

DECISION MATRIX

Ovum Decision Matrix for Business Intelligence 2011/2012

Finding the right partner to handle changing analytics needs

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SUMMARY

Catalyst

The business intelligence (BI) market has been undergoing a steady transformation over the last two or three years. While the need for BI continues to exist and grow, the diversity, volume, and speed of data thrown at BI solutions has increased manifold. To keep delivering even the same level of insight as a decade ago, BI vendors and their solutions need to run faster than ever. Enduser needs have also expanded. BI needs to be less complicated, more intuitive and business-user-friendly, and more agile. As a result, the selection process for BI vendors has become lengthier. Ovum has surveyed the market and has published this Decision Matrix report to help enterprises select the right BI solution from among those from eight leading vendors.

Ovum view

 IBM and SAS are the overall leaders in the BI market. For the first time, IBM has outranked every other vendor on customer satisfaction scores, a significant achievement that reflects the effort made to effectively bring together disparate BI

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- products and services into a single integrated whole. SAS on the other hand is still unbeaten in the predictive analytics market.
- SAP and Oracle are both best suited to organizations with existing large SAP and
 Oracle footprints, although both can technically work well in other environments.
 Oracle's commitment to engineered systems on data warehousing appliances, Big
 Data, and low-latency analysis makes it a prime candidate for organizations that are
 looking for a one vendor solution to all present and future analytic needs. SAP's
 HANA on the other hand promises to boost BI performance to suit near real-time
 analytic workloads.
- Microstrategy's appeal is in its independent BI specialist's status and its offerings in
 often-neglected areas such as natural language querying. In addition, Microstrategy is
 currently best of breed in mobile offerings.
- QlikTech is a new entrant that is focused on in-memory analysis. It is best positioned at organizations that relatively have less BI legacy and are looking for a quick deployment. Minimal involvement from IT and greater user flexibility are other positives.
- Pentaho, the only open-source vendor covered in this report, is another new entrant in the Decision Matrix. The company is, however, quite mature and has more than 1,200 enterprise customers. Ovum's believes that open source will remain a very viable niche in the BI market.
- Microsoft is the only vendor that does not have a separately licensable BI solution.
 However, Ovum places Microsoft on the Ovum Decision Matrix because of the high
 adoption of Microsoft Office SharePoint. Microsoft BI is best positioned at
 organizations that run a lot Microsoft software and do not require specialist BI
 capabilities.

Key findings

- · BI continues to buck the trend
- BI in the cloud is unlikely to emerge as the dominant model
- BI vendors are still working out the plumbing for Big Data
- Social concepts can be seen in most tools, but collaboration is still missing
- Most vendors do not work very well with third-party data tools

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VENDOR SOLUTION SELECTION

Inclusion criteria

Because BI has very broad definitions, including reporting solutions, data management solutions, performance management solutions, there are a wide range of products and vendors that are positioned in this technology area. Identifying appropriate solutions for the largest number of Ovum's enterprise subscribers has resulted in a very tight set of inclusion criteria.

- The vendors have to offer a "platform" for BI, where all moving parts are well
 integrated. The platform offering must give customers a way to manage and work with
 raw data, and finally lead users to reports and visualizations that impact business
 decisions.
- The vendors must have close to or higher than average market growth as determined by Ovum's BI model. The majority of this growth must be driven by license revenue growth.
- Vendors must have more than 500 enterprise customers and not only be focused on one or two geographies.
- The products must have a significant level of brand awareness across enterprises, covering a range of verticals, and in multiple geographies.

Exclusion criteria

Vendors and products excluded from analysis in this report were determined on the following criteria.

- Those providing point solutions, such as only reporting, visualization, data mining, or predictive analytics.
- Offerings with a significant portion of functionality that is delivered through third-party products.
- Vendors whose presence is limited to a restricted geographical area.
- Vendors with maintenance revenue growth only.

In addition to BI providers covered by this Ovum Decision Matrix, there are many alternative providers whose products may not be categorized as general-purpose BI "platforms" per se, but instead discrete, targeted applications that may be more vertically aligned, or suited to a particular

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category of end users. Profiles of these can be found in Ovum's forthcoming report Business Intelligence (Technology Evaluation and Comparison Report) 2011/12.

Methodology

Technology analysis

As BI solutions cover a wide area of functionalities and tools, Ovum has identified nine key areas for the analysis of each offering related to specific BI functionality. The categories are:

- Query and reporting: The ability to support multiple methods for querying data, effective management of queries, general reporting capabilities, including the support for multiple report types, designs, and easy navigation and administration
- Monitoring: The ability to use BI for tactical rather than strategic goals, monitoring
 measures the ease with which vendors enable interactive dashboards, easy to
 develop operational KPIs, and how actionable and close to real time these metrics
 are.
- OLAP analysis: Proficiency at handling multi-dimensional models and data, proficiency at metadata management, support for different architectures, and developing and querying cubes.
- Advanced analytics: The range and depth of predictive and advanced analytics functions.
- Data sourcing and integration: The ability to integrate across multiple data sources, operating platforms, and applications, both native and third-party
- System management: The ease with which the platform can be managed and administered, including application of multi-layer policies, applying data security, managing metadata, and optimization based on behavior
- Platform support: The number and variety of platforms, both client and server, supported.
- Mobility and collaboration: The ability to easily push reports and content on mobile devices and the ability to use BI artifacts as collaboration objects.
- Packaged BI applications: The number and range of analytic applications offered.

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Customer satisfaction

Ovum asked end-user customers of the eight vendors' BI solutions to rate their respective products and the vendor performance in eight categories:

- Product quality: whether the product used is reliable and consistent.
- Customer support: how the vendor has responded to customer requests or proactively managed the relationship.
- Services capabilities: the ability of the vendor to provide customization and deployment support.
- Vertical specialization: both vendor knowledge and product enhancements to address the needs of specific industries.
- Portfolio depth: how the customer perceives the product's capabilities to address the organization's operational needs.
- Service levels: the responsiveness of the vendor to requests for support and the frequency of updates and upgrades.
- Financial stability: how the customer perceives the robustness of the vendor.
- Client engagements: how the customer has been treated by the vendor either in deployment or ongoing support.

Market impact

Ovum analysts use data collected through primary and secondary research to determine a vendor's global market impact. Market Impact is measured across six categories, each of which has a maximum score of 10.

