San Ramon, California
January 2014

Ventana Research performed this research and analysis independently. Our goals were to determine the Value Index for Mobile Business Intelligence and to evaluate vendors and products in accordance with the Ventana Research mobile business intelligence blueprint and specific operational and performance activities and processes. We charged no fees for this research and invited to participate all vendors that are delivering applications to enable mobile business intelligence. This report includes vendors and products generally available as of November 15, 2013.

Our purpose in conducting this research was to evaluate the maturity of software vendors and products and their appropriateness for the methodology and processes of mobile business intelligence. This research and report are not intended to imply that one vendor or product is the right choice for any particular organization. Rather, they provide a baseline of knowledge that organizations can use to evaluate vendors and products to manage and improve mobile business intelligence by aligning business and IT. Unlike IT analyst firm reports that use subjective influences to score vendors, our research is based on thorough analysis of customer assurance and product categories that best represent how an organization should evaluate its technology supplier.

The full report with detailed analysis is available for purchase. We can provide detailed insights on this Value Index and advice on its relevance to an organization through the Ventana On-Demand research and advisory service. Assessment services based on this benchmark research also are available.

We certify that Ventana Research performed the research to the best of our ability; that the analysis is a faithful representation of our knowledge of vendors and products; and that the analysis and scoring are our own.
Mobile Business Intelligence

Ventana Research defines business intelligence (BI) as the process of integrating data and applying analytics to yield meaningful information that can guide actions and inform decisions to accomplish a broad range of business objectives. Mobile business intelligence is the ability to access business intelligence tools through smartphones and tablets at any location. Clearly, the availability of the right information in the right place at the right time are critical elements for successful mobile business intelligence. In our view, the value of business intelligence lies in the business benefits achieved through its use, and this is even more important for mobile business intelligence.

The analysis and findings of our benchmark research on next-generation business intelligence and information optimization inform our product evaluations in this, the 2014 Mobile Business Intelligence Value Index. That research examined the uses of business intelligence on mobile technology to determine organizations’ current and planned use and the capabilities required for successful deployment.

It found wide interest in mobile business intelligence and a desire to improve the use of information in 40 percent of organizations, though adoption is less pervasive than that interest may suggest. Fewer than half of organizations currently access BI capabilities on mobile devices, but more than two-thirds (71%) of participants expect their company’s mobile workforce to be able to access BI capabilities in the next 12 months. The research also shows strong executive support: Nearly half of executives said that mobility is very important to their BI processes.

Easy access and use is an important criterion in this Value Index because usability was identified as an important evaluation criteria for mobile business intelligence applications by the largest percentage of organizations. This reflects an emphasis on usability that we find in most of our research, and in this case it also may be due to the user experience of the first generation of business intelligence on mobile
devices, in which applications were not always optimized for touch-screen interfaces and designed to support gestures. It is clear that today’s mobile workforce requires the ability to access and analyze data simply, straightforwardly and using an intuitive interface.

In the current environment of mobile device platforms, in which Apple, Google, Microsoft and RIM each have their own operating systems and Web browsers, an ongoing debate pits native applications against browser-based and HTML5 or hybrid mobile BI applications. It has implications for the Value Index evaluation areas of usability, capability and manageability and thus for buyers.

One option for developers is to create their products in native code such as Visual Studio and C# for Windows, Java for Android devices, and Xcode and Objective C for Apple iOS. In this case, the business intelligence engine itself can be optimized for the device platform. The strength of this approach is that it interacts natively with the underlying operating system and so can provide a more fluid experience including native support for multitouch gestures, double tapping, and pin and stretch. It also takes advantage of features on smartphones or tablets such as the camera and voice recognition. And, importantly for mobile BI applications, it enables offline analysis.

Another option is to develop a purely Web-based application. This is similar to developing a Web page or a series of pages, but can be done by following HTML5, which our research finds is the second-most widely used technology standard for information (by 54% of organizations), after SQL. Using HTML5 enables developers to deliver applications to mobile device screens regardless of the underlying operating system. The major benefit of this option is to have a single code base and a “develop once and deploy anywhere” approach since the browser separates the application from the underlying operating system.
The third approach is a compromise, developing a hybrid application using third-party tools that wrap the HTML5 code in a native application container. This approach draws advantages from both of the others since it can enable users to take advantage of native device functions such as a camera while using a single code base to support the application, which means less work to deploy the application. Another benefit to a hybrid application is that it gives users the ability to find and download applications.

