

# Embedded Analytics Buyers Guide

2023 Vendor and Product Assessment

EXECUTIVE  
SUMMARY



## **Bend, Oregon**

### **September 2023**

The information contained in this Ventana Research Buyers Guide provides a baseline of knowledge that organizations can use to evaluate the sophistication of vendors and products in the area of embedded analytics. Our findings are drawn from thorough, research-based analysis of product and customer experience categories that best represent how an organization should evaluate technology vendors.

Nothing in this report and our research is intended to imply that one vendor or product is the right choice for any one particular organization. Rather, our goal is to provide an objective ranking and rating of vendors and products related to the topic of this Buyers Guide using our research methodology and blueprint for successful evaluation and selection. We performed this research independent of any external influence, charged no fees for any technology vendor to participate in the research and invited all relevant vendors that met our inclusion criteria. This report includes products generally available as of August 1, 2023.

The complete Buyers Guide report and research is available to be licensed for use across an organization or the Internet. We provide insights on the technology industry, software categories and vendors related to this Buyers Guide to organizations through our Ventana On-Demand research and advisory service. We also offer assessment services using this research to help discover and provide guidance on vendor selection.

We certify that Ventana Research performed this research to the best of our ability, that the analysis is a faithful representation of our knowledge of vendors and products, and that the ranking and ratings are our own.

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## Embedded Analytics

The processes and technology of the analytics and data software industry play an instrumental role in enabling an organization's business units and IT to optimally utilize data in both tactical and strategic ways. To accomplish this, organizations must provide their workers technology that can access the data, generate and apply insights from analytics, communicate the results and support collaboration as needed.

When analytics are embedded in business processes and applications, 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. Analysis is 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. For these reasons, we expect that by 2026, more than two-thirds of line-of-business personnel will have immediate access to cross-functional analytics embedded in their activities and processes, helping to make operational decision-making more efficient and effective.

This Buyers Guide 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 cannot perform their own analyses without IT involvement. Our research on cloud-based analytics, predictive analytics, data preparation and big data analytics all show strong interest in embedded delivery of those capabilities. Analytics vendors understand the need to deliver embedded analytics; most have been developing and enhancing APIs and other mechanisms to integrate analytics more tightly into business processes and applications.

### Embedded Analytics

#### Market Assertion

By 2026, more than two-thirds of line-of-business personnel will have immediate access to cross-functional analytics embedded in activities and processes helping to make operational decision-making more efficient and effective.



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**David Menninger**  
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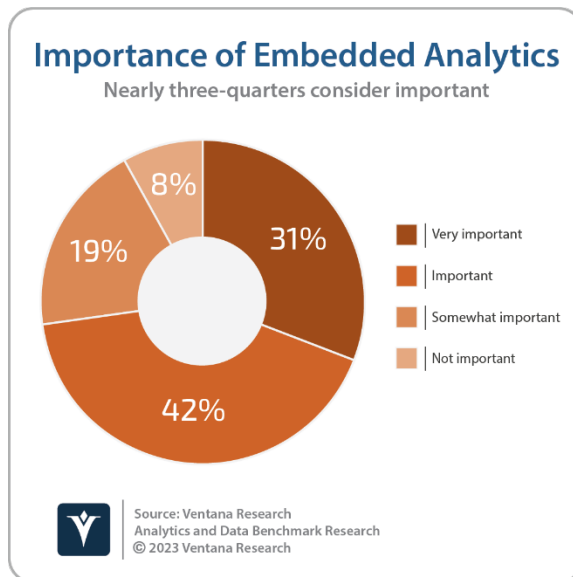


However, it can be challenging for analytics and business intelligence vendors to package and deliver their capabilities in a way that makes them easy to embed into other applications and processes. Vendors are working to overcome these challenges because organizations recognize the importance of embedded analytics. Nearly three-quarters of participants in our Analytics and Data Benchmark Research said they considered embedded analytics important.

Vendors must provide tools for defining data models and accessing data from applications and other data sources. These tools will likely be used by a different audience than typical analytics tools. An application development team, for instance, would create the framework for line-of-business personnel to perform analyses. In addition, the tools must 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.

