Bend, Oregon  
March 2019

Ventana Research performed this research and analysis independently. Our goals were to determine the Value Index for Embedded Analytics and Business Intelligence and to evaluate vendors and products in accordance with the Ventana Research analytics and business intelligence blueprint. We charged no fees for this research and invited to participate all vendors that are delivering relevant applications to enable analytics and business intelligence. This report includes products generally available as of August 2018.

Our purpose in conducting this research was to evaluate the maturity of software vendors and products and their value for enterprise use in embedded analytics and business intelligence. Nothing in this report of our research is intended to imply that one vendor or product is the right choice for any particular organization. Rather, it provides a baseline of knowledge that organizations can use to evaluate vendors and products to manage and improve analytics and business intelligence. Unlike IT analyst firm reports that use subjective factors to score vendors, our research is based on thorough research-based analysis of customer assurance and product categories that best represent how an organization should evaluate its technology supplier.

The full Value Index 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 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.
Embedded Analytics and BI

Ventana Research provides unique insight into the analytics and business intelligence (BI) industry. This is important, as its processes and technology play an instrumental role in enabling an organization’s business units and IT to utilize its data in both tactical and strategic ways to perform optimally. To accomplish this, organizations must not only provide technology that can access the data, generate and apply insights from analytics, and communicate the results, they also must ensure that the analytics are presented in a way that leads to action. One of the most effective ways to do this is to embed analytics into business processes and applications.

When analytics are embedded in business processes and analytics, analyses are easier to perform and more accessible to line of business personnel. The analyses are easier to perform in part because the application collects and assembles data; our research shows that data preparation can be the most time-consuming step in the analytical process. Embedded analytics can dramatically reduce or eliminate this step. The analyses are also easier to consume because there is no need to switch context between the business application and an analysis tool.

Perhaps more importantly, analytics embedded within applications can more easily lead to action. For instance, if an analysis suggests a change in pricing, the appropriate logic can be included in the application to make those changes. If an analysis suggests a marketing campaign for a specific customer segment, that segmentation can be performed and the campaign launched.

This Value Index assessment focuses on the challenge of delivering analytics and business intelligence in the context of business processes and applications. These needs are substantial: More than half of organizations (53%) report their users of analytics tools can’t perform their own analyses without IT involvement. Our research on cloud-based analytics, predictive analytics and big data analytics all show strong interest in embedded delivery of those capabilities.

Analytics vendors recognize the need to deliver embedded analytics. Most have been developing and enhancing APIs and other mechanisms to more tightly integrate analytics into business processes and applications. However, it can be
challenging for analytics and business intelligence vendors to package and deliver their capabilities in a way that makes it easy to embed them into other applications and processes. Vendors are working to overcome these challenges because organizations recognize the importance of embedded analytics. Nearly three-quarters of participants in our Data and Analytics in the Cloud benchmark research said they considered embedded analytics important.

Vendors must provide tools for defining data models and accessing the application’s data as well as other data sources. Those tools will likely be used by a different audience than typical business intelligence tools. An application development team would use these tools to create the framework for line of business personnel to perform analyses. The tools must also provide mechanisms to integrate both inputs to and outputs from the analytical processes with other applications. Embedded analytics also requires programmatic access to the management and administration functions to minimize installation and maintenance of the system for line of business personnel.

Ventana Research has conducted market research in a spectrum of related areas including Data Preparation, Machine Learning, Data and Analytics in the Cloud, Next-Generation Predictive Analytics and Big Data Analytics and Integration. We have examined the expansion of business intelligence through the use of cloud computing, mobility and advanced analytics as well as how BI products use collaboration capabilities, social media techniques and location-related analytics. The findings of these research undertakings guide our comprehensive approach to this Value Index.

The Value Index for Embedded Analytics and Business Intelligence uses the Ventana Research methodology, a framework that evaluates application 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).

This Value Index report evaluates the following vendors that offer products that deliver embedded analytics and business intelligence as we define it: BOARD International, Domo, Infor, Information Builders, IBM, Looker, Microsoft.
Corporation, MicroStrategy, Oracle Corporation, Qlik, Salesforce.com, SAP, SAS, Tableau Software and Yellowfin.

We urge organizations to do a thorough job of evaluating embedded analytics and business intelligence 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 can shorten the cycle time for an RFP.

Unlike many IT analyst firms that rank vendors from an IT-only perspective or that focus on a specific type of analytics and BI, 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 analytics and business intelligence.

Value Index Overview

This report on the Ventana Research Value Index: Embedded Analytics and Business Intelligence in 2019 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 16 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 analytics and 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 embedded analytics and business intelligence. The Index evaluates the software in seven key categories that are weighted to reflect buyers’ needs based on our expertise and research. Five are product-related: Usability, Manageability, Reliability, Capability and Adaptability. In addition, we consider 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 analytics and business intelligence methodology and blueprint, which links the personas and processes for analytics and business intelligence to an organization’s requirements.

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 pie charts that express levels of performance. The extent to which each pie chart is full reflects our assessment of value to you, the potential buyer, on a scale also expressed in percentages. Thus, we present the Value Index in both analytic and graphic form, each depicting the value of a specific vendor’s offering in terms of what it can deliver that is relevant to your analytics and business intelligence needs.

The Value Index is not an abstraction; Ventana Research uses a carefully crafted best practices-based methodology to represent how organizations actually will assess vendors and products. We have designed the Value Index to ensure that it provides objective research and guidance to organizations looking to assess and evaluate their applications for business and IT needs. The structure of the Value Index reflects our understanding that the proper evaluation of vendors and products involves far more than just examining product features or potential revenue or customers generated from marketing and sales. 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 an 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 determining a short list of vendors that does not represent a best fit for your organization.