- Revenues: Each vendor's global BI revenues are calculated as a percentage of the market leader's revenues. This percentage is then multiplied by a market maturity value and rounded to the nearest integer.
- Revenue growth: Each vendor's revenue growth estimate for the next 12 months is calculated as a percentage of the growth rate of the fastest-growing company in the market. The percentage is then multiplied by 10 and rounded to the nearest integer.
- Geographical penetration: Ovum determines each vendor's revenues in three regions: the Americas; Europe, the Middle East, and Africa (EMEA); and Asia-Pacific. These

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revenues are calculated as a percentage of the market leader's revenues in each region, multiplied by 10, and then rounded to the nearest integer. The vendor's overall geographical reach score is the average of these three values.

- Recognition: Survey respondents are asked to select BI vendors they are aware of.
 The percentage of the vendor recognition is then divided by the highest percentage of the vendor recognition, multiplied by 10, and rounded up to the nearest integer.
- Vertical penetration: Ovum determines each vendor's revenues in the following verticals: energy and utilities; financial services; healthcare; life sciences; manufacturing; media and entertainment; professional services; public sector; retail; wholesale and distribution; telecommunications; and travel, transportation, logistics, and hospitality. These revenues are calculated as a percentage of the market leader's revenues in each vertical, multiplied by 10, and then rounded to the nearest integer. The vendor's overall vertical penetration score is the average of these three values.
- Size-band coverage: Ovum determines each vendor's revenues in three company size bands: large enterprises (more than 5,000 employees), medium-sized enterprises (1,000-4,999 employees), and small enterprises (fewer than 1,000 employees). These revenues are calculated as a percentage of the revenues of the market leader in each region, multiplied by 10, and then rounded to the nearest integer. The vendor's overall company size-band score is the average of these three values.

Ovum ratings

- Leader: This category represents the leading solutions that we believe are worthy of a place on most technology selection shortlists. The vendor has established a commanding market position with a product that is widely accepted as best-of-breed.
- Challenger: The vendors in this category have a good market positioning and are selling and marketing the product well. The products offer competitive functionality and good price-performance proposition, and should be considered as part of the technology selection.
- Follower: Solutions in this category have less broad applicability, and may have limitations in terms of the product's functionality, or the vendor's execution capability.
 However, they will still be suitable to meet specific requirements, and may be worth exploring as part of the technology selection.

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Ovum Interactive Decision Matrix

To access the Ovum Interactive Decision Matrix Interactive, an online interactive tool providing you with the technology features that Ovum believes are crucial differentiators for leading solutions in this area, please load the Ovum Interactive Decision Matrix Interactive tool on the Ovum Knowledge Center.



MARKET AND SOLUTION ANALYSIS

BI continues to buck the trend

A survey of the vendors featured in this Decision Matrix report and other prominent vendors confirms that the BI market is counter-cyclical. The overall market appears to be recording healthy growth rates in spite of the fears of a double-dip recession in Europe and reduced investor confidence in global financial markets. Most vendors featured in this report reported double-digit growth figures, with one vendor reporting greater than 40% year-on-year revenue growth. It is also interesting to note that a large part of this growth was driven by new license revenue and not merely maintenance and services. In Ovum's view this reflects the expansion of BI deployments from departmental to organizational, the constant change in analytics goalposts, and continuing investment in newer analytics technologies.

BI in the cloud is unlikely to emerge as the dominant model

While BI in the cloud is certainly not a non-starter, research did not indicate that the cloud-delivered solutions share of the BI market would ever be similar to that in the customer relationship management or human capital management markets. None of the vendors featured in this report has a significant installed base for its cloud-delivered solutions. While a cloud-based BI business is perfectly viable, for most BI requirements cloud hosting would offer only modest cost advantages over on-premise, unlike CRM. Ovum believes that while some issues, such as customer aversion to hosting confidential data on public clouds, may take time to be dispelled, cloud BI as a business model and consumption model can no longer be ignored. The case for cloud BI must therefore be built on using the strengths of laaS, SaaS, and PaaS to solve the pain-points of customers, providing as much abstraction to the end user as possible. To reduce complexity, vendors must be prepared to bundle and stack solutions, handle the resulting integrations, and manage plumbing and infrastructure where needed.

BI vendors are still working out the plumbing for Big Data

In spite of the hype around Big Data analysis, only three vendors out of the eight could connect to an actual Hadoop or other NoSQL instance. At the time of writing this report, Oracle, Microstrategy, and Pentaho were the only vendors that were able to work with live Hadoop data. However, most of the other vendors are close to publishing their own or third-party Hadoop connector, and are likely to close this gap in 2012.

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Social concepts can be seen in most tools, but collaboration is still missing

Social, and the broader theme, collaboration, is another concept that has attained buzzword status in BI. Social for the BI market pertains to enabling collaborative report development and data manipulation through features such as annotations and easy report-sharing. For end users, social features in BI are mostly about more visual or intuitive lineage depictions, easy mashups of data and reports, version control, and an audit trail of changes made.

Ovum finds that most vendors are working to simplify their UI and make the entire report creation and sharing process more consumable on an ongoing basis. Vendors that stand out here include QlikTech, which almost eliminates the difference between report runtime and design time, allowing higher degrees of freedom to users. On the other hand, most vendors do not yet provide connectors to enterprise collaboration platforms other than their own. Ovum believes that BI needs to get closer to collaboration suites so that BI reports can be shared as collaboration artifacts, and the data from enterprise collaboration can be analyzed in BI.

Most vendors do not work very well with third-party data tools

The concept of universal data management tools is still far from reality. Not all vendors covered in this report do not allow or cannot work the use of third-party ETL tools. Some vendors such as SAP do not integrate with third-party metadata management tools, some such as Microsoft do not integrate with third-party OLAP Servers, while still others such as Microstrategy do not allow third-party reporting tools to report on their dataset.