Organizations are aware of the value of embedded analytics. The next step is to embrace embedded analytics and determine what capabilities their vendor currently offers. They should also be comparing their current offering with what other vendors have to offer. In evaluating embedded analytics, one must also consider the underlying analytics capabilities. Great APIs and SDKs can only do so much if the foundation of underlying analytics is weak. Consequently, this Buyers Guide combines an assessment of embedded analytics capabilities with core analytics capabilities to determine the vendor's overall rankings. Organizations can then use this report not only to help guide purchasing decisions, but to guide conversations with vendors about their roadmap for embedded analytics. The market continues to evolve, but organizations can realize value today that will improve their analytics processes.

This research evaluates the following vendors that offer products that address key elements of embedded analytics as we define it: AWS , Cloud Software Group, Domo, GoodData, Google, IBM, Idera, Incorta, Infor, insightsoftware, Microsoft, MicroStrategy, Oracle, Pyramid Analytics, Qlik, SAP, SAS, Sigma Computing, Sisense, Tableau Software, ThoughtSpot and Zoho.





## Buyers Guide Overview

For over two decades, Ventana Research has conducted market research in a spectrum of areas across business applications, tools and technologies. Ventana Research has designed the Buyers Guide to provide a balanced perspective of vendors and products that is rooted in an understanding of the business requirement in any organization. Utilization of our research methodology and decades of experience enables our Buyers Guide to be an effective method to assess and select technology vendors and products. The findings of this research undertaking contribute to our comprehensive approach to ranking and rating vendors in a manner that is based on the assessments completed by an organization.

This Ventana Research Buyers Guide: Embedded Analytics is the distillation of over a year of market and product research efforts. It is an assessment of how well vendors' offerings will address organizations requirements for embedded analytics software. The index is structured to support a request for information (RFI) that could be used in the RFP process by incorporating all criteria needed to evaluate, select, utilize and maintain relationships with technology vendors. An effective product and customer experience with a technology vendor can ensure the best long-term relationship and value achieved from a resource and financial investment.



Ventana Research has designed the Buyers Guide to provide a balanced perspective of vendors and products that is rooted in an understanding of business requirements in any organization.

In this Buyers Guide, Ventana Research evaluates the software in seven key categories that are weighted to reflect buyers' needs based on our expertise and research. Five are product-experience related: Adaptability, Capability, Manageability, Reliability, and Usability. In addition, we consider two customer-experience categories: 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 Value Index methodology and blueprint, which links the personas and processes for embedded analytics to an organization's requirements.



The structure of the research reflects our understanding that the effective evaluation of vendors and products involves far more than just examining product features, potential revenue or customers generated from a vendor's marketing and sales efforts. We believe it



Ventana Research believes that an objective review of vendors and products is a critical business strategy for the adoption and implementation of software.

is important to take a comprehensive research-based approach, since making the wrong choice of an embedded analytics technology can raise the total cost of ownership, lower the return on investment and hamper an organization's ability to reach its potential performance. In addition, this approach can reduce the project's development and deployment time and eliminate the risk of relying on 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 asked participating vendors to provide product and company information across the seven

product and customer experience categories that, taken together, reflect the concerns of a well-crafted RFI. 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. Most selected vendors also participated in a one-on-one session providing an overview and demonstration, after which we requested they provide additional documentation to support any new input.

Ventana Research believes that an objective review of vendors and products is a critical business strategy for the adoption and implementation of embedded analytics software and applications. An organization's review should include a thorough analysis of both what is possible and what is relevant. We urge organizations to do a thorough job of evaluating embedded analytics systems and tools and offer this Buyers Guide as both the results of our in-depth analysis of these vendors and as an evaluation methodology.



# How To Use This Buyers Guide

## Evaluating Vendors: The Process

We recommend using the Buyers Guide to assess and evaluate new or existing technology vendors for your organization. The market research can be used as an evaluation framework to establish a formal request for information from technology vendors on their products and customer experience and will shorten the cycle time when creating a RFI. The steps listed below provide a process that can facilitate best possible outcomes.