To ensure the accuracy of the information we collected, we required participating vendors to provide evaluation data across the aforementioned 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.
The Findings

The Value Index for Embedded Analytics and Business Intelligence in 2019 finds MicroStrategy first on the list with IBM second and Information Builders third. Companies that score in the top three in any category earn the designation Value Index Leader. IBM has done so in four of the seven categories; MicroStrategy, Infor and Information Builders are a Value Index Leader in three categories; and BOARD, Domo, SAP and SAS in two categories.

Our Value Index methodology determines the weighting for each of the seven categories to best represent the needs of buyers. Here is our specific analysis for each of the categories.

The Capability category makes up 65 percent of the Value Index rating. It is designed to assess the product across a range of business intelligence capabilities specific to mobile devices, including data modeling and access, analytic discovery and integration, as well as collaboration and support for communicating results of analyses. Ventana Research evaluates nearly 400 different function points in 36 different categories to assess capabilities. In this category, MicroStrategy, IBM and Information Builders are Value Index Leaders.

Usability is also necessary for meeting a wide range of the business needs of executives, management, managers, workers, analysts and those responsible for administration of analytics and BI. The weighting for this category is 5 percent of the Value Index score. Vendors’ products are evaluated in this category on the support they provide for the range of roles in the analytics process – executives, managers, analysts, users and IT administration. Domo, MicroStrategy and SAP are the top three vendors in this category with Yellowfin very close behind.

For analytics processes to operate efficiently, the software on which they run must be able to scale and perform reliably on existing architectures; thus
reliability is weighted at 5 percent of the Value Index. MicroStrategy, Infor and Information Builders are the Value Index Leaders in this category. Adaptability is weighted at 10 percent; this category assesses support for configuration and development and integration across usage, processes, applications and data. Infor, IBM and SAS are the highest-rated vendors in this category.

Manageability, which includes administration, security and licensing, is weighted at 5 percent of this Value Index. Manageability proved to be a challenging category for some – vendors either performed well or struggled to meet business and IT needs for effective installation, deployment and administration. Information Builders, BOARD and SAP are the top three vendors in this category.

In TCO/ROI, a category that evaluates vendor support for buyer investment evaluation through information, tools and services to help with the business case, makes up 5 percent of the Value Index score. Leaders Domo, Infor and IBM are well prepared. However, many of the others struggled to provide the tools and information organizations need to make a sound buying decision that is based on the product’s benefits and costs.

The Validation category contributes 5 percent to the overall Value Index score. The leaders here are BOARD, IBM and SAS, but this assessment finds wide variation in the level of detail that vendors provide regarding many areas including services and support. A lack of information about a vendor’s product support is a challenge that no organization looking to evaluate and select an analytics and BI product simply should have to face. After all, a vendor’s success is about not just technology but also its relationship with the customer and the support it provides.

As noted above, this Ventana Research Value Index evaluates the software in seven key categories. 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. Vendors whose products scored higher in aggregate in the five product categories place farther to the right; the combination of scores for the two customer assurance categories determines their placement on the vertical axis. In short, vendors that place closer to the upper-right on this chart scored higher than those closer to the lower-left.
We warn 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 handle analytics and business intelligence, there are many idiosyncrasies and differences in how they do these functions that can make one vendor’s offering a better fit than another’s with a particular organization’s needs.

After more than a decade of technology advances, all the products we evaluated are feature-rich, but not all the capabilities they offer are equally valuable to users. Moreover, the existence of too many capabilities may be a negative factor for an organization if it introduces unnecessary complexity. Nonetheless, one company may decide that a larger number of options is a plus, especially if some of them match its established practices or better support a new initiative that is driving the purchase of new software.

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

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Product Names</th>
<th>Version</th>
<th>Release Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOARD International</td>
<td>Board</td>
<td>10.3</td>
<td>2018</td>
</tr>
<tr>
<td>Domo</td>
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<td></td>
<td></td>
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<tr>
<td>IBM</td>
<td>Cognos Analytics</td>
<td>11.0.12</td>
<td>2018</td>
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<tr>
<td></td>
<td>Planning Analytics</td>
<td>2.0.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ILOG CPLEX Optimization Studio</td>
<td>12.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SPSS Statistics</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Infor</td>
<td>Birst Enterprise</td>
<td>5.31</td>
<td>2018</td>
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<tr>
<td>Information Builders</td>
<td>WebFocus</td>
<td>8.2.04</td>
<td>2018</td>
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<tr>
<td></td>
<td>iWay</td>
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<td></td>
<td>Omni-Gen</td>
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<td>Looker</td>
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<td>5.8</td>
<td>2018</td>
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<tr>
<td>Microsoft Corporation</td>
<td>PowerBI</td>
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<td>MicroStrategy</td>
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<td>2018</td>
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<tr>
<td>Oracle</td>
<td>Analytics Cloud</td>
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<td></td>
<td>Business Intelligence Enterprise Edition</td>
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<td></td>
<td>BI Mobile Version</td>
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<tr>
<td>Qlik</td>
<td>QlikSense</td>
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<td></td>
<td>QlikView</td>
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<tr>
<td>Salesforce</td>
<td>Einstein Analytics Platform (Includes Sales and Service Analytics)</td>
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<tr>
<td></td>
<td>Einstein Discovery</td>
<td></td>
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<tr>
<td>SAP</td>
<td>SAP Analytics Cloud</td>
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<td></td>
<td>SAP Lumira</td>
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<tr>
<td>SAS</td>
<td>SAS Visual Analytics</td>
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<td>2018</td>
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<tr>
<td></td>
<td>SAS Visual Data Mining and Machine Learning</td>
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<td></td>
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<td></td>
<td>SAS Enterprise Miner</td>
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<td>Tableau</td>
<td>Tableau Server</td>
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<td>2018</td>
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<tr>
<td></td>
<td>Tableau Desktop</td>
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<tr>
<td></td>
<td>Tableau Online</td>
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<td></td>
<td>Tableau Prep</td>
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<tr>
<td>Yellowfin</td>
<td>Yellowfin BI</td>
<td>7.4</td>
<td>2018</td>
</tr>
</tbody>
</table>
Value Index Methodology

The Ventana Research Value Index is an analytic assessment of how well vendors’ offerings will address buyers’ requirements for a particular category of software. The Value Index, which we have prepared for more than a decade, is structured to replicate an RFI/RFP process by incorporating all criteria needed to evaluate, select and deploy technology and maintain relationships with vendors. Ventana Research believes that an objective review of specific vendors and products is critical to the establishment of analytics and business intelligence. An organization’s review should include a thorough analysis of both what’s possible and what’s relevant. Our research will help you understand how vendors and products fit into an analytics and business intelligence framework.