Despite movement toward an open approach our research shows that Apple is the preferred technology platform for business. Apple is preferred for smartphones most often (by 59%), followed by Google Android (24%), RIM BlackBerry (11%) and Microsoft (6%). Apple is even more dominant as the preference for tablets (71%) vs. Google Android (13%) and Microsoft (9%). However Android is the clear second choice (at 42% for smartphones and 49% for tablets), which indicates it will challenge Apple in this rapidly changing market.

The Value Index for Mobile Business Intelligence uses the Ventana Research methodology, a framework that evaluates vendors and their products in seven categories of requirements. Five are product related, assessing usability, manageability, reliability, capability, and adaptability, while two quantify the customer assurance issues of vendor validation and total cost of ownership and return on investment (TCO/ROI). Three out of five organizations participating in our next-generation business intelligence research said it is important to be able to interact with and visualize data, and more than one-third (38%) said they want sophisticated capabilities that make it possible to derive predictions from statistical modeling and planning. We therefore designed the Capability analysis in this Value Index to examine support for interactivity and visualization, and role-based functional support for mobile BI developers, end users and IT. The research also found it is important for mobile BI to run across browsers and operating systems. This additional exploration enables us to assess in more detail the degree to which products provide the advanced capabilities.
increasingly in demand by business and IT users for mobile devices. Our research finds he use of smartphones and tablets increasing: 44 percent of organizations have used mobile technology for more than one year, and more than half (56%) now use smartphones and tablets.

The Value Index for Mobile Business Intelligence evaluates the following vendors that offer products that address key elements of mobile business intelligence as we define it: Actuate, arcplan, Birst, Information Builders, IBM, Jaspersoft, Logi Analytics, MicroStrategy, Oracle, Pentaho, QlikTech, Roambi, SAP, SAS, Tableau and Yellowfin.

We urge organizations to do a thorough job of evaluating mobile BI systems and tools and offer this Value Index as both the results of our in-depth analysis of these vendors and as an evaluation methodology. The Value Index can be used to evaluate existing suppliers and also provides evaluation criteria for new projects; applying it thus can shorten the RFP cycle time.

Unlike many IT analyst firms that rank vendors from an IT-only perspective, Ventana Research has designed the Value Index to provide a balanced perspective of vendors and products that is rooted in an understanding of business drivers and needs. This approach not only reduces cost and time but also minimizes the risk of making a decision that is bad for the business. Using the Value Index will enable your organization to achieve the levels of efficiency and effectiveness needed to optimize mobile business intelligence.
Value Index Overview

The Ventana Research Value Index: Mobile Business Intelligence in 2014 is the distillation of a year of market and product research efforts by Ventana Research, the premier benchmark research and advisory services firm. Built on a foundation of more than 10 years of business and technology research, this unbiased, fact-based index is the first such industry undertaking to assess the value of software designed specifically for enabling mobile business intelligence.

This Ventana Research Value Index is an analytic representation of our assessment of how well vendors’ offerings meet buyers’ requirements for software that enables and supports mobile business intelligence. The Index evaluates the software in seven key categories. Five are product-related: Usability, Manageability, Reliability, Capability and Adaptability. In addition, we considered two customer assurance categories: Vendor Validation and Total Cost of Ownership and Return on Investment (TCO/ROI). To assess functionality, one of the components of capability, we applied the Ventana Research mobile business intelligence methodology and blueprint, which links the business process of mobile business intelligence to an organization’s information technology.

We use our research-based analytics and methodology to generate the Value Index percentages. We then build them into a set of indicators that we present graphically as temperature charts. In these indicators the colors reflect our assessment of the value to you, the potential buyer, on a scale from minimally valuable, or Frigid (blue), to very valuable, or Hot (red). Thus, we present the Value Index in both analytic and graphic form, each depicting the value of a specific vendor’s offering based on an evaluation of what it can deliver that is relevant to your mobile business intelligence needs.
The Value Index is not an abstraction; Ventana Research used a carefully crafted best practices-based methodology to represent how organizations actually will assess vendors. We believe it is important to take this approach, since making the wrong decisions can raise the total cost of ownership, lower the return on investment and hamper your organization’s ability to reach its performance potential. In addition, this approach can reduce the project’s development and deployment time and eliminate the risk of placing on your short list vendors that are wrong for your organization.