1. Define the business case and goals.  
Define the mission and business case for investment and the expected outcomes from your organizational and technology efforts.
2. Specify the business needs.  
Defining the business requirements helps identify what specific capabilities are required with respect to people, processes, information and technology.
3. Assess the required roles and responsibilities.  
Identify the individuals required for success at every level of the organization from executives to front line workers and determine the needs of each.
4. Outline the project's critical path.  
What needs to be done, in what order and who will do it? This outline should make clear the prior dependencies at each step of the project plan.
5. Ascertain the technology approach.  
Determine the business and technology approach that most closely aligns to your organization's requirements.
6. Establish technology vendor evaluation criteria.  
Utilize the product experience: Adaptability, Capability, Manageability, Reliability and Usability, and the customer experience in TCO/ROI and Validation.
7. Evaluate and select the technology properly.  
Weight the categories in the technology evaluation criteria to reflect your organization's priorities to determine the short list of vendors and products.
8. Establish the business initiative team to start the project.  
Identify who will lead the project and the members of the team needed to plan and execute it with timelines, priorities and resources.



## The Findings

All of the products we evaluated are feature-rich, but not all the capabilities offered by a technology vendor are equally valuable to types of workers or support everything needed to manage products on a continuous basis. Moreover, the existence of too many capabilities may be a negative factor for an organization if it introduces unnecessary complexity. Nonetheless, you may decide that a larger number of features in the product is a plus, especially if some of them match your organization’s established practices or support an initiative that is driving the purchase of new software.


Factors beyond features and functions or vendor assessments may become a deciding factor. For example, an organization 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 category weighting can be applied to determine the best fit of vendors and products to your specific needs.

### Scoring of Vendors Across all Categories

The research finds IBM first on the list with SAP in second place and Qlik in third. Companies that place in the top three of a category earn the designation of Leader. IBM, Oracle and SAP have done so in five of the seven categories; Qlik in three; Domo in two and Sisense in one category.

The overall representation of the research below places the rating of the Product Experience and Customer Experience on the x and y axes, respectively, to provide a visual representation and classification of the vendors. Those vendors whose Product Experience have a higher weighted performance to the axis in aggregate of the five product categories place farther to the right, while the performance and weighting for the two Customer Experience categories

Vendors		Performance
IBM	1	76.7%
SAP	2	76.6%
Qlik	3	74.8%
Oracle	4	74.6%
Domo	5	72.4%
Tableau (Salesforce)	6	71.2%
Zoho	7	67.3%
Microsoft	8	65.4%
insightssoftware	9	65.0%
MicroStrategy	10	64.8%
Sisense	11	63.6%
Idera	12	61.2%
SAS	13	61.0%
Cloud Software Group	14	60.2%
Pyramid Analytics	15	58.9%
Google	16	58.7%
AWS	17	58.2%
GoodData	18	58.2%
ThoughtSpot	19	56.7%
Incorta	20	56.5%
Infor	21	54.0%
Sigma Computing	22	44.6%

