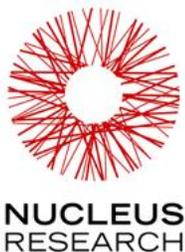


RESEARCH NOTE

TECHNOLOGY VALUE MATRIX SECOND HALF 2014 ANALYTICS



ANALYSTS:

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THE BOTTOM LINE

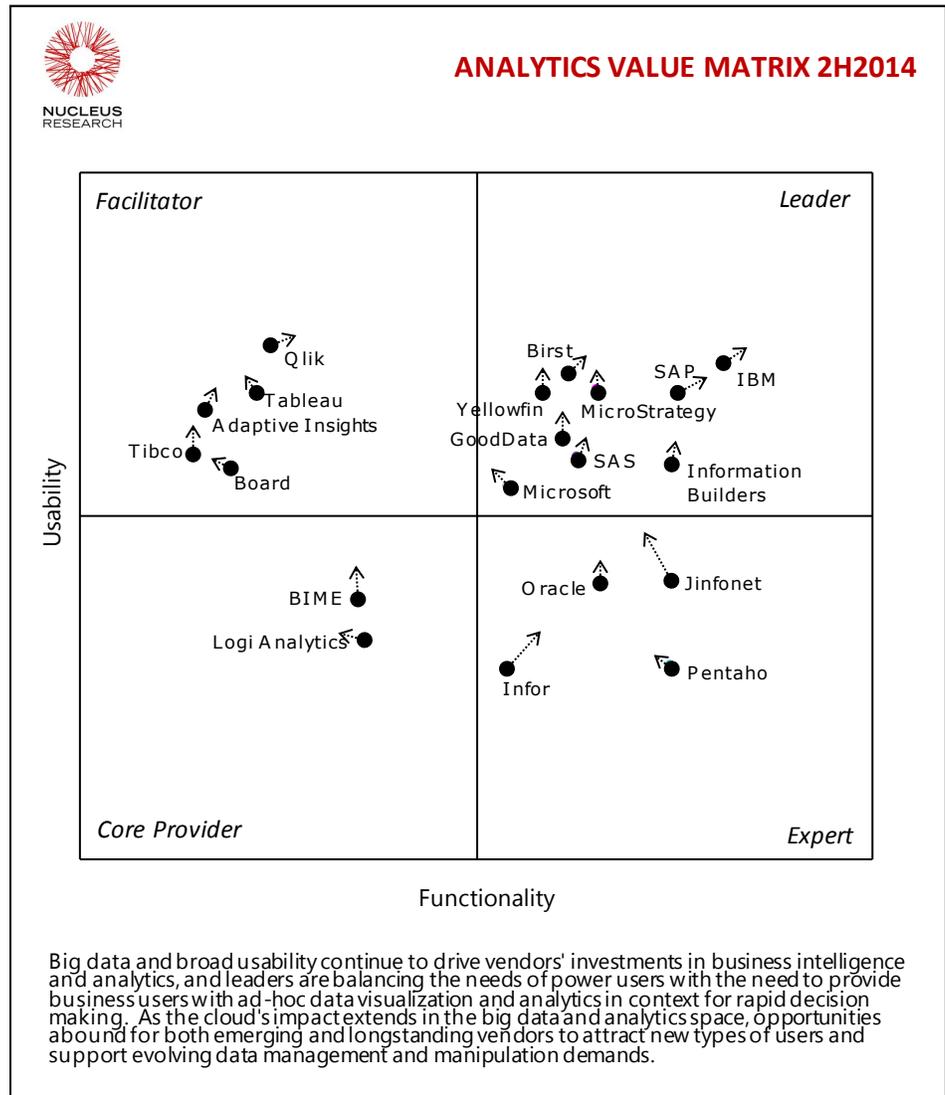
The analytics market has evolved from a small market of large, established vendors with predominantly on-premise solutions to a complex mix of cloud-based and on-premise applications, data discovery and visualization tools, and business intelligence (BI) platforms and solutions. Established vendors have had to shift their pricing and deployment models to meet customer demand while smaller upstarts are gaining ground through penetration strategies and partnerships. This Matrix evaluates all vendors' ability to deliver value based on usability and functionality.

The 2H2014 Analytics Value Matrix reflects the significant changes in the market that have taken place in the last six months, as cloud analytics options gain ground, vendor investments in usability bring more and more sophisticated analysis and visualization tools to the business user, and partnerships and integration bring analytics into the core of many other enterprise applications.

As BI vendors look to increasing competition in 2015, they are finding that broader adoption of analytics across the enterprise and the growth of data sources and volumes are presenting new challenges for customers. Although increasing functionality is important, so is the need to help customers leverage their existing investments while expanding their analytics capabilities. Key trends impacting product development include:

- The Internet of things (IOT) and other new data contexts. The growth of machine-generated data as well as the availability of location-based and other data is not just contributing to growing and spiky data volumes. It is providing new opportunities and challenges for predictive analytics and for adding new context to traditional analyses.
- The rise of data discovery. Companies such as Qlik and Tableau are raising the expectations for end users seeking direct interaction with data, and with IBM Watson Analytics's freemium offering, Nucleus expects more ad-hoc data discovery tools will enable initial analysis and more ad-hoc data-based decision making.
- A broader cloud play for analytics. Most companies have taken advantage of the first wave of cloud BI benefits (lower cost, greater flexibility, access from anywhere), and traditional vendors are playing catch up with cloud pricing and migration models.

Sophisticated analytics customers are thinking about the next steps around data governance, data location, and the migration of large data sets between cloud and on-premise data centers while meeting security and regulatory requirements. Because the cloud is inherently suited to spiky data sets like those generated by analytics and big data, data management and triage tools are taking on new importance.



- Demand for collaboration. Broader adoption of data discovery and other tools and the need for a tiered user approach to put more analytical tools into the hands of more users are driving demand for not just shared repositories or dashboards, but more effective means for different users to share and collaborate on their analyses.
- New data governance requirements. With data moving between applications and divisions, and across cloud and on-premise data architectures, companies are being

challenged to rethink their data definitions and governance strategies to ensure appropriate data is available in the right framework and format for analysis while the broader set of enterprise data is consistent and secure.

