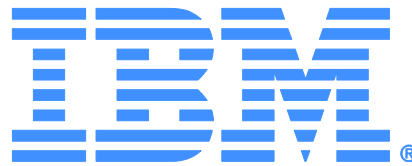




Getting the most out of your BI investment in SAP environments

As SAP shops continue to seek to get more value from their SAP application investments, BI-related projects are the one place IT can get easy executive buy-in. But SAP's BusinessObjects acquisition has muddied the waters for many SAP shops, which have made investments in BEx tools. In turn, many are wondering about BW's future and place in a new BI strategy -- and what enhancements SAP plans to bring to the data warehousing platform. In this eBook, readers will get an overview of SAP's BI strategy, and get advice on what to do about BEx, BW, and more to develop long-term BI strategies of their own.

Sponsored By:





Getting the most out of your BI investment in SAP environments

Table of Contents

[SAP BI roadmap one year later: How's Business Objects working out for SAP BI customers?](#)

[Leveraging BW strengths and overcoming weaknesses: Should you upgrade to BW 7.3?](#)

[Factors to consider when deciding to move off SAP Bex](#)

[SAP Business Warehouse Accelerator \(BWA\): Are the benefits worth the cost?](#)

[Resources from IBM](#)

SAP BI roadmap one year later: How's Business Objects working out for SAP BI customers?

By Courtney Bjorlin, Site Editor

Since SAP acquired Business Objects more than a year ago, the vendor's message has been clear to its SAP NetWeaver business intelligence (BI) customers -- start looking at SAP BusinessObjects.

Around this time last year, SAP released its post-acquisition BI product roadmap, which made clear that its Business Explorer (BEx) reporting product line would be phased out by 2016. SAP will continue to invest in the BI Accelerator and SAP Business Warehouse (BW), but the focus now will be on enhancing the Business Objects -- now known as SAP BusinessObjects -- front-end tools.

The roadmap may be clearly laid out and result in better BI software for end users. SAP BusinessObjects executive Jonathan Becher said SAP phased out BEx reporting tools "where SAP was less strong." But SAP NetWeaver BI customers are still figuring out how to get there.

"I think everybody can rest assured that the SAP BusinessObjects merger is proceeding very well. Business Objects is the front and center of all the new product versions. It's a very clear roadmap," said Boris Evelson, principal analyst with Cambridge, Mass.-based Forrester Research. "The bad news is that clients have to make very hard decisions."

Are SAP BI customers moving to SAP BusinessObjects?

At the time of the acquisition, SAP customers numbered more than 40,000 and Business Objects customers were in the high 30,000s, with about 5,000 overlapping between the two companies, Becher said. Since the acquisition, that 5,000 number has grown dramatically, he said, not specifying by how much.

A recent report by Gartner Research analyst Kurt Schlegel shows that SAP BI customers aren't in a hurry to move to SAP BusinessObjects, and most are still using the NetWeaver BI front-end analysis and reporting tools.

"Generally speaking, the majority of mature NetWeaver BI customers are loyal to SAP and the investments they made in the product," the report states. "However, they also are in no hurry to quickly adopt the Business Objects product roadmap."

This could be because the roadmap has left much of the customer base that installed NetWeaver BI tools disappointed, Forrester's Evelson said. After spending millions to install SAP BI tools, they're now being told they have to spend more to move to SAP BusinessObjects, he said. Gartner's research shows that SAP is charging as much as \$2,000 to \$3,000 per user to buy the Business Objects premium platform.

What's an SAP NetWeaver BI customer to do?

SAP customers now have to figure out what role SAP NetWeaver BI will play as their platform, and whether SAP BW will continue to be their main data warehouse, Evelson said. Rather than migrate to SAP BusinessObjects tools, SAP recommends a side-by-side deployment -- phasing over to the SAP BusinessObjects tools from Web Application Designer and BEx report designer, according to an email response from Business Objects executive Franz Aman.

"SAP customers who use the BEx tools will continue to be supported," Aman said. "However, SAP does recommend [that] customers evaluate the SAP BusinessObjects portfolio, as those solutions will be the strategic direction for the company and any new features and requirements will be implemented in the SAP BusinessObjects BI solutions."

For example, deploying a hybrid option that uses the BEx Analyzer as the OLAP front-end and Crystal Reports for reporting is a good option, according to the Gartner report. Building reports in Crystal will reduce some of the efforts needed later to convert reports created in the BEx tools, the report states.

