For Business Process Professionals

October 29, 2010
The Forrester Wave™: Enterprise Data Quality Platforms, Q4 2010
Informatica Leads With DataFlux And Harte-Hanks Trillium Software Close Behind
by Rob Karel
with Connie Moore and Charles Coit

EXECUTIVE SUMMARY
In Forrester’s 124-criteria evaluation of enterprise data quality platform vendors, we found that Informatica and DataFlux led the pack in part because of the breadth and depth of those products’ functional capabilities, including strong support for real-time data quality services, data quality monitoring, and stewardship capabilities, but even more so on the quality of the experience shared by their customers. Harte-Hanks Trillium Software — a Leader with best-in-class data profiling, robust data cleansing, standardization, and matching capabilities — also had positive feedback from its customers. SAP BusinessObjects, IBM, and Pitney Bowes Business Insight (PBBI) are Strong Performers, offering compelling data quality and data profiling solutions with specific strengths that will make them attractive considerations for many large enterprises.

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- Enterprise Data Quality Platforms Evaluation Overview
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NOTES & RESOURCES
Forrester conducted product valuations in April 2010; fielded the March 2010 Global Data Quality Forrester Wave Customer Reference Online Survey with 56 respondents based on customer references provided by the evaluated vendors; and interviewed six vendors: DataFlux, Harte-Hanks Trillium Software, IBM, Informatica, Pitney Bowes Business Insight, and SAP BusinessObjects.

Related Research Documents
“Data Quality Platform Adoption Trends”
October 12, 2010

“Enterprise ETL: Evolving And Indispensable To Your Data Management Strategy”
May 12, 2010

“Trends 2009: Master Data Management”
October 23, 2009

“Warning: Don’t Assume Your Business Processes Use Master Data”
September 21, 2009
DQ SOFTWARE AND COMPETENCY ARE CRITICAL ON THE PATH TO MASTER DATA MATURITY

For many years, data quality (DQ) evangelists within large organizations suffered from a “Chicken Little” complex, where all their warnings about the negative business impact resulting from poor-quality, untrustworthy data fell on deaf ears. During this time, many one-off, project-based data cleansing initiatives were approved to support targeted cleanups of the occasional CRM application, direct marketing/campaign management system, or financial data mart, but the concept of enterprise data quality was far from becoming the norm.

But in the past three to five years, Forrester has witnessed a significant increase in organizations’ adoption and interest in embedding data quality best practices, methodologies, and technologies into their enterprise data management strategy and architecture. When assessing what triggered this shift in focus to data quality, consider that many business process professionals within large enterprises experience underperforming CRM, ERP, data warehousing (DW), and business intelligence (BI) initiatives. These projects’ lack of success often shares the same root cause: lack of business user confidence in the data captured, managed, and consumed by these applications. As a result, data quality software has been so widely embraced within these environments that many of the leading enterprise apps and BI vendors have acquired or built OEM relationships with some of the leading data quality vendors.

But rescuing expensive and mission-critical enterprise software investments has only been the tip of the iceberg in fueling the most recent interest in data quality software. The global economic downturn that began in 2008 led CEOs and CFOs to ask their CIOs what else could be done to control margins and reduce compliance and regulatory risk. CIOs recommended and embraced data quality and profiling software investments, along with a focus on embracing data governance best practices as a strategic lever for business process pros to deliver optimized processes and decisions to senior management. Resulting efforts help to improve operational efficiencies, reduce wasted costs, optimize critical business processes, provide data transparency and auditability for compliance, and improve customer experiences, leading to higher loyalty and competitive differentiation.

Data Quality: An Active And Diverse Market With Options For Companies Of All Sizes

Dozens of vendors worldwide offer industry-agnostic data quality and data profiling capabilities, and a great deal more, as well, if you consider solutions that target specific applications, functions, or industry processes. Also, many data quality vendors specialize and provide depth of expertise in a focused part of the data quality market such as postal address verification (e.g., Experian QAS, Melissa DATA), matching or identity resolution [e.g., Infoglide Software, Netrics (acquired by TIBCO Software), and Pervasive Software], and data profiling (e.g., Ab Initio and Business Data Quality). Many others also focus just on a single-data-domain-like product [e.g., Silver Creek Systems (acquired by Oracle)] or customer (see Figure 1).
**Figure 1** Data Quality Market Segmentation

**Enterprise-class data quality platforms**
- DataFlux (SAS)
- IBM
- Informatica
- Harte-Hanks
- Trillium Software
- SAP (via Business Objects)

**Data quality specialists**
- Ab Initio (profiling only)
- Ataccama
- Capscan
- DataMentors
- Global Data Excellence
- Information Builders
- Omikron
- Oracle
- Pervasive Software (matching/profiling only)
- DataLever
- Datanomic
- Datamagic
- Information Builders
- Innovative Systems
- Human Inference
- Talend
- X88 Software
- Uniserv GmbH