LEADERS

Leaders in the Matrix include Birst, GoodData, IBM, Information Builders, MicroStrategy, Microsoft, SAP, SAS, and Yellowfin.

BIRST

Birst maintains its position as a leader in the Matrix, and continues to make investments in its position as a cloud BI leader, linking cloud BI, visualization, and data warehousing. Birst also provides data warehousing options with Birst's own cloud or with Amazon Web Services (AWS). In talking with customers, Nucleus has found that data management capabilities are a key functionality differentiator for Birst, but that customers also cite high levels of customer service and lower total cost of ownership as factors in their selection process.

Birst continues to have success with Birst Visualizer, which makes sharing, collaboration and analysis more consistent, faster and reliable. With easy to use, self-serve access to business data, casual business users will be able to make data-based business decisions as a result of their own investigations. These capabilities, initially targeted at existing customers, are now available to all customers as part of the Birst Discovery and Birst Enterprise at no additional charge.

In the past 12 months, Birst has shown an increase in partnerships to implement divisional and industry-specific solutions for customers around customer relationship management (CRM) and industries such as technology, health and pharmaceuticals, financial services, manufacturing and insurance. The company has also extended partnerships to attract a broader base of customers:

- In June, Birst announced support for SAP HANA, allowing customers to build a data warehouse in SAP HANA using Birst technology. Birst also supports several deployment options, whereby customers can run SAP HANA ONE and Birst in the AWS cloud, SAP HANA in SAP's cloud and Birst in the Birst cloud, or use the HANA appliance and Birst on premise. This flexibility gives customers the freedom to choose the deployment option that best fits their needs, as well as maintaining a single version of the truth for an end-to end cloud BI solution. Recently, Birst and SAP have announced closer integration plans for Birst on the SAP HANA Cloud platform, promising more options for those customers with SAP HANA considering cloud BI.
- Birst has strengthened its relationship with NetSuite, and with that, has released Birst Express for NetSuite. This free module includes Birst Visualizer and a library of operational metrics, visualizations, and reports focused on extending value of the NetSuite environment for BI and analysis.

- Birst continues to invest in more cloud and on-premise application partnerships, beyond the connectors already available for Salesforce.com, Marketo, Google Analytics, Oracle, SAP and others.

As Birst develops more embedded analytics partnerships and customers, Nucleus expects it will need to make further investments in supporting mobile devices as a broader set of users seek ready access to data visualization and discovery.

GOODDATA

GoodData's investments in usability and functionality anchor its position as a leader in the Matrix. GoodData offers an end-to-end, multitenant and extensible BI platform-as-a-service (paas) targeted at IT, marketing, and sales departments in midsize to large enterprises. It enables IT to govern data and deliver trusted datasets to end users for data discovery as a complement to existing information management initiatives or as net new deployments, enabling businesses to analyze data and collaborate to make more informed and strategic decisions. The GoodData platform provides organizations with the ability to collect, store, refine, visualize, analyze, report and integrate data while avoiding the systems administration, tool integrations, data manipulation, management, and optimization work of an on-premise platform.

In speaking with customers, Nucleus found they chose GoodData over more traditional vendors because of its software's usability, data governance, licensing, cloud model, and thought leadership (Nucleus Research *o65 – Anatomy of a Decision – GoodData*, April 2014). Users were able to access the data they need for analysis, in a self-service way, and as a result, many organizations saw increased productivity and a more holistic view of their data and business processes.

The GoodData platform is at the core of each GoodData product line, including Powered By GoodData, a partner program that helps partners deliver best-in-class analytics to customers, and GoodData's direct offerings that allow business and IT organizations to build the custom analytics they need. Both types of customers access the open architecture of the cloud-based, multitenant GoodData Platform, helping IT deliver quick, simple and flexible self-service access to all their users, and helping users directly access the data they need to collaborate on and analyze to drive decision making. GoodData offers pre-built templates, designed for a selection of disciplines, including sales, marketing, social media, and customer service. Additionally, GoodData offers expert services and training to ensure success for customers of each product line.

In March 2014, GoodData launched the Open Analytics Platform. This platform incorporates big data management technologies such as Hadoop, HP Vertica and MongoDB as its "Data Storage Service," the "Data Lake"-style foundation for increasing the storage and processing capacity it offers customers. The platform also includes open APIs for adding custom visualizations in HTML5 and JavaScript, and for automating BI tasks

such as data workflow, event notifications, and interactions with transactional systems. In June 2014, GoodData continued the support of HP Vertica, announcing its open analytics platform can now operate on the HP Vertica Analytics platform, providing real-time data analysis for customers.

The analytics platform also allows users to forecast and perform advanced statistical functions through the Extensible Analytics Engine (XAE). In September 2014, GoodData updated this engine to include a new and improved predictive package, and computed metrics for creating custom metric ranges.

In the past year, GoodData has increased its focus on social analytics, announcing a partnership with Semantria, a leading sentiment intelligence solutions provider. GoodData has also invested in pre-built templates and data source integrations to provide embedded analytics for more than 100 OEM partners with more than 35,000 customers.

IBM

IBM's products in core business intelligence, performance management, predictive analytics, and big data management make it a leader in functionality in the Matrix, and IBM's ongoing investments in improving usability and accelerating time to value make it a usability leader as well. On a case-by-case basis, Nucleus has found IBM customers leveraging its analytics to solve a broad set of business challenges and deliver a payback in fewer than 12 months.

