

Application BI: Agent of Change

A Ventana Research
Primary Research Study

White Paper

Prepared For:



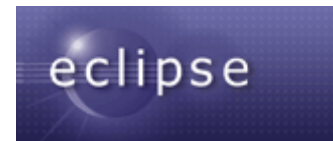
V E N T A N A
R E S E A R C H

Aligning Business and IT to Improve Performance

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Ventana Research performed this research for a fee to examine Application 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 application BI systems and tools. 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

Extracting information from transactional applications is a continuing struggle for businesses today, and they and their suppliers take many approaches to accomplish it. Vendors have created report templates, metadata management tools, schemas, load scripts and taken other approaches as well. Collectively, these constitute a category of analytic applications tailored specifically for transactional applications, typically developed by large mainstream vendors.

For the purposes of this study and as a means of delineation from other categories of business intelligence (BI) software available on the market, Ventana Research calls these products Application BI. Large-scale applications from Oracle, PeopleSoft (now part of Oracle), Siebel (also now part of Oracle) and other enterprise resource planning (ERP) vendors are data sources for Application BI. Various software vendors, including Noetix, now offer products in this space. Application BI requires little customization and comes with tools and functionality that allow automated adaptation to updates and changes in the vendor-developed transactional system.

The purpose of this study is to examine the value and success of Application BI in the market. The study will identify the leading factors that facilitate or inhibit the use of Application BI systems to extract information from transactional or planning applications. Data collected for this study comes from a quantitative survey Ventana Research conducted via the Web between November 2005 and January 2006. We tallied responses from 383 professionals from small, midsize and large companies. Line-of-business (30%) and IT (70%) roles were represented. Respondents were predominantly from North America (78%), with small percentages from other regions in the world (22% total).

Adoption of Application BI is well-established. The large majority of respondents said they have existing deployments (44% of respondents) or development under way (27%). Few respondents cited no intention to deploy Application BI. While most current deployments (66%) were relatively small (up to 200 users), final deployments of projects or partial others to be completed in the next 12 months were expected to be much larger: 42 percent claimed final deployments of 1,000 to more than 20,000 users. For example, more than twice as many respondents expected to have deployments of more than 1,000 users than were deployed today. Clearly, organizations intend robust deployments of these kinds of applications. Further, the growth of these deployments indicates intent to invest further in them. This intention is a key indicator of likely success in the market for Application BI products.

In searching for the causes of this probable success, Ventana Research investigated the perceived value of technology-related benefits from Application BI systems. These were the leading benefits that respondents cited (in descending order of priority):

- to adapt to and support ongoing changes automatically (68% cited as extremely important or very important)
- to enable end users to create or modify their own reports (66%)
- to have a common metadata layer that supports both daily and operational reporting (65%)
- to query and integrate operational data from multiple databases without requiring a data warehouse or an operational data store (58%).

Ventana concludes from these responses that organizations most highly value Application BI systems that reduce maintenance and implementation costs, enable end-user self-service and assure consistent, accurate data for analysis.

Responses were divided equally for and against the idea that Application BI deployments reduce dependence upon extraction, transformation and loading (ETL) systems and data warehouses. Specifics of the organization such as individuals involved, business information needs, and the implementation and support processes involved likely contribute as much to reliance on ETL applications and data warehouses as does the use or not of an Application BI system.

Ad-hoc query and analysis (57%) and operational reporting (53%) were the capabilities respondents most often cited as part of their current Application BI systems.

Performance management was a top concern in respondents' plans for further implementation of Application BI systems. The leading categories were scorecards (50%) and dashboards (49%). Use of scorecards, dashboards and alerts indicates an intention to manage performance. Enterprise metadata management (49%) was another leading capability planned for Application BI systems; it was rated similarly important in prior studies of operational BI applications, in which respondents cited integration of application metadata as a key priority. Also cited were data mining (44%) and budgeting, forecasting and planning (44%), both of which indicate intentions to research and plan performance.

