendors, with their multitenant data warehouses and industry- and application-specific data models, promise to get customers up and running within days or weeks. Electronics manufacturer Vicor had an aggressive eight-week schedule in mind when it decided to replace its spreadsheet-based budgeting and planning approach in late 2007. SaaS vendor Adaptive Planning customized a data model and made an online performance management application accessible to 65 employees across the United States, Japan, and various regional sales offices. Employees were able to enter, review, and approve the 2008 budget within six weeks.

"We used to be lucky if we finished budgeting within five months," says Doug Brunton, Vicor's director of financial systems. The time-savers include a uniform model that eliminates individual spreadsheets and recalculations, and easy workflow and approvals. Brunton probably could get that from an on-premises performance management app (assuming it could offer the same Web accessibility), but he says there's no way the IT staff could have deployed it within eight weeks.

Some consider SaaS a stopgap to on-premises BI software deployments, but not Ken Harris. The CIO of health and beauty products maker Shaklee taps SaaS wherever he can to stretch his small IT staff and budget—RightNow for CRM, Omniture for Web analytics, and PivotLink for BI.

The company uploads its sales and financial data into a PivotLink-hosted data warehouse each night, and employees use Web-accessible report and query tools to evaluate sales, marketing campaigns, and financial performance.

That Web access makes it easier for Harris to massively expand PivotLink access: from 50 employees to, beginning this fall, as many as 5,000 independent businesspeople who sell Shaklee products via the direct-sales model used by Amway, Avon, and Tupperware. "We want to help our customers grow their business, so we're going to expose their sales information to them and give them a limited subset of queries," Harris says.

That flexibility is one reason Harris likes SaaS. What about cost? Harris says annual subscription fees aren't much more than the annual maintenance fees for on-premises BI software. Harris knows that drill, having gone the 18-month, seven-figure BI route while at the Gap. At Shaklee, it was a 120-day effort and a low-six-figure investment.

Of course, the Gap is a $14 billion-a-year corporation with 134,000 employees, while Shaklee is a private company with estimated sales of $500 million. For SaaS-based BI, the sweet spot so far continues to be small and midsize companies that have limited IT resources.

—Doug Henschen
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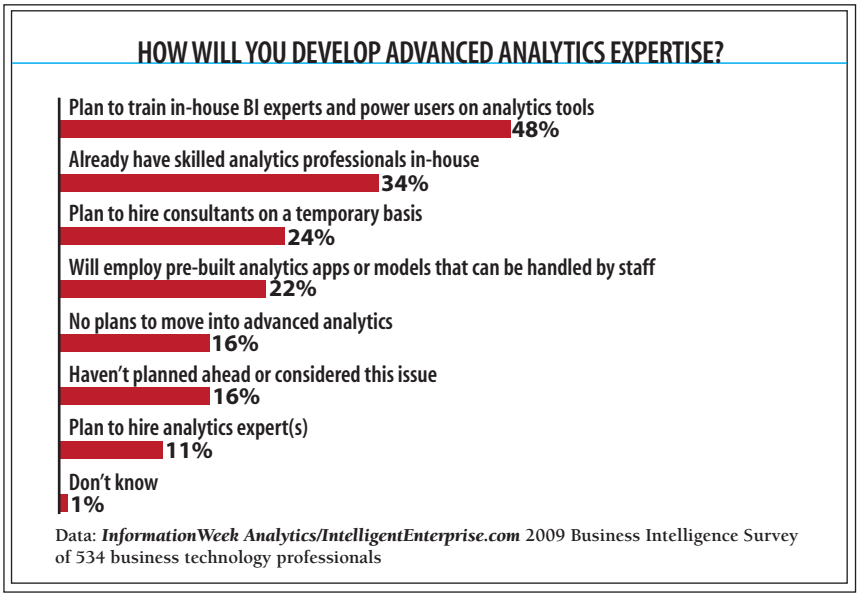
With General Motors and Chrysler recently shedding thousands of dealers, plenty of former franchisees have become independents and are seeking third-party financing from companies like Dealer Services. Brady hopes her purpose-built model can predict the best loan prospects and eliminate up to 10 of the 15 hours it takes to review an application. If the model sees a sure bet, why pay a high-salary credit analyst to rubber-stamp every detail?

Surprisingly, Dealer Services already had SPSS software, but the lender uses Information Builders' WebFocus suite. Brady says integration of analytics and the BI environment was crucial. "The SPSS product itself is fine, but we had to pull data out of our transaction systems, reformat it, use the analytic tools to develop the model, and then run batch analysis on yet another server," she explains. With the integration of WebFocus and RStat, "once the model is finished, it's as easy as working with a report." SAP and IBM say they offer similarly tight links between SPSS analytic tools and their BI environments.