To prepare this value index, we drew on our research-related work with organizations over the past 15 years, which has included benchmarking and advising thousands of organizations. Our continuous market research across analytics and data provides the context of the real needs of buyers; this was complemented by our research on technology suppliers, knowledge of the market and expertise in this area.

All vendors that offer relevant products and meet the inclusion requirements are invited to participate in the Value Index evaluation process, at no cost to them. If a vendor does not respond to or declines the invitation, a determination is made whether to include it in our analysis based on our defined set of inclusion criteria. These criteria include vendors’ geographic operations, customer base and revenue as well as all relevant aspects of the products’ fit for the particular category being evaluated. If a vendor is actively marketing, selling and developing a product as reflected on its website that is within the scope of the Value Index, it is automatically evaluated for inclusion. We have adopted this approach because we view it as our responsibility to assess all relevant vendors whether or not they choose to actively participate. This report includes products generally available as of August 2018.

To ensure the accuracy of the information we collect and ensure that the Value Index reflects the concerns of a well-crafted RFP, we require participating vendors to provide evaluation data across all seven categories. Ventana Research then validates the information, first independently through our knowledge base of product information and extensive web-based research, and then in consultation with the vendors.

The Value Index is designed to be independent of the specifics of vendor packaging and pricing and whether the products are priced or sold as part of a suite or bundle or individually. To represent the real-world environment in which businesses operate, we include vendors that offer suites or packages of products, as the relevant individual modules or applications must still be
evaluated by those responsible for those business processes. We take no position on the offering approach of the products or packages; where options exist, organizations using the Value Index will need to decide whether they choose a suite of products or individual applications that best meet their requirements.

Here are the major requirements as they were presented to potential participants:

- A vendor could submit as many products as it wished; each was evaluated to determine individual category compliance as well as ranking in the functionality evaluation.
- Any package of products that was submitted for Value Index consideration also had to be listed on the vendor’s website and be generally available to prospective buyers.
- Vendors were requested to complete a questionnaire detailing the specific functional requirements and capabilities of products submitted.
- Verification of functionality was required through product documentation and/or a demonstration of the actual product.
- Vendors were asked to respond to questions about specific criteria in all of the seven evaluation categories to provide us with information while providing insight into the vendor’s ability to meet specific criteria.

Our knowledge and expertise in the market, drawn from continuously assessing vendors and products, our benchmark research, a Value Index questionnaire, interviews with each vendor and reviews of the products themselves provided the input for this research. Across the seven categories, each response was assessed and reviewed and scores assigned. After validation, we aggregated the scores to determine the vendor’s and the product’s score totals. If a vendor submitted more than one product for evaluation, we included the product with the best score in our capability evaluation. The result is the vendor’s best product fit for our criteria.

To arrive at the overall Embedded Analytics and Business Intelligence Value Index for a given vendor, we weighted each category to reflect its relative contribution to the value as realized by an organization. We established the weighting of the evaluation categories at the beginning of the process based on our experience and prioritizations derived from our benchmark research.

We have made every effort to encompass in this Value Index the functional requirements and capabilities of our analytics and business intelligence blueprint, which we believe reflects what a well-crafted RFP should contain. Even so, there may be additional areas that affect which vendor and products best fit your particular requirements. Therefore, while this research is complete as it stands, utilizing it in your own organizational context is critical to ensure that products deliver the highest level of support for your projects in this area.
Evaluation Categories

Ventana Research designed the evaluation categories to reflect the breadth of the real-world criteria incorporated in a request for proposal to vendors in analytics and business intelligence, based on our benchmark research. We evaluated vendor submissions for the Ventana Research Value Index for Embedded Analytics and Business Intelligence in seven categories, five relevant to the product or package being evaluated and two to the vendor. Each section below presents the analysis and ranking of vendors.

**Usability of the Product**

The Usability category involves evaluation criteria intended to explore utility for varied levels of business and the diverse ages and competencies of organizations’ employees. The evaluation criteria include the extent to which the product provides the support needed by each of the functional roles involved in enabling analytics and business intelligence – executives (CxO), management (EVP, SVP, VP), managers, directors, analysts and those involved from the IT organization. They also include how sophisticated the product’s support of mobile technologies is and the extent to which the product design enables its use by workers of different generations. The Usability section examines how effectively the vendor has addressed the human interface aspects of the product. The Value Index for Embedded Analytics and Business Intelligence in 2019 weights Usability at 5 percent of the overall rating. The analysis finds the Usability Value Index Leaders to be Domo, MicroStrategy and SAP.
Manageability of the Product

The Manageability category involves evaluation criteria intended to ensure the products meet business and IT needs for installation, deployment and administration. The evaluation criteria include the support that the product provides for administration by IT and by business. They also include the flexibility of the security provisions built into the application with respect to user identity, role and access, how effective the data security is that the application provides, to what extent it supports auditing and compliance, what the license options are, how use is audited and what investments are required in licensing or subscription and maintenance. The Value Index for Embedded Analytics and Business Intelligence in 2019 weights Manageability at 5 percent of the overall rating. The analysis finds the Manageability Value Index Leaders to be Information Builders, BOARD International and SAP.

