

# Open Source BI

## A Ventana Research Primary Research Study

### Executive Summary



**V E N T A N A**  
R E S E A R C H

*Aligning Business and IT to Improve Performance*

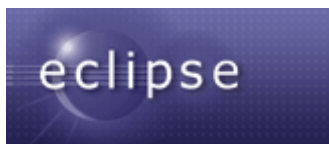
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San Mateo, California  
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Ventana Research performed this research for a fee to examine Open Source BI. This document is based on our research and analysis of a quantitative survey administered via the Web to qualified respondents. Qualification was based on involvement with the use, deployment and maintenance of business intelligence systems.

This research was designed to investigate companies' attitudes and actions toward the use of open source BI systems. This research is not intended for use outside of this context and does not imply that organizations are guaranteed success by using only these results to improve overall corporate performance. Moreover, gaining the most benefit from any performance alignment technology begins with an assessment of your organization's unique needs.

We certify that Ventana Research wrote and edited this report independently, that the analysis contained herein is a faithful representation of our evaluation based on our research and our experience with performance management techniques, and that the analysis and conclusions are entirely our own.

*Ventana Research*

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## EXECUTIVE SUMMARY

Open source software is more widespread today than ever before. In general, unlike companies that develop proprietary software and control it for profit, developers of open source software make its source code available for use and/or modification from its original design free of charge. After changes, users can distribute their versions of it for free. Open source is now taking market share from commercial software in key product categories, including operating systems (Linux), application servers (JBoss), Web servers (Apache), programming languages (perl and php) and databases (mySQL, PostgreSQL).

In the realm of business intelligence (BI) software, open source projects have emerged over the last 18 months. They include BIRT, JasperReports, Pentaho, Mondrian and Jreports. Some of these Open Source BI projects are supported and developed by software vendors such as Actuate, JasperSoft and Pentaho. The Open Source BI movement has reached a point at which many organizations are asking themselves whether they might use this software to replace custom-coded BI systems (such as reports or dashboards), commercial BI software deployments or both.

For open source projects, questions always arise about viability and adoption on a large scale. The following are particularly pertinent:

- Can Open Source BI software successfully challenge commercial BI software?
- What factors will affect success or failure for Open Source BI software?
- What is the current state of adoption for Open Source BI software?
- What are the future trends for adoption of Open Source BI software?
- Does the overall open source movement affect the success of Open Source BI software adoption?

This research report explores in depth and attempts to answer these and other pressing questions.

The data analyzed for the study comes from a quantitative survey Ventana Research conducted via the Web between November 2005 and January 2006. We solicited participants in roles having both IT and line-of-business (LOB) titles. Various managerial levels participated. Our aim was to get a broad overview of the intentions, perceptions and trends of the market regarding Open Source BI. Of 552 participants who entered the survey, 320 completed it. Of those who finished it, 67 percent of the respondents had IT roles and the remaining one-third had business roles. Most (72%) were from the United States. Industry representation was broad, with the greatest representation from a single industry – computers – being only 18 percent. In terms of size, 22 percent of participants were from large companies (having annual revenue of \$1 billion or more), 20 percent from midsize companies (\$100 million to \$1.0 billion in annual revenue) and 45 percent from small companies (having less than \$100 million in annual revenue); 13 percent did not declare their company's size.

Interest in and early adoption of Open Source BI is widespread and growing. Our research shows that 21 percent of organizations involved with Open Source BI have already deployed applications, 19 percent are in development and 43 percent are considering deployment. The findings suggest that the number of large deployments (more than 1,000 users) will grow two to three times within the next 12 months. The majority of respondents said they would deploy more Open Source BI projects within their organizations. Further, there was no “glass ceiling” limiting Open Source BI deployment; a majority also stated that there were no future projects for which they would not consider Open Source BI.

Users of current deployments of Open Source BI were mostly operational users and not midlevel managers or senior executives. Over time, though, we expect senior and middle management to use Open Source BI also, as organizations have time to broaden access to include these other types of users.

Open source BI technology is not yet a standard, in the sense of being the only BI platform for most organizations. Few respondent organizations had standardized on using a top-down plan for deployment, and the largest group evaluated Open Source BI use project by project. Yet numerically significant groups of respondents had deployed Open Source BI enterprise-wide, for extranet use or for mission-critical situations. Further, 84 percent of organizations that already had deployed Open Source BI intended further deployments, whereas only 48 percent of organizations still considering Open Source BI software intended further deployments.