Ovum Decision Matrix - BI

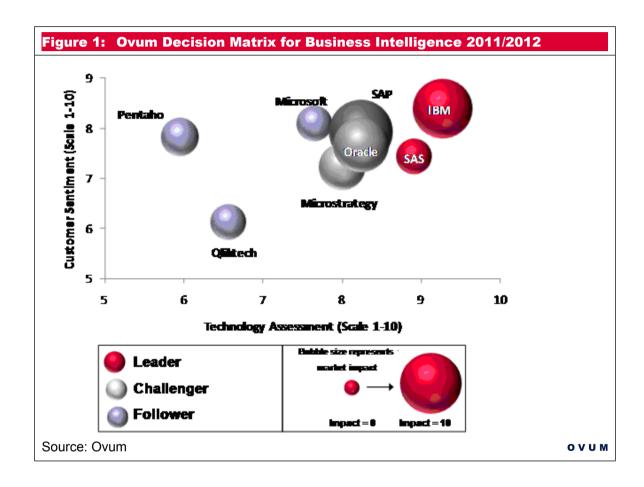


Table 1: BI Decision Matrix				
Leader	Challenger	Follower		
IBM	Microstrategy	QlikTech		
SAS	Oracle	Microsoft		
	SAP	Pentaho		
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IBM and **SAS** are market leaders

IBM and SAS lead the overall BI market. Of the two, IBM has posted an unusually high customer satisfaction score this year, which is atypical given that customers do not usually feel positive about companies that are acquisition-driven. The strong vote of confidence in spite of two major acquisitions points to the fact that IBM has managed customer transition and integration very well. The size of the IBM's BI footprint is now the second largest in the market, which makes the high customer perception ranking even more noteworthy. Ovum finds IBM's strategy of using BI as the backbone for its "smarter everything" compelling. Across a very wide variety of requirements, existing infrastructure, and organization sizes, Ovum finds IBM to be relevant.

SAS leads the BI market by garnering best or second best scores in technology almost every category. SAS's differentiation clearly continues to be its edge in advanced analytics, an area that is becoming more relevant. Also SAS's strong drive to carry the advanced analytics edge into faster memory and databases makes it a strong contender for the number-one spot.

Microstrategy, Oracle, and SAP are formidable challengers

Microstrategy, Oracle, and SAP are the primary challengers in the BI market. These vendors form a distinct rung in terms of size, technology scores, and customer satisfaction.

SAP is now the largest BI vendor in the market and differentiates itself by offering the widest range of vertical-specific solutions. Over the longer term, Ovum believes that SAP's BI proposition can gain further traction given the rising popularity and push behind HANA. Oracle, on the other hand, distinguishes itself by offering a robust BI platform alongside an all-pervasive analytics backbone including data warehousing appliances, Big Data, and low-latency analysis. The vendor will be appealing to enterprises that have some existing Oracle footprint and plan to use integrated analytics infrastructure across the enterprise, regardless of the size, form, or structure of data. Microstrategy is best positioned as an independent BI vendor that scales very well. The vendor's capabilities around processing queries on very large data sets, its support for Apache Hadoop, and its market-leading mobile offering are also key positives.

Microsoft, QlikTech, and Pentaho have specific sweet spots

Microsoft does not have a separately licensable BI solution. However, its BI capabilities are hard to ignore given its ubiquity. Ovum believes that Microsoft will continue to be one of the best choices for small to medium-sized organizations that have a Microsoft footprint. However, given the vendor's unique positioning and the lack of a separate BI practice, Ovum rates it a "Follower".

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QlikTech focuses entirely on in-memory, which means it is best positioned at organizations that have relatively less BI legacy. The vendor looks extremely promising and has grown at astonishing rates over the last few years. Ovum expects QlikTech to win over competitors wherever ease of use and intuitiveness are important selection criteria.

Pentaho is the only open-source vendor in this report and differentiates itself by the amount of flexibility it offers and its strong development community. Pentaho's solution is very well suited to specific sectors that rely on open source, or for organizations that depend on the exclusivity of their BI processes for maintaining their competitive advantage.

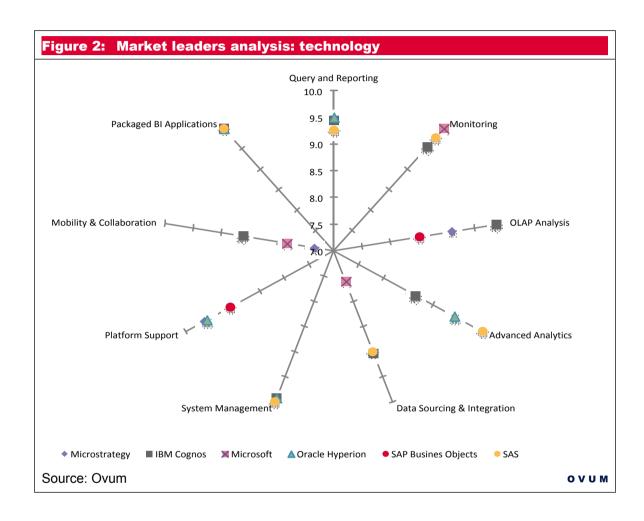


MARKET LEADERS

The BI market is broad and includes many subsets. Vendors vary in their focus and in their market strengths. In this section, Ovum attempts to provide a deeper look into the underlying patterns in the market by comparing the top vendors in each of the criteria that contribute to the technology, impact, and customer-satisfaction ratings. Ovum has resisted the temptation to create multiple categories of BI "types", which would lead to most vendors being "top of the tree" in one such category. Rather, Ovum believes that the end user has to also consider the context and comment behind the scores, to see which product might best suit its individual needs.



Market leaders: technology



IBM and SAS lead the entire market on technology. Of the two, IBM features on the graph in seven of the nine categories while SAS features in six categories. Some of the categories, such as query and reporting, OLAP analysis, and system management, have a cluster of vendors vying for the top position. Such an arrangement makes sense given that such features have now become must-haves for enterprise-grade BI platforms. However, with newer features, such as mobile BI capabilities and advanced analytics, the difference between vendors is more marked.