Integration also reduces the need for statisticians, whose talents are in short supply and can demand starting salaries of $125,000. The idea is that experts can develop and deploy models while business users run analysis within a familiar interface and with few data preparation steps.

Pre-built applications are another option for getting predictive without a huge investment in analytic expertise. Software with built-in models for a specific industry or for a company function like marketing are the fastest-growing segment for SAS, the leader with 33% of the $1.5 billion analytics market in 2008, IDC estimates. The recession has "really put a focus on solving problems like credit risk and market risk in finance, fraud detection in banking, and price optimization in retail," says Jim Davis, chief marketing officer at SAS.



Brady's not so sure about the analytics-for-the-masses approach. She chooses the data dimensions to be considered herself, including dealer size and type, number of locations, payment patterns, histories of bounced checks, and inventory practices. To build the model, she's testing algorithms including neural networks. And models are never done, because they must be revalidated and updated as conditions change. "A

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savvy business user could play with the tools to test a few variables and hypotheses," Brady says, "but I wouldn't suggest they tackle more sophisticated analysis."

Companies expect to be able to grow their own analytics expertise. Forty-eight percent of companies will do in-house training to groom BI experts and power users, while only 34% have these pros on staff, finds an *InformationWeek Analytics/IntelligentEnterprise.com* survey (see chart, above).

MONITOR AND ANALYZE IN REAL TIME

You hear "real time" a lot from BI vendors, but they seldom mean subsecond or even subminute response. You can use techniques such as trickle feeding or change data capture to get a conventional data warehouse down to subminute latency, but it might be more troublesome and expensive than stream processing alternatives, which are moving outside their finance niche.

Low-latency BI, faster business activity monitoring, and ultra-low-latency complex event processing are all examples of stream processing technologies. They typically include instant alerts so people can react when a particular threshold, event, or pattern is seen. But at these speeds—anywhere from a few seconds for low-latency BI to milliseconds for complex even processing—most companies also need to couple low-latency insight with automated response.

At Insurance.com, keeping a high-traffic e-commerce site humming requires real-time monitoring of at least a dozen supporting business systems, from the e-commerce platform and customer-matching algorithms to Web servers and a rate-call engine that gets quotes from insurance carriers. The company built a monitoring application in 2004, but by early 2008 it was coming up short.

The breaking point came when Insurance.com decided to monitor rate calls by state, says Scott Noerr, director of IT services. Upgrading the in-house app to do that meant six to eight weeks' time for three developers.

A build-versus-buy analysis ended in March 2008 with the selection of IBM Cognos Now, a monitoring and dashboard appliance that fits in the low-latency BI category. IT met the monitoring need while adding alerting, escalation, and custom-graphics interfaces that the home-grown app lacked. Insurance.com considered IT-specific tools for network monitoring, site monitoring, and performance monitoring, but that would have required a hodgepodge of tools that didn't render a holistic view from one interface. Like most BI products, IBM Cognos Now is designed to tap into a variety of source systems and data types. Insurance.com's deployment took about six weeks and required one full-time-equivalent staffer.

The alerting features were the first big improvement "because we no longer have to watch an

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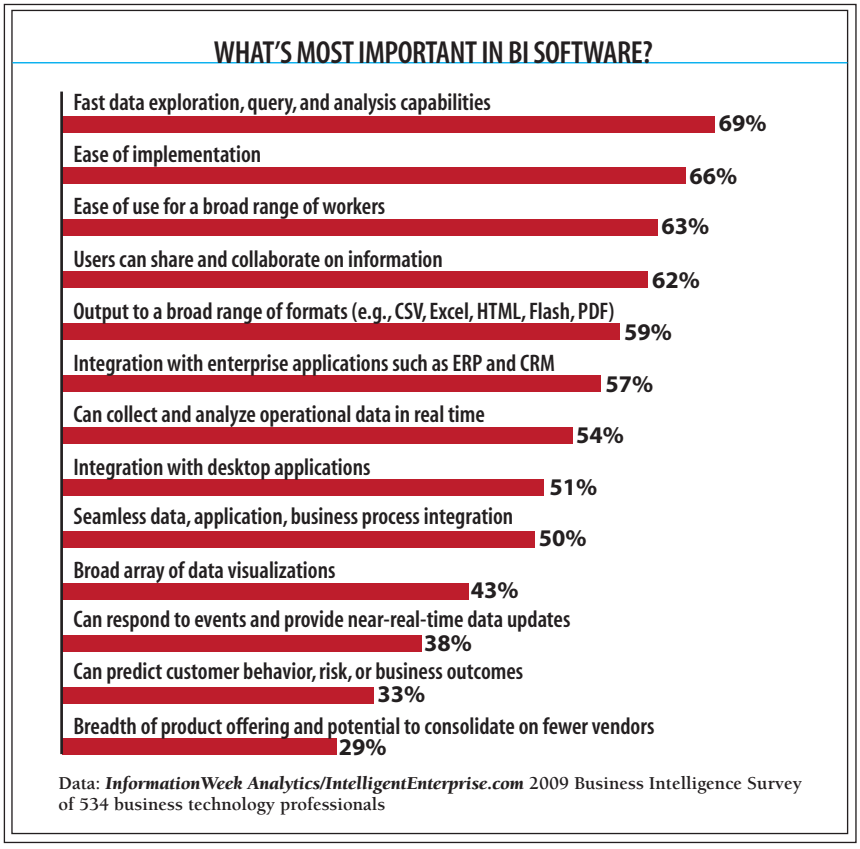
interface to discover we have a problem," Noerr says. But the best hope for increasing revenue comes from automation and escalation features added last fall. One application monitors 15 variables to determine call-center agent capacity. When it spots excess capacity, the app automatically adjusts CRM software to push leads to agents more quickly—a great example of real-time insight tied to real-time response.