Over the past year, IBM has continued to develop analytic capabilities and integrate them into more broad solutions, in areas such as risk analytics, procurement, sales performance management, and social collaboration. It has also released enhanced visualization capabilities, improved performance with Cognos Dynamic Cube technology, and increased support for HIVE and other big data sources. Specific product advances driving IBM's positioning in the Matrix include:

- New enhancements to Cognos Business Intelligence around security, in-memory analysis, report generation, and streamlined installations. Cognos 10 has been designed for multitenant deployments, and is scalable for public and private clouds. This cloud release will bring the Cognos BI capabilities to a wider audience, and with the efforts made on ease of use, simplification, and deployment flexibility, many can look to take advantage of the investments that have been made. V10.2.2 is scheduled for release before the end of 2014.
- The newest release of SPSS Modeler for the cloud. IBM SPSS Modeler Gold on Cloud will allow customers to leverage the power of SPSS Modeler in a hosted environment, and is offered with subscription pricing.
- Broader offerings for small and medium businesses. Especially with products such as IBM Cognos Insight, IBM SPSS Modeler Professional, IBM SPSS Statistics, and IBM Cognos Express, IBM is bringing enterprise capabilities to the individual user and smaller organizations.

- IBM Business Intelligence Pattern with BLU Acceleration. IBM Business Intelligence Pattern with BLU Acceleration speeds analytics and reporting through dynamic in-memory columnar processing. This new technology from IBM Research and Development labs provides an extremely efficient way to find relevant data. Other innovations, such as parallel vector processing, data skipping, and actionable compression make it easier for users to connect with needed information at rapid speed.

IBM's acquisitions of Cloudant and SoftLayer show a level of sophistication across the IBM portfolio that the company is bringing to bear on analytics, particularly in the way customers can manage complex cloud data management demands and leverage IBM's mobile investments to drive data-driven decision making at the device level.

From an organic perspective, IBM is also investing in more rapid, predictable analytics deployments with Patterns, a set of automated, preconfigured installation packages that are virtualized to simplify implementations and support best practices. Patterns are available now for business intelligence with BLU acceleration and cloud deployments, and IBM plans additional releases, new versions, and enhancements in the coming year.

In September, IBM announced IBM Watson Analytics (Nucleus Research o220 – *IBM announces Watson Analytics*, October 2014), the combination of natural language cognitive computing capabilities that Watson first became known for with predictive and visual analytics tools, all designed to drive value from insights to more users within organizations. In addition to Watson, IBM's data refinery services continuously gather information across data sources, optimizing, enriching and refining the data sets, and making the data more useful for analytic exploration and discovery. With a freemium model to drive user exploration and adoption, Watson Analytics is tackling the cloud analytics model with arguably the most powerful cognitive computing capabilities available in the market.

Nucleus expects that this focus on business user insights, reinforced by the strong play of analytics in IBM's Smarter Commerce and Smarter Planet initiatives, will continue to drive IBM's strategy moving forward. Arguably, IBM's biggest challenges will be in helping customers navigate which technologies are best suited for their analytics needs, and how they can leverage their existing investments and skills with new analytical techniques and tools. Nucleus has already seen customers make the natural extension from an existing Cognos deployment to a more predictive focus with SPSS, and IBM has shown several potential integration points between the Cognos BI solution and Watson Analytics. Nucleus will be watching how IBM continues to provide thought leadership and technology bridges between solutions as well as how IBM Concert can be leveraged for collaboration and task management.

INFORMATION BUILDERS

Information Builders continues to develop its portfolio of data management capabilities with data governance, data quality support, core BI, packaged applications, data discovery, advanced analytics, and predictive analytics.

On the usability front:

- Information Builders's mobile apps are based on a device-neutral approach so organizations do not have to limit the device of choice among their end-user community, which makes sense given users' bring your own device (BYOD) demands.
- Information Builders continues to deliver on its BI Portal and InfoApps, a self-service environment that provides an "app store" delivery mechanism populated with business-focused applications. The portal applications can extend the benefits of BI to a much broader user base and reduce reliance on IT. The self-contained, interactive BI apps, easily consumable on multiple devices, are small and focused on specific business problems for flexibility and ease of use.

In March 2014, Information Builders announced a partnership with Esri to extend the mapping capabilities and allow WebFOCUS users to access the most current geographical data to provide insights into the geographical forces that impact their business. Additionally, Information Builders's partnership with Beacon Integrated Data Services (IDS), a data-as-a-service (daas) solution, extends the data reach for Information Builders' WebFOCUS BI and analytics platform.

In September 2014, Information Builders announced the release of InfoDiscovery, enabling users to leverage data discovery capabilities, using governed data. This ensures the resulting insights are based on sanctioned enterprise data, can be operationalized, shared with the rest of the organization, and incorporated into applications. Integrated into the WebFOCUS platform, InfoDiscovery allows users to incorporate spreadsheets and other personal files, with enterprise data, then create and explore visualizations, and share their insights. It uses the InfoDiscovery Sandbox, a columnar data store that can store large volumes of data, for fast retrieval and calculations. InfoDiscovery also provides geographical analysis, based the Esri partnership.

Today, Information Builders has deployments with more than 2 million users. Moving forward, Information Builders is targeting to extend BI to customers, partners, and business and power users, while building more extensive InfoApps capabilities, new user interfaces, and greater mobile capabilities, and by expanding its data management capabilities.

MICROSOFT

Microsoft maintains a leader position in the Matrix, and Microsoft Excel is still the default self-service BI tool around the world. Microsoft has focused this year on providing

additional business value in other areas of its portfolio, and delivering self-service BI solutions to business users with the ease of use and familiarity of a tool they already use.

Microsoft launched PowerBI for Office 365 in the spring with the goal of providing business users with more advanced analytics capabilities within the Office 365 environment. Power BI is delivered through Excel, and provides users with data analysis and visualization capabilities to identify business insights either on-premise or within a cloud environment. Power BI features include Power Query, Power Map and Q&A natural language query engine. Microsoft continues to invest in Office 365, with a regular release cadence and core investments have been made in areas such as security, compliance, data management, infrastructure, and communications. Additional development work focused on user productivity has brought Office Mobile to iPhones and Android phones, with access to Word, Excel, and PowerPoint documents stored in Office 365 so users can update and edit documents from their devices. Other announcements impacting Microsoft's position in the Matrix include:

- In April 2014, Microsoft released Microsoft SQL Server 2014, which added an updateable in-memory ColumnStore and Power View for multi-dimensional models.
- In June 2014, Microsoft announced HDInsight support for Hadoop 2.4.
- In July 2014, Microsoft introduced the public preview of Microsoft Azure Machine Learning, which is a fully managed cloud service for building predictive analytics solutions. Azure ML combines the power of a comprehensive machine learning service with the benefits of cloud.