"This is an attractive option for SAP customers that know they will eventually embrace Business Objects as their NetWeaver BI front end but just are not ready to commit yet," the report states.

Those contemplating a full move to SAP BusinessObjects may choose to wait until the end of 2009, when SAP plans to significantly enhance the BEx Analyzer, an OLAP analysis tool, under the name Pioneer, Evelson said.

Customers can also wait until 2010, he said, when BusinessObjects plans to release a new version of its Business Objects platform that promises to bring together its front-end tools on the same infrastructure -- so that they can be used seamlessly with one another.

Still, some customers will contemplate a third party.

"I don't see any kind of mass exodus from the SAP BusinessObjects product line," Evelson said. "But clients are definitely looking at other tools."

Take, for instance, Garden City, N.Y.-based LifetimeBrands, which designs and develops brands like KitchenAid. It went looking for BI software shortly after SAP acquired Business Objects.

The company could never really get a good sense of what it would take to support Business Objects, according to Cliff Siegel, senior vice president of the global supply chain, and settled on QlikView. Siegel said they're waiting to see where SAP goes with its BI products, and right now, QlikView provides them easy access to the information they need.

"We have what we need with QlikView," he said. "I was kind of having a hard time understanding what it would take to support the BI infrastructure. I just couldn't connect the prices."

What's in store in 2009 and beyond?

Still, analysts don't doubt that the Business Objects tools are better than the BEx ones, and SAP is committed to enhancing them.

Within the next couple of months, SAP will release a product that combines Polestar, a Business Objects search tool, with the Business Warehouse Accelerator.

The vendor is also focusing on bringing tighter integration between what formerly was SAP technology and what was Business Objects technology. That includes more efforts like the integration of Crystal Reports into SAP Business One.

There will also be tighter integration among the BI; governance, risk and compliance (GRC); corporate performance management (CPM); and information management product lines, Becher said.

For instance, if the process is order-to-cash, BI and GRC can help determine whether the customer represents a higher risk or identify any trade restrictions to moving a product. "Everywhere along that process dimension there's a need for that Business Objects portfolio," Becher said. "It's pushing more and more of those across the lines of business."

There are also plans for tighter integration between the NetWeaver platform and the Business Objects platform.

"It's probably safe to project that, over time, there will be tighter ties between NetWeaver and that platform," Becher said.

Leveraging BW strengths and overcoming weaknesses: Should you upgrade to BW 7.3?

By Courtney Bjorlin, Site Editor

SAP customers can expect several improvements in the forthcoming SAP Business Warehouse (BW) 7.3 release, but it came at a cost -- SAP skipped a release.

Early this year, SAP announced that it will scrap the BW 7.2 release because customers wanted more functionality in fewer upgrade steps. That new functionality includes enhanced modeling tools and better integration with SAP BusinessObjects and EIM tools to increase scalability and reduce development time.

Beta shipments of 7.3 started in July, and the product is set to go into ramp-up in November.

Even with the boost in functionality, BW customers still face a tough decision on whether to upgrade based on SAP's plans for its Sybase business and appliance strategy moving forward.

For example, customers have complained about BW's scalability, the difficulty of connecting to non-SAP data sources and the development time required on the customers' part. Some consultants say that smaller businesses are increasingly turning instead to SAP BusinessObjects Rapid Marts -- pre-built data marts for SAP and non-SAP applications -- for this reason. They enable shorter development cycles and are easier to deploy.

Still, between 10,000 and 12,000 SAP shops, mostly enterprises, have deployed BW at the heart of their SAP application initiatives, making it one of the most widely deployed data warehousing platforms. SAP shops like it because it is integrated with NetWeaver, and the analytic modeling and reporting layer and pre-packaged business content is highly complementary to SAP's ERP data model. SAP customers that sole-source BI/ERP can report and analyze data from SAP's operational systems, according to Madan Sheina, principal analyst with Ovum.

The customer base is split between customers running BW 3.x and BW 7.x releases, according to James Kobiellus, senior analyst at Forrester Research.

In turn, a lot of ISVs have built tools to optimize the database design, workload management and loading in BW deployments, Kobiellus said, providing customers with a host of software optimization options.

Another advantage to BW is that SAP doesn't integrate a database into BW; it leaves that choice up to customers. They can run and store data in a BW cube and choose an Oracle, Teradata, SQL or HP Neoview database, for example, Kobiellus said.

But the product has its notorious weaknesses.