The second app monitors the customer lead-to-close process and sends an alert to the designated managers if it detects performance glitches. If the condition persists, alerts escalate to higher-level executives.

Complex event processing is a technology that companies are starting to use more broadly to make monitoring more real time. Sprung from the lab projects and custom deployments of fast-trading Wall Street brokerages in the 1990s, commercial off-the-shelf products have taken shape the last five years. Mainstream uses have emerged in supply chains, shipping and logistics, retail, utilities, and other time-sensitive applications. Shipping giant UPS, for example, not only made stream processing vendor Truviso a company standard, it also invested in the startup.



Data: ***InformationWeek Analytics/IntelligentEnterprise.com*** 2009 Business Intelligence Survey of 534 business technology professionals

UPS decided it needed to replace a legacy application that tracked and did load balancing for as many as 50 million transactions made by visitors to UPS.com, as well as shipping requests through UPS's PC-based WorldShip application. The old system did classic rearview-mirror reporting—it collected server log data each night, and reported on transaction attempts, successes, and failures by servers the next morning. "When problems used to crop up and people would call us to ask 'What do you see?' all we could tell them was 'We'll tell you tomorrow what we see,'" says Jim Saddel, a systems manager at UPS. "Now we can look at the dashboard and see right away whether it's an across-the-board problem or an isolated problem on a specific server."

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UPS upgraded its Truviso deployment in April to add e-mail and text-based alerts. When managers see an alert about borderline performance, they can investigate and hopefully prevent an outage.

Lots of vendors talk a good game about moving BI into operational areas like the ones at Insurance.com and UPS. But slow, batch-oriented technologies are too often the norm, and they can't keep pace with decisions that have to be made in the moment. Stream processing technologies promise to make "real time" reports, dashboards, and decision-support applications a reality.

COMMIT TO IN-MEMORY

The third element poised to change BI is the much faster analysis that's possible using in-memory calculations. In-memory tools can quickly slice and dice large data sets without resorting to summarized data, pre-built cubes, or IT-intensive database tuning.

Products such as Spotfire (acquired by Tibco), Applix TM1 (acquired by IBM, now IBM Cognos TM1), and QlikTech were pioneers in the category, and in recent months more vendors have joined the in-memory ranks, or laid out plans to do so. Microsoft, for example, plans to add in-memory analysis to next year's release of SQL Server 2008 R2. MicroStrategy added optional in-memory analysis capabilities in January to its BI suite.

The power and appeal of in-memory products have grown in recent years as multicore, multithreaded, and 64-bit server technologies have become more commonplace and affordable. These hardware advances enable in-memory products to analyze the equivalent of multiple data marts or even small data warehouses in RAM. The technology also eliminates, or at least minimizes, the need for extensive data prep and performance tuning by IT. For end users, that means faster self-service BI without waiting in the IT queue.

SAP gave a jolt to in-memory approaches this spring with SAP BusinessObjects Explorer, which blends the Internet-search-style querying of its Polestar interface with the in-memory analysis of SAP's Business Warehouse Accelerator appliance. The product is available with or without the super-charging of in-memory 64-bit technology, but without it, it's an Internet-search-style querying tool. The big handicap: The in-memory version accesses data only in SAP Business Warehouse. An upgrade due this fall is expected to access myriad data sources.

Sara Lee is an Explorer beta-tester turned customer. Having completed a pilot test this spring, the food conglomerate bought the system with expectations that the speed will let it eventually open up BI to many more employees. A lot of people don't use BI now because "every time you ask a question, you can go get yourself a cup a coffee before you'll get an answer," says Vincent Vloemans, director of global information management at Sara Lee.

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"With this technology, you get answers in a second, and that implies you also start asking questions out of curiosity."

