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# The Forrester Wave<sup>™</sup>: Self-Service Business Intelligence Platforms, Q2 2012

by Boris Evelson, June 12, 2012

#### **KEY TAKEAWAYS**

#### IT Can No Longer Support The Majority Of BI Requirements

BI is unlike any other enterprise software in that it exhibits a paradox: The more BI requirements you implement, the more new ones pile up. Relying too heavily on IT-centric BI support models is not sustainable.

#### Self-Service BI Features Are Key To Empowering Business Users

Self-service BI capabilities go well beyond user friendly or intuitive interfaces. Forrester recommends examining all the product features evaluated in this report to ensure a well-rounded self-service capability.

#### Your Enterprise BI Platform May Already Provide Most Of The Self-Service Features

Before plunging into full-blown evaluations of separate BI tools for self-service, leverage findings in this report to make sure that your current enterprise BI platform doesn't already have many of the self-service features you need.



### The Forrester Wave<sup>™</sup>: Self-Service Business Intelligence Platforms, Q2 2012

Six Leaders And Six Strong Performers Compete For A Share Of The End User BI Market by Boris Evelson

with Stephen Powers, Holger Kisker, Ph.D., Noel Yuhanna, and Shannon Coyne

#### WHY READ THIS REPORT

In Forrester's 31-criteria evaluation of self-service business intelligence (BI) vendors, we found that IBM, Microsoft, SAP, SAS, Tibco Software, and MicroStrategy led the pack due to the breadth of their selfservice BI functionality offerings. Information Builders, Tableau Software, Actuate, Oracle, QlikTech, and Panorama Software were close on the heels of the Leaders, also offering solid functionality to enable business users to self-serve most of their BI requirements.

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Forrester conducted demo-based evaluations in Q4 2011 and interviewed 11 vendor companies: Actuate, IBM, Information Builders, Microsoft, MicroStrategy, Panorama Software, QlikTech, SAP, SAS, Tableau Software, and Tibco Software.

#### **Related Research Documents**

Trends 2011 And Beyond: Business Intelligence March 31, 2011

Empower BI HEROes With Self-Service Tools October 26, 2010

The Forrester Wave<sup>™</sup>: Enterprise Business Intelligence Platforms, Q4 2010 October 20, 2010



#### **BI SUPPORT MOVES BEYOND JUST IT-CENTRIC MODELS**

Traditional BI approaches and technologies — even when using the latest technology, best practices, and architectures — almost always have a serious side effect: a constant backlog of BI requests. Enterprises where IT addresses more than 20% of BI requirements will continue to see the snowball effect of an ever-growing BI requests backlog. Why? Because:

- **BI requirements change faster than an IT-centric support model can keep up.** Even with by-the-book BI applications, firms still struggle to turn BI applications on a dime to meet frequently changing business requirements. Enterprises can expect a life span of at least several years out of enterprise resource planning (ERP), customer relationship management (CRM), human resources (HR), and financial applications, but a BI application can become outdated the day it is rolled out. Even within implementation times of just a few weeks, the world may have changed completely due to a sudden mergers and acquisitions (M&A) event, a new competitive threat, new management structure, or new regulatory reporting requirements.
- Conventional waterfall SDLC approaches are poorly suited for BI. The traditional waterfall methodology for the software development life cycle (SDLC) calls for collecting user requirements, transforming them into specifications, and then turning these specifications over to developers. While this approach is often successful for traditional enterprise application implementations, it won't work for the majority of BI requirements. The "build it, and they will come" model is directly applicable and recommended for BI, as only once an end user sees something she can touch and feel and play around with will the real requirements materialize. "What are the key requirements that your BI application must address?" is a typical IT question. "It must address everything, because I don't know what kinds of reports I'll have to produce and what kinds of analysis I'll have to perform tomorrow," is, unfortunately, a typical answer.
- Business and IT do not always see eye to eye on BI applications and projects. In the eyes of business executives, managers, and individual contributors, nothing is more important than business requirements. Furthermore, they want their BI business requirements addressed according to their, not IT's, schedule so that they can continually address their clients' needs and avoid falling behind the competition. IT, on the other hand, is charged with maintaining law and order and insists on sticking to standard BI tools and following approved software development and project methodologies.