First is its scalability, and, consequently, performance. BW doesn't scale beyond 60 to 70 terabytes across a 4-node to 8-node cluster, Kobiellus said. A lot of the newer data warehousing software can scale to petabytes. Despite well-entrenched tuning techniques, performance has always been an issue -- one that more and more users have to buy the BW Accelerator (BWA) to correct. With a BWA, query performance in BW is reduced from several minutes to seconds. But the BWA is expensive, and many customers can't afford it.

In turn, while the BWA is an appliance, BW itself isn't sold as a pre-integrated appliance. The appliance model itself is becoming a competitive advantage for other vendors, namely, Oracle Exadata, Kobiellus said.

That said, SAP is aiming toward an appliance strategy now that SAP has acquired Sybase and its database business, he said.

Under the development effort termed HANA -- high-performance analytical appliance -- customers will see more of a complete, appliance-based packaging and delivery of BW that's integrated with the BusinessObjects front-end tools, data integration tools and the SAP application suite, Kobiellus said.

In HANA's architecture, the data will be persisted in memory, and calculations are done in memory. It'll be virtualized across many processing and storage nodes, making it massively

scalable, enabling real-time data integration and real-time data query. This will all be integrated with ERP and other applications, Kobiellus said.

Sybase will be a big part of this, but HANA is not the next generation of Sybase IQ, the vendor's analytics server, Kobiellus said.

Customers looking to factor an appliance strategy into their SAP landscapes can expect the technology driven by HANA to be released sometime in 2011, Kobiellus said.

In the short term, customers will find several improvements in BW 7.3, including enhanced in-memory scenarios and delegating more calculations to the front-end BW Accelerator product. There's enhanced capabilities and performance, increased flexibility and simple configuration of the cockpit.

"It'll really set the stage for the HANA release next year," Kobiellus said.

Specific improvements, according to SAP, include:

- Semantic partitioning. There is a single point of entry for creation and administration, wizard-based creation of data models and data flows, easy re-modeling of the partitions and full integration of archiving and nearline storage.
- Graphical user interface. The graphical data flow modeling is fully integrated into the data warehousing workbench, enabling easy graphical design of complex end-to-end data flows and detailed technical customizing facilitated by forward navigation. There's automated tools to aid in the development effort -- including a dataflow wizard, a dataflow copy tool (to copy an existing dataflow or a process chain) and a dataflow migration tool (for migrating data from BW 3 to 7, for example).
- Accelerated data loads for data-store objects and master data.
- Tighter integration with SAP data services for accessing non-SAP data. There's a new source system type on BW called "Data Services," which can create simple dataflow from DataStore to BW DataSource. There's also tight integration of Data Services into extended SAP NetWeaver BW Data Flow concept.

- Tighter integration with the SAP Business Objects tools and other SAP performance management products such as SEM, as well as enhanced business planning and BW add-ons.
- Enhanced functionality for SAP administrators, including support of complex development landscapes, mass change function for authorizations and version management for MetaData objects.

Should you upgrade?

Most users tie a BW upgrade to an upgrade to ECC 6.0. If BW 3.x is performing fine in terms of queries and load performance, and ad hoc reporting, there's really no need to upgrade, Kobiellus said.

But many customers are finding an easier, and cheaper, approach in Rapid Marts, according to Brian Jordan, executive vice president of Kogent.

BW is more of a multidimensional, proprietary approach to data warehousing, and it is extremely IT-centric, especially for a small- to midmarket company with little IT staff. It's difficult to put BusinessObjects on BW because BusinessObjects is a relational toolset. Therefore, BW takes four times longer to implement than RapidMarts, Jordan said. For instance, to build a dashboard, users need exCelsius to connect to Microsoft Live Office, to BusinessObjects universe and then connect it to a BEx query. There's just a lot of workflow, and a lot of development cycles have to occur to get what the customer needs.

"They just don't play well together, and it's very painful to integrate that two," Jordan said. "With a Rapid Mart, you get that up universe up and built on top of it. You connect it the universe and it's ready to go."

Factors to consider when deciding to move off SAP Bex

By David Fox, Contributor

Aside from the end of life for a release, deciding whether to move off SAP BEx comes down to an evaluation of feature/function, user adoption and integration. Unfortunately, the last item -- integration -- is often overlooked because of the sizzle factor of some of the tools on the market.

SAP NetWeaver BW BEx continues to shine in areas such as multi-currency support, multi-language support, and use of flexible hierarchy relationships, and as a robust calculation engine and dynamic OLAP engine. While extremely powerful, these capabilities are overshadowed by the instantly impressive Web 2.0 flash-based tools available.