Sara Lee will test Explorer in two areas. First, its continuous improvement/lean group will use it to help optimize processes such as purchase-to-pay and order-to-cash. That requires country-by-country analysis to know which units perform best and worst, and why. "Answering those questions is easier if you can navigate data quickly," Vloemans says.

Second, its finance unit in Europe thinks faster answers will improve its standard BI reporting. "These people are constantly planning and reviewing the business, and they also get a lot of 'what if' questions thrown at them from senior management for which they don't have pre-defined reports," Vloemans says.

If those two deployments go well, he thinks the tool could be exposed company-wide. But that will require security controls and careful thought about the dangers of bad intelligence—like assuming "sales" is measured the same in each business unit. Warns Vloemans, "That's a BI problem in general, but when you give a powerful tool to more users, you need to be even more mindful about how people will interpret the data."

Your employees want that speed—fast data query and analysis is cited more than any other feature as most important among BI buyers. Real-time insight and prediction fall lower on the list, though that's not surprising given they're unfamiliar capabilities for many BI practitioners. Query and analysis is as old as BI itself, and who doesn't want a faster and easier version of what you already use every day? Don't be lulled, though: While prediction and real-time insight are over-the-horizon capabilities for many, they'll be table stakes within a few short years.

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Aug. 24, 2009

IDC Ranks Vendors In Growing Business Analytics Market

By Antone Gonsalves

THE BUSINESS ANALYTICS MARKET GREW BY 10% IN 2008, with Oracle having the largest share in terms of revenue, according to market research firm IDC . Over the next five years, sales are expected to continue to rise at a compound annual growth rate of 7.2%.

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From 2009 through 2013, business analytics sales will be driven by corporations' need for decision support to assist in cost cutting, customer acquisition and retention, and compliance processes, according to a recent report co-authored by analysts Dan Vesset, Mary Wardley, and Brian McDonough.

In 2008, Oracle led the overall market, followed in order by SAP, IBM, SAS, and Microsoft, the report said. Rounding out the top 10 were Teradata, Fair Isaac, Informatica, Infor, and MicroStrategy.

IDC divides the business analytics software market into four primary segments: analytic applications, business intelligence tools, data warehousing platform software, and spatial information analytics tools. In taking a look at the top 10 vendors, Oracle is present in all market segments with a broad portfolio of business intelligence tools, analytic applications, and data warehousing software. As a result, Oracle has the highest diversity of offerings. Nevertheless, the business applications maker received less than a quarter of its total software revenue from business analytics software. Therefore, it remains to be seen whether a company with less reliance on business analytics software than competitors will invest what's needed to hold on to its leading position, the report said.

SAP's market standing was helped by the 2008 purchase of Business Objects, combined with other acquisitions and internal product development. As a result, the vendor has a broad portfolio of BI tools, analytic applications, and data warehouse generation tools.

Despite its second-place position, SAP had the highest momentum of all the business analytics vendors. "This indicates that despite trailing Oracle in size and share, SAP more than compensated for it in revenue in 2008," IDC said. "SAP also had the second-highest diversity, confirming its broad portfolio and standing in the individual segments of the market."

IBM's leading position was boosted by the completion of its acquisition of Cognos, which added BI tools and analytic applications to the company's already strong presence in the data warehouse generation and management segments of the market.

"IBM was third on the diversity ranking, fourth in momentum, and had a less than 25% reliance on business analytics software," IDC said. "The latter is due to IBM's significant presence in various application development and deployment, systems software, and collaborative applications market, which do not directly contribute to the business analytics revenue."

Fourth-place SAS's broad portfolio spans all business analytics market segments and is exclusively dedicated to this market. "The company leads in the advanced analytics

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tools segment and is within the top two vendors in two other market segments," IDC said.

Microsoft's fifth-largest market share was mostly driven by its position in the data warehousing and BI segments of the market. However, the software maker is starting to also focus more on analytic applications through its Dynamics software division.

"Microsoft was fifth on the diversity ranking but third in momentum," IDC said. "The latter indicator is a testament to the company's strong growth rate in the business analytics market in 2008."

Teradata captured the sixth-largest market share with a solid portfolio in data warehouse management, along with tools for data mining and analytic applications for supporting CRM and supply-chain management processes.

FICO's seventh position was driven by a heavy reliance on the financial services industry. In addition, the company leads the services operations analytics applications segment, and provides CRM analytics applications and advanced analytics tools.

Informatica had the highest growth rate of the top 10 vendors in 2008. Its presence in the market is due to its data integration software used for data warehouse generation.

Infor's ninth position is due primarily to a portfolio of analytic applications led by its financial performance and strategy management applications. The company also offers its own query, reporting, and analysis tools.