To ensure the accuracy of the information we collected, we required participating vendors to provide evaluation data across seven categories designed to reflect the concerns of a well-crafted RFP. Ventana Research then validated the information, first independently through our database of product information and extensive Web-based research, and then in consultation with the vendors. The majority of selected vendors participated in one-on-one consultative sessions, after which we requested them to provide additional documentation to support any new inputs. We evaluated mobile BI software from vendors that have demonstrations available on their websites or through mobile application stores.
The Findings

The Value Index for Mobile Business Intelligence in 2014 shows that currently the top supplier, based on weighted factoring of the five product and two customer assurance categories, is MicroStrategy, which qualifies as a Hot vendor, followed by 10 other Hot vendors: IBM, SAP, QlikTech, Information Builders, Yellowfin, Tableau Software, Roambi, SAS, Oracle and arcplan. In addition five vendors are rated Warm: Actuate, Pentaho, Jaspersoft, Logi Analytics and Birst.

The top three companies’ products all provide strong user experiences and functionality, but MicroStrategy stood out across the board, finishing first in five categories and most notably in the areas of user experience, mobile application development and presentation of information. IBM, the second-place finisher and also a Hot Vendor, has made significant progress in mobile BI with six releases in the past year, adding support for Android, advanced security features and an extensible visualization library. SAP’s steady support for the mobile application of its BusinessObjects platform, incorporation of mobile support for its Lumira discovery platform, its streamlined user experience across different functions, and an integrated mobile device management software helped produce high scores in various categories and put it in third place, also as a Hot Vendor.
In examining products for this Value Index we encountered some noteworthy innovations in mobile BI. Among them are QlikTech’s flexible offline deployment capabilities for the iPad; Information Builders’ browser-based capabilities with Active Technologies; Yellowfin’s collaboration technology; Roambi’s use of storyboarding in its Flow application; and SAS’s advanced analytics capabilities.

The Value Index analysis found notable differences in how products satisfy the mobile business intelligence needs of employees working in IT and business roles ranging from administrators and developers to analysts and managers. We also found substantial variance in how products provide mobile development, security and collaboration capabilities and role-based support for users. Thus, we caution that similar vendor scores should not be taken to imply that the packages evaluated are functionally identical or equally well suited for use by every organization or for a specific process.

Although there is some degree of commonality in how organizations provide mobile access to data, apply analytics to generate metrics and present information in dashboards and reports, there are many differences in how they support interactive visualization and data discovery in analytics that can make one vendor’s offering a better fit than another’s for your organization’s needs. For example, companies that want their mobile workforce to be able to engage in root-cause discovery analysis may prefer tools such as those from Tableau and QlikTech. Large companies that are looking for a custom application approach may prefer MicroStrategy or Roambi, while others looking for collaboration on the mobile devices may prefer Yellowfin.

As noted above, this Ventana Research Value Index evaluates the software in seven key categories. Five are product-related: Usability, Manageability, Reliability, Capability and Adaptability. In addition, we considered two customer assurance categories: Vendor Validation and Total Cost of Ownership and Return on Investment (TCO/ROI). The chart below places the product-related and customer assurance scores on the X and Y axes respectively to provide a visual representation of our Value Index scores. Those vendors whose products scored higher in aggregate in the five product categories place higher, to the right, with their standing shown by the color-coding of the horizontal axis; the combination of scores for the two customer assurance categories
determine their placement on the vertical access and the corresponding color-coded standing in that area.

Ventana Research Value Index 2014
Mobile Business Intelligence

We reiterate that close vendor scores should not be taken to imply that the packages evaluated are functionally identical or equally well suited for use by every organization or for a specific process. Although there is a high degree of commonality in how organizations mobile business intelligence, there are many idiosyncrasies and differences in how they approach mobile device support that can make one vendor’s offering a better fit than another’s with an organization’s needs.