Forrester by no means advocates that firms transfer complex, mission-critical, enterprise wide BI applications — especially those that carry external exposure or other operational risk — into the hands of non-IT professionals. However, anecdotal evidence leads us to believe that with the proper BI application portfolio classification, no more than 20% of all BI applications should fall into this restricted category. We maintain that in an ideal BI environment, 80% of all BI requirements should be carried out by the business users themselves.

#### **Business-Owned Self-Service BI Applications Are Crucial To BI Success**

But what does it take for a BI tool or application to enable all types of users (casual users, power users, and executives) to self-serve for new queries, reports, analytics, and dashboards? "Intuitive" and "user friendly" are subjective terms. A point-and-click and drag-and-drop graphical user interface (GUI) may be a nirvana of intuitiveness to an information management pro who started his computer career working with punch cards or green-screen terminals, but to a younger generation of knowledge workers brought up on search GUI from Google and social media GUI from Facebook, a point-and-click GUI may not be as obvious or natural. When evaluating BI tools' business user self-service capabilities, Forrester recommends considering features and capabilities including:

- Automodeling. Not every business user is an experienced data modeler, so look for the BI tool to autosuggest a best data model (star schema) based on input data types and content. Some BI tools can only identify data types, such as dates, numbers, or text, while others can automatically suggest star schemas with the initial set of facts and dimensions. More-advanced tools even identify and build hierarchies and automatically geocode attributes such as ZIP codes, countries, regions, cities, and states.
- Calculated measures. IT developers can't possibly foresee and prebuild every single measure and metric into enterprise data warehouses (EDWs) and data marts. So enterprises must ask these questions: Can the end users add new calculated measures without IT involvement? Are these calculations mostly simple, as in A+B=C, or do they allow if/then/else conditions and other full programming scripting logic for a calculation? How many prebuilt algebraic, text, business, financial, and advanced analytical functions are available out of the box to be used in these calculations?
- Collaboration. No one works in isolation from the rest of the teams in the organization these days, so look for the BI tool to include user-to-user and user-to-developer collaboration functionality. What are the tool's own collaboration capabilities, and what are its capabilities to integrate with other popular enterprise and social collaboration platforms such as Microsoft SharePoint, IBM Connections, and Novell Teaming?
- Data virtualization and drill anywhere. In today's world of big data, no one can afford to put anywhere close to 100% of their enterprise data and information content into a structured database. Therefore, capabilities to virtually link multiple data sources and drill anywhere within these sources becomes important, unless one can afford to wait for days, weeks, or months for these new data sources to be loaded into an EDW.
- Prompt for columns. Creating standardized reports with prompted lists (for values such as time periods, geographic regions, or business units) reduces the number of canned reports IT professionals have to produce. Firms should take it to the next level and create a few standard enterprise report templates with placeholders where a trained business user can place any

appropriate column from the database and runtime. Combined with "drill anywhere," this can theoretically reduce the number of canned reports in an enterprise to a handful.