MicroStrategy rounds out the top 10 vendors. The company derives all its revenue in the market from the query, reporting, and analysis market segment.

The top 10 vendors account for 66% of the software revenue from business analytics, leaving the remaining 34% a competitive battleground for hundreds of independent software vendors worldwide.

"Some provide a single tool or application, while others offer software that spans multiple market segments," IDC said. "Some of these vendors are highly focused on specific business processes and/or industries, while others offer horizontal technology applicable across the market."

Vendors 11 through 35 in IDC's rankings are led in size by SPSS, Omniture, Integraph, Information Builders, ESRI, and Sybase. However, in terms of momentum, the leading vendors are Netezza, QlikTech, Salesforce.com, Omniture, Sybase, and Tibco.

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Looking ahead, IDC believes incremental business analytics projects will dominate in the short term, as budgets are likely to be available only for narrowly defined projects with predictable returns on investment.

"Broad, organization-wide projects are likely going to be rare in the short term," IDC said. "There will likely be more, lower-priced, department-level deals across all segments of the business analytics market."

IDC also expects end-user organizations to place a greater focus on cost containment, customer retention and service, risk management, and compliance processes. In addition, there will be an acceleration toward the software-as-a-service sales-delivery model, and interest in open source technology will continue to rise, particularly in the BI tools segment of the market.

In the intermediate to long term, end-user organizations are likely to show interest in "areas of intersection of business analytics technologies with related solutions of collaboration, unstructured content access and analysis, business process management, and knowledge management," IDC said.

IDC's market analysis report is called the "Worldwide Business Analytics Software 2009-2013 Forecast And 2008 Vendors Shares," and it's available through the firm's Web site.

Aug. 20, 2009

IBM's SPSS Deal May Spark Market Consolidation

By Mary Hayes Weier

IBM'S PLANNED ACQUISITION OF SPSS is likely to set off a new wave of consolidation in the business intelligence market, as more software vendors look to beef up their predictive analytics capabilities, according to a Forrester Research report.

Forrester predicts that in the coming year, vendors will look to partner or acquire companies specializing in this area, including Accelrys Software, Angoss, FICO, KXEN, and Portrait Software. SAP, in particular, is likely to make a predictive analytics acquisition, the research firm said.

"Any BI vendor that fails to realign around a strong predictive focus will find itself on the sidelines

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of this new era of future-facing analytics," according to Tuesday's report, "Business Intelligence Polishes Its Crystal Ball," co-authored by James Kobielus, Boris Evelson, and Leslie Owens.

SAS Institute, a privately held company, is the clear market leader in predictive analytics, followed by SPSS. In a December 2007 interview with *InformationWeek*, SAS CEO and co-founder Jim Goodnight said he wasn't interested in being acquired. SAS had "numerous opportunities in the last year [to be acquired] and a number of inquiries," Goodnight said in 2007, but he felt such a merger wasn't needed given SAS's strong revenue growth, and would negatively impact the company's culture.

It's unclear whether Goodnight still believes that, but SAS continues to report strong revenue.

Two years ago, a big wave of consolidation hit the market for traditional BI tools, such as query and reporting. In October 2007, SAP announced it would acquire Business Objects, and a month later, IBM said it would acquire Cognos. Now Forrester expects SAP to follow IBM's move in the predictive (also called advanced) analytics area, to mitigate the risk of depending on its existing partnership with SPSS.

Still, even with SPSS coming under the wings of a competitor, Forrester points out that SAP already has some relevant offerings, including the forecasting and market-basket analysis capabilities in SAP Business Warehouse, and some of the more advanced analytic and trend-projection capabilities in Crystal Reports and Xcelsius.

Oracle, which also was part of the consolidation wave two years ago (it acquired Hyperion for $3.3 billion), offers Oracle Data Mining within its 11g database for advanced analytics, plus some technology in that area acquired from Sigma Dynamics a few years ago. Oracle might try to integrate these offerings in its traditional BI suite or acquire a third product or company in the advanced analytics area, the report says.

Customers' business needs will drive the software industry's focus on predictive analytics in coming months, according to Forrester. Reporting, querying, dashboards, and OLAP just don't provide enough predictive insight for today's market needs, and make it difficult to find anticipated patterns.

In addition, having separate systems for traditional BI and predictive analytics creates problems for customers. When products come from different vendors or are poorly integrated, some metadata has to be entered and maintained in different places, and data frequently must be moved from one database to another.

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Of course, ownership of BI tools and predictive analytics by one company due to an acquisition or merger won't bring instant relief to these problems. According to the report, "IBM will have its hands full integrating SPSS's solutions and professional service capabilities completely with its own diversified BI, data warehousing, and other analytics offerings."