As with other Ventana Research studies on BI, this one indicated that Finance (35%), Support (18%), Sales (15%), Marketing (10%) and Services (9%) are the organizational departments that most commonly use Application BI. Not only do organizations want to measure financial performance, they want to enhance their understanding of and service to customers. The top business benefits were improvements in visibility across the organization, business competitiveness and customer service. To achieve these goals, organizations cited the following leading information benefits from Application BI: making decisions better and faster, providing more data to more individuals and running the business more efficiently.

ABOUT THIS STUDY

Many organizations gain understanding of their operations by examining data stored in transactional or planning applications via business intelligence software. The challenge in preparing to do this often lies in minimizing the effort it takes to create the BI interface. Metadata, queries and reports all must be created to serve business decision information needs, but that creation must involve consideration of the ways in which the data is stored.

Creating a tool that works comfortably at the intersection of these factors can be a complex and costly task. Various vendors have simplified this onerous process with business intelligence software built to generate information automatically from popular vendor-developed transactional systems. These products, here called Application BI, require much less customization by users than do others built on a general BI platform. Further, they come with the capability to automate adaptation to updates and changes in the vendor-developed transactional system.

Anecdotal evidence collected by Ventana Research indicated that a growing number of companies were adopting vendor-provided Application BI products and deriving significant benefits from them. The purpose of this study is to validate or refute those impressions.

Our research study identifies the leading factors that facilitate or inhibit the use of business intelligence systems purposely built to extract information from particular transactional or planning applications. Respondents ranked their preferences for capabilities of these applications. They characterized key traits such as ease of use, time to deployment and reaction time for user support. They also mentioned the following features as affecting their willingness to adopt vendors' Application BI products:

- affiliation with an enterprise application vendor (Oracle, SAP, Siebel and others)
- completeness of the Application BI offering
- its ability to provide information context automatically
- its ability to aid in training and support for use of the underlying ERP application
- its ability to adapt to changes in the transactional vendors' applications
- the size of the project for which Application BI software will be used
- modularity of the Application BI technology.

Methodology

Data collected for this study comes from a quantitative survey Ventana Research conducted via the Web between November 2005 and January 2006. Ventana Research solicited participation in the survey via e-mail blasts and Web site invitations. These solicitations were done via the media sponsors of the study. They are businessintelligence.com, datawarehouse.com, Directions Magazine, Intelligent Enterprise and TechTarget. We targeted roles with IT and line-of-business (LOB) titles. Various managerial levels participated. Our aim was to get a broad market overview of the intentions, perceptions and trends of the market regarding Application BI.

Solicitations were done by both Ventana Research and media publishers that presented ads on their Web sites and in their e-mail newsletters as well as targeted e-mail

invitations. Both Ventana Research and its media partners originated the e-mail blasts. The survey form defined Application BI as follows:

Unlike a BI platform or suite, Application BI comes preconfigured to support specific underlying transactional applications. Application BI consists of predefined report templates, predefined schema definitions and other integration and automation tools to streamline and automate creation of reports, BI metadata, predefined queries and views from transactional, enterprise resource planning (ERP), supply chain management (SCM), human resources (HR), customer relationship management (CRM) and other similar applications.