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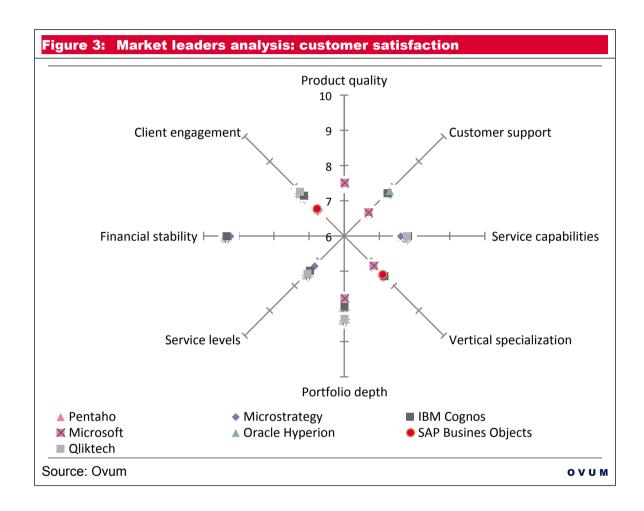
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Oracle, SAP, and Microstrategy are closely clustered in total technology scores. However, these vendors outperform each other in different areas. SAP trumps others in monitoring, while Oracle appears slightly better off than its competitors in advanced analytics.



Market leaders: customer satisfaction



IBM is the overall leader across the maximum number of categories in customer satisfaction this year. Ovum finds this achievement particularly impressive given the turbulent environment IBM has operated in over the last few years, including two large acquisitions and the recent change in top leadership at its analytics division.

Microsoft, which usually emerges as a clear favorite in customer-satisfaction ratings, comes in at a close second. This is surprising given that Microsoft leads customer satisfaction in most of the

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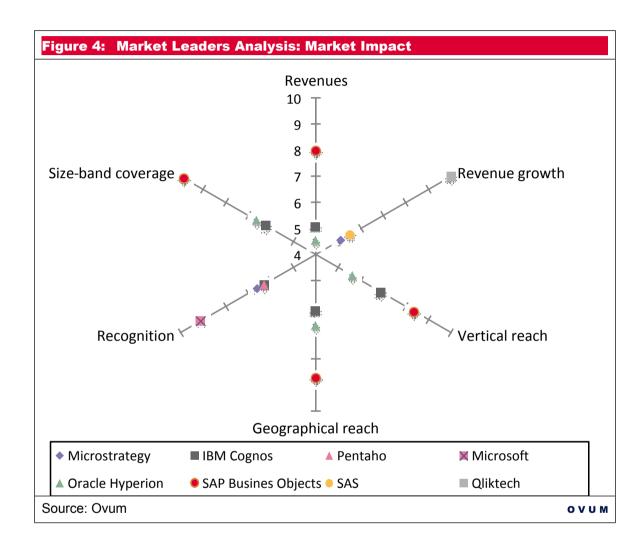


markets it operates. Even in BI, more than twice the number of respondents recognize Microsoft as a BI provider than those who recognize IBM's or Oracle's BI suites.

SAP, Pentaho, and Oracle form the next step in terms of customer-satisfaction rankings. While both the mega vendors outrank Pentaho on factors such as the perception of product quality and customer support, Pentaho scores higher than both in portfolio depth and client engagement.



Market leaders: market impact



Mega-vendors beat all on size, while QlikTech leads on momentum

The list of leaders across the market impact dimension is predictable, comprising SAP, IBM, Oracle, and SAS. By Ovum's estimates the BI revenues of these vendors are the highest in the market. However, Microsoft trumps all when it comes to being universally recognized as a provider of BI technology. QlikTech, now no longer the smallest vendor, is still recording high revenue growth rates and will continue to do so throughout the next year according to Ovum.

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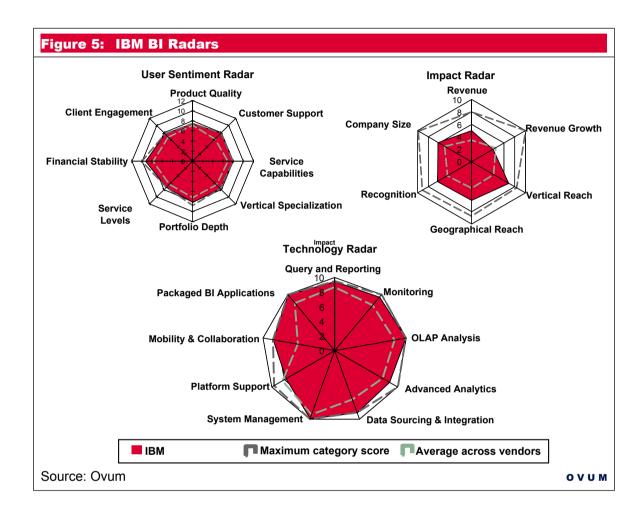
VENDOR ANALYSIS

IBM: BI Radars

IBM's performance has been impressive against every evaluation parameter. The vendor leads all others in technology scores, and Ovum estimates that the IBM's presence is one of the largest in the BI market, especially after the acquisition of SPSS in late 2009. The vendor also scores the highest on customer satisfaction, which is commendable for an organization of its size. The customer satisfaction indicates that enterprises are likely to recognize IBM among the top three providers of BI solutions in the market. To summarize, the vendor has an extensive market presence, the suite is functionally rich, and in spite of its scale and acquisitions IBM has managed to keep its BI customers happy.

IBM's leadership in the technology rankings is noteworthy. In 2009, Ovum conducted an assessment of the top BI and performance management vendors, where IBM did not lead the group. However, with a series of small acquisitions (and SPSS), and a re-jigging of the entire analytics strategy, it has managed to seamlessly integrate Cognos's and SPSS's product sets into its IBM Global Services offerings, creating a compelling proposition. Some of the product features that Ovum finds commendable in IBM's BI suite include support for in-memory models (dynamic memory swapping, delta and incremental updating, and in-memory optimization and compression) through the Cognos TM1. In addition, Ovum is happy to see IBM using SPSS to further sharpen its core "Smarter Planet" message. The level of integration among IBM Global Services, SPSS, and Cognos is more than simple product/service bundling. IBM has already embedded SPSS technology into Cognos so that Cognos users can consume SPSS models directly. In addition, IBM's portfolio comes out best-in-class in the emerging areas to watch in the BI market, namely mobile BI (Cognos Mobile) and support for 64-bit architecture, SMP, and MPP, across the board.





Recommendation: Leader

A leading aggregate technology and customer satisfaction score leads us to assign a leader rating to IBM. Using BI at the core, the vendor has set an ambitious target of \$16.4bn by 2015 for its Business Analytics and Optimization (BAO) business, which a collection of software, hardware, and services for optimizing business for analytics solutions. Ovum believes that IBM possesses one of the most expansive BI tools and services portfolios in the market. By stitching together its BI suite and professional services, IBM creates a unique value proposition that is almost impossible for other vendors to match.