MICROSTRATEGY

Microstrategy continues to make investments in its cloud and mobile strategy and has focused on ease of use as well as the ability to handle large, diverse data sets. MicroStrategy's Analytics Platform includes the Analytics Desktop, plus two additional products: MicroStrategy Analytics Enterprise, and Analytics Express, which is a free cloud-based self-service visual analytics solution that provides self-service analytical capabilities similar to the Analytics Desktop, with reports and dashboards, native mobile applications, and secure team-based collaboration. Nucleus found Express enabled customers to quickly gain a consolidated view of their business processes because of the easily consumable and navigable dashboard.

MicroStrategy also offers data visualization and data discovery capabilities with its Visual Insight product, designed for performing data analysis in a fast and intuitive way by utilizing capabilities like drag-and-drop manipulations, drop zones for multidimensional analysis, highly graphical displays, intuitive filtering controls, and built-in best practices for visual exploration. It allows users to bring in data from spreadsheets, databases, or Hadoop.

On July 8, MicroStrategy announced the repackaging of several of its licenses into four distinct packages designed to simplify the complexity around renewal and purchase of

MicroStrategy products. This new packaging model reduces the deployment and adoption challenges with packages designed entirely around end users, server operation, administration and mobile deployment. Organizations no longer have to decipher existing licensing and product capabilities just to meet the analysis and reporting requirements of user communities, deployment needs, or administration requirements. The new packaging structure also allows MicroStrategy to extend its existing footprint in many accounts, increasing the adoption rate and the stickiness of its solution (Nucleus Research 0175 – *Microstrategy demystifies packaging*, August 2014).

In October, MicroStrategy announced that its Analytics Platform version 9.4.1 was certified to be compatible with and optimized for Oracle Database 12c with the Database In-Memory option. With this announcement, joint customers will be able to take advantage of the speed and performance of Oracle Database In-Memory when running real-time MicroStrategy BI applications and will improve performance for analytics queries powering MicroStrategy mobile applications.

MicroStrategy has also continued to make investments in its Mobile Application Development Platform for driving greater access to data and insights from mobile devices. With support for analytics, transactions, multimedia, and collaboration, the platform enables customers and partners to build mobile apps with minimal coding. The ability to embed transactional capabilities into mobile applications with the platform enables users to not just view data but also collaborate and act upon it. Additionally, the platform stores the underlying components of applications as objects in centralized metadata, so different objects can be reused across applications and changes to any object are automatically cascaded throughout the application portfolio to update the object wherever it is being used, reducing ongoing maintenance burdens.

SAP

SAP's vision for analytics focuses on the three key themes of engage, visualize, and predict, with specific goals of enabling enterprise BI for all users, driving agile visualization, and providing advanced analytics for predictive results in more applications and processes. All of these themes rely on SAP's investments in usability and cloud and in leveraging the power of SAP HANA to drive rapid analysis of large data volumes.

SAP's BI solutions product strategy is focused on providing a strong user experience, advanced functionality for analytics, and scalable, flexible solutions:

- Users stated increased visibility, enhanced data consolidation and interaction capabilities, and the strength and flexibility of the dashboarding capabilities were key values gained with the use of SAP BusinessObjects. As one customer said: *"We were able to provide our diverse user community with an easy-to-use environment where they can focus on understanding the information, can quickly access further details if they need to, but be able to have a single version of the truth for all their decision making."*

- SAP Lumira provides agile visualization and data discovery with an easy-to-use interface for exploring data and driving real-time understanding of the business. Lumira is available for desktop, Web, and mobile users and is offered both on-premise and as a saas solution leveraging SAP HANA cloud, with a cloud licensing and pricing model.
- SAP InfiniteInsight (formerly KXEN) provides predictive analytics with capabilities to automate data preparation, predictive modeling, and deployment tasks to enable users to rapidly build models and operationalize predictive analysis. InfiniteInsight can be embedded into business applications and processes and can also be accessed through SAP Customer Engagement Intelligence for real-time customer segmentation building.

SAP has made a number of announcements since publications of the last Matrix that impact its positioning:

- In May, SAP announced advances to SAP Lumina software for data discovery, including visualizations across cloud, mobile devices, and the desktop; custom visual extensions with a software development kit (SDK), pre-built visual discoveries to accelerate time to value, and the ability to create and share infographics.
- In May, SAP also announced an extension of its partnership with Microsoft: SAP applications will be certified for Microsoft Azure, interoperability improvements are planned between SAP applications and Microsoft Office (specifically, general availability for connectivity between SAP BusinessObjects and Microsoft PowerBI), and SAP and Microsoft plan future support for SAP HANA on Azure.
- In July, SAP announced general availability of new capabilities on the SAP HANA platform that simplify integration with Esri geospatial services and content. The partnership is designed to bring high-performance spatial analytics, self-service mapping, and collaboration to bear in Esri and SAP environments to enable users to make better business decisions with geographical data in context.
- In October SAP announced a partnership with OpenPeak so OpenPeak and its resellers can provide enterprise customers with mobile management capabilities to support secure delivery of BusinessObjects, InfiniteInsight, and Lumira analytics capabilities on mobile devices.

SAS

SAS provides a suite of business intelligence, performance management, and predictive analytics applications built on top of a strong programming environment.