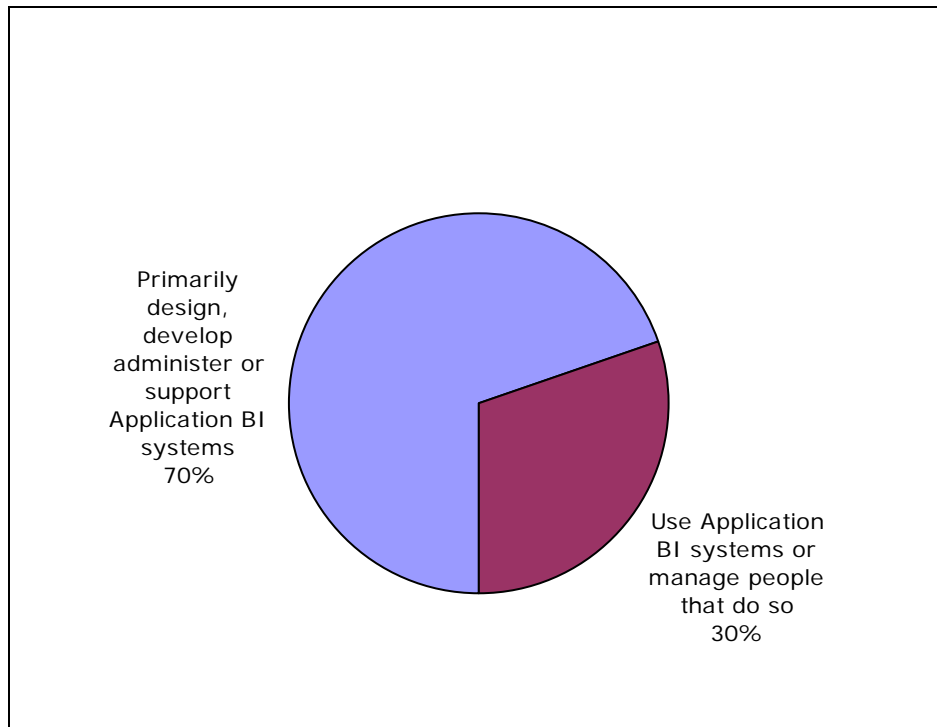
We offered the following incentives to respondents who completed the survey:

As a token of thanks for your time, the first 50 qualified participants will receive a \$5.00 Starbucks gift certificate. All qualified participants will receive a \$125.00 membership to the Ventana Research Performance Management Community and a research report on the findings and will be entered in a drawing for an iPod Nano.

Demographics

The following charts depict detailed demographic data for the respondents who completed the survey. A total of 2,837 Web users clicked through to the survey. Of these, 383 were directed to the question thread for Application BI. Respondents from small, midsize and large businesses are included in the results. Of the 383 respondents that started the set of questions, 298 completely answered all questions. Abandonment increased linearly throughout the set of questions.