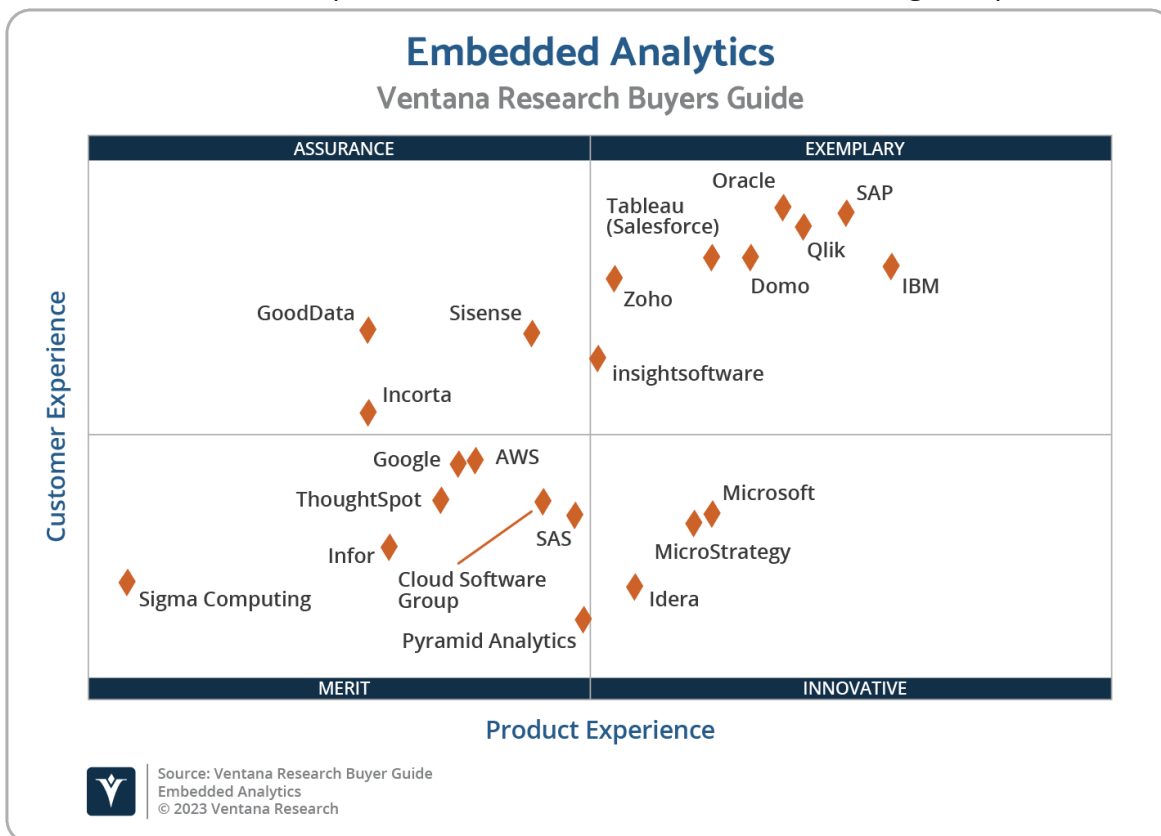
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determines their placement on the vertical axis. In short, vendors that place closer to the upper-right on this chart performed better than those closer to the lower-left.

The research places vendors into one of four overall categories: Assurance, Exemplary, Merit or Innovative. This representation classifies vendors overall weighted performance.



**Exemplary:** The categorization and placement of vendors in Exemplary (upper right) represent those that performed the best in meeting the overall Product and Customer Experience requirements. The vendors awarded Exemplary are: Domo, IBM, insightsoftware, Oracle, Qlik, SAP, Tableau and Zoho.

**Innovative:** The categorization and placement of vendors in Innovative (lower right) represent those that performed the best in meeting the overall Product Experience requirements but did not achieve the highest levels of requirements in Customer Experience. The vendors awarded Innovative are: Idera, Microsoft and MicroStrategy.

**Assurance:** The categorization and placement of vendors in Assurance (upper left) represent those that achieved the highest levels in the overall Customer Experience requirements but did not achieve the highest levels of Product Experience. The vendors awarded Assurance are: GoodData, Incorta and Sisense.



**Merit:** The categorization for vendors in Merit (lower left) represent those that did not exceed the median of performance in Customer or Product Experience or surpass the threshold for the other three categories. The vendors awarded Merit are: AWS, Cloud Software Group, Google, Infor, Pyramid Analytics, SAS, Sigma Computing and ThoughtSpot.

We warn that close vendor placement proximity 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 embedded analytics, 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 for a particular organization's needs.

We advise organizations to assess and evaluate vendors based on their requirements and use this research as a reference to their own evaluation of a vendor and products.



## Product Experience

The process of researching products to address an organization’s needs should be comprehensive. Our Value Index methodology examines Product Experience and how it aligns with an organization’s life cycle of onboarding, configuration, operations, usage and maintenance. Too often, vendors are not evaluated for the entirety of the products; instead, they are evaluated on market execution and vision of the future, which are flawed since they do not represent an organization’s requirements but how the vendor operates. As more vendors orient to a complete product experience, the more robust of an evaluation can be conducted.