Aug. 10, 2009

Aberdeen Tells SMBs How To Get The Most Out Of BI

By Antone Gonsalves

SMALL AND MIDSIZE BUSINESSES that have achieved "best-in-class" performance are typically focused on delivering business intelligence tools as quickly as possible to the largest number of users in a self-service, non-IT-assisted way, according to a research firm.

Aberdeen Research drew that conclusion following a survey of 530 SMBs worldwide. In studying the companies, the research firm found that the best-in-class SMBs achieved a 29% average year-over-year increase in operating profit, a 4% average year-over-year decrease in BI cost per user, nearly 100% delivery of BI to end users in a self-service capacity, and a 14-day average deployment time of BI applications.

In achieving that level of performance, the best-run companies were three times more likely than other companies to have a formalized BI training program, nearly two times more likely to have the ability to monitor the usage level of the BI system, and 66% more likely to leverage data cleansing tools, Aberdeen said.

Based on the study, Aberdeen determined a number of "required actions" in order to achieve best-in-class performance. Those actions included defining sets of business unit key performance indicators (KPIs) that roll up to the overall company strategy, establishing teams from across the organization to facilitate the deployment of BI tools, and starting to migrate away from spreadsheets and toward dedicated BI.

In looking closely at the Aberdeen study, the best-performing companies were willing to think outside the box to create an analytical culture and infrastructure that delivered value at the lowest cost. In doing that, managers often took a three-pronged approach that included delivering business visibility, resource optimization, and cost management.

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In the first area, best-in-class organizations leveraged strategic and tactical tools to guide their decision-making and to achieve improvements in profitability and customer service, Aberdeen found. In optimizing resources, top companies were exploring ways to break out of the confines of spreadsheet-based static reporting, whether it was through on-premises BI, open source tools, or software-as-a-service implementations.

The best companies also undertook strict oversight and controls and continually looked for ways to reduce wasted effort, to better leverage in-house domain expertise, and to lower the cost-per-user of BI tools.

Best-in-class companies typically operated within a PACE framework, Aberdeen said. PACE stands for pressures, actions, capabilities, and enablers.

The pressures were the result of competition driving the need to improve speed of access to relevant business data. The actions were identifying areas of the business that could achieve the fastest return on investment from BI and aligning business goals with KPIs.

The BI capabilities delivered included automated report generation and delivery to the end user, establishing an "information culture" that values timely delivery of data, monitoring the number of users accessing the BI system and using cross-functional teams for faster deployment of BI tools.

Finally, Aberdeen found that the technological enablers of higher operational performance included reporting and analysis tools, data integration tools, performance reporting dashboards, real- or near-real-time reporting and analysis, data cleansing tools, and operational dashboards.

Aberdeen also found several strategic initiatives that helped the highest-performing companies align their organizations for successful BI implementations. First was to automate elements of their "information value chain" to lessen the technical burden to the organization, Aberdeen said. Such actions reduced cost and made otherwise expensive BI implementations more affordable.

In addition, companies with the highest-performing operations took steps to identify areas of the business that would deliver the most tangible and rapid ROI from a BI deployment. Also, the best-performing companies took the necessary steps beforehand to clean, refine, and organize back-end data sources.

"By making the up-front effort to make their data cleaner and more relevant, they've created a downstream effect of providing better-informed decision support to their employees," Aberdeen said.

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Once data sources are in order, best-in-class companies strive to make BI available to as many employees as possible by utilizing a "land and expand" strategy, according to Aberdeen. That is, a company will deploy BI to one strategic function, such as sales, marketing, or finance, wait for the the technology to prove its work, and than expand to other areas.

Finally, Aberdeen determined a number of "required actions" for achieving best-in-class performance through BI. The steps included defining sets of business unit KPIs that roll up to the overall company strategy, migrating away from spreadsheets to dedicated BI, and using metadata management tools to ensure that one set of data definitions is used during the integration and BI application development process.

Other steps include the use of BI deployment teams that represent multiple departments within the company. Once the BI tools are in place, usage has to be monitored to determine the level of functionality users are leveraging, which ultimately leads to a more efficient implementation. Also, to help ensure user adoption, formalized training programs have to be implemented.

Other steps to success in BI, based on the evaluation of the highest-performing companies, include the use of outward customer-facing dashboards and BI tools. "Providing an easily accessed dashboard view into a customers' account information, order history, new product releases, or discounted products and services—just to name a few—is a very powerful way of maintaining customer satisfaction and retention," Aberdeen said.

Finally, the best companies regularly review software licensing, deployment, and service options from BI vendors, in order to take advantage of the unprecedented number of options available in today's highly competitive environment.

July 20, 2009

BI Is A Top Technology On Executives' Wish Lists

By Antone Gonsalves

BUSINESS INTELLIGENCE IS EXPECTED to have the highest impact on organizations over the next two to five years, as they increasingly incorporate the technology in ERP and CRM software, a recent study shows.