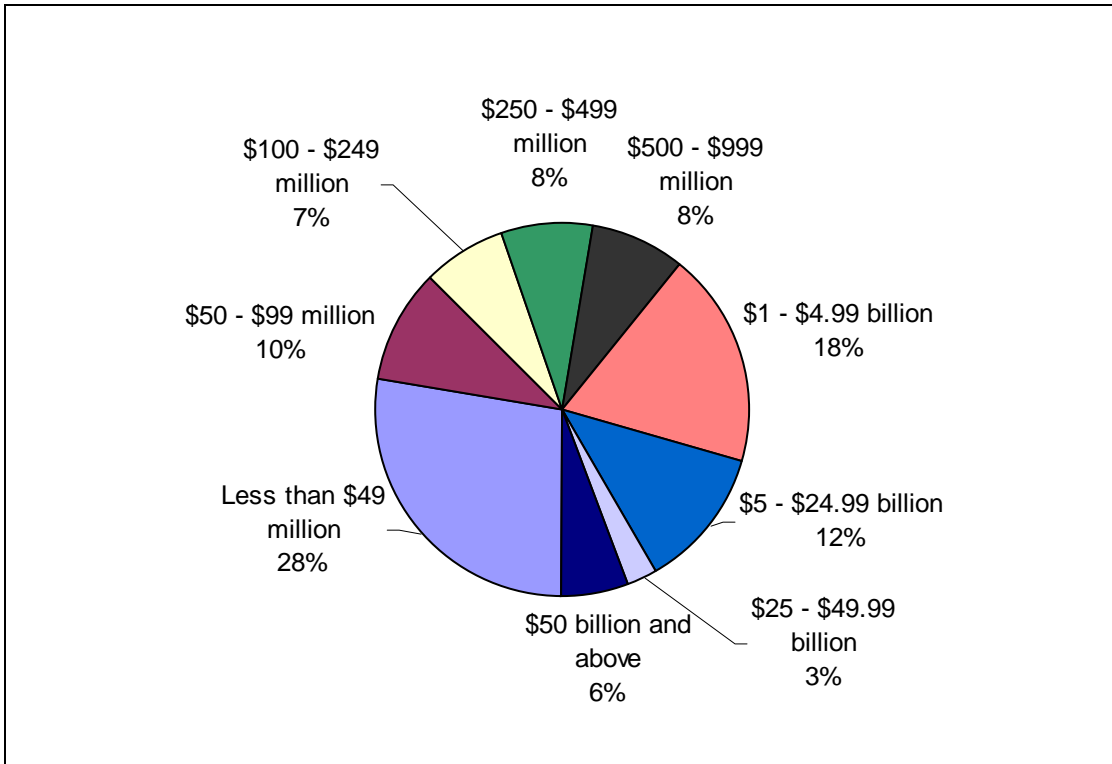
Figure 1
Respondents by Role



Source: Ventana Research

Respondents fell into two basic categories, support and users. The large majority play a support role: 70 percent of the respondents indicated they work in IT, while the remaining 30 percent of the final qualified survey population – the users – were business managers and executives.

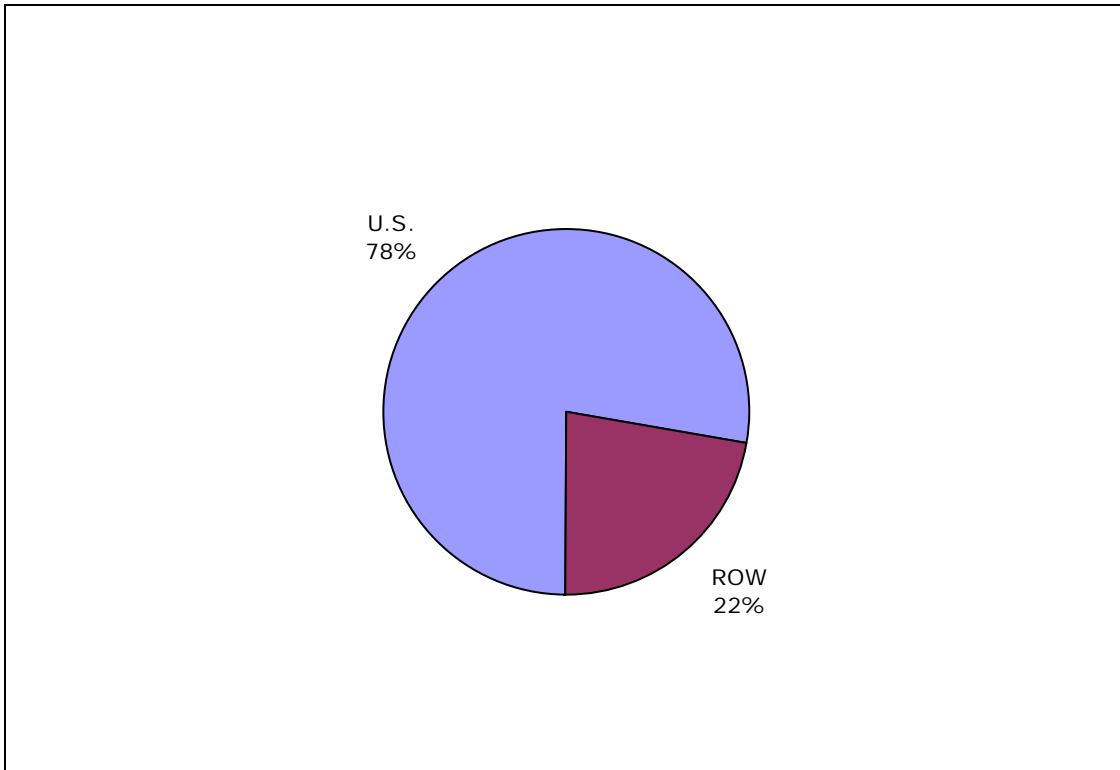
Figure 2
Respondents by Company Revenue



Source: Ventana Research

Of the respondents, 39 percent were with Global 2,000 companies, 23 percent were with midsize businesses, and the remaining 38 percent were from small companies. For this study, Ventana Research defined “medium-size business” as one having annual revenue between \$100 million and \$1 billion and “small-size business” as one having annual revenue up to \$99 million.