SAS has integrated its analytics into an easy-to-use solution, called Visual Analytics for data visualization, reporting, dashboards and mobile. This in-memory BI solution simplified the ease of use of SAS BI, combining auto-charting and mobile access with existing SAS functions to provide data visualization and data discovery for users. In March 2014, an updated version was released with faster and easier data loading, new text and unstructured data analytics, more reporting features, and improved mobile device

capabilities. With Visual Analytics's interactive data visualizations, SAS is delivering capabilities that may have been previously focused on data miners and statisticians to business analysts and other business users.

Also on the usability front, SAS BI's integration with Microsoft Office and SharePoint allows reports and analysis to be shared throughout the organization. SAS data visualizations can be shared through Outlook and SharePoint for collaboration, and used in presentations using PowerPoint. The integration is not static, as the data visualizations are live and can be refreshed in any of the Microsoft applications.

SAS offers a hosted cloud environment that allows customers to quickly start using SAS Visual Analytics, with a hosted trial version to allow organizations to try before they buy.

YELLOWFIN

Nucleus has found that Yellowfin's combination of a collaborative BI platform, strong in-application BI presentation capabilities, data visualization, proactive alerts, and decision making capabilities rank it as a leader in functionality, and its intuitive Web-based user interface gives it a strong usability ranking as well.

Yellowfin's focus on keeping the user interface and presentation layer simple and easy to use has allowed it to compete for enterprise, departmental, and embedded BI deployment projects. Customers stated Yellowfin's easy to understand user interface, flexibility, self-service discovery and ease of deployment were key factors behind the success they have seen in their deployments. As one customer said, *"We used to have to bring in a number of sources of data into Excel, and spend most of our time cleansing and consolidating the data. We are using Yellowfin for that now, and are saving more than 8 hours a week at least on that process. All the data is consolidated now, it is easy to use, and our users can now quickly access the data they need."* Yellowfin also offers administrative, management, and advanced data analysis and exploration capabilities for enterprise-wide deployment and management.

Yellowfin Mobile BI supports Android and iOS, and users can create reports via their mobile devices, extending the usability and accessibility of the solution. Reports, analytics, and dashboards can be accessed in the same format via any platform or device, providing consistent reporting for all users. Yellowfin's collaboration capability allows organizations to share knowledge and insight, discuss and overlay knowledge on business data, and collectively decide the best course of action.

In August 2014, Yellowfin released version 7.1, with significant enhancements to its location analytics and data import capabilities. Its location analytics enhancements included the introduction of native base layers and GeoPacks. Yellowfin now ships with a native base map of the world, enabling users to create multilayered maps without needing to source WMS layers or use third-party mapping services such as Google Maps.

GeoPacks, available for free download from the Yellowfin Marketplace, contain location-relevant demographic data, as well as geometry and GIS data, allowing users to combine third-party location-relevant information with their own business data to generate deeper location-based insight. Customers said location intelligence enhancements were one of the biggest differentiators in the new version, as well as the improvements to the CSV import process, which enables them to easily manipulate CSV files at importation, making it quicker to prepare spreadsheet data for reporting purposes.

Yellowfin licenses its solution with one annual all-inclusive license type that enables every user to access and utilize Yellowfin's full range of features and functionality – there are no separate charges to utilize Yellowfin's location analytics; collaborative capabilities; or apps for iPad, iPhone and Android devices (HTML5).

EXPERTS

Experts in the Matrix include Infor, Jinfonet, Oracle, and Pentaho.

INFOR

Infor BI is the common technology platform under Infor Dynamic Enterprise Performance Management (d/EPM), an end-to-end offering, bringing together BI, analytics, and CPM with an in-memory multi-dimensional architecture. This provides organizations with a common data model for a single version of the truth.

Infor uses an in-memory database platform that is part of Infor BI called the In-Memory Grid for high performance analysis including drilling up and down hierarchies and performing calculations. This platform supports write-back for forecasting and planning, allowing organizations to integrate their CPM and BI capabilities and tasks. Infor incorporates R for statistical forecasting, providing analysts additional advanced analytics for planning and forecasting requirements.

Infor ION, a loosely-coupled standards-based approach for integrating data from Infor and other non-Infor applications, provides workflow and event monitoring. Infor ION Business Vault enterprise data hub provides the ability to model hierarchies and master data relationships. This capability ensures all users are using the same business view and definitions, simplifying data insight, reducing the challenges of misinformation and increasing the trust in the data. The Business Vault provides audit and data lineage capabilities to reconcile transformations from source to target. Infor BI's semantic data layer, Data Links, provides simplified access to applications and databases for reporting and analytics. Business rules are modeled in a single layer which then can be accessed via production reporting, analytics, and ad hoc reporting tools.

Infor provides users with the ability to mashup business and operational data alongside planning and forecasting information to get better insight to business results and drivers.

Social collaboration is provided with Infor Ming.le, which allows users to easily collaborate, share that information, and gain insights needed for business decisions. Infor Motion Dashboards allow users to easily view business results, create mashups of business data, and enter plans and forecasts from mobile devices.

Infor also provides out-of-the-box pre-packaged analytic content for areas such as sales, production, and project costing. Customers can also build their own analytics using the dashboarding and analytic capabilities of Infor d/EPM suite. These dashboards can be delivered via the Web or via mobile devices. Users can use the dashboard components and widgets to create their own personal dashboards, and also use self-service features to create new widgets on the data sets, all within the dashboarding environment.

Recently, Infor released a new Analytics for Human Capital Management solution and also enhanced analytics for manufacturing industries including automotive, aerospace and defense, food and beverage, fashion, and core manufacturing. Packaged industry analytics help customers accelerate a BI implementation and leverage best practices and are pre-integrated with Infor business applications. In the past year, Infor has released new solutions, such as the Infor Healthcare TrueCost solution, and delivered further integrations into the Infor ERP applications. Infor has also introduced several new packages as part of the Infor Cloudsuite, using the Amazon Web Services (AWS) Cloud, and providing the on-demand access and auto-scaling built into Infor applications, as well as the access to resources in AWS when needed.