Reliability of the Product

The Reliability category involves evaluation criteria intended to ensure that the products can reliably deliver the performance and scalability needed. The evaluation criteria include the nature of the product’s support for an organization’s IT architecture at the level of the enterprise, the network, the server and the data, and the sophistication of its development and customization capabilities. The criteria also include the extent to which it supports access by remote and mobile users, how well and quickly it performs server processing, how well it scales in terms of number of users, volume and complexity of data and server demand, and what investments are required to ensure reliability. The Value Index for Embedded Analytics and Business Intelligence in 2019 weights Reliability
at 5 percent of the overall rating. The analysis finds the Manageability Value Index Leaders to be MicroStrategy, Infor and Information Builders.

**Adaptability of the Product**

The Adaptability category applies evaluation criteria designed to ensure that the products can be configured and customized to meet the needs of a given business. The evaluation criteria include configuration flexibility, development and programming support for customization, and whether it supports integration into mobile and web-based platforms. The criteria also include how well the product operates across data-related process and workflow systems, whether it can interface well with business applications, and what investments are made to enhance adaptability. The Value Index for Embedded Analytics and Business Intelligence in 2019 weights Adaptability at 10 percent of the overall rating. The analysis finds the Manageability Value Index Leaders to be Infor, IBM and SAS.

**Capability of the Product**

The Capability category involves criteria to evaluate the fit between the capabilities of the products to support analytics and business intelligence and the needs of various groups within the business – from managers and executives to workers, analysts and administrative and IT personnel. In this research, Ventana Research evaluated nearly 400 different function points in 36 different categories to assess the capabilities of vendors’ products. These categories encompass data, analytics and communication capabilities. The data category analysis included defining data models and accessing data. Analytics capabilities include navigating, interacting with
and presenting data on a variety of devices. Communication analysis included collaboration, dashboards and the ability to modify displays of information. The Value Index for Embedded Analytics and Business Intelligence in 2019 weights Capability at 65 percent of the overall rating. The analysis finds the Capability Value Index Leaders to be MicroStrategy, Information Builders and IBM.

**Customer Assurance: Validation of the Vendor**

The Validation category applies evaluation criteria designed to assess the vendor’s commitment to the market segment along with the breadth of its communication of relevant information. The evaluation criteria include the extent to which the vendor is focused on and committed to this product line, how stable the vendor company’s management and financial condition are and what existing customers say about the company and its products. The criteria also include the extent to which the vendor can provide a clear roadmap of the product line’s development and direction, what services it provides to support deployment, and the quality of its product support. The Value Index for Embedded Analytics and Business Intelligence in 2019 weights Validation at 5 percent of the overall rating. The analysis finds the Validation Value Index Leaders to be BOARD International, IBM and SAS.
Customer Assurance: TCO/ROI of the Vendor

The TCO/ROI category applies evaluation criteria designed to assess the value the vendor delivers with its products. The evaluation criteria include the extent to which the vendor is focused on and committed to this product line and how sophisticated it is in demonstrating product value, total cost of ownership and total benefit of ownership. The evaluation criteria also include an evaluation of the tools and documentation it provides to enable customer evaluation of ROI and TCO and what the vendor cites as its investment in optimizing customer TCO and ROI. The Value Index for Embedded Analytics and Business Intelligence in 2019 weights TCO/ROI at 5 percent of the overall rating. The analysis finds the TCO and ROI Value Index Leaders to be Domo, Infor and IBM.
Weighted Scoring of Vendors Across Categories:
The table below presents the Value Index analysis of each of the seven evaluation categories for each participating vendor. The first column shows the overall Value Index rating for each. We urge organizations to identify which of the embedded analytics and business intelligence categories are priorities and then to use the Value Index findings presented in the charts above and this table to identify which vendors are most likely to support their specific needs.

![Ventana Research Value Index](image)

Source: Ventana Research Value Index
Embedded Analytics & BI
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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 analytics and business intelligence.

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 choosing and deploying analytics and business intelligence. 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.

The DecisionCycle™ steps detailed below provide a framework for assessing the maturity of your business and IT efforts and determining how to align your people, processes and technology investments.

1. **Business Goal and Purpose**
   Define the mission of the business project, the specific goals that you want to accomplish and the desired benefits. In other words, what are you doing, why is it important and what outcome do you want to achieve? The goals should be grounded in your organization’s strategy and plans, including how they link people to key performance indicators. This step will deliver documentation of the mission and goals of the project from a business perspective.

2. **Business Requirements**
   What must be done from a business perspective to achieve these goals? Defining the business requirements clarifies why specific capabilities are required and sets the stage for classifying the user community’s roles. This step will deliver clearly documented business requirements.

3. **User Community and Usage Requirements**
   It is critical to understand functionally the types of users involved. Define your users’ roles in terms of the business goals to be achieved. Every organization will have different user classifications, but typical roles are management, analysts, power users and information consumers. This step will deliver a classification of users and their usage requirements.
4. **Functional Requirements and Capabilities**
   What needs to be done, and who will do it? The functional requirements are the framework that enables individuals to understand and work toward the stated business requirements and goals. This step will deliver a set of priorities and weightings that connect business to IT so that everyone understands what is required for your project to succeed.

5. **Organizational Maturity**
   Evaluate the maturity of your organization in terms of analytics and business intelligence. The organization can progress only as far as the capabilities of top management and key line managers allow. This step will deliver a benchmark of your organizational maturity in analytics and business intelligence.

6. **Technology Approach and Master List**
   Determine the technology approach that most closely aligns to your organization’s requirements, and develop a master list of products and vendors that best fit your needs. Then create a scoring model that will evaluate products. This step will deliver a master list of vendors and products prioritized for further evaluation.

7. **Business and Technology Evaluation Criteria**
   Define the business and technology criteria that you will use to evaluate the vendors, using as a guide those drawn from our benchmark research that we have used to build the Value Index. These criteria should include usability, manageability, reliability, functionality, adaptability, validation and TCO and ROI. This step will deliver the short list of vendors and products to evaluate for final selection.