Other factors besides features and functions or assessments about the vendor can turn out to be a deciding factor. For example, a company may face budget constraints such that the TCO evaluation can tip the balance to one vendor or another. This is where the Value Index methodology and the appropriate weighting can be applied to determine the best fit of vendors and products to your specific needs.
## Products Evaluated

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<thead>
<tr>
<th>Vendor</th>
<th>Product Name</th>
<th>Version</th>
<th>Release Date</th>
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<td>arcplan</td>
<td>arcplan Mobile</td>
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<td>Birst</td>
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<td>IBM</td>
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<td>Information Builders</td>
<td>WebFOCUS Mobile</td>
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<td>Jaspersoft</td>
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<td>1.6</td>
<td>October 2013</td>
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<td>Logi Info</td>
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<tr>
<td>Pentaho</td>
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<td>Yellowfin Mobile</td>
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How To Use This Value Index

This research on tools and systems can provide you with insight into the value of your existing and new investments and a framework to assess your initiatives and programs. Business and IT improvement efforts should be based on best practices and research that deliver value quickly. Ventana Research recommends that you organize your efforts around our blueprint for this topic and use the Value Index to determine which vendors will best satisfy your needs for workforce management.

Be sure to define both business and IT requirements as part of an improvement process based on these research results. We advocate a structured approach such as our DecisionCycle™, an eight-step process for enabling workforce management. Using this framework, you can incorporate these steps into a program document that will both summarize and detail your initiative or project. Then consult the Value Index to ensure you make choices that will yield the results you want.

Using the DecisionCycle™ steps detailed below, you can build a framework for assessing the maturity of your business and IT efforts and determining how to align your people, processes and IT investments.

1. Define the business goal and purpose.
2. Define the business requirements.
3. Define the user community and usage requirements.
4. Establish the functional requirements and capabilities.
5. Evaluate the organizational maturity.
6. Determine the technology approach and master list.
7. Define the business and technology evaluation criteria.
8. Evaluate and select a vendor.
Vendor Profile

MicroStrategy
http://www.microstrategy.com/platforms/mobile

<table>
<thead>
<tr>
<th>MicroStrategy</th>
<th>Ranking</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Ranking</td>
<td>First</td>
<td>95.1%</td>
</tr>
<tr>
<td>Usability</td>
<td>First</td>
<td>94.0%</td>
</tr>
<tr>
<td>Manageability</td>
<td>First</td>
<td>97.1%</td>
</tr>
<tr>
<td>Reliability</td>
<td>First</td>
<td>97.8%</td>
</tr>
<tr>
<td>Capability</td>
<td>First</td>
<td>95.6%</td>
</tr>
<tr>
<td>Adaptability</td>
<td>Second</td>
<td>93.7%</td>
</tr>
<tr>
<td>Validation</td>
<td>First</td>
<td>96.4%</td>
</tr>
<tr>
<td>TCO/ROI</td>
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<td>90.5%</td>
</tr>
</tbody>
</table>

**Company and Product Profile**
(Provided by MicroStrategy)

“MicroStrategy is a worldwide provider of enterprise software platforms. Our mission is to provide the most flexible, powerful, scalable and user-friendly platforms for analytics, mobile, identity and loyalty offered either on premises or in the cloud.

“Our Mobile App Platform contains a suite of developer, administration, and server tools. It is the easiest, fastest and most affordable way to mobilize practically all of your information systems, including data warehouses, BI, ERP, CRM, web applications and more, currently trapped on the desktop. Transform your entire workforce into a connected and highly productive mobile workforce.”

**Ventana Research Evaluation**

MicroStrategy has a long commitment to mobile BI, with early investments in building native applications on its BI platform. The company has intensified its focus over the last three years to embrace both smartphones and tablets. It ranks first overall in this Value Index by earning the Hot rating in all seven categories and the top ranking in five: Usability, Manageability, Reliability, Capability and Validation; it ranks second in Adaptability. It received the highest score in Reliability for its server’s high performance in supporting mobile BI and in
Manageability for being able to manage deployments across business and IT with its integrated platform, which provides flexible administration for distributed environments and unified governance. The top Usability score results from the seamless designer and user experience and a multitouch interface. While we found some shortcomings on Android devices in previous versions, the company has addressed these in the latest versions and is committed to continue to enhance the native platforms.

MicroStrategy’s lowest score (though still in the top half of the field) is in TCO/ROI. It should provide more details on the benefits and value of its approach to stimulate investment and make public more tools and documented success of its customers. Overall MicroStrategy has a strong ability to assemble analytics and information into custom applications, and its visualization and interactivity capabilities are the most sophisticated of all vendors we considered. Its mobile applications platform and support for broader information applications are superior to other mobile BI technologies.
Appendix: Vendor Inclusion

We invited all vendors with relevant mobile business intelligence offerings to participate in the Value Index evaluation process, at no cost to them. If the vendor did not respond to the invitation, we made a determination whether to include it in our analysis based on our knowledge of the company, its products and customers. We have adopted this approach because we view it as our responsibility to assess all relevant vendors whether or not they choose to invest the time and effort to participate.