JINFONET SOFTWARE

Jinfony Software JReport is a Java-based BI platform. It has evolved from an embedded reporting tool to deliver more data visualizations and analytics and support mobile delivery. Jinfony provides an easy-to-use solution that is easy to embed, and includes an extensive variety of APIs to allow solution developers the ability to extend the BI capacities of their solutions. Jinfony also provides flexible pricing for OEMs to help reduce their costs, as well as responsive and experienced support and services teams. As one customer said: *"Our support and enhancement requests are quickly responded to, and Jinfony keeps up with the protocols and new technology. We have thousands of users of our solution, and JReport has been very easy to use and embed."* The JReport Cluster Server is optimized for auto scaling, load balancing, and eliminating single points of failure.

JReport 13, released in May, provides enhancements to its visualization capabilities with new tools and customizations as well as performance improvements. It also includes a geo-analysis capability (with Google Maps and OpenStreetMap), which enables users to customize areas and markers, as well as navigate the information by drilling up or down within the maps, without requiring predefinition by developers.

JReport provides easy-to-use tools for report building and analysis, but also for embedding these visualizations into customer's host applications through a number of

methods including an extensive API set. The focus on self-service means users have flexible data source access, charts, and easy data interaction, as well as filtering, sorting and linking to reports. JReport also provides the ability to perform ad-hoc reporting and detail data reporting, as well as extensive customization and interactivity. JDashboard extends JReport by providing easy end-user creation of dashboards through reusable components. Visual Analysis provides end users with ad-hoc analysis capabilities for quickly analyzing data from different angles.

Jinfony provides mobile users the ability to access their reports and dashboards using iOS or HTML5 in an interactive fashion, and in the future plans extended capabilities to allow for more authoring type actions.

Jinfony has built its own in-memory cube and caching technology to provide improved performance gains, as well as the ability to execute parallel queries for better response and query performance. Jinfony also supports several big data environments such as NoSQL, MapReduce, MongoDB and Apache Hive, as well as Amazon AWS. As one OEM said: *"Jinfony supports a wide variety of platforms and data sources that others in this space do not. We can meet the deployment requirements our clients are looking for, and provide the ease of use that has improved adoption rates and the self-service that our users are looking for."*

Jinfony has built a strong base of OEM customers based on its extensive API library, its flexibility, and the ease of use available for the end user. Moving forward, Jinfony will continue to focus on developing more BI capabilities within its solution, as well as further collaboration, but should ensure it maintains its high level of support and competitive pricing strategy, as they are critical to many OEM partners.

ORACLE

Oracle's high functionality position reflects the breadth of the Oracle offering, which includes business intelligence, performance management, predictive analytics, data mining, and big data tools. Announcements in the second half of 2014 include:

- Oracle announced Oracle Analytics Cloud, which takes business intelligence and analytics for big data and traditional data and delivers it as a service. This portfolio of analytics offerings was built for the cloud, is deployed in the cloud, is subscription based, and allows users to perform data analysis for cloud, on-premise, traditional, and big data sources. Mobile users have access to the same information, simplifying development and deployment efforts.
- Oracle announced a service for big data, which leverages the Hadoop framework, and allows users to access, store, and analyze data securely, while integrating into other Oracle cloud services. There are several options for organizations to deploy the services, allowing for distribution of costs and optimization of existing or new environments.

- In Oracle's Big Data Discovery Service provides users with a saas environment to navigate their big data systems, and analyze, explore, and prepare Hadoop data for ease of consumption and navigation.
- Oracle released Enterprise Metadata Management 12c to address the growing needs of data governance, especially in the world of big data. With the growing needs of business to gain big data access combined with on-premise data, Oracle is providing the tools to help organizations manage the data that is both external and internal.

PENTAHO

Pentaho provides an analytics and data integration platform for faster access to insights from multiple data sources, with capabilities for operational and interactive reporting, data discovery and analysis, visualizations and dashboards, predictive analytics and data mining, a graphical visual design for ETL, and connectivity to a broad array of data sources including big data sources such as Hadoop and NoSQL and analytic databases such as Pivotal Greenplum, HP Vertica, Teradata Aster, and IBM Netezza.

Pentaho Business Analytics Version 5.1, released in June 2014, extended previous investments in user experience and big data with several enhancements that included interactive visual analytics directly on MongoDB and full YARN support. Also included was the Pentaho Data Science pack that was designed to simplify the data preparation, cleansing, and orchestration of analytic data sets.

Pentaho has an adaptive big data layer in its platform that accelerates access and integration to the latest versions, and capabilities of big data stores such as Hadoop distributions, NoSQL databases and specialized big data sources.

Pentaho continues to focus on providing extensive Big Data native integrations. Pentaho MapReduce allows java developers to create MapReduce jobs with no coding or specialized skills. In April 2014, Pentaho announced certified support for Cloudera 5. This combines Pentaho's easy-to-use visual interface for data ingestion, manipulation, integration, and task orchestration with Cloudera, allowing organizations to get a more comprehensive view of data across the enterprise.

One of Pentaho's biggest strengths is its open standards and open architecture. The java-based platform and multitenant architecture facilitate cloud and saas deployments, and allows for integration into enterprise security frameworks as well third-party charts and graphics via open APIs. As a result, Pentaho supports efficient integration into applications and OEM solutions.

FACILITATORS

Facilitators in the Matrix include Adaptive Insights, Board, Qlik, Tableau, and TIBCO Spotfire and Jaspersoft.

ADAPTIVE INSIGHTS

In February 2014, Adaptive Planning changed its name to Adaptive Insights to reflect the expansion of its CPM and BI suite beyond planning, budgeting, forecasting, and reporting. Nucleus has found that enterprise and midmarket organizations are choosing Adaptive Insights for its ease of use, greater collaboration capabilities, cloud deployment and competitive functional capabilities. It is completely Web and cloud based for ease of self-service creation, analysis, and consumption of analytics. Customers can optionally integrate analytics and visualization with planning and consolidation, simplifying the deployment of financial analytics without requiring complex configurations. Users are able to perform completely freeform dashboard creation, without requiring IT intervention.