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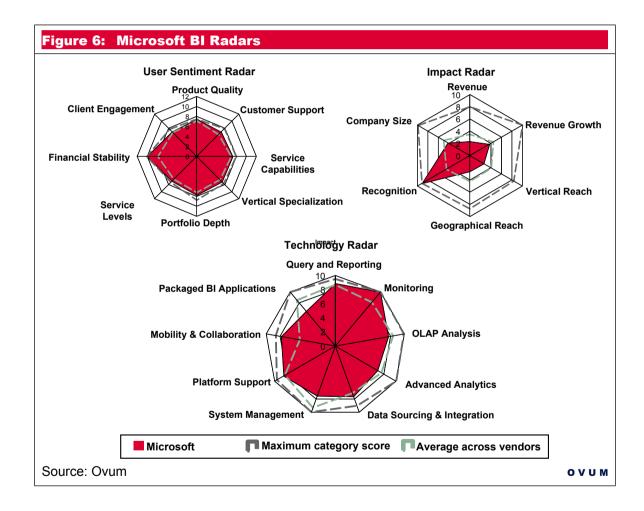
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Microsoft: BI Radars

Microsoft is a unique entry in the Ovum Decision Matrix for Business Intelligence because the vendor does not focus on providing its BI technology as a stand-alone solution. Instead, Microsoft's BI capabilities are designed primarily to serve its installed base in Microsoft Office, Microsoft SharePoint Server products, and the Microsoft SQL Server platform. Microsoft discontinued the independent licensing of its product, PerformancePoint Server, in 2009 and has since merged its BI functionality deeper into the SharePoint Server.



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Given the sheer size of Microsoft's enterprise applications footprint, Microsoft BI has a significant market share of the market. By Ovum's estimates, Microsoft's BI revenue (entirely a theoretical construct) is well above QlikTech, Pentaho, and Microstrategy. For organizations that have already invested in SharePoint and SQL Server, the case for Microsoft BI is compelling. On a stand-alone basis Microsoft's technology score is slightly below average, but a closer look reveals that the scores are impressive on core BI features, such as querying and monitoring. In fact, Microsoft's monitoring capabilities are best in class given the infusion of SQL Server 2008 R2 – StreamInsight into the solution.

The solution lacks a few key areas and scores low on some criteria compared to its better-established competitors, such as the availability of packaged applications and OLAP analysis. However, with the upcoming release of SQL Server 2012 Microsoft could well be on the way to plugging these gaps in its portfolio. Overall, Microsoft's market presence and brand recognition tip the customer satisfaction assessment balance in its favor, launching it to second place in terms of end-user perception. End users are very confident about the portfolio depth offered by Microsoft, which is rather counter-intuitive given that its portfolio remains largely horizontal and smaller than those of the market leaders. As usual, Microsoft also tops the charts in recognition. Over the longer term, Ovum believes that Microsoft has the potential to disrupt the market landscape with its atypical approach to the BI market.

Recommendation: Follower

Average technology scores, excellent customer satisfaction scores, and a good share in the mid-market would get Microsoft to the "Challenger" category. However, the lack of a separately licensable BI and performance management leads us to assign a "Follower" rating to Microsoft. To summarize the case for Microsoft BI, small to mid-sized enterprises would need a good reason to look beyond Microsoft when the environment is primarily Microsoft and the requirements from BI are not extremely specialized, such as analyzing Hadoop data in-house or dealing with challenges that are typical to certain verticals and situations. However, organizations would also need a very good reason to select Microsoft should BI analysis and processes be unique, or if the analysis requirements necessitate looking at non-ECM data sources.

Microstrategy: BI Radars

Microstrategy remains an independent vendor in the BI market, alongside others such as SAS, Information Builders, and Actuate. Like most other pure-play independent BI vendors, Microstrategy's BI platform has been entirely built in-house, which helps it score over mega-

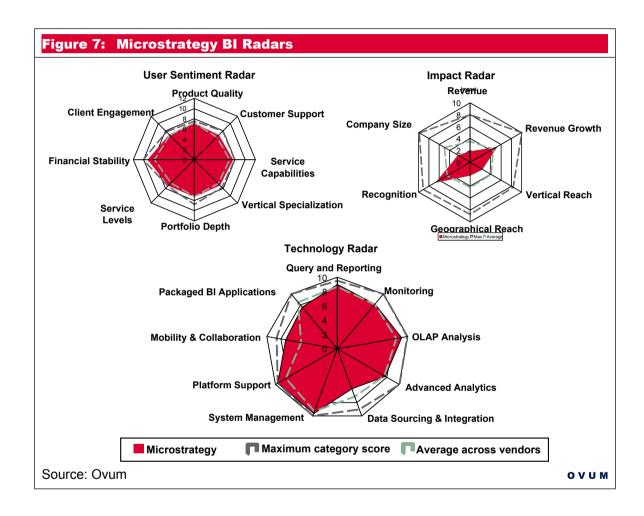
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vendors in a few aspects around integration. Tight integration means having a set of consistent metadata that is reusable and portable across tools and applications. The net result is a targeted portfolio of products and a lower total cost of ownership (TCO) realized through faster development and lower IT maintenance costs.



Microstrategy scores above the group average on the technology assessment. Categories in which the vendor's solution scores well include query and reporting, monitoring, OLAP analysis, and support for platforms. Given the absence of multiple metadata layers, Microstrategy is extremely good at allowing multiple devices, applications, and interfaces use the same query results. Ovum also found Microstrategy's capabilities impressive around the conversion of natural language

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queries into SQL. Capabilities around processing queries on very large data sets are key differentiators for Microstrategy, which continues with its support for Apache Hadoop.

In terms of revenue, Microstrategy is smaller than the mega-vendors, and even independent vendor SAS. However, it recorded a very attractive growth rate (close to 20% year on year) in 2010. Maintenance revenues were close to three times new license revenue, but pure license revenue grew 24%, pointing to the fact that the vendor was fast gaining new business even during the recession. Part of the reason for this growth is Microstrategy's ability to keep customers happy. The vendor scores above average on all parameters in customer satisfaction, coming close to the group maximum on service levels, service capabilities, and customer perception of product quality.