8. **Evaluate and Select**
   Evaluate the short list of vendors based on your business and technology criteria, and select your preferred vendor for the project. This evaluation should include a proof of concept to assess and validate vendors’ products. This step will determine the vendor that best fits your business project and will be your technology partner in analytics and business intelligence.
Embedded Analytics and BI Vendors Evaluated in This Value Index

Vendors that participated in the research are highlighted in this section. For each we provide its own description, taken from its website; these do not represent Ventana Research’s assessment, which follows them. The pie charts shown correspond graphically to the percentages at right; together they represent each vendor’s performance on the value scale overall and for each category. “Value Index Leaders” are those vendors that have earned a performance percentage among the top three either overall or in a product or customer assurance category.

BOARD International [https://www.board.com](https://www.board.com)

*Company and Product Profile*

“The new era of decision-making; Analyze, simulate, plan and predict in a single platform.”

“BOARD’s unified platform for analysis, simulation, and planning makes business decision-making more efficient and effective. BOARD helps organisations reach a single vision of their performance in a simple and extremely effective manner. Information originating from various sources is integrated into a virtual data repository shared by the entire organisation thus providing business users with a customised yet unitary vision.”

*Ventana Research Evaluation*

BOARD uses an in-memory database engine and requires a Windows server. The in-memory server supports a hybrid option that can retrieve data values on-demand rather than pre-loading all data, enabling it to deal with larger databases than would fit in memory.

The product offers good customization but needs a more complete set of APIs and more granular user-interface objects for better embedded usage. BOARD’s transaction support provides integration with other applications and business processes. Command-line operations also can enable a measure of integration.
The company ranks first in Validation with readily available case studies and customer references. BOARD’s product ranks second in Manageability with good capabilities for both IT administration and business administration of its systems. In Usability, Board ranks fifth with capabilities targeted to specific personas in both lines of business and IT. In the Capability category it is one of five products in the Value Index to offer robust interactive planning analyses.

However, BOARD could improve; its lowest ranking is Adaptability where it places ninth. Better APIs and customization capabilities and support for more platforms would help improve its score in this category.
Domo  [https://www.domo.com/](https://www.domo.com/)

**Company and Product Profile**

“It started with highly respected, highly frustrated executives who felt locked out of their own business data. And when you get that much talent and experience focused on one problem—making data more accessible to business leaders—you get a phenomenal solution. The sum of Domo’s parts deliver a virtuous cycle of business optimization. Everyone knows more, works together better, and gets more done, faster.”

“Share insights and build stronger relationships with customers, partners and vendors by embedding interactive Domo cards: in portals, on web properties, or even inside applications. Now you can give your customers the powerful insights they need to help optimize their business.”

**Ventana Research Evaluation**

Domo is a cloud-based offering that requires most data to be loaded into the Domo repository. The product also includes some capabilities for hybrid data access when large data sources are accessed or organizations prefer not to load data into the Domo repository. Domo has made its APIs open source and has posted them to GitHub.

Domo’s product ranks first in Usability, which has been a consistent focus of the company and certainly comes through in its embedded usage. The product scored above average on integration but below average on customization, suggesting that it is better suited for certain types of embedded usage. It also ranks first in TCO/ROI with good material to help support the business case for using its products. Domo excels in the areas of collaboration and communication, supporting analytic business processes such as assigning tasks and tracking their progress to completion, but the API offers limited support for these capabilities.

The company’s lowest rankings are in Reliability and Adaptability, where it ranks 11th and 10th respectively. Metrics that provide visibility into the use of resources and the performance of the system are critical factors for embedded usage. Also, improved configuration, integration and API capabilities would allow organizations to include Domo in their existing business processes to get more value out of their implementations.
IBM  https://www.ibm.com

Company and Product Profile
“Business analytics - insight to action. Fuel creativity, find new opportunities, make confident decisions and drive operational efficiency. IBM Business Analytics can help you mitigate risks and increase operational efficiency in all areas of your business.”

“Boost your revenue. Organizations that can deliver an embedded analytics solution can realize significant gains in revenue growth, marketplace expansion, and competitive advantage. So why choose IBM? Only IBM can get you to market quickly and seamlessly while offering a broad portfolio and support along your entire journey.”

Ventana Research Evaluation
IBM bases its product architecture on a combination of data loaded into the system and dynamic queries of data in place. Its depth of data modeling capabilities and flexibility of output options make it well suited to many types of applications.

IBM ranks second overall in the Value Index assessment. Its capabilities rank third overall. IBM and its products performed well in the Adaptability and Validation categories. The company has a large number of references and provides quality case studies to help prospects understand how others use their products. IBM ranks third in TCO/ROI with good information and tools to establish the business case and strategic value of its product.

The company ranks fifth in Reliability. Better server scalability and performance would help improve its ranking here. Better integration of the various products in its portfolio would help to improve the product’s performance in the Usability and Manageability categories. And there are some analytic and administrative functions not available via APIs.
Infor [https://www.infor.com/](https://www.infor.com/)

**Company and Product Profile**

“Stop seeing data as a competitive advantage. Start using it as one. Whether you’re an IT professional or Business User, Birst offers modern BI solutions that support all your business analytic initiatives. Birst enterprise BI delivers the speed, self-service, and agility front-line business workers demand, and the scale, security, and control to meet rigorous corporate data standards.”

“Are you building an analytic product or looking to monetize your data – but don’t have the time, resources, or domain expertise? Birst delivers a comprehensive analytics and business intelligence platform that pre-integrates data management, visual language and analysis in one place, and provides the utilities to help you easily embed that into your application.”

**Ventana Research Evaluation**

The Birst Enterprise architecture supports cloud or on-premises deployments and the data model is designed to access data from a variety of sources in a networked or virtualized approach. Its flexible deployment options and integration with business processes and applications allow organizations to incorporate analytics into varied line of business activities. The product also offers robust data modeling options.