Cost is a primary factor driving consideration of Open Source BI software. The largest segment (48%) of respondents expected Open Source BI to be half the price of equivalent commercial BI software; one-fourth expected it to cost the same as commercial BI software. However, the majority of respondents also stated that Open Source BI was sufficiently feature-rich to satisfy their requirements. At the same time, most of the respondents who were considering or using Open Source BI software already licensed commercial BI software. Ventana Research concludes that Open Source BI is used for different purposes than is commercial BI, has lower cost and potentially fewer features, but is no less adequate for users. It is noteworthy that slightly less than half of respondents were from small companies, which implies that open source BI adoption may be led by agile organizations that have fewer resources than larger companies.

It also is important to note that current and future users of Open Source BI software want it to continue to develop. Respondents cited improved security support, more data source adapters, improved administration and a metadata layer as leading features they wanted to see added. Organizations that had deployed Open Source BI also cited a need to render data in PDF files.

While rather small numbers of respondents said they had purchased support (18%), maintenance (17%), consulting (12%) or indemnification services (11%) from Open Source BI vendors, larger portions of each (28%, 26%, 24% and 14%, respectively) reported they intended to do so. In fact, organizations that had deployed Open Source BI software had a proportionately larger percentage of respondents that had purchased one or more of these services than those that were only considering Open Source BI. Ventana Research believes that these investments in supplementary services indicate a commitment by organizations to Open Source BI.

We also asked respondents how involvement with Open Source BI benefited them individually. The primary personal (as opposed to organizational) benefits that they credited to use or development of Open Source BI were fulfilling organizational objectives and improving the ability to meet management's needs. Respondents cited that open source community participation and improvement of their own personal marketability were much less important.

## WHAT TO DO NEXT

### Choosing an Open Source BI product

The results of this research show that most organizations involved with Open Source BI expect support from a commercial enterprise involved with advancement of the technology. Ventana Research believes that this will become more important as organizations commit more resources to Open Source BI. We therefore urge that when choosing an Open Source BI product companies consider the availability of support from vendors as well as the developer community.

In addition, community support should be evaluated in terms not just of the frequency of downloads but of other, more important factors. Our survey respondents reported that popularity, as indicated by download volume, was not a key factor for choosing an Open Source BI product. More important were the size of the community actually using the technology and the activity associated with it. Characterizing this is difficult at the moment because statistics on usage are sketchy. This will change with time, and we expect to quantify this in future research studies. However, factors such as timeliness of response to questions in chat groups, participants' organizational titles and employers and frequency of postings in user groups can serve as proxy indications of a community's vibrancy.

Study respondents also cited quality of code and affiliation with other open source projects as important. The best ways to determine the quality of code are by investigating customer references and performing evaluations in-house. We advise that vendors be asked about their quality assurance processes, including automation and code coverage. Affiliation with other projects may be relevant if the possibility of integrating them with existing systems exists. Review support within Open Source BI for other open source project-specific features that could offer attributes such as improvements in system performance improvement and ease of use, reductions in cost and risk and overall increases in productivity for users and/or developers.

### Operational Use of Open Source BI

The fastest-growing segment of the business intelligence market is Operational BI. Organizations now see business intelligence technology as critical for delivering information that their front-line workers need for daily decision-making. Technical challenges related to this use of BI are different than for departmental or management use. User communities within corporations can be quite large, in the thousands or tens of thousands. These users generally are not technically adept and require their BI systems to meet their needs without a lot of fuss. Deployment of operational BI most often occurs in the form of a highly customized system that is usually described as an "application." These customizations emphasize intuitive ease of use, no need for training, guaranteed performance and ready access.

Open Source BI is now in use as a platform for Operational BI applications. Organizations considering it for operational decision-making should not use traditional departmental or managerial BI evaluation criteria, but instead should reframe their evaluation for the specific needs of operational deployment. The lead evaluators should be less sophisticated operational users rather than power users. However, developers should work in concert with these operational users to assure that the technical capabilities they provide match the operational needs.

## **Standardization of BI and Open Source**

Many IT organizations now seek to reduce support costs for business intelligence technology by standardizing and consolidating their BI technology portfolio. This has both the advantages and limitations of a one-size-fits-all approach. Certainly cost reduction via rationalization of technology infrastructure is a worthy strategy. But organizations should also consider its impact on the end users, especially if their needs vary widely, and the potential sacrifices of useful product features to pursue a rationalized BI technology portfolio.

We recommend that for the near term organizations seeking to standardize on one or a few BI technologies to reduce cost and streamline IT responsiveness balance their use of commercial BI and Open Source BI.