Recommendation: Challenger

A high aggregate customer satisfaction score and a higher than average technology score leads us to assign a "Challenger" rating to Microstrategy. It must be mentioned in this context that Microstrategy is smaller than most of its peers considered in this report, with the exception of Pentaho. However, it continues to be perceived by customers as financially stable. Ovum recommends Microstrategy for organizations that are looking to engage an independent BI vendor that can provide enterprise-grade scalability and performance. The solution, especially in its cloud version, is also suitable for small to medium-sized organizations.

Oracle: BI Radars

Oracle's Business Intelligence Foundation Suite 11.1.1.5 (11g) features among the top vendors in the technology assessment, with maximum scores in two categories. Oracle's BI Foundation Suite 11.1.1.5 offers market leading functionality in the core area of query and reporting, the category that Ovum considers the most important aspect of any BI solution. While many vendors claim to offer comprehensive querying features in a report, Ovum finds that Oracle's suite provides the highest level of flexibility and intuitiveness in its reporting and querying features, both to end users/developers and administrators. Oracle's user base is positive about the company's commitment to delivering robust services in the BI market, and is quite impressed by the support offered by its customer services. Oracle's customers also rate the vendor well above average in other client-engagement criteria such as product quality, customer support, service capabilities, vertical specialization, and portfolio depth. Above average customer perception is noteworthy in Oracle's case. In Ovum's experience, the vendor tends to elicit lower than average customer satisfaction attributable to its history of rapid acquisitions, which is likely to make customers apprehensive about post-integration issues. However, over the last three years Oracle has done a

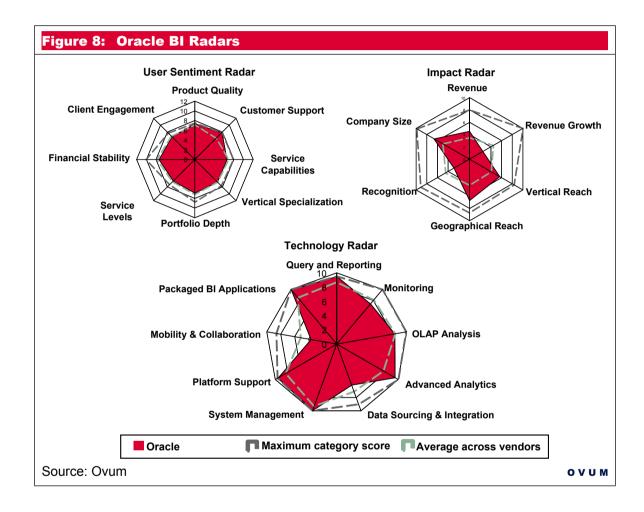
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good job of integrating Hyperion into its BI suite and improving the overall customer service experience, which is evident from our survey.



It is important to note that this assessment considers only the Oracle 11g BI suite. At OpenWorld 2011 Oracle announced three different engineered systems: the Big Data appliance, Exalytics, and Exadata that target specific analytic problems. Oracle's analytics portfolio covers several technical trends in analytics today including in-memory, parallel database processing, and self-serve BI. These are converging to enable "speed-of-thought" analytics. Ovum believes that over the medium term (two to three years), the boundaries between analytical databases, BI platforms, and analytics applications will blur. Taking a futuristic view, Oracle appears best poised among BI

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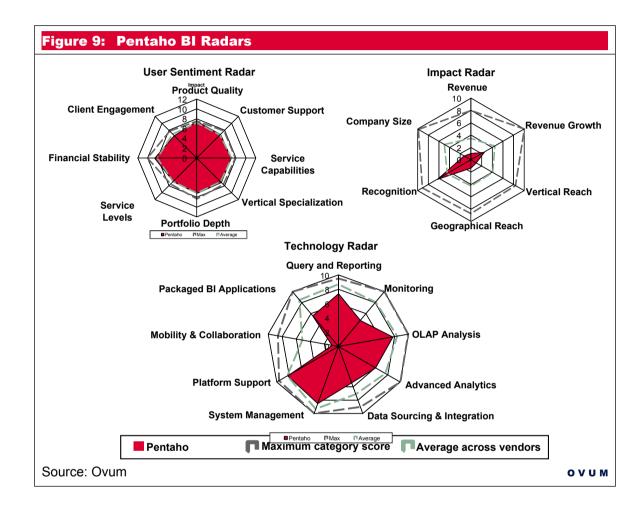
mega-vendors to serve a variety of analytic requests, from ad-hoc to structured, with closely integrated infrastructure and tools that share interfaces and metadata.

Recommendation: Challenger

An above average technology score, a rapidly rising customer perception rating, and an average market impact score lead us to assign a "Challenger" rating to Oracle. The vendor certainly warrants close evaluation when a long-term commitment is being made to BI-oriented decision-making processes. What makes Oracle sit on the cusp of the "Challenger" and "Leader" categories are its new announcements in data warehousing appliances, Big Data, and low-latency analysis. For organizations that are looking to plan an enterprise-wide data assimilation and analysis infrastructure, Ovum finds Oracle's proposition compelling.



Pentaho: BI Radars



Pentaho is the only open-source vendor featured in the 2011 BI Decision Matrix. With more than 1,200 paying customers for its commercial open-source offerings, the vendor is a key player in select verticals in the BI market. Ovum's decision to feature Pentaho in the list of BI leaders has a lot to do with the continued relevance of open-source solutions in the BI market, the vendor's credible technology, and the momentum that the company has built up over the last five years. Most open-source-suitable enterprise software markets have a large professional services component and, typically, only some verticals constitute a super-majority of the user constituency. Both these factors hold for most open-source BI solutions. However, open-source BI also has to

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address a large business user constituency, where it differs from other software categories such as BPM and ITSM. Therefore an open-source BI vendor has to focus on keeping its solution relevant to business users, while allowing developers more freedom than is offered by a proprietary solution. Ovum finds Pentaho's solution to be capable of hitting both these targets with relatively small professional services components (implementations typically take between two and four weeks). Pentaho's current momentum and uptake in key verticals such as education and retail leave little doubt about the sustainability of the company.