Adaptive Insights customers have cloud-based deployments that scale in size including one customer who rolled out the solution to 3,000 seats, with no IT involvement. Most recently, another customer deployed the Adaptive Insights BI solution, Adaptive Discovery, to 5,000 seats.

Adaptive Discovery includes scheduled print-quality snapshot report reporting in multiple formats that can be used against any dashboard or group of metrics. Detailed query and pivot table style reporting across multiple underlying data sources and freeform dashboards with charts and tables that can be easily resized to emphasize key metrics are also included. The latest release in September has extended dashboard reporting, including additional output options and drill-down style reporting across multiple underlying data sources. Adaptive Discovery also has pre-configured content, including dashboards with scorecards and charts for specific user roles, ease of deployment, and the ability to enable rapid adoption and analysis.

In September 2014, Adaptive released Adaptive Integration, which provides data importing from a variety of on-premise and cloud sources. Nucleus found that the direct integration of data from the Planning and Consolidation applications and operational data sourced from data warehouses, CRM, and ERP sourced into a single set of dashboards was a key factor driving the decision to use Adaptive Discovery for many organizations.

In September 2014, Adaptive Insights released Adaptive OfficeConnect, which allows user to connect existing Microsoft Excel reports to Adaptive, or create new presentation-quality reports. OfficeConnect provides full connectivity across Excel, Word, and PowerPoint, with seamless data flow between reports and presentations. One customer said, *"As an experienced finance professional (and Excel guru) I have been thoroughly impressed by the hours of time saved and efficiencies gained."*

BOARD

Switzerland-based Board provides an integrated BI and corporate performance management (CPM) solution with a programming-free interface. The Board solution has

the ability to provide an integrated business planning environment extending past finance, with a multidimensional database, a hybrid user interface supporting both client-based and Web-based interactions, and a focus on self service and ease of use.

Later this year, Board has scheduled version 9 for release, which will include in-memory clustering for application deployment in-memory across multiple machines, predictive analytics, and enhanced mobile capabilities for Windows Tablets and iPads, allowing users to input data and conduct simulations.

Over the past year, Board has seen success against business intelligence visualization vendors that lacked back-end analytic support as well as performance management vendors that did not provide comparable analytics functionality.

QLIK

Qlik provides two products for analytical needs QlikView and Qlik Sense:

- The QlikView data discovery platform supports ad-hoc data analysis. QlikView is the platform for creating analytic apps that are easy to use and deploy, and being leveraged by its partner community to create hundreds of them to solve specific customer challenges. These range from multi-tenant cloud solutions to single-tenant cloud solutions, and include specialized areas of market research, to contact centers, sports statistics, workforce management solutions and a sales tracking app specific to mutual fund companies.
- Just released this September, Qlik Sense is a self-service data visualization application, with storytelling and ease-of-use data integration. Qlik has been successful in the enterprise, with multiple million-dollar deals, and enterprise-wide (not just departmental) displacement of traditional BI. Qlik Sense allows users to easily create a range of flexible, interactive visualizations that drive exploration and discovery. Groups and teams can collaborate, and a centralized information hub allows the sharing and locating of content faster and easier. Mobile users have full capabilities on any device, leveraging an HTML5 client. Qlik Sense is built on the QIX Associative Data Indexing engine, the second generation of Qlik's patented engine technology, and the same engine used by QlikView. Associative data indexing allows people to explore data relationships across many sources that would otherwise be hidden in hierarchical or query-based approaches.

These QlikView apps are deployed in the cloud, via a saas model, driving rapid deployment and ease of access, as well as the ability to handle the inherent spikiness of data without the investment for scale that would be required for an on-premise deployment. As one customer stated: *"We were able to liberate the data as Qlikview had no problem in handling the volume of data. Now everyone can easily view the information they want, on the fly. QlikView has made all the difference for visibility."*

Qlik is moving forward on a 2-product strategy, continuing to provide QlikView to those looking for a data discovery platform, and Qlik Sense for those looking for a self-service data visualization application. Both products use the same associative data indexing, and will be able to navigate data relationships regardless of which product they are in. Users will be able to share guided apps in Qlik Sense, and access the same data sets and data models that are available to QlikView users.

TABLEAU SOFTWARE

Tableau's origins in data discovery and visualization have made it a popular choice for organizations seeking to provide business users with rapid access to insights. The company's visual analytics toolbox enables users to rapidly integrate and visualize multiple data sources without extensive development or data skills. Tableau supports data sources from IBM, Oracle, Microsoft, and SAP, as well as cloud data warehouse solutions such as Amazon Redshift. Also, Tableau's support of MapR Hadoop to accompany existing support for Cloudera's Hadoop distribution (CDH), and Amazon Elastic MapReduce service provides enterprises with a roadmap to support data discovery as they shift their Big Data from expensive relational databases to cheaper Hadoop distributions. Tableau also has data partnerships with Salesforce.com, Amazon Redshift, Amazon Web Services, Google BigQuery, and Analytics, DataStax, DataSift, SnapLogic, Syncsort, Informatica, and 1010data.

Recent announcements from Tableau impacting its position in the Matrix include:

- MarkLogic Corporation and Tableau announced a MarkLogic Enterprise NoSQL connector that allows organizations to apply Tableau to analyze MarkLogic data.
- Tableau announced Drive, a new methodology drawing on the best practices of customers to drive effective self-service analytics adoption. Designed to smooth the transition to self-service analytics, Drive provides guidance for orchestration of IT and business to support security, data governance, and provisions while enabling business users.
- Tableau announced new direct connection capabilities with IBM InfoSphere BigInsights and the beta release of a direct connector for Amazon Elastic MapReduce from Amazon Web Services and Spark SQL. It also announced it had qualified for Databricks "Certified on Spark" program.