That notion is changing, however, and changing quickly. Pioneer -- the combination of the two flagship products SAP BusinessObjects Voyager and SAP NetWeaver BEx Analyzer -- will be made available in ramp-up in 2010. Soon, customers will be able to have a consistent user interface across desktop client and Web versions of the product. This will have a tremendous positive impact on end-user satisfaction and user adoption rates.

With an increase in end-user adoption rates, the velocity of information delivery will increase, which will be accompanied by an increase in ROI. Furthermore, this increase in consumption will result in additional needs for increased access to external data. The increased adoption and use of the front-end tools will drive the need to expand the underlying data warehouse, as well as increase self-service functions and automation initiatives. Customers will find the information value chains becoming more efficient as the tool integration matures. Taking a view from the BI Maturity Model developed by Wayne Eckerson of The Data Warehousing Institute, the integration will have a significant impact on helping customers transition from a state of actionable information to decision automation.

When you think of benefits, it comes down to removing the barriers to user adoption and increasing ROI. Getting to BW 7.2, which SAP has now rolled into the NetWeaver BW 7.3 release, and Pioneer will eliminate the last remaining barrier to attaining full user adoption. As users become attuned to the robust and consistent user interface, the focus will shift to additional information needs and a continued increase in the velocity of the information value chain -- driving automation.

David Fox is the principal BI architect for Claricent Inc., an SAP consulting firm that specializes in NetWeaver BI, and now in NetWeaver and BusinessObjects integration. Fox has more than 10 years of experience in NetWeaver BI.

SAP Business Warehouse Accelerator (BWA): Are the benefits worth the cost?

By Courtney Bjorlin, Site Editor

One of the more common SAP complaints heard at the water cooler is that SAP Business Warehouse (BW) queries are taking too long.

When it comes to performance, BW hasn't really cut it as a traditional data warehouse. For example, a solid data warehouse has a multi-dimensional data model. However, BW is a flat, relational database. Therefore, BW doesn't scale to accommodate large data sets, and despite well-entrenched tuning techniques, performance has always been a pain point, according to Justin Burmeister, a longtime Basis administrator.

SAP's answer is the Business Warehouse Accelerator (BWA). By integrating the TREX search engine with BW, indexing all of the fact tables and putting it all in-memory, SAP created a brilliant architecture, Burmeister said. Query performance in BW is reduced from several minutes to seconds. Queries aren't performed on insufficient subsets of data. System performance isn't negatively affected. Users are wildly happy.

But then the bill comes – along with the nagging feeling of getting charged for something SAP perhaps should have fixed in the first place and the frustration of seeing obvious ways the whole project could be cheaper.

"On the Basis team, we're heroes, taking the 20-minute queries down to two seconds (with the BWA)," Burmeister said, adding that while SAP has recognized the popularity of the BWA, it responded with a "ludicrous" pricing model.

"The licensing model is a total boondoggle," he said. "To me, this is a workaround to fundamental architecture flaws in BW, under the pretext of 'certified hardware/software integrated solutions,' serving as a cash cow for SAP and its hardware partners. You shouldn't have to do this in the first place."

Why does the BWA cost so much?

Cost is the chief complaint with the BWA, and several customers interviewed blamed the way BWA is being sold.

A BWA is sold in two parts: Customers buy the hardware package from their choice of hardware partner, and SAP sells and licenses the software. The software is already loaded onto the hardware, and the hardware is preconfigured to plug into the customers' environment like an appliance – with the goal of everything working out-of-the-box, according to SAP.

IBM, HP, Fujitsu, Dell, Cisco, Sun/Oracle, and Teradata are the "key" BWA partners, according to SAP.

The biggest expense is the hardware, which can't be shared with any other application. SAP's list price for the software is around \$50,000, according to Forrester Research's Boris Evelson, principal analyst with the Cambridge, Mass.-based firm. The average price for the hardware is around \$200,000, according to Forrester.

SAP acknowledged customer dissatisfaction with the pricing model and said in an email response, "We understand there has been some discussion about the cost of the product, and we're constantly reviewing our pricing and deployment flexibility as we improve BWA."

Users see some obvious ways the cost of a BWA can be brought down.

One, for example, is being able to install it on their own. Customers are discouraged from installing the BWA themselves, said Tony De Thomasis, NetWeaver Technician at Australia Post, the Australian postal service. Customers who try to do so are prompted with this message on the main BWA installation splash-screen, "Support can only be granted for installations performed by these vendors..."