Pentaho's aggregate technology scores are slightly below market average. However, it must be mentioned that Pentaho does not target the entire BI market and every functional area like the mega-vendors, but instead focuses on areas where the adoption of open source is more likely. For example, integrating data and performing OLAP analysis from a variety of sources is Pentaho's strong suit. Pentaho is also one of the few vendors that provides direct integration with Hadoop and NoSQL databases from the BI suite, allowing users to report, analyze, and visualize Hadoop and NoSQL data, as well as traditional data sources.

Recommendation: Follower

A modest technology score and an above average customer-satisfaction score lead us to assign a "Follower" rating to Pentaho. Overall, the suite is full featured and certainly increases the number of options and reduces the cost of getting started on BI for technical organizations. On the customer-satisfaction dimension, Pentaho scores well against service-quality-related parameters such as service capabilities, service levels, and customer perception of financial stability.

QlikTech: Bl Radars

QlikTech is the latest vendor to feature in Ovum's BI Decision Matrix. The vendor features in this comparison not only because of its unique and continued focus on in-memory analytics, but also the exponential growth it has achieved in the last few years. In a market that has been slowly consolidating and losing its individuality over the last three to four years, QlikTech stands out as an innovative vendor that addresses a pertinent customer pain-point: the requirement for simplicity. Instead of relying on OLAP and cubes to pre-aggregate queries, the solution lets customers load their entire dataset onto fast-performing memory and provides a solid tool that helps explore and drill this dataset using multiple criteria. While most other BI vendors are now on the in-memory bandwagon, very few use the full capabilities of in-memory data analysis. In fact, QlikTech is one of only two vendors that offer delta and incremental updating of in-memory models, and in-memory model optimization using compression. Ovum believes that more importantly than in-memory,

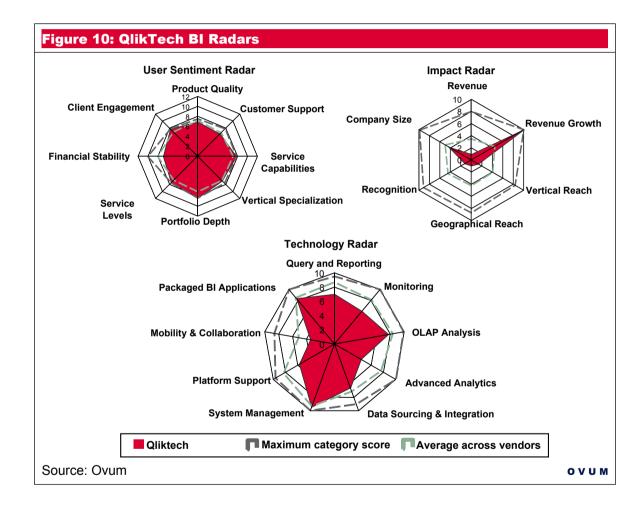
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QlikTech's ease-of-use factor mainly comes from its associative modeling technique, which creates automatic associations (similar to joining attributes) between multiple rows/columns that have similar characteristics. As a result, predefined drill-down hierarchies or navigation paths do not need to be built, and navigation, exploration, and creation of hierarchies can be defined within the context of a QlikView application.



In the overall technology assessment, QlikTech scores slightly below average. However, an assessment of QlikTech's technology cannot be carried out with the same yardstick as OLAP vendors. There are several areas where the platform stands out. Query and reporting, for example, is radically different in QlikTech because all the data is in-memory, naturally leading to best-of-

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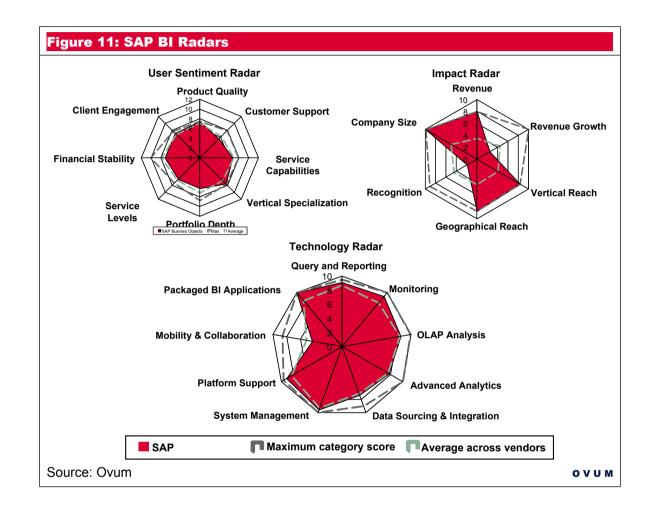
breed query performance. However, extensive reliance on third parties for vertical solutions and advanced analytics modules is a slight negative. Ovum would like to see the mobility and collaboration aspects of the platform improve further. It must be noted, however, that this assessment was carried out before QlikTech released version 11, which focuses on expanding the collaboration and mobility aspects of the solution. QlikView 11 includes collaboration capabilities such as annotations and shared sessions. It also provides additional mobile capabilities such as support for Android tablets, and an optimized viewing mode for small-screen iOS and Android smartphones. In the version evaluated, security, system, and user-management aspects of this platform are commendable, which minimize the burden on internal IT and go a long way toward self-serve BI. Market impact-wise, QlikTech remains the fastest growing vendor in the entire list at about 40% growth year over year. In 2010, the company added 400 new customers a month on average, an enviable metric for any vendor. However, the vendor needs to focus on improving the customer-satisfaction perception.

Recommendation: Follower

Ovum assigns a "Follower" rating to QlikTech. The vendor's non-traditional methods for analyzing data (associative in-memory method) can be extremely helpful for a variety of use cases, but it also has its limitations when SQL constructs become necessary. As data sizes increase and there are multiple federated data warehouses to handle, even QlikTech has to rely on data layers that assimilate and lend uniformity to data from a variety of sources, resembling a data warehouse staging area. The vendor says customers can choose to operate without such a structure, but Ovum believes that doing so would not be optimal. In Ovum's view, QlikView best fits organizational requirements where it is imperative that business users are able to analyze most of the data themselves without regular involvement from IT. In addition, the solution is a very good fit where the deployment time needs to be drastically minimized. An interesting use-case of Qliktech is also to identify bad data quickly, where users can pull a large dataset into memory and quickly identify missing associations and/or data.