Birst’s embedded capabilities were above average in all the subcategories we evaluated. Combined with Birst’s other scores, the company ranks fourth overall in our Embedded Analytics and BI Value Index. Birst’s best rating is in Adaptability where it ranks first due to the product’s flexible deployment and configuration options including white-labeling applications for a custom look and feel. Birst Enterprise is designed to be easily integrated into the existing infrastructure, applications and processes. The company also ranks second in both Reliability and TCO/ROI.

The category in which Birst ranks lowest is Usability where it places ninth. Some improvements and modernization to the product’s user interface could help improve its performance here. It would also help to have more finely grained user interface components that could be used within third-party application development frameworks.
Information Builders [https://www.informationbuilders.com/](https://www.informationbuilders.com/)

**Company and Product Profile**

“For organizations where data is integral to success, Information Builders provides the industry’s most scalable software solutions for data management and analytics. Our integrated platform for business intelligence (BI), analytics, data integration, and data quality, combined with our proven expertise, delivers value faster, with less risk.”

“Embedded BI and analytics is about integrating actionable insights into everyday applications and systems used by business workers, within their usual workflow. The benefits of well-designed and implemented embedded BI are a simpler and more convenient user experience, increased productivity, and a higher adoption of data-driven business.”

**Ventana Research Evaluation**

Information Builders’ architecture is based on a model of accessing the data directly in a variety of commercial databases and Hadoop distributions. The products support hundreds of different data sources. Its breadth of analytic capabilities and output options make it applicable to a wide variety of embedded use cases.

Information Builders ranks third overall in the Value Index assessment, placing first in Manageability and second in Capability. The company provides deep support across all the Manageability criteria we evaluated. Its products also perform well in Reliability where it ranks third and Adaptability where it ranks fourth.

The lowest rankings for Information Builders are in Usability and Validation where it ranks eighth and seventh respectively. Additional data model management and data model validation APIs would help round out its embedded capabilities. More information and better demonstration of financial growth would improve its Validation ranking.
Looker [https://looker.com/](https://looker.com/)

**Company and Product Profile**

“Data is no longer just a place to find answers. It’s the place where ideas originate. And when everyone in your company is looking at the same numbers, sharing the same truth, they’ll be able to collectively make smarter, more informed decisions.”

“Embedded analytics for seamless data exploration. Powered by Looker takes a modern approach to embedded analytics, making it simple to build and deploy right within your product. Use Looker’s embedded platform to deliver reliable data, dashboards, and actionable self-service analytics to your customers.”

**Ventana Research Value Index**

<table>
<thead>
<tr>
<th>Performance</th>
<th>Rating</th>
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</tr>
</thead>
<tbody>
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<td></td>
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<tr>
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<td>Adaptability</td>
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<td></td>
</tr>
<tr>
<td>Validation</td>
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<td></td>
</tr>
<tr>
<td>TCO/ROI</td>
<td>49.2%</td>
<td></td>
</tr>
</tbody>
</table>

Looker’s strengths are in Manageability, Validation and Reliability. It ranks sixth in Manageability, offering strong support for business and IT personnel administration. It offers a flexible architecture and configuration, ranking seventh in Reliability. The company also offers good case study material and references to validate the value of its products.

While language-based capabilities make Looker very flexible for embedded analytics, less reliance on LookML or a graphical alternative to LookML would improve its last-place score in Usability.
Microsoft Corporation [https://www.microsoft.com](https://www.microsoft.com)

**Company and Product Profile**

“Unleash the power in your data. Reimagine the realm of possibility. Microsoft data platform solutions release the potential hidden in your data—whether it's on-premises, in the cloud, or at the edge—and reveal insights and opportunities to transform your business.”

“Help your users make contextual, data-driven decisions with the power of visual analytics. Power BI offers robust features and developer tools to support embedding stunning data visualizations in any platform, product, website, portal, or service. With Power BI Embedded—for application developers—you can embed cutting-edge dashboards, reports, and data visualizations in custom applications and portals, without the time and expense of building your own analytics solution from the ground up.”

**Ventana Research Evaluation**

Microsoft PowerBI is a public cloud offering that is also available in a desktop version. The architecture supports loading data into PowerBI or directly querying data in a variety of on-premises or cloud-based commercial databases including distributions of Hadoop. The product includes extensive API capabilities to create embedded applications and extend the PowerBI environment. Many of the criteria we evaluate in the Value Index require third-party components. Consequently, the company’s scores are lower than if those capabilities were native to the platform and supported by Microsoft. Microsoft PowerBI ranks 11th in capabilities.

Overall Microsoft ranks 13th in the Value Index assessment. The product offers strong calculation and data-access capabilities but lags in most of the criteria we evaluate. The company has frequent new releases and has announced significant new functionality for the product, but the Value Index assessment is based primarily on generally available functionality, not early releases or previews. Other than the Capability category, Microsoft ranks no higher than 12th in any category we evaluated.

Microsoft’s biggest strength is its community for developers. The company identifies developers as a specific group of targeted users and offers good documentation that is specialized for this audience.
MicroStrategy [https://www.microstrategy.com](https://www.microstrategy.com)

**Company and Product Profile**

“We provide powerful software solutions and expert services that empower every individual with actionable intelligence, helping enterprises unleash the full potential of their people and investments. Our analytics and mobility platform delivers high-performance business applications that meet the needs of both business and IT.”

“MicroStrategy embedded analytics empowers Intelligent Enterprises with highly customized and powerful web and mobile reporting applications that match the organization’s brand. With MicroStrategy, it’s easy to embed sophisticated analytical functionality in existing applications, integrate into a custom product offering, or extend MicroStrategy with 3rd-party capabilities.”

**Ventana Research Evaluation**

MicroStrategy’s architecture is based on a model of direct access to data in a variety of commercial database products including connectivity to Hadoop.

MicroStrategy ranks first overall in the Value Index. The product tops the Capability and Reliability categories and places second in Usability. MicroStrategy scores well in many of the categories we assess and is particularly strong in its architecture, flexibility and scalability. It ranks well across most of the criteria we evaluate — the company is near the top in integration and customization features.