Ten of the 16 suppliers evaluated above responded positively to our requests for information to help in our analysis of their mobile business intelligence products; those that did not are arcplan, Birst, Jaspersoft, Oracle, SAS and Tableau Software. For these vendors we based our evaluations on reviews of their products and customers and on information available on the Internet and through briefings and demonstrations from them.

We did not include a number of other vendors in this Value Index evaluation because they did not satisfy a sufficient number of the criteria that our methodology for this research requires.
About Ventana Research

Ventana Research is the leading benchmark research and business technology advisory services firm. We provide insight and expert guidance on trends and mainstream and disruptive technologies. Our unparalleled insights and best practices guidance are based on our rigorous research-based benchmarking of people, processes, information and technology across business and IT functions worldwide. The combination we offer of benchmark research, market coverage and in-depth knowledge of hundreds of technology providers means we can deliver business and technology education and expertise to our clients where and when needed to reduce the time requirements, cost and risk of technology investments. The Ventana Research Indexes – the Value Index and the Benchmark Index family – have redefined the research industry by providing accessible, easy-to-use research-based business and technology guidance to businesses. Ventana Research provides the most comprehensive analyst and research coverage in the industry; the many business and IT professionals worldwide who are members of our community benefit from Ventana Research’s insights, as do highly regarded media and association partners around the globe. Our views and analyses are distributed daily through blogs and social media channels including Twitter, Facebook, LinkedIn and Google+. Ventana Research was ranked the #1 analyst firm you can trust in enterprise software for 2009 for its relevance to the industry. To learn how Ventana Research advances the maturity of organizations use of information and technology through benchmark research, education and advisory services, visit www.ventanaresearch.com.

We offer a variety of customizable services to meet your specific needs including workshops, assessments and advisory services. Our education service, led by analysts with more than 20 years of experience, provides a great starting point to learn about important business and technology topics from compliance to business intelligence to building a strategy and driving adoption of best practices. We also offer tailored Value Index Assessment Services to help you define your strategy, build a business case and connect the business and technology phases of your project. And we can provide Ventana On-Demand access to our analysts on an as-needed basis to help you keep up with market trends, technologies and best practices.
Everything at Ventana Research begins with our focused research, of which this Value Index is a part. We work with thousands of organizations worldwide, conducting research and analyzing market trends, best practices and technologies to help our clients improve the efficiency and effectiveness of their organizations.

Through the Ventana Research community we also provide opportunities for professionals to share challenges, best practices and methodologies. Sign up for Individual membership at www.ventanaresearch.com to gain access to our weekly insights and learn about upcoming educational and collaboration events – webinars, conferences and opportunities for social collaboration on the Internet. We offer the following membership levels:

**Individual membership:** For business and IT professionals* interested in full access to our website and analyst team for themselves. The membership includes access to our library of hundreds of white papers and research notes, briefings and telephone or email consulting sessions to provide input and feedback.

**Team membership:** For business and IT professionals* interested in full access to our Web site and analysts for a five-member team. The membership includes access to our library of hundreds of white papers and research notes, briefings, telephone/e-mail consulting sessions to provide input and feedback and the use of Ventana Research materials for business purposes.

**Business membership:** For business and IT professionals* interested in full access to our website and analyst team for their larger team or small business unit. The membership includes access to our library of hundreds of white papers and research notes, briefings, telephone or email consulting sessions to provide input and feedback, use of Ventana Research materials for business purposes and additional analyst availability.

**Business Plus membership:** For business and IT professionals* interested in full access to our website and analyst team for larger numbers of company employees. The membership includes access to our library of hundreds of white papers and research notes, briefings, telephone or email consulting sessions to provide input and feedback,
quotes and validation for media, use of Ventana Research materials for business purposes, additional analyst availability and access to our team for scheduled strategy consulting sessions.

This Value Index report is one of a series that are available for purchase. Also available are any of our extensive library of Benchmark Research reports. To purchase a report or learn more about Ventana Research services – including workshops, assessments and advice – please contact sales@ventanaresearch.com.

* Additional services are available for solution providers, software vendors, consultants and systems integrators.