"I would much prefer to stand up my own infrastructure and run the BWA the same way I run my NetWeaver Enterprise Search instance," De Thomasis said in an email interview.

SAP should allow customers to build their own accelerators using their own hardware, integrating the TREX search engine software with BW themselves, Burmeister said. One large customer he worked with was ready to spend \$750,000 on blade hardware that would have cost \$90,000 to \$120,000 had it not been purchased as part of a BWA sale.

Still, customers are left with a difficult decision – one in which the benefits of BWA are tough to ignore.

"BWA has become quite a big decision for BW customers," Gartner Research vice president Kurt Schlegel said in an email. "They really need the performance boost it provides, but it is quite expensive and SAP is not discounting. I wouldn't expect SAP to soften their stance, as they are making too much money from the BWA."

Take Australia Post, for example. The organization, which runs 80 SAP instances, recently partnered with IBM on a BWA pilot program. Query performance in the BW 7.01 is acceptable now, De Thomasis said. But with a 1.1 terabyte (TB) database growing at approximately 200 gigabytes per month, query runtime will become longer and overall system performance will degrade down the road.

In the pilot program, the team determined the 10 most important BW queries and did the following "tests." They ran and measured query runtime without the BWA, ran the same load and measure query runtime with the BWA, and ran the same load and measure runtime without the BWA, but doubled the memory on a BW instance.

"The test results showed the BWA to be the winner hands-down," De Thomasis said. "In some cases, up to 65 times runtime improvements were measured once we activated the BWA."

The cost of the BWA is a major concern, but Australia Post will go forward with it because business requirements always come first, De Thomasis said. The organization is preparing for an influx of requests for analytical applications and complex, ad-hoc queries on employee mobile devices.

According to Werner Hopf, CEO of Dolphin, an SAP partner that specializes in information lifecycle management, the most important factors that go into the decision to implement BWA are the number of transactions loaded into cubes per time period, how frequently data from previous periods need to be modified, the number and complexity of queries, and the number of concurrent users running queries against the system.

Alternatives for improving BW performance

Customers need to compare the BWA expense with the labor effort (and data latency) of using aggregates in BW to improve performance, Schlegel said. And, like Australia Post, they need to compare the benefits and expense of buying BWA against throwing more hardware at the problem.

But there are other options for improving BW performance without purchasing a BWA.

For example, organizations should look first at tuning. There is a lot of tuning that can be done, Evelson said.

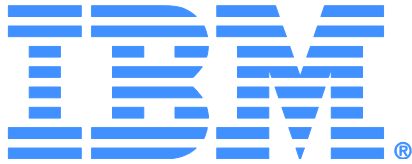
BWA is a necessary ingredient once you reach a certain size, Hopf said, but implementing ILM and archiving can dramatically improve query performance. A good strategy is to implement nearline storage first and then decide whether query performance justifies a BWA purchase. Organizations may find they can postpone a BWA purchase, or, when using nearline in conjunction with a BWA, at least reduce the sizing of BWA, he said. BWA and Dolphin's work can also be complementary solutions, where a customer using a BWA can lower the total cost of ownership and maintain performance by incorporating nearline storage.

Nearline, column-based storage gives organizations similar performance -- not quite as fast, but almost as fast, as BWA, Hopf said. It can reduce 20-minute queries to 10 to 20 seconds, he said. And it costs a lot less. Depending on the hardware architecture and vendor, hardware cost would be approximately \$20,000 for a 5 TB BW system. Cost for a 1,000-user license is approximately \$150,000. That's compared to around \$675,000 for a 5 TB BWA system. Plus, ongoing storage and administration costs are reduced.

In turn, the nearline environment can be used for non-productive systems (QA, training, sandbox, etc.) without additional cost, Hopf said, while for BWA, at least a few blades would be required for a test system to perform integration testing.

"The core issue is really that the BW Accelerator is a point solution to address performance or query response time," he said. "But it's not necessarily the only ingredient to having an efficient overall analytics and business intelligence infrastructure in place."

Resources from IBM



[Cognos software on the SAP NetWeaver® platform](#)

About IBM

At IBM, we strive to lead in the creation, development and manufacture of the industry's most advanced information technologies, including computer systems, software, networking systems, storage devices and microelectronics. We translate these advanced technologies into value for our customers through our professional solutions and services businesses worldwide. www.ibm.com