The research based on the methodology of expertise identified the weighting of Product Experience to 90% or nine-tenths of the total evaluation. Importance was placed on the categories as follows: Usability (10%), Capability (30%), Reliability (10%), Adaptability (30%) and Manageability (10%). This weighting impacted the resulting overall rankings in this research. IBM, SAP and Qlik were designated Product Experience Leaders as a result of their commitment to embedded analytics technology. Vendors have been investing in this area for years now, and as a result, nearly all vendors had a 50% or better performance rating, indicating that they meet a broader range of enterprise embedded analytics requirements.

Many organizations will only evaluate the capabilities of products, but the research identified the criticality of Manageability, Reliability and Usability (10% weighting each) across a broad set of criteria that would support deployments of embedded analytics into other applications. The research also considers the breadth and depth of analytics that can be embedded into other applications.

Embedded Analytics Product Experience		
Vendors		Performance
IBM	1	69.2%
SAP	2	67.7%
Qlik	3	66.2%
Oracle	4	65.4%
Domo	5	64.3%
Tableau (Salesforce)	6	63.0%
Microsoft	7	62.9%
MicroStrategy	8	62.4%
Idera	9	60.2%
Zoho	10	59.4%
insightsoftware	11	58.7%
Pyramid Analytics	12	58.4%
SAS	13	58.2%
Cloud Software Group	14	57.1%
Sisense	15	56.6%
Google	16	54.6%
AWS	17	54.1%
ThoughtSpot	18	53.3%
Infor	19	51.6%
Incorta	20	51.0%
GoodData	21	50.9%
Sigma Computing	22	42.3%

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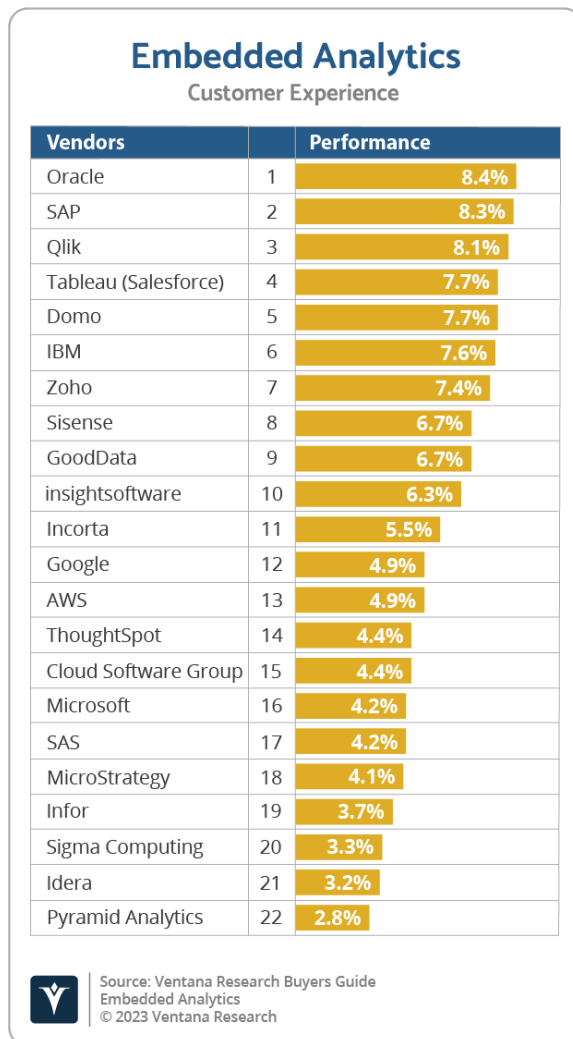
## Customer Experience

The importance of a customer relationship with a vendor is essential to the actual success of the products and technology. The advancement of the Customer Experience and the entire life cycle an organization has with its vendor is critical for ensuring satisfaction in working with that vendor. Technology providers that have Chief Customer Officers area more likely to have greater investments in the customer relationship and focus more on their success. These leaders also need to take responsibility for ensuring the marketing of their commitment is made abundantly clear on website and in the buying process and customer journey.

Our Value Index methodology weights Customer Experience at 10%, or one-tenth, as it relates to the framework of commitment and value to the vendor-customer relationship. The two evaluation categories are Validation (5%) and TCO/ROI (5%), which are weighted to represent their importance to the overall research.