In surveying more than 1,600 executives in 36 countries, the Aberdeen Group found that one in four identified BI and analytics as the software technology with the most pronounced effect in 2009.

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"Companies are finding that BI has many uses within the organization, but the barriers to success lie in the ability to make access and use pervasive," David Hatch, VP of technology research at Aberdeen said in a statement. "The top performers are focusing efforts on creating a self-service approach to BI that enables non-technical workers to obtain information and analytic capabilities without burdening the IT staff."

The executives identified several business initiatives as driving BI use within their organizations. They included sustainability and green tracking, field marketing and promotions tracking, and customer service and relations, according to Aberdeen.

The focus on the three areas was due to a shift in BI projects from an emphasis on long-range strategic trending and planning to more tactical/operational applications within specific business units.

According to the study, BI is the most predominant extension/module planned for ERP systems. In addition, more than four in 10 respondents selected sales performance metrics as the top measure used in determining return on investment with BI. Other top ROI metrics were cost savings, customer performance, and process efficiency.

June 12, 2009

As Big BI Gets Hip, QlikTech Targets Large Deployments

By Doug Henschen

QLIKTECH MAY BE THE HOTTEST AND FASTEST-GROWING company in business intelligence, but that growth is relative. For starters, the company had $120 million in revenue in 2008, so it has a way to go before it can play in the billion-dollar-plus big leagues along with SAP BusinessObjects, SAS, IBM Cognos, and Oracle. More important, from a BI buyer's perspective, the vendor's QlikView software is typically deployed by smaller organizations with around 900 employees, according to the BI Survey 8 (see chart below). That's quite a bit smaller than the averages for larger and more established BI vendors.

Median Customer Headcount by Product/Vendor

Product/vendor	Median customer parent organization headcount
All (2014)	1911
arcplan (124)	7631
Board (150)	400
Business Objects (519)	5776
Cognos BI (290)	6408
Cognos TM1 Server (119)	4491
Cubeware Cockpit (90)	497
Hyperion (273)	14,405
Infor PM OLAP (189)	1582
Information Builders (109)	4596
Microsoft Excel PivotTables (291)	1,808
Microsoft SQL Server (486)	2516
MicroStrategy (301)	8076
Oracle, including Hyperion (401)	8662
QlikView (179)	912
SAP BI/BW (261)	8077
SAP, including Business Objects (707)	5518
SAS (131)	13,781
No BI product yet purchased (143)	758

(Analyses based on products purchased, whether or not these were the nominated 'primary' products)
SOURCE: BI SURVEY 8

Hoping to land bigger deals and ever-larger customers, QlikTech this week released QlikView 9.0, an upgrade of its in-memory BI

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platform laced with new features aimed at enterprise-grade deployments. Those features start with a battery of enterprise manageability improvements, including a visual administrative control panel that provides one view of all deployed QlikView servers. The vendor has bolstered load balancing and handling of large, complex, and concurrent queries. Also new is a PDF Report Generation and Distribution feature that fills the production reporting role—long a bread-and-butter staple for the larger BI suites.

These gaps had to be filled for QlikTech to win bigger deals, yet QlikView still doesn't the fit the mold of its larger competitors.

"The typical enterprise BI solution gives the masses PDF reports while the power users get analysis," said Anthony Deighton, QlikTech's senior VP of marketing. "Our approach is to give everyone analytic capabilities by making it easy enough to do analysis without a lot of training."

But as the BI Survey 8 findings reveal, QlikView is most often selected as an alternative for departments and line-of-business units seeking a way around IT bottlenecks and corporate-standard products. Apart from fast analysis, a key advantage of its in-memory technology is that the building of cubes happens on the fly, as opposed to having to wait for IT to add new data and rebuild cubes.

Can QlikTech unseat well-established enterprise incumbents? "In some cases they may, and that's likely to be where customers either haven't kept up with the latest releases or within organizations where the business is moving too quickly to put up with IT bottlenecks," said Aberdeen Research analyst David Hatch.

Despite the modest size of its average deployment, QlikTech points to 13,000-seat and 11,000-seat deployments at 3M and Pfizer, respectively, as proof that QlikView can handle bigger deployments. The vendor isn't alone among alternative BI providers in pursuing larger deployments. Earlier this month Tibco Spotfire released a 3.0 upgrade with beefed-up data integration, systems management, and scalability features, including load balancing and caching.

QlikView 9.0 includes other upgrades aimed at deployments of all sizes. A new Java Mobile edition, for example, supports BlackBerry, Symbian, and other smartphone platforms that can run Java Virtual Machines. QlikTech already offers a mobile app specifically for the iPhone that supports its multitouch interface and built-in GPS capabilities.