The company’s lowest rankings are for TCO/ROI and Manageability, where it ranks ninth and seventh respectively. In the latter category, the leaders offer slightly better flexibility across both business and IT administration of the system. In the context of embedded usage, the large number of products in the portfolio can complicate implementations.
Oracle Corporation https://www.oracle.com

**Company and Product Profile**

“As technology evolves and the amount of data and data sources grow exponentially, you may have little or no time to rethink your analytics initiatives to change with a fast-paced business environment.”

“Every organization has the need for analytics—that is, every organization has data they need to gather, analyze, and interpret. But that is easier said than done. As technology evolves and the amount of data and data sources grow exponentially, today’s fast-paced business environment may leave you with little time to rethink your analytics initiatives. Accessing new data sources, and being able to determine what is valuable and what is noise, is no easy feat.”

**Ventana Research Evaluation**

Our analysis considered Oracle Analytics Cloud (OAC), a public cloud service that Oracle says provides “lift and shift” support for Oracle Business Intelligence Enterprise Edition (OBIEE). The product uses a model of importing data but also supports live access to several of the leading relational databases via its Remote Data Connector.

Oracle ranks 10th overall in the Value Index assessment. Its best rankings are for Usability and Capability where it ranks seventh and eighth respectively. OAC provides good capabilities for analytic discovery and scores well in the output and delivery of information. Better data modeling capabilities would help drive its Capability score higher and better integration of the Essbase capabilities into the OAC offering would make it easier to deploy embedded analytics.

Oracle’s lowest rankings are for Validation and TCO/ROI where it ranks last and 14th respectively. With a large portfolio of products, it is difficult to find and evaluate information specific to the OAC products such as documentation, case studies and services. As Oracle converts more of the OBIEE capabilities into the OAC product it will help improve its ranking in the Value Index.
Qlik [https://www.qlik.com](https://www.qlik.com)

**Company and Product Profile**

“Qlik® delivers intuitive platform solutions for self-service data visualization, guided analytics applications, embedded analytics and reporting to approximately 48,000 customers worldwide. Companies of all sizes, across all industries and geographies, use Qlik solutions to visualize and explore information, generate insight and make better decisions.”

“Take advantage of the industry’s leading data analytics platform, purpose-built to embed intelligence anywhere. Easily combine any data source, no matter how large, and create powerful analytics seamlessly integrated into your users’ workflow, from simple widgets and web mashups to fully custom analytics applications.”

**Ventana Research Evaluation**

Qlik offers Qlik Sense and QlikView products, with new developments generally appearing first in the Qlik Sense product line, an offering designed for cloud-based deployments. Qlik uses an in-memory architecture for highly responsive interactive analyses and the products can also be configured for live access to data sources in place.

Overall Qlik ranks 14th in the Value Index. The products provide strong calculation and analysis capabilities along with strong customization features. The company is investing in the developer community and has created Qlik Branch with a number of useful resources. The best ranking for Qlik in the Value Index is sixth in the TCO/ROI category. The company does a good job providing tools and documentation to support an TCO/ROI analysis on the benefits of using its products.

It lags in the Adaptability and Reliability categories compared to the other vendors assessed in the Value Index. Better integration with business processes and applications would improve its Adaptability score; better metrics and configurability to support scalability across users and data would help improve Qlik’s performance in the Reliability category.
Salesforce.com [https://www.salesforce.com](https://www.salesforce.com)

**Company and Product Profile**

“We believe everyone can be a Trailblazer, and we’re building the technology to make it happen. The Fourth Industrial Revolution is changing the way people work, using robotics, AI, the Internet of Things, and more. By making these innovations easier and more accessible, we’re helping create a future with greater opportunity and equality for all.”

“For those of you new to Einstein Analytics, it’s an analytics platform that combines data sets, dashboards, and analytics apps — all within an embedded, homogeneous user experience. When it comes to using analytics especially the blended transactional, analytical and predictive experience.”

**Ventana Research Evaluation**

Salesforce Einstein Analytics is a public cloud service. The architecture is based on accessing Salesforce data and loading other data into the Salesforce platform. The company does a good job embedding and delivering its capabilities within Salesforce applications in a way that makes it easy for line of business personnel to take advantage of them. However, this assessment considers the broader set of requirements for embedding analytics into other applications and creating completely custom applications. As a result, Einstein Analytics ranks 12th overall in the Value Index.

Salesforce has a strong commitment to the developer community with its Lightning Platform and Heroku products. Einstein Analytics performed well in Adaptability where it ranks sixth, exhibiting good capabilities for integration into business processes and other applications. In addition, Salesforce provides some interesting interactive tools for TCO/ROI analysis to help justify investments in its products.

The company has continued to expand its analytics capabilities and is becoming more competitive in this market, but still lacks some of the analytics and communication capabilities we sought in this Value Index. For example, better forecasting, planning and score-carding capabilities would be valuable components to embed in analytic applications.
Company and Product Profile

“SAP is the world leader in enterprise applications in terms of software and software-related service revenue. Based on market capitalization, we are the world’s third largest independent software manufacturer.”

“SAP S/4 HANA is SAP’s next generation Business Suite which provides instant insights on Live data without data redundancy or any latencies. It supports in-context information with analytics and insights. No ETL or Batch Processing is required as compared to traditional landscapes involving ERP and BW system.”

Ventana Research Evaluation

SAP announced recently that it was focusing on SAP Analytics Cloud, a public cloud service, as the primary solution for data discovery, presenting a roadmap that combines SAP Analytics Cloud and SAP BusinessObjects Enterprise into a single hybrid solution. Consequently, our analysis is based primarily on SAP Analytics Cloud. It uses a model of importing data into the system but with some limitations also supports live data connections to underlying data via SAP HANA and some other mechanisms.