The vendors that rank the highest overall in the aggregated and weighted Customer Experience categories are Oracle, SAP and Qlik. These category leaders in Customer Experience best communicate their commitment to customer needs. Vendors such as Tableau, Domo and IBM were not Overall Leaders, but demonstrated a high level of commitment to customer experience.

Many vendors we evaluated did not have sufficient information available through their website and presentations. This makes it increasingly difficult for organizations to evaluate vendors on the merits of their commitment to customer success. As a result, nearly half of the vendors' performances were scored at less than 50% of the maximum in our evaluation. As the commitment to a vendor is a continuous investment, the importance of supporting customer experience in a holistic evaluation should be included and not underestimated.





## Appendix: Vendor Inclusion

For inclusion in the Ventana Research Augmented Analytics Buyers Guide for 2023, a vendor must be in good standing financially and ethically, have more than 50 dedicated workers, at least \$50 million in annual or projected revenue verified using independent sources, sell products and provide support on at least two continents, and have at least 100 customers. The principal source of the relevant business unit's revenue must be software-related and there must have been at least one major software release in the last 18 months. The product must be capable of accessing data from a variety of sources, modeling the data for analysis, analyzing the data using a variety of techniques, communicating the results in a variety of ways and supporting the data and analytics processes within an organization.

The research is designed to be independent of the specifics of vendor packaging and pricing. To represent the real-world environment in which businesses operate, we include vendors that offer suites or packages of products that may include relevant individual modules or applications. If a vendor is actively marketing, selling and developing a product for the general market and is reflected on its website that it is within the scope of the research, that vendor is automatically evaluated for inclusion.

All vendors that offer relevant embedded analytics products and meet the inclusion requirements were invited to participate in the research evaluation process at no cost to them.

Eleven of the 22 vendors responded positively to our requests for additional information and provided completed questionnaires and demonstrations to help in our evaluation of their embedded analytics products. We categorize participation as follows:

**Complete participation:** The following vendors actively participated and provided completed questionnaires and demonstrations to help in our evaluation of their product: Domo, GoodData, IBM, insightsoftware, Oracle, Pyramid Analytics, Qlik, SAP, Sisense, Tableau and Zoho.

**Partial participation:** The following vendors provided limited information to help in our evaluation: Incorta, Infor and MicroStrategy.

**No participation:** The following vendors provided no information or did not respond to our request: AWS, Cloud Software Group, Google, Idera, Microsoft, SAS, Sigma Computing and ThoughtSpot.



Vendors that meet our inclusion criteria but did not completely participate in our Buyers Guide were assessed solely on publicly available information. As this could have a significant impact on their classification and rating, we recommend additional scrutiny when evaluating those vendors.

## Products Evaluated

Vendor	Product Names	Version	Release Month/Year	Participation Status
AWS	Amazon QuickSight	July 2023	July 2023	None
Cloud Software Group	Spotfire	12.5	June 2023	None
Domo	Domo	August 2023	August 2023	Complete
GoodData	GoodData Cloud GoodData Cloud Native	2.4 (Cloud Native),	July 2023	Complete
Google	Looker	23.12	July 2023	None
IBM	IBM Cognos Analytics	12.0.0	June 2023	Complete
Idera	Yellowfin	9.9.0	July 2023	None
Incorta	Incorta Open Data Delivery Platform, Incorta Cloud	6.0 (on-premises) 2023.7.0 (cloud)	July 2023	Partial
Infor	Infor Birst	2023.04	April 2023	Partial
insightsoftware	Logi Symphony	23.2	June 2023	Complete
Microsoft	Power BI	2.119.323.0	July 2023	None
MicroStrategy	MicroStrategy ONE	11.3.10	June 2023	Partial
Oracle	Oracle Analytics Cloud Oracle Analytics Server	July 2023 Update (Cloud); 2023 (Server)	July 2023 (Cloud); March 2023 (Server)	Complete