## **TCO for Open Source BI**

A commonly held belief is that Open Source BI has a lower total cost of ownership than commercial BI. The results of this study support that notion. Nevertheless, just as with selecting a commercial BI platform, Ventana Research recommends “running the numbers” for the total cost of ownership of Open Source BI. Since this calculation will be done for a future project, estimates should be made for areas of specific risk. These include:

- transition costs if the organization decides to switch technologies
- maintenance, support and consulting costs from vendor(s) supporting the Open Source BI project
- costs for license management related to Open Source (such as indemnification)
- costs to build required functionality not found in the Open Source BI software
- costs to train developers, administrators and users on the new software.

Ventana Research recommends applying a structured approach that assures equivalent comparisons between alternative approaches to deploying BI (whether Open Source or commercial).

## **Upgrading to a Commercial Version of Open Source BI**

The decision to upgrade to a commercial version of Open Source BI should be based on a need for particular features or functions and on return on investment. Commercial vendors of Open Source BI may be strongly motivated to continue to develop their products, but they often make independent decisions as to which capabilities they upgrade. As stated above concerning Operational BI, organizations should evaluate commercial upgrades based on the value they provide in improvements in system performance and ease of use, decreases in costs and risks and increases in productivity.

## **Capabilities to Evaluate Carefully**

Our research showed that the primary areas where respondents thought additional development was needed were:

- security integration
- data source adapters
- administrative capabilities
- metadata management and use
- dashboard capabilities.

Organizations should apply a weighted approach to prioritizing their own needs against the existing capabilities of Open Source BI systems. For additional needed functionality, determine whether it can be easily developed on the fly and estimate the cost of that development.

## HOW VENTANA RESEARCH CAN HELP

Competitive and profitable companies in the next decade will focus their business and IT investments on improving performance. Business Intelligence (BI) is a critical component to provide an organization the information required to optimize business results. There are challenges ahead. Business user demands for timely and relevant information are increasing while IT resources are constrained. IT portfolios are consolidating, the vendor landscape is more fluid than ever and strict IT governance requires a stated business return and TCO calculation for approval of each technology investment. To address these challenges, you need to leverage your resources effectively and build a solid BI strategy that aligns people, process and technology.

Ventana Research can help. We are the leading Performance Management research and advisory services firm. Our analysts and consultants have extensive BI experience combined with an ongoing research foundation into business and technology trends, vendor solutions and best practices. Serving as an objective extension to your team, we can help you create a roadmap addressing business and technology issues to improve performance.

Through our **Business Intelligence Strategy and Technology Assessment** service, we will:

- Profile your business user community based on their role, level, and process ownership (or business activity) within the organization.
- Assess challenges and desired improvements to current activities as they relate to performance improvement initiatives.
- Evaluate your current BI technology investments.
- Perform a TCO audit to capture all related costs to existing BI investments.
- Conduct a gap analysis and build a targeted, profile-based BI strategy based on the desired performance improvements and the associated business user community.

You'll Get:

- **BI Strategy and Roadmap** – Your BI Strategy will serve as a foundation to accelerate and ensure the success of ongoing, multi-year initiatives.
- **Industry Benchmarks and Best Practices** – We will deliver education through industry business and technology benchmarks and help you leverage best practices like project assessment and TCO.
- **Increased User Adoption** - We will help you align profile-based business requirements with the appropriate BI technology to enable organizational adoption of technology.
- **Decreased Project Risk** – Through our understanding of the vendor landscape and a proven methodology for mapping requirements with solutions, we will streamline the vendor selection process to guarantee optimal results.
- **Reduced Costs and Increased ROI** – By instituting a rigorous methodology to align your people, processes and technology you gain assurance you'll get it right the first time and decrease costs while reaping the benefits of BI for an increased ROI.

*This service is customizable to meet your specific needs. Please contact us to learn more about Ventana Research proven methodologies, research and results at [clientservices@ventanaresearch.com](mailto:clientservices@ventanaresearch.com).*

### **About Ventana Research**

Ventana Research is the leading Performance Management research and advisory services firm. By providing expert insight and detailed guidance, Ventana Research helps clients operate their companies more efficiently and effectively. These business improvements are delivered through a top-down approach that connects people, process, information and technology. What makes Ventana Research different from other analyst firms is a focus on Performance Management for finance, operations and IT. This focus, plus research as a foundation and reach into a community of over two million corporate executives through extensive media partnerships, allows Ventana Research to deliver a high-value, low-risk method for achieving optimal business performance. To learn how Ventana Research Performance Management workshops, assessments and advisory services can impact your bottom line, visit [www.ventanaresearch.com](http://www.ventanaresearch.com).