- Search-like GUI. A Google-like GUI achieves several important objectives in the quest for the ultimate self-service BI tool. First, it requires little to no training; hardly any knowledge workers in the modern world can't use a web-based search tool. This is a benefit, as every hour of BI training for a salesperson is an hour away from customers. Second, a point-and-click GUI assumes that you know exactly what you are looking for, while very often you don't, and a search-like GUI is especially handy in you-don't-know-what-you-don't-know scenarios. Last but not least, search-like GUI enables faceted navigation, which is often the best way to drill up/down/across hierarchies that are ragged and unbalanced.
- Application sandboxes. What happens when an urgent and critical business need calls for a completely new BI application today but your IT partners tell you that you are not at the top of their priority list? The ability to download and install a new BI tool on your desktop or laptop computer is one way to handle this. If an urgent business requirement calls for analyzing terabytes of data, creating a BI sandbox in a cloud with computing resources constrained only by budget may be the way to go.
- Write back. Creating multiple what-if scenarios based on existing data is a commodity feature of most BI and online analytical processing (OLAP) tools. As long as one can cut the report by different dimensions, one can analyze multiple cause-and-effect scenarios. But building what-if scenarios based on new data (creating new budgeting scenarios, for example) requires "write back" capabilities or updating the underlying database or an OLAP cube in real time. Firms should understand whether a BI tool can update aggregate or individual values, generate completely new transactions, or write back new transactions to operational applications as well as how much or how little custom programming that involves.
- Exploration and discovery. Reporting, analyzing, and slicing and dicing information based on an existing data model is another commoditized feature of most BI tools. This approach is often referred to as prediscovery, as all requirements for future reporting and analysis need to be prediscovered and built into a data model. But analyzing information based on a new hierarchy not already built into the data model or based on entities and attributes whose relationships are not defined in a data model falls within the realm of specialized tools. These tools are often based on nonrelational or nondimensional data models (such as an associative index, for example). They are also great at addressing the I-don't-know-what-I-don't-know quagmire.
- Migration to production. Last but not least, say you did create a great BI application using all or most of the features described. Now what? How can you share it with your colleagues, your team, or the rest of the enterprise? Is it back to the "I have to call IT" game, or does your BI tool allow you to publish what you created to a shared environment? It shouldn't be that simple,

however, because in many cases these self-built BI applications need to be "productionalized" first. The right approach? A publishing action that kicks into motion a "move to production" workflow or at least automatically notifies the appropriate IT resources.

#### SELF-SERVICE BUSINESS INTELLIGENCE PLATFORMS EVALUATION OVERVIEW

To assess the state of the self-service business intelligence platforms market and see how the vendors stack up against each other, Forrester evaluated the strengths and weaknesses of top self-service business intelligence platform vendors.

#### Evaluation Criteria: Current Offering, Strategy, And Market Presence

After examining past research, user needs assessments, and vendor and expert interviews, we developed a comprehensive set of evaluation criteria. We evaluated vendors against 31 criteria, which we grouped into three high-level buckets:

- **Current offering.** These criteria include the evaluation results of all of the features and capabilities reviewed in this document. They also incorporate the result of a short build-to-specs test (where each vendor had to build a small BI application based on a Forrester-supplied data set) as well as the results from a survey of four to 32 customers per vendor.
- **Strategy.** We reviewed each vendor's strategy and considered how well each vendor's plans for product enhancement position it to meet future customer demands. We also looked at the financial and human resources the company has available to support its strategy as well as each vendor's go-to-market pricing and licensing strategy.
- Market presence. To establish a product's market presence, we combined information about each vendor's financial performance, installed customer base, and number of employees across major geographical regions; its partnership ecosystem; as well as its horizontal and vertical industry applications.

#### **Evaluated Vendors Have Rich Self-Service BI Functionality And Strong Market Presence**

Forrester included 12 vendors in the assessment: Actuate, IBM, Information Builders, Microsoft, MicroStrategy, Oracle, Panorama Software, QlikTech, SAP, SAS, Tableau Software, and Tibco Software. Oracle was included as a nonparticipating vendor. Each of these vendors has (see Figure 1):

 Self-service BI functionality. We included vendors that could demonstrate the significant majority of self-service features described in this report.

- The ability to query databases using SQL and MDX. While other querying technologies such as XQuery and DMX are available, SQL and MDX are the most widely used technologies in large enterprises.
- A self-contained, complete, fully functioning BI environment. We focused on BI tools not technologically or functionally tied or limited to particular functional/horizontal applications (ERP, supply chain management [SCM], etc.). These tools must be self-contained, complete BI environments or platforms that do not necessarily have to be embedded in other applications.
- Sufficient market presence and interest from Forrester clients. We included vendors with at least 100 in-production customers present in more than one major geographical region. We also focused on vendors that Forrester clients frequently mentioned or asked about in the context of business intelligence (measured as more 25 inquiries over the past 12 months).