Overall SAP ranks eighth in the Value Index. The product offers strong data modeling and analytics capabilities and also scores well on integration. Its best rankings are third in Usability and Manageability. It provides a modern and clean user interface in its analytic objects as well as robust administration and security capabilities.

SAP Analytics Cloud is a relatively new product and, as such, the company is still adding some of the capabilities of its predecessor, BusinessObjects. In particular, more visualization types and more output and information delivery capabilities would improve its rankings. Also, more performance metrics and configuration options would help improve its Reliability score.
**Company and Product Profile**

“Your inherent need to understand the world around you continually propels you forward. SAS speeds your journey toward discovery. Analytics is our story because it can redefine yours. We’ve been applying analytics to the toughest business problems for decades. With SAS, you get solutions built on a powerful analytics platform – and millions of lessons learned.”

“To successfully execute your analytics strategy, you need an analytics platform that balances choice and control in a way that's right for you. Only SAS delivers. By providing the perfect balance of choice and control, the SAS Platform enables you to orchestrate your analytics journey to ensure optimal returns on your investments in data, talent and analytic technology.”

**Ventana Research Evaluation**

SAS products have a highly scalable architecture and can be configured to load data into a SAS database or can access data directly from several high-performance commercial database products. SAS ranks ninth overall in the Value Index.

The company’s highest rankings are in the Adaptability and Reliability categories, where it ranks third and fifth respectively. The products offer a number of development and configuration options. SAS provides good information to assess performance and manage the scalability of its implementations. SAS’s highest rating in Validation is due to its long standing in the market and its overall focus on analytics.

The company has recently been investing in providing APIs for developers using open source languages such as JAVA, Python and R. While SAS applications are highly configurable and customizable, better integration options and communication options for analyses results would help improve its Capability score.
Tableau Software [https://www.tableau.com/](https://www.tableau.com/)

**Company and Product Profile**

“When it comes to elevating people with the power of data, only Tableau combines a laser focus on how people see and understand data with the kind of robust, scalable platform you need to run even the world’s largest organizations.”

“Imagine giving your customers access to powerful analytics, all from within your application or product. With our embedded analytics solution, you can do just that. Empower your customers with industry-leading analytics capabilities to drive your product engagement and customer satisfaction. With Tableau, you can quickly and easily get to market with a solution that is easy to customize, integrate, and deploy. Stay focused on your area of expertise, and let Tableau take care of the analytics.”

**Ventana Research Value Index**

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<tbody>
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<tr>
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<tr>
<td>Validation</td>
<td>61.3%</td>
</tr>
<tr>
<td>TCO/ROI</td>
<td>55.6%</td>
</tr>
</tbody>
</table>

Tableau ranks 11th overall in the Value Index. Its products performed best in the Reliability category, where it ranks eighth. Tableau is known for its user interface and excels at interactive analyses, and it scored well in this section of the Capability category. However, better capabilities to integrate and customize the product would improve its overall ranking in our assessment.

Tableau has recently launched a developer program to provide more tools and APIs for developers, but this was after our analysis was completed. One other challenge for Tableau is the interactive nature of its user interface, which makes it less adaptable to embedding other business processes. The assessment also finds that Tableau has little information such as case studies and information on services readily available to validate the value of its products.
Yellowfin [https://www.yellowfinbi.com/](https://www.yellowfinbi.com/)

**Company and Product Profile**

“Any BI can tell you what happened. Yellowfin tells you Why. Faster. We love data. We live for developing the world’s best BI and analytics platform that helps our clients increase their business performance. We connect people and their data.”

“By embedding Yellowfin, you’re choosing analytics software that is ranked number 1 for embedded BI, trusted among hundreds of enterprise software companies and over 3 million users world-wide. We make it easy to embed world-class analytics. Why build your own BI module when you can so easily integrate Yellowfin? Fill the gaps in your application’s analytics functionality. Integrate sleek, interactive dashboards, ad-hoc and geospatial reporting.”

**Ventana Research Evaluation**

Yellowfin offers its products on premises and as a cloud service. The user interface is entirely browser based. The data architecture relies on third-party commercial databases to hold the data being analyzed, which provides the power of the underlying database and doesn’t require moving the data to another data store. Overall, Yellowfin ranks fifth in the Value Index.

The product performs well in our analyses, scoring above average in more than three-quarters of the capability sub-categories we evaluated and earning it a ranking of fourth in Capability. The product is designed in a way that supports embedding, with explicit capabilities for white labeling as well as numerous, often finely grained objects and well-documented APIs.

Yellowfin did not provide as much information or tools as other vendors to support TCO/ROI analyses. Additional case studies and services information would help improve its ranking in Validation and better notification support for security violations would help improve its Manageability ranking.
Appendix: Vendor Inclusion

All vendors that offer relevant analytics and business intelligence products and meet the inclusion requirements were invited to participate in the Value Index evaluation process, at no cost to them. If a vendor did not respond to or declined the invitation, a determination was made whether to include it in our analysis based on our defined set of inclusion criteria. These criteria are designed to ensure we include in our evaluation vendors’ geographic operations, customer base and revenue as well as all relevant aspects of the products’ fit for the particular category being evaluated. If a vendor is actively marketing, selling and developing a product as reflected on its website that is within the scope of the Value Index, it is automatically evaluated for inclusion. We have adopted this approach because we view it as our responsibility to assess all relevant vendors whether or not they choose to actively participate.

Eleven of the 15 suppliers responded positively to our requests for information and provided completed questionnaires and demonstrations to help in our analysis of their analytics and business intelligence products. The following vendors declined to participate or did not respond to our invitation: Microsoft, Oracle, Qlik and Tableau. To organizations evaluating these vendors, we recommend extra scrutiny as part of the software assessment because they did not make their technology available for the Value Index evaluation process; all online material that was generally available was used for the analysis along with briefings and information provided. This report includes products generally available as of August 2018.

We did not include a number of other vendors in this Value Index evaluation because they did not satisfy 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 and LinkedIn. 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.

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

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