Version 8.2, released in June, provided a Mac version of Tableau Desktop, improved collaboration, and improved map visualizations. This release provides millions of Mac users access to Tableau's business intelligence solution. In addition to Mac support, 8.2 included improved storytelling and collaboration, with a feature called "Story Points" that enables the user to create compelling, interactive, data-driven stories. Users can assemble sheets and dashboards into a narrative, and capture insights with annotations, highlights, and filters. The author can also add descriptions to findings. Going forward, Tableau will be expanding on features that support constructing visual narratives and effective communication of ideas. Tableau has increased its investment in GLI to make its map

easier to use, faster and more flexible, and has brought the mapping technology in house to have better control and complete a complete redesign.

With 8.2, Tableau also included the ability to connect directly to a database or create an extract of their data to bring it in-memory, thus allowing performance and data access flexibility, as well as single sign-on with SAML and improvements to the mobile and Web experience of users.

In 8.3, scheduled for later this year, Tableau promises to deliver interactive analytics, an increased focus on performance, as well as extended data preparation capabilities, data connectivity, Web data connectivity, more mobile capabilities, and improved spreadsheet cleansing.

Earlier this year, Tableau released Tableau Public, a free data storytelling application. More than 30,000 users have taken the opportunity to create and share interactive charts and graphs, maps, live dashboards, and applications that can be published anywhere on the web. Tableau has also brought the value of analytics and data discovery to the classroom, providing the software to 19,000 students.

TIBCO

With its acquisition of Jaspersoft in April 2014, TIBCO extended its business intelligence and analytics footprint, with the combination of Spotfire's data visualization capabilities and embedded reporting, analytics, and business intelligence from Jaspersoft. In November, TIBCO announced its vision for the TIBCO analytics platform and previewed new solutions and updates for Spotfire and Jaspersoft including:

- Spotfire and Jaspersoft interoperability, including broadening the reach of Spotfire through Jaspersoft's reporting platform and enhancing Jaspersoft reports with Spotfire GeoAnalytics for map-based visualizations.
- Availability of Spotfire on the Amazon Web Services (AWS) marketplace, providing users with pay-as-you go access to Spotfire data visualization in the cloud.
- A new TIBCO Metrics offering (currently in beta), a cloud-based service to deliver personalized key performance indicators to any device.

In June, TIBCO announced the Jaspersoft Visualize.js JavaScript framework for advanced embedding of visualizations and reports within business applications, to drive broader business consumption of analytics in applications and in context.

In October, TIBCO announced the open source release of version 5.6 of Jaspersoft on the Jaspersoft Community site, with product updates including new native big data connectors, additional interactive reporting features, an updated OLAP engine for faster queries, and enhancements to Haspersoft Studio for faster development and iteration of reports.

In September, TIBCO announced it was being acquired by Vista Equity Partners, a firm focused on software, data and technology-enabled businesses. The acquisition gives the company an opportunity to recast its investments in research and development outside the pressures of quarterly earnings reporting, and Nucleus will be tracking both that progress and its impact on TIBCO customers.

CORE PROVIDERS

Core providers in the Matrix include BIME and Logi Analytics.

BIME

BIME, founded in 2009, is a pure cloud BI service focused on big data. BIME delivers easy-to-use data analysis, visualization, and dashboarding as a plug-and-play service. BIME's Query Blender technology allows users to combine data from a wide variety of sources including offline data sources such as flat files; and complex ones such as SQL databases; online data streams such as Google Analytics, Twitter, Facebook Insights, Google BigQuery; Amazon Redshift; and SAP HANA. In addition, through the Query Blender, the user can mashup, query, and display the results of interconnected datasets within one dashboard with multiple views.

BIME released version 6 in the fall, which continues to highlight its commitment to ease of use and the user experience. Version 6 has improved processes around data import and query building, performance enhancements, and automatic chart selection for best data fit, as well as enhancements in report and dashboard building. Mobile users can query data and build dashboards on tablets or smartphones – without experiencing any change in experience regardless of the size of the screen. The user experience from Version 5 to Version 6 has improved both usability and functionality. As one customer said: *"We've seen a big improvement moving to version 6. Our learning curve has dropped significantly, and it is much easier for us to incorporate best practices. We have many different types of users – both internally and externally, and everyone has quickly adopted the release."*

BIME has also introduced a new pricing structure, allowing customers to tailor licensing to better meet their needs. BIME's continued focus is on providing a simple-to-use interface, extensive connectors, and big data capabilities.

LOGI ANALYTICS

Logi Analytics delivers three products for the data visualization and analytics marketplace: the Logi Info platform, Logi Vision, and Logi Ad hoc. Logi Analytics allows companies to quickly build analytics-driven applications and embed analytics within enterprise applications.

Logi Vision, a visual data discovery application that delivers analytics for the workgroup, was introduced earlier this year, enabling business users to unlock and share insights from

data. Integrated with its business intelligence platform, Logi Info, Logi Vision is able to drive decision making through a recommendations approach that delivers best practices in data profiling as well as data visualization to make analysis easier for everyday business users. In August, the latest version of Logi Vision was released, delivering new analytical capabilities with mapping, social collaboration features similar to news feeds, and the ability to transform and group time or numeric data into dimensions for analysis.

Logi Analytics has made a number of updates to its business information platform, Logi Info, throughout 2014. In March, Logi introduced new capabilities for the analysis of big data sources such as MongoDB. Additional updates were made in July and October, which expanded Info's self-service capabilities to make it easier for business users to query data and author dashboards and reports without further involvement from IT. Logi also introduced extended visualization support and interactivity, simplified dashboard and report layout, and new dashboard and report sharing capabilities. One customer said: *"We've been able to present information to our users in ways we were just not able to with our previous solution. Being able to show location information combined with our data was the key to getting our users on board. It required very little training and our rollout was very fast."*

In the past year, Logi Analytics has announced support for several Big Data repositories, including Amazon Redshift, HP Vertica, Parstream, Cloudera, and Hortonworks (Hadoop), as well as new partnerships with Pivotal, and Actian.