Vendor	Product name	Version	Release date			
Actuate	ActuateOne	11 SP4	Q2 2012			
IBM	IBM Cognos Insight	v10.1	February 2012			
Information Builders	WebFOCUS	7.7.03	November 2011			
Microsoft	<ul> <li>Power View</li> <li>PowerPoint</li> <li>Excel</li> <li>SharePoint</li> </ul>	<ul> <li>SQL Server 2012</li> <li>Microsoft Office 2010</li> <li>SharePoint Server 2010</li> </ul>	April 2012			
MicroStrategy	MicroStrategy	9.2.1A	September 2011			
Oracle	Oracle Business Intelligence Suite Enterprise Edition	11g	Q4 2011			
Panorama Software	Necto	11	May 2011			
QlikTech	QlikView	11	November 2011			
SAP	SAP BusinessObjects	4.0 Feature Pack 3	April 2012			
SAS	SAS Enterprise Business Intelligence	4.31	July 2011			
Tableau Software	• Tableau Desktop • Tableau Server	7	January 2012			
Tibco Software	Tibco Spotfire Analytics	v4.0	November 2011			

#### Figure 1 Evaluated Vendors: Product Information And Selection Criteria

#### Vendor selection criteria

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Source: Forrester Research, Inc.

#### LACK OF BI PLATFORM FEATURES IS NO LONGER AN EXCUSE FOR IT OVERLOAD

The evaluation uncovered a market in which (see Figure 2):

- **IBM, Microsoft, SAP, SAS, Tibco Software, and MicroStrategy lead the pack.** These vendors demonstrate significant capabilities and a good balance of self-service BI features across most requirements. If a vendor from this list is already an enterprise's preferred BI platform provider, there's often little to no reason to look elsewhere for another specialized BI tool.
- The six Strong Performers offer competitive options. Vendors in the Leaders category can by no means sit on their laurels — Strong Performers Information Builders, Tableau Software, Actuate, Oracle, QlikTech, and Panorama Software are hot on their heels.<sup>1</sup> In many specialized situations where certain features have specific importance, these vendors can even outshine and outperform the Leaders.

This evaluation of the self-service business intelligence platforms market is intended to be a starting point only. We encourage readers to view detailed product evaluations and adapt the criteria weightings to fit their individual needs through the Forrester Wave<sup>™</sup> Excel-based vendor comparison tool.



Figure 2 Forrester Wave<sup>™</sup>: Self-Service Business Intelligence Platforms, Q2 '12

Source: Forrester Research, Inc.

	Forrester's Weighting	Actuate	IBM	Information Builders	Microsoft	MicroStrategy	Panorama Software	QlikTech	SAP	SAS	Tableau Software	Tibco Software
CURRENT OFFERING	50%	3.05	3.50	2.90	3.40	3.45	2.80	3.45	3.40	3.40	3.20	3.75
Self-service BI client feedback	10%	2.00	3.00	4.00	1.00	1.00	5.00	4.00	1.00	3.00	4.00	3.00
Automodeling	10%	2.00	3.00	1.00	3.00	3.00	1.00	3.00	1.00	3.00	3.00	2.00
Calculated measures	5%	4.00	4.00	4.00	4.00	4.00	2.00	2.00	3.00	5.00	4.00	5.00
Collaboration	10%	1.00	5.00	1.00	5.00	3.00	4.00	4.00	5.00	3.00	1.00	4.00
Drill anywhere	10%	4.00	3.00	4.00	3.00	5.00	1.00	3.00	4.00	3.00	3.00	3.00
Prompt for columns	5%	5.00	5.00	5.00	3.00	5.00	3.00	3.00	5.00	5.00	3.00	3.00
Search-like graphical user	5%	2.00	3.00	2.00	2.00	2.00	3.00	4.00	4.00	1.00	2.00	4.00
interface (GUI)												
App procurement	5%	5.00	3.00	3.00	3.00	5.00	5.00	3.00	5.00	2.00	3.00	5.00
Data federation/virtualization	5%	3.00	5.00	4.00	3.00	5.00	3.00	3.00	4.00	5.00	3.00	3.00
Post discovery	10%	3.00	3.00	3.00	5.00	3.00	3.00	5.00	4.00	3.00	4.00	5.00
Semantic layer	10%	5.00	4.00	3.00	4.00	5.00	3.00	3.00	5.00	5.00	5.00	5.00
Migration	5%	3.00	3.00	3.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Write back	5%	3.00	3.00	3.00	3.00	3.00	1.00	3.00	1.00	2.00	1.00	3.00
Clicks/time to answer	5%	2.00	2.00	2.00	4.00	2.00	2.00	4.00	3.00	5.00	5.00	5.00
STRATEGY	50%	3.79	4.42	4.39	4.26	3.55	3.52	3.06	4.08	3.98	3.83	3.33
Commitment	40%	4.00	4.50	4.50	4.50	3.50	4.00	2.50	4.50	4.50	4.00	3.00
Pricing and licensing	10%	4.20	4.94	4.06	3.28	2.04	2.04	2.44	2.04	1.00	4.60	2.84
Transparency	5%	3.00	3.00	4.00	3.00	3.00	2.00	4.00	2.00	2.00	3.00	1.00
Product direction	45%	3.60	4.40	4.40	4.40	4.00	3.60	3.60	4.40	4.40	3.60	4.00
MARKET PRESENCE	0%	2.40						3.22			2.34	3.17
Company financials	30%	2.60	3.80					4.40				3.90
Global presence and installed base	40%	2.25	5.00	3.25				3.75				2.00
Partnership ecosystem	10%	2.00	0.00	2.00				4.00				2.00
Functional BI applications	20%	2.60	5.00	2.00	3.00	2.40	0.00	0.00	5.00	5.00	0.00	5.00