SAP: BI Radars



SAP's BI offering, the SAP BusinessObjects BI Platform, leads the field in terms of market-impact ratings. The solution is strong on most technology assessment categories, notably in the query and reporting, and monitoring core features, and the breadth of its packaged applications is second to none. The company focuses on key functional areas such as BI for finance, sales and marketing, and HR and operations. Key modules include planning and consolidation, customer analysis and retention for telcos, on-shelf availability analysis, sales analysis for retail, and staff productivity management for healthcare. SAP also offers a large number of modules that target

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specific issues in verticals, such as a spend analysis and reporting module for healthcare and a planning and consolidation module for the public sector.

SAP is now the largest vendor in the BI market in terms of size and impact, mostly attributable to its recent acquisitions of Business Objects and Sybase. The vendor has always been very successful among large enterprises, and its focus remains on the upper mid-segment and the large enterprise segment. Over the last two to three years, SAP has consistently integrated best-in-breed features from its overlapping BI solutions and ensured interoperability, which shows in its above average technology ranking. However, a few areas warrant further attention. While SAP ensures tight integration and a shared environment between its own applications, the platform does not support third-party ETL tools, development environments, or metadata engines very well. In addition, SAP does not offer the complete range of functionality of the BI suite on mobile devices, which is a conscious choice given device memory limitations, small screens, and interaction limitations. Ovum agrees with SAP's assumption that complex OLAP analysis is probably never going to take the mobile route. However, this assessment does find some innovative mobile offerings including interactive search and navigation capabilities on mobile devices that go a long way to democratize BI usage. Ovum believes that going forward, SAP will monetize its acquisition of Sybase by better tying up Sybase's mobile technology to its BI suite.

Recommendation: Challenger

SAP's industry coverage is the most extensive on the market. The vendor also scores well above market average on technology and customer satisfaction. Ovum recommends placing SAP in the "Challenger" category. SAP's analytics product portfolio now contains an interesting mix of technologies, including traditional DW and BI, in-memory (HANA), and event-driven analytics or CEP (from Sybase). Ovum believes that all of these products have the potential to deliver synergies. Over the medium term, Ovum finds the prospects of SAP to be very promising.

SAS: BI Radars

SAS is a rare kind of vendor, a private company that makes more than \$2bn a year in revenues and keeps growing at market leading rates (in the range of 7% to 12% per year) regardless of the health of the world economy. The vendor is also one the rare advanced analytics, BI, and data management pure-plays in the list of top scorers on the technology dimension. SAS scores the second highest rating on the technology dimension, above formidable competitors such as Oracle and SAP. The technology scores are consistently high against individual dimensions, with highest

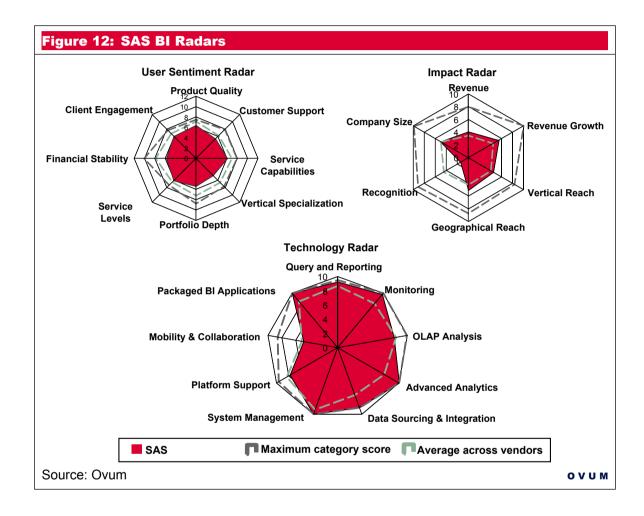
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scores in three, advanced analytics, systems management, and packaged BI applications. SAS's customer-satisfaction and market-impact scores are close to average with no major exceptions.



SAS's leadership is advanced analytics comes as no surprise. While open-source alternatives such as R and proprietary competitors such as SPSS (now IBM) have tried to erode SAS's market share in the past, these efforts have met with limited success. Large organizations, such as insurers, banks, and retail chains that consider analytics to be mission-critical are extremely sticky on SAS solutions. In addition, the vendor's strong focus on vertical and function-focused solutions has invariably seen the vendor through tough competition. SAS's very low employee turnover rates

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(less than 4%) also help ensure that the vendor develops and maintains long-lasting relationships with clients, providing consistency in products and services.

Ovum believes that SAS is well positioned to take advantage of the several industry trends, such as the trend toward BI mobility, analytics in-database, and SaaS. The vendor now possesses a very forward-looking roadmap that targets emerging market segments and "blue ocean" customers.

Recommendation: Leader

A close second position in technology scores and market-leading expertise in advanced analytics put SAS in the "Leader" category in 2011. Ovum also finds interesting SAS's new product direction of focusing on high-performance computing, process automation, business visualization, data management, and SaaS. Should SAS be able to bring greater business agility to rolling out its technology initiatives, it could well extend its market leadership in the next five to six years.

Conclusion

The BI selection problem is becoming increasingly complicated. However, the increase in complexity represents more complete portfolios, which is good news. Vendors that could earlier have been described as primarily reporting or analytics-focused and lacking in predictive tools have now acquired the necessary tool sets. Vendors that could have been described as focusing on fairly simple and predictable analytics issues have now acquired the means to accommodate bigger and more diverse data processes with greater variability. Ovum believes the selection challenge now warrants a longer and more detailed evaluation process of both customer requirements and vendor offerings.



APPENDIX

Summary scores

Table 2: Ovum Decision Matrix for Business Intelligence 2011/2012 vendor scores (in alphabetical order)

Vendor	Technology	Customer Satisfaction	Market Impact
IBM	9	8	6
Microsoft	8	8	2
Microstrategy	8	7	3
Oracle	8	7	5
Pentaho	6	7	2
QlikTech	7	6	2
SAP	8	7	7
SAS	9	7	2
Source: Ovum			O V U M

Further reading

The Cloud and BI: at Odds? July 2011

Research Guide: Business Intelligence, June 2011

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We hope that the analysis in this brief will help you make informed and imaginative business decisions. If you have further requirements, Ovum's consulting team may be able to help you. For more information about Ovum's consulting capabilities, please contact us directly at consulting@ovum.com.

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