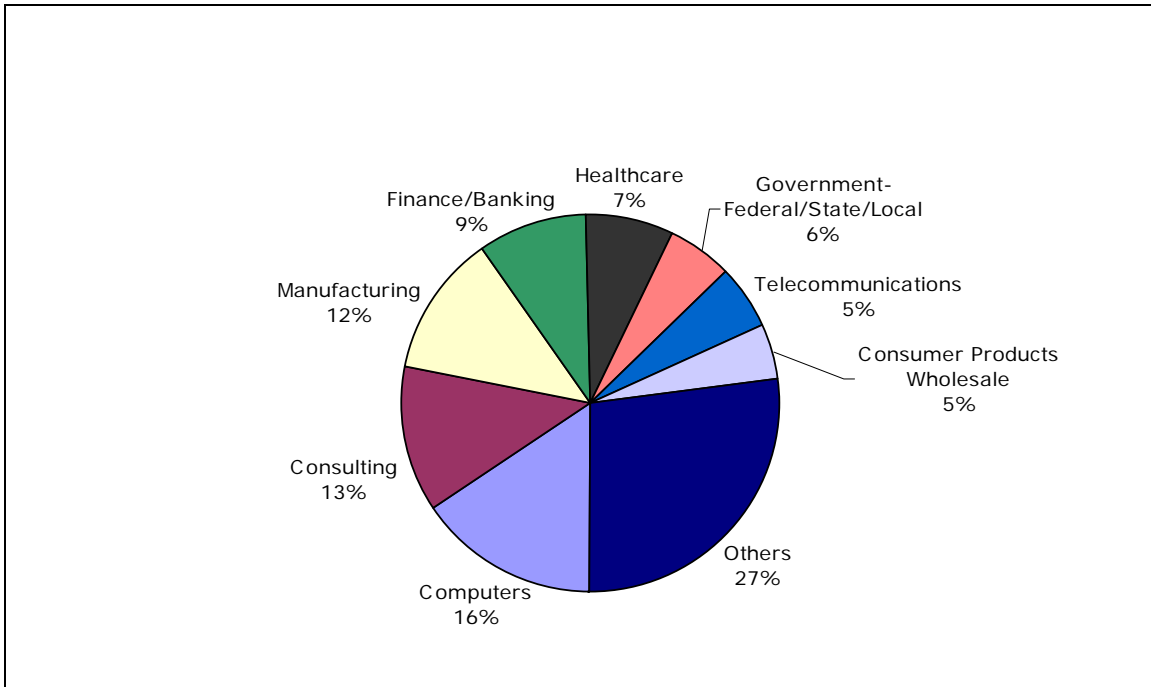
Figure 3
Respondents by Geographic Region



Source: Ventana Research

North America (78%) was the dominant geographic segment represented in the support group. The remaining 22 percent came from various places in the rest of the world (ROW).

Figure 4
Respondents by Industry



Source: Ventana Research

Industry representation was broad, and represents a composite view of the business market as a whole.

KEY INSIGHTS

Note: Parenthetical references found at the ends of sentences and beginning with Q indicate that the percentages noted just previously are derived from responses to that question. For example, in the first instance below, "(Q2)" means that the numbers for the status of deployments in the preceding sentence come from answers to Question 2.

Application BI is an established technology.