Pyramid Analytics	Pyramid Decision Intelligence Platform	2023	June 2023	Complete
Qlik	Qlik Sense Qlik Cloud	July 2023	July 2023	Complete
SAP	SAP Analytics Cloud	2023.16	August 2023	Complete
SAS	SAS Viya	2023.07	July 2023	None
Sigma Computing	Sigma	July 2023	July 2023	None
Sisense	Sisense Fusion	2023.6	July 2023	Complete
Tableau (Salesforce)	Tableau Cloud, Tableau Server, Tableau Embedded Analytics, Tableau Data Management, Tableau Advanced Management, Tableau Desktop, Tableau Prep, Tableau Mobile	2023.2	June 2023	Complete
ThoughtSpot	ThoughtSpot Analytics	9.4.0	July 2023	None
Zoho	Zoho Analytics	5.0 (Build Number 5260)	July 2023	Complete



## Vendors of Note

We did not include vendors that, as a result of our research and analysis, did not satisfy the criteria for inclusion in the Buyers Guide. These are listed below as “Vendors of Note.”

<b>Vendor</b>	<b>Product</b>	<b>\$50M Revenue</b>	<b>Actively Market Analytics Product</b>	<b>50 Dedicated Employees</b>	<b>100 customers</b>
Board International	Board	Yes	No	Yes	Yes
Hitachi Vantara	Pentaho Data Platform	Yes	No	Yes	Yes
Kyigence	Kyigence Zen Kyigence Enterprise	No	Yes	Yes	Yes
OpenText	Open Text Magellan	No	Yes	Yes	Yes
Sisu Data	Sisu Data Intelligence Engine	No	Yes	Yes	No
Tellius	Tellius	No	Yes	Yes	No





## About Ventana Research

Ventana Research is the most authoritative and respected benchmark business technology research and advisory services firm. We provide insight and expert guidance on mainstream and disruptive technologies through a unique set of research-based offerings including Benchmark Research and technology evaluation assessments, education workshops and our research and advisory services, Ventana On-Demand. Our unparalleled understanding of the role of technology in optimizing business processes and performance and our best practices guidance are rooted in our rigorous research-based benchmarking of people, processes, information and technology across business and IT functions in every industry. This Benchmark Research plus our market coverage and in-depth knowledge of hundreds of technology providers means we can deliver education and expertise to our clients to increase the value they derive from technology investments while reducing time, cost and risk.

Ventana Research provides the most comprehensive analyst and research coverage in the industry; business and IT professionals worldwide are members of our community and 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](#).

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](http://www.ventanaresearch.com).

## What We Offer

Ventana Research provides a variety of consulting, advisory, research and education (CARE) services to meet your specific needs when evaluating and selecting vendors. We offer tailored Assessment Services using the Buyers Guide and Value Index methodology to help you evaluate technology vendors and products used today or that may be used in the future. Ventana On-Demand (VOD) provides structured education and advisory sessions to support business and technology professionals.

Everything at Ventana Research begins with our market research using our subject matter expertise and industry experience working with organizations worldwide. Our continuous approach to conducting research and analyzing market trends, best practices and



technologies helps our clients become more efficient and effective. Through the Ventana Research community we share our research and insights. Sign up for free membership at <https://www.ventanaresearch.com/> to gain access to our weekly insights and learn about upcoming educational and collaboration events.

We offer the following VOD membership levels for business and IT professionals:

**Individual membership:** For those interested in full access to our community and analysts for themselves. This level includes access to our library of market research and insights with access to industry analysts and subject matter experts by telephone or email.

**Team membership:** For those interested in full access to our community and analysts for a team. This level includes access to our library of market research and insights with ad-hoc advisory and structured consultative sessions to provide contextual feedback.

**Business membership:** For those interested in full access to our community and analysts for a larger group. This level includes access to our library of market research and insights with ad-hoc advisory and structured consultative sessions to provide contextual feedback.

**Business Plus membership:** For those interested in full access to our community and analysts across business teams and units. This level includes access to our library of market research and insights with ad-hoc advisory and structured consultative sessions to provide contextual feedback as well as additional strategic consulting sessions.

**[Additional services](#) are available for technology vendors, consulting and systems integrators, and investment firms.**

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