QlikTech also has introduced the capability for QlikView to run in the cloud, so BI customers can quickly test and scale deployments while QlikTech partners can offer QlikView-powered Web services. It's a hybrid deployment model that combines conventionally licensed software

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with the option of running cloud-based instances on Amazon.com's EC2. The vendor says QlikView servers can be launched in as little as 15 minutes and just as quickly turned off, so you pay only for what you use.

"QlikTech is being very clear that this isn't a SaaS offering and they aren't coming out with a BI application that you can subscribe to," said Hatch of Aberdeen. "End users should think of this as running the software on the cloud rather than on conventional hardware. It will be interesting to see if companies want to take a build-it-in-the-cloud versus a [SaaS] buy-it-in-the-cloud approach."

Finally, QlikTech has added a freely downloadable Personal Edition of QlikView aimed at building a community of power users and developers who use QlikView to solve BI-related challenges.

"We often find that there are a few people inside organizations who are struggling to solve an analytic problem and need a way to get at and understand the data," QlikTech's Deighton says. "If we can solve their problems with this Personal Edition, we think it will open up bigger opportunities within those organizations."

Of course, with demand growing for QlikTech's style of BI, incumbent BI vendors are responding. Cognos did so by acquiring Applix and its in-memory TM1 product (before its own acquisition by IBM). SAP responded more recently by announcing SAP BusinessObjects Explorer, a blending of its in-memory Business Warehouse Accelerator and the Polestar search-style query interface.

So it looks like the big guns will be trying to play hip, alternative BI provider while upstarts like QlikTech and Spotfire are appealing to IT by presenting broader, enterprise-ready platforms.

May 18, 2009

In-Memory BI Upgrades Point To Mainstream User Adoption

By Doug Henschen

NEW INTEGRATIONS, NEW SCALABILITY OPTIONS, and new data visualization options promise to bring Tibco Spotfire 3.0 to a broader base of potential business intelligence consumers. Announced and released on May 18, the 3.0 release marks the latest in a series of major upgrades since Spotfire's acquisition by Tibco nearly two years ago. And like the recent SAP BusinessObjects Explorer release, the upgrade represents the maturation of a once-niche in-memory product into a mainstream BI offering.

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Unlike conventional BI tools, which query data on disk, in-memory products load data into random access memory so users can quickly query and interact with information without extensive IT performance tuning and data preparation. Spotfire was introduced in the late 1990s as a visual data exploration tool used almost entirely by pharmaceutical and life-sciences researchers. As has been the case for other in-memory products, Spotfire's power and breadth of appeal have increased with the advent of multicore, multithreaded, and 64-bit server technologies. Since its acquisition by Tibco in May 2007, Spotfire has been enhanced with operational and predictive analytics, real-time data integrations, and data mining capabilities.

The Tibco Spotfire 3.0 upgrades announced today include pre-built data integrations to SAP BW, SAP R/3, Salesforce.com, Siebel eBusiness Applications, and Oracle E-Business Suite, in addition to a new Web services integration option. These connectors not only make it easier to integrate popular data sources, they also open up new data access and analysis options.

"Until recently, we've been limited to accessing data from relational data sources and file-based locations," said Tibco Spotfire product marketing manager Tim Wormus. "With 3.0, we're expanding to full enterprise connectivity, and you can also model the data so you can connect multiple sources to build a federated data warehouse or analytics layer." With Spotfire's caching support, Wormus said, you can pull data from production systems and let users query against the caching layer rather than mission-critical production systems.

Designed to support larger, enterprise-wide deployments, the scalability features in the 3.0 release include load balancing and failover support as well as new deployment management and administrative controls. The Web-based configuration controls ease remote administration while the deployment management features simplify migration from development, test, and production servers.

New analytics and visualizations introduced in Tibco Spotfire 3.0 include treemaps, new scatter plots, and error bars within bar and line charts that let you see the data behind the visualization. An added visualization toolkit is said to make it easier to build custom visualizations. "This extends our lead in our core competency of visually interactive, real-time analytics," Wormus said.

The Tibco Spotfire 3.0 release comes less than a week after SAP announced SAP BusinessObjects Explorer, a new product that blends the Internet-search-like Polestar query interface with the in-memory analysis capabilities of SAP's Business Warehouse Accelerator appliance. Introduced in 2006 as the Business Intelligence Accelerator, the BWA appliance is another in-memory product headed for mainstream use. The accelerated version of Explorer

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introduced last week is limited to accessing data in SAP BW, but a "second-wave" upgrade set to be introduced late this year or early next year is expected to access myriad data sources.

QlikTech QlikView and IBM Cognos TM1 (formerly Applix TM1) are two other venerable in-memory products. Several leading BI vendors have either recently added (MicroStrategy) or plan to add (Microsoft) in-memory analysis capabilities.

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