Figure 2 Forrester Wave<sup>™</sup>: Self-Service Business Intelligence Platforms, Q2 '12 (Cont.)

All scores are based on a scale of 0 (weak) to 5 (strong).

Source: Forrester Research, Inc.

#### **VENDOR PROFILES**

#### Leaders Demonstrate Significant Capabilities And Good Balance

- IBM (Cognos) offers the broadest and the most balanced set of self-service features. With the recent rollout of Cognos Insight, IBM is now front and center in the self-service BI market. The new product is based on the popular in-memory OLAP TM1 engine. It still lacks some of the more advanced data exploration and discovery features that are mostly the realm of associative database management systems (DBMSes). But for most of the business user self-service functions, it will do a fine job, and it really shines at what-if scenario modeling and planning use cases where write-back capabilities are essential. Cognos Insight can also consume and analyze predictive analytics output from SPSS Modeler an advanced analytics product from IBM allowing users to add another dimension of insight to their work.
- Microsoft enables business users to look no further than Excel for self-service BI. Microsoft has built on its broad, omnipresent, SQL Server-based BI functionality, which already includes Integration Services, Reporting Services, and Analysis Services. It now offers a very respectable PowerPivot and Power View in-memory data analysis and discovery engine. Think of this as Excel on steroids. If you are already using Excel (and who isn't?) look no further for your self-service BI platform especially when you already have it anyway, as most likely it's already part of your Enterprise SQL Server and/or SharePoint license. Microsoft may only offer around 80% of advanced BI functionality as compared with other leading vendors, but what it lacks in features it more than makes up for in cost/benefits ratios.
- SAP BusinessObjects offers excellent self-service functionality on big data. In-memory is the name of the self-service BI game these days when one is looking for answers at the speed of thought. Most in-memory DBMS engines, however, have practical limitations of analyzing no more than a few hundred GBs at a time. To address this limitation, SAP now offers a highly differentiated combination of BusinessObjects Explorer with its top exploration and discovery capabilities and the SAP HANA in-memory appliance. Today's largest production in-memory model is approximately 7 to 8 TBs compressed to approximately 1 TB, and SAP has tested its offering in its labs to scale up to approximately 80 to 100 TBs compressed to approximately 16 to 20 TBs. Beyond self-service, SAP still needs to tighten its product-to-product integration to close several integration gaps in its vast BI product portfolio, for example, its need for a more common UI and improved reusability of components.
- SAS offers one of the top self-service BI choices for power users. Even though SAS has a broad BI platform that supports most BI use cases, it is mostly known for its advanced analytics. If you are already a user of SAS BI, look no further than the self-service advanced analytics features of Enterprise Guide. SAS's new Visual Analytics product also empowers users with visual self-service for big data exploration techniques and approachable analytics. SAS may not be going after the BI platform market as forcefully as the other leading vendors Forrester sees SAS more often in advanced analytics deals but it definitely has all the tools and components.