The anecdotal evidence cited above, which implied that companies have strong interest in Application BI, was supported by the data from this study. Further, adoption of Application BI by the respondents was significant. Of the 383 respondents who answered the question how their organizations were involved with Application BI, 44 percent had fully deployed one or more Application BI systems, 27 percent were in deployment of such an application and 24 percent were considering it. Only 2 percent were not considering involvement (Q2). Ventana Research believes that this result shows that Application BI is well-known, and for almost half of the respondents, is a tool in active use for gaining information from their enterprise applications.

While 66 percent of the respondents' organizations had deployments of less than 200 users, over the next 12 months that percentage is predicted to shrink to 37 percent as the next larger segment, 200 to 1,000 users, will grow from 20 percent to 36 percent (Q4). Larger segments of 1,000 to 5,000 users, 5,000 to 20,000 users and more than 20,000 users also will grow. Results show that the percentage of respondents in each of these larger user groups will grow to approximately 300 percent of current counts at final deployment. Clearly, organizations intend to have robust deployments of these kinds of applications. When compared to other operational BI-related surveys, this distribution of user communities is roughly similar in that significantly more large deployments will result. Further, the growth of these applications indicates a desire to invest further in them. This intention is a key indicator of success in the market for Application BI solutions.

Users perceive a variety of technological benefits.

Ventana Research asked what benefits the respondents valued in Application BI systems. They replied as follows:

- They include prebuilt report templates (Q6).
- They enable users to automatically generate and update reports, BI metadata and analytical views from Oracle, PeopleSoft or Siebel applications (Q7).
- They provide a common metadata layer that supports both daily, operational reporting and interactive, analytic applications (Q8).
- They can automatically adapt to and support ongoing changes in the underlying table structures over time, such as application version changes and internal modifications (Q9).
- They help shorten report development by providing a comprehensive set of prebuilt report templates that accurately reflect the user's own unique business information needs and terminology (Q10).
- They can automatically adapt to changes in tables, schemas and APIs of the Oracle, PeopleSoft or Siebel transactional applications (Q11).

- They can query and integrate operational data from multiple databases (including legacy systems) simultaneously, without requiring a data warehouse or an operational data store (Q12).
- They enable end users to create or modify their own reports without impacting IT resources (Q13).

Respondents valued some benefits more than others. When we combined the percentages for those that considered a benefit very or extremely valuable, the leading benefits were:

- automatically adapt to and support ongoing changes (68%; Q11)
- enable end users to create or modify their own reports (66%; Q13)
- have a common metadata layer that supports both daily, operational reporting (65%; Q8)
- query and integrate operational data from multiple databases without requiring a data warehouse or ODS (58%; Q12).

We conclude from these responses that organizations most highly value Application BI systems that reduce maintenance and implementation costs, enable end-user self-service and assure consistent, accurate data for analysis. This is consistent with results from other Ventana Research studies of operational BI. Further, automation, end-user self-sufficiency, consistent data and inexpensive data integration are all leading priorities of information management today.

Users also perceive business-related information benefits.

The information benefits that most encourage use of Application BI by these organizations are more informed and faster decisions (19%), data access for more individuals (17%), running the business more efficiently (14%) and access to previously inaccessible data (12%; Q19). Clearly, when dealing with customers, making decisions quickly is important. Organizations are also seeking to broaden individual decision-making and to enable more efficient business execution. Efficiency may be gained through the technical benefits cited in the previous section. These benefits and other results lead Ventana Research to conclude that the needs for decision enhancement, efficiency and data access are consistent with improved financial analysis and understanding of customers. In fact, the top business benefits respondents cited are improvements in visibility across the organization (27%), business competitiveness (27%) and customer service (16%; Q20).

Respondents don't agree on whether Application BI reduces dependence on ETL and data warehouses.

The use of traditional BI systems (not Application BI) often increases users' dependence on ETL systems and data warehousing. When asked whether their Application BI Systems reduced reliance on ETL and data warehouses, respondents differed. Some said that reliance was reduced; others said that it was increased. In total, 10 percent more respondents indicated a decreased (rather than increased) reliance on ETL and data warehouses when using Application BI systems (Q14). We believe this result is not significantly conclusive. Specifics of the organization such as the individuals involved, the business information needs, and the implementation and support processes involved likely contribute as much to the dependence on ETL applications and data warehouses as does the use or not of an Application BI system.

Application BI can be a tool for performance management.

Performance management was a top concern in respondents' plans for further implementation of BI systems. Fully half (50%) cited plans to implement scorecards, and 49 percent cited plans for dashboards (Q15). This finding is consistent with prior studies of operational BI by Ventana Research, in which respondents cited being able to compare actual results to plans and forecasts and to have common KPIs as leading user benefits of operational BI systems (see "Business Intelligence for Operational Performance Research Study" on Ventana Research's Web site). Implementation of enterprise metadata management, a concept similar to master data management, was planned by 49 percent of the respondents. Respondents to a recent study of operational BI applications by Ventana Research indicated that they valued consistent metadata across BI applications; that result also was consistent with the need for enterprise metadata management found in this study.

Other planned capabilities with leading response counts by respondents were alerts (45%), data mining (44%) and budgeting, planning and forecasting (44%; Q15). This would indicate that organizations intend to do more than basic reporting or ad-hoc querying against their databases with Application BI.

Query and analysis are the most popular Application BI features.

The most commonly cited business intelligence features that companies either implemented or planned were ad-hoc query and analysis (90%) and operational reporting (85%; Q15). Results also indicated that most organizations had already implemented these with their Application BI systems. Respondents also cited ad-hoc query and analysis as a leading requirement (34%) for existing BI systems (regardless of whether they were Application BI systems). Other capabilities that were frequently cited as implemented or planned were dashboards (85%) and spreadsheet integration (78%).

This result, too, is consistent with findings from other Ventana Research studies of operational BI. The high frequency of ad-hoc query and analysis is indicative of the need to enable user self-service and to reduce the burden of report development on IT. As stated before, the need for dashboards is consistent with the need to manage operational performance within organizations. Spreadsheet integration is a common theme, as enterprises respond to various regulatory compliance standards, seek a single version of enterprise truth and streamline the delivery of information to decision-makers.

Most users work in finance or customer-facing areas.

Areas of the organization with the most users of Application BI systems were Finance (35%), Customer Support (18%), Sales (15%), Marketing (10%) and Services (9%; Q18). Organizations cited much less frequently were Manufacturing (5%), R&D (4%) and Distribution (4%). Consistently with other studies by Ventana Research of areas where BI is used, this research indicates that Finance and customer-facing organizations are leading users of Application BI.

Users' satisfaction with IT support varies.

Respondents reported that with respect to their Application BI systems they were satisfied or very satisfied with IT's ability to create (66%) or modify (65%) operational

reports. The next highest-scoring category for satisfaction was support for new (62%) or modified (61%) ad-hoc queries and reports. The least satisfaction was found around IT's ability to create (32%) or modify (31%) a dashboard KPI, followed by creating a new dashboard or a data mart (25%). Ventana Research believes that dashboards can be difficult to create and maintain, not because of their interactivity, but because they often pull information from diverse data resources, some of which may be difficult to access.

WHAT TO DO NEXT

IT organizations know that maintaining all the software required to report on, analyze and manage a business is a costly, time-consuming and challenging task. Large organizations with suites of software from multiple vendors and in different versions have a proportionately larger task. Automation and abstraction are technical approaches to reducing the cost and effort required to manage them. Application BI – business intelligence products that are tailored to support specific applications through a comprehensive set of tools, engines, APIs, templates and metrics that automate and abstract – can significantly reduce the cost and time it takes IT organizations to deliver information to their decision-makers. It therefore should be considered as a critical piece of an overall BI strategy.

Application BI is a much-discussed concept that has yielded some proven technology. Our research makes clear that many organizations already have deployed Application BI. It provides value in the form of lower costs and improved productivity. Automating the migration to new versions and releases, end-user self-service and the ability to integrate multiple instances and versions of source applications are key capabilities that Application BI brings to corporate information systems.