- **Tibco Spotfire shines with its highly visual self-service, in-memory engine.** Tibco Spotfire received the highest current offering score in the evaluation based on its self-service BI features. These features include a highly graphical, associative, in-memory engine that allows for intuitive data discovery and exploration as well as a free-for-a-year Tibco Silver Spotfire cloud offering. Unlike other vendors with broad BI platform offerings, Tibco Spotfire should not be viewed as a direct competitor in this space (one would not use Spotfire to create pixel-perfect complex reports) but rather as complementary technology to those BI platforms that lack leading discovery and exploration capabilities.
- MicroStrategy offers self-service BI on an unlimited number of data sources. For most organizations, a neatly modeled EDW with all the enterprise's data already loaded and ready is not reality, so the ability to self-serve one's BI needs across multiple heterogeneous data sources is a top requirement. This is where MicroStrategy shines with the multisourcing capability of its battle-proven ROLAP engine. ROLAP engine has an additional benefit as well many Forrester clients cite lower long-term cost of BI ownership due to a reduction in the number of cubes or reports they have to build. Furthermore, MicroStrategy's Visual Insight tool enables businesspeople to visually explore data and generate insights, whether with enterprise data or a simple import of a local file on the user's desktop. ROLAP engine, however, carries a price: The initial setup required to take advantage of all of its powerful features can be complex and time consuming.

#### **Strong Performers Offer Highly Competitive Options**

- Information Builders delivers self-service BI functionality based on its robust BI platform. While Information Builders is mostly known for its large-scale BI deployments — experience and expertise that came from its mainframe roots — WebFOCUS also offers highly competitive BI functionality for business users. These capabilities include intuitive InfoAssist query builder and highly interactive Active Reports. There's also a hidden gem inside WebFOCUS: the Visual Discovery product, which offers a respectable in-memory data exploration and discovery alternative to offerings from other, well-known in-memory BI vendors. While this may not come up or be an issue in most self-service scenarios, under the covers, WebFOCUS is based on the FOCUS fourth-generation programming language. In extreme situations — and Information Builders addresses these as they come up — some advanced routines may still need to be tweaked and optimized using FOCUS programming.
- Tableau Software continues to set the standards for self-service advanced data visualization. Self-service and intuitive data visualizations go hand in hand, and Tableau has been the vanguard of advanced data visualization for years. Late last year, Tableau closed a functionality gap with the introduction of an in-memory engine for data discovery and exploration. The new capability gives two important options for business users: the ability to load the entire data set into memory and perform highly responsive data exploration or, if the data set is too big, leave data where it is in a relational or multidimensional DBMS and

analyze it with Tableau's patented and intuitive VisualSQL. Unlike other vendors with broad BI platform offerings, Tableau should not be viewed as a direct competitor in this space (one would not use Tableau to create pixel-perfect complex reports) but rather as complementary technology to those BI platforms that lack advanced data visualization capabilities.