In choosing an Application BI vendor, companies should use a matrix of features, needs and value. In constructing this matrix, features should be identified to serve particular needs, and needs are prioritized according to the value their fulfillment will bring to the organization. The study results show that most organizations value the following capabilities:

- the ability to adapt to changing application versions and instances automatically. This is especially important to large organizations that have multiple instances of ERP or other transactional applications.
- the ability for end users to create or modify their own reports (and dashboards). When organizations have large user communities or many different dashboards to support, it is important to minimize support costs and personnel through self-service.
- the ability to manage and use metadata for both operational and daily reporting. Metadata both provides consistency of analysis and shortens the time needed to create reports and queries.
- the ability to query and integrate data from multiple underlying applications without requiring a data warehouse or an operational data store. Enterprise-wide views of business operations require views composed from multiple data sources.

These capabilities are not exclusive, but the study respondents identified them as most important. We recommend that organizations evaluate Application BI alternatives based upon these and other capabilities that enable automation and abstraction. These benefits grow in importance along with the size of the user community and the complexity of the data.

Support for Dashboards and Scorecards

The use of BI for operational decision-making often is manifested in deployment of dashboards and scorecards. Not surprisingly, the study results show that these BI objects are at the top of the list of those to be deployed. These tools are essential to performance management, which requires a consistent, broadly deployed set of metrics

against which the organization executes systematically. Further, performance management is often done via management by exception. Dashboards and scorecards facilitate this by alerting operational decision-makers to the highest priorities currently requiring their attention.

It's not enough just to have dashboards and scorecards. They must be able to adapt to infrastructure changes, to be modified by end users and to support views from multiple data sources. Since the study data shows that users are more concerned about IT's ability to support dashboards and metrics than reports, organizations should look for technology that specifically eases the management of these BI objects. They should double-check their specific BI needs against those capabilities most highly prioritized by the study respondents and analyze variations for supporting factors that assure their choices will provide the best alignment with business needs.

Organizations should not view prospective Application BI initiatives as mere replacements of existing capabilities with streamlined administration. It is important to align these initiatives with key business goals that advance customer satisfaction, competitiveness, worker productivity and shareholder value. To do this, evaluators should include detailed analyses of business value that a prospective Application BI deployment will add. As a framework for that evaluation, we recommend that organizations start with the evaluation criteria the study used to determine information benefits. These include the ability to make better-informed decisions, improve business efficiency, and provide data access for more individuals and access to previously inaccessible data. Similarly, organizations should clearly identify the business value of the prospective deployment. Study results indicated improvements in organizational visibility, business competitiveness and customer service as leading benefits of Application BI deployments.

Reduced Dependence on Data Warehouses and ETL

Ventana Research believes that organizations can diminish the use of data warehouses or extraction, transformation and loading (ETL) systems through deployment of Application BI, but they should consider all of the reasons they need a data warehouse before deploying Application BI to do so. It is likely that Application BI is best at reducing the costs of maintaining and updating metadata, templates, reports, dashboards and metrics related to a specific transactional application – these are significant expenses for many organizations. And creating, modifying or adapting these structures to new information needs often is a more pressing issue than deciding whether to implement a data warehouse or an ETL program.

Reduced Dependence on IT by Users

The results of the study indicate that with the proper use of Application BI, end users are more self-sufficient, administration is more fully automated and data is integrated better. We believe that in concert these benefits enable organizations to react more quickly to changing business conditions, which is a key demand placed on information management systems today. We recommend that organizations seeking better response to unforeseen information challenges consider Application BI technologies, especially those that provide automation and abstraction capabilities that reduce or even minimize administrative intervention by IT personnel.

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, processes, information and technology. What makes Ventana Research different from other analyst firms is our focus on Performance Management for finance, operations and IT. This focus, plus research as a foundation and reach into a community of more than 2 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.