- Actuate offers one of the top open source self-service BI platforms. Conventionally known for its highly scalable mass-report-distribution and complex-report-writer development platform, Actuate's open source BIRT engine has the critical mass of business-user-friendly features required to stand its ground as a respectable self-service BI platform. While traditionally not known for analytics, Actuate offers new features including in-memory data objects for OLAP-like analysis as well as some data exploration and discovery. Aficionados of open source can also use BIRT onDemand for instant provisioning of a BI sandbox in the cloud.
- Oracle persistently and successfully closes gaps in its self-service BI portfolio. While Oracle BI Server (an OBIEE component) continues to be a leading, enterprise-grade ROLAP engine with heterogeneous data sourcing capability, Oracle Business Intelligence Enterprise Edition (OBIEE) also successfully addresses many other self-service BI needs. Oracle's recent introduction of Exalytics "engineered system" closes one of the gaps in Oracle's BI portfolio with in-memory data analysis capabilities with a highly visual interface. Oracle's recent acquisition of Endeca (not evaluated in the current Forrester Wave), with its inverted-index DBMS and highly intuitive faceted navigation for data discovery and exploration, has the potential to significantly boost Oracle's overall position in the self-service BI market.
- QlikTech remains a pervasive and omnipresent self-service BI platform of choice. QlikTech frequently turns up in conversations with Forrester clients regarding their shortlists for BI platforms, and rightfully so. While we did not perform benchmark testing in this evaluation, our clients tell us that more often than not they prefer QlikTech over other in-memory engines for memory compression and speed of analysis benchmarks. QlikTech is also focusing on the collaboration features of its platform we especially like its real-time BI whiteboarding feature, which is unique to QlikTech. Unlike other vendors with broad BI platform offerings, QlikTech should not be viewed as a direct competitor in this space (one would not use QlikTech to create pixel-perfect complex reports) but rather as complementary technology to those BI platforms that lack leading discovery and exploration capabilities.
- Panorama Software leapfrogs its competition with self-service BI collaboration functionality. Teamwork is essential to achieving successful BI processes and results. While most other BI vendors only scratch the surface of collaboration features with report annotations, Panorama's Necto release offers true social media collaboration with features including friending, following, and workgroup circles. Panorama by itself does not offer data exploration and discovery capabilities but rather works as a different UI on top of other exploration engines, such as Microsoft PowerPivot. Also, if your choice for office productivity tools is Google, Panorama has years of experience with OLAP (Google PivotTables) on data stored in Google spreadsheets.

#### SUPPLEMENTAL MATERIAL

#### **Online Resource**

The online version of Figure 2 is an Excel-based vendor comparison tool that provides detailed product evaluations and customizable rankings. Because Oracle chose not to provide full information for its Self-Service BI solution (Oracle Business Intelligence Enterprise Edition), we have not included a detailed spreadsheet summarizing its product in the Wave tool associated with this document.

#### **Data Sources Used In This Forrester Wave**

Forrester used a combination of four data sources to assess the strengths and weaknesses of each solution:

- Hands-on lab evaluations. Vendors spent 30 minutes with a team of analysts who supervised a demo-based evaluation of the product using a scenario-based testing methodology. We evaluated each product using the same scenario(s), creating a level playing field by evaluating every product on the same criteria.
- Vendor surveys. Forrester surveyed vendors on their capabilities as they relate to the evaluation criteria. Once we analyzed the completed vendor surveys, we conducted vendor calls where necessary to gather details of vendor qualifications.
- Product demos. We asked vendors to conduct demonstrations of their product's functionality.
   We used findings from these product demos to validate details of each vendor's product capabilities.
- **Customer reference survey.** To validate product and vendor qualifications, Forrester also conducted a survey of each vendor's current customers.

#### The Forrester Wave Methodology

We conduct primary research to develop a list of vendors that meet our criteria to be evaluated in this market. From that initial pool of vendors, we then narrow our final list. We choose these vendors based on: 1) product fit; 2) customer success; and 3) Forrester client demand. We eliminate vendors that have limited customer references and products that don't fit the scope of our evaluation.

After examining past research, user need assessments, and vendor and expert interviews, we develop the initial evaluation criteria. To evaluate the vendors and their products against our set of criteria, we gather details of product qualifications through a combination of lab evaluations, questionnaires, demos, and/or discussions with client references. We send evaluations to the vendors for their review, and we adjust the evaluations to provide the most accurate view of vendor offerings and strategies.

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We set default weightings to reflect our analysis of the needs of large user companies — and/or other scenarios as outlined in the Forrester Wave document — and then score the vendors based on a clearly defined scale. These default weightings are intended only as a starting point, and we encourage readers to adapt the weightings to fit their individual needs through the Excel-based tool. The final scores generate the graphical depiction of the market based on current offering, strategy, and market presence. Forrester intends to update vendor evaluations regularly as product capabilities and vendor strategies evolve.

#### **ENDNOTES**

<sup>1</sup> Information Builders' and Tableau Software's overall scores are higher than some of the Leaders' overall scores, but they did not end up in the Leaders' category because, although they both scored very well in the strategy portion of the evaluation, their current offering scores were relatively low. Final scores are a simple average of current offering and strategy scores, but in order to end up in the Leaders' category, the vendor must receive strong scores for both attributes.

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