**Hosted or SaaS**
- Acxiom
- Dun & Bradstreet
- salesforce.com (via Jigsaw)

**Postal address verification**
- caatoosee
- CDNYE
- DataTech Smartsoft
- Indentex
- Melissa DATA
- Experian QAS
- Satori Software
- Strikelron
- TowerData

**Matching or identity resolution engines**
- Infoglide Software
- Microsoft (via Zoomix)
- TIBCO Software (via Netrics)
- S3
- Syslore

Source: Forrester Research, Inc.
Many data management professionals focus on project-based or departmental implementations and often consider these best-of-breed data quality alternatives. But the vast majority of large enterprise companies (typically $1 billion-plus enterprises and large public sector organizations) seek mature, fully functional, and experienced data quality platforms that provide both the breadth of functionality and the depth of implementation expertise to support the complexities of their global IT and business environments. For this reason, this Forrester Wave evaluation focuses on the shortlist of vendors most often considered by large organizations.

Further validation that this list was the right one came from Forrester's August 2010 Global Data Quality Online Survey of 145 IT professionals familiar with their organization's data quality initiatives. Interestingly, 23% of the respondents indicated they were still using in-house, custom-developed solutions to manage their data quality requirements, demonstrating still significant potential growth for this market segment. But of those using packaged data quality software, 67% of respondents indicated that they were using one of the six evaluated vendors, while only 33% shared that they chose among 15 other vendors for data quality (see Figure 2).

**Figure 2 Custom Solutions Are Still Widespread**

<table>
<thead>
<tr>
<th>“Which vendor is the primary provider of your data quality (DQ) solution?”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom-developed solution (build over buy)</td>
</tr>
<tr>
<td>IBM InfoSphere QualityStage/Information Server</td>
</tr>
<tr>
<td>Informatica</td>
</tr>
<tr>
<td>Harte-Hanks Trillium Software</td>
</tr>
<tr>
<td>DataFlux (SAS)</td>
</tr>
<tr>
<td>SAP BusinessObjects</td>
</tr>
<tr>
<td>Talend</td>
</tr>
<tr>
<td>Pitney Bowes Business Insight</td>
</tr>
<tr>
<td>Human Inference</td>
</tr>
<tr>
<td>Silver Creek Systems</td>
</tr>
<tr>
<td>Information Builders/iWay Software</td>
</tr>
<tr>
<td>Datanomic</td>
</tr>
<tr>
<td>Experian QAS</td>
</tr>
<tr>
<td>DataMentors</td>
</tr>
<tr>
<td>DataLever</td>
</tr>
<tr>
<td>DataTactics</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Not applicable</td>
</tr>
<tr>
<td>Don’t know</td>
</tr>
</tbody>
</table>

Source: August 2010 Global Data Quality Online Survey

Source: Forrester Research, Inc.
The Data Quality Landscape Repainted As Part Of Broader Data Management Infrastructure

From 2000 to the present, we’ve witnessed a steady — and accelerating — consolidation of data quality software technology vendors within the data management market. Large enterprise app, BI, and data integration vendors, as well as existing data quality software specialists, have led these acquisitions. Within the past 10 years, many of these former acquirers have become targets themselves, including Ascential Software, Business Objects, Group 1 Software, Hyperion, and Similarity Systems (see Figure 3).

Interestingly, the primary catalyst for these acquisitions was rarely a push to enter new data management markets or to acquire a customer-installed base. Rather, acquirers made data quality software technology investments to address customer frustrations around the lack of usefulness and trustworthiness of the data managed within their own technology portfolios. Types of products from the vendors that are the most aggressive in incorporating data quality management capabilities include:

- **Data integration platforms that need to move beyond data plumbing.** For years now, data integration (DI) vendors, particularly those offering high-performance enterprise ETL solutions, invested heavily to evolve their portfolios into broader data management platforms that include data integration, data quality, data profiling, metadata management, and other complementary capabilities. This strategy paid off for vendors like IBM, Informatica, SAP (via its Business Objects acquisition), and most recently, SAS’ DataFlux subsidiary — the latest vendor to release a platform that combined data quality and data integration, among other capabilities. These vendors and others find strong cross-sell and upsell opportunities across data integration and data quality with both new and existing customers.²

- **BI and analytics apps from vendors that know they must deliver trusted, not just any, data.** Anyone who has managed a BI or DW project identifies closely with the old adage “put garbage in, get garbage out.” Most BI and DW professionals have absolutely no control over the operational systems and business processes that capture the majority of the data required within their environments. Until these data management pros work more closely with their business process counterparts, these issues will continue.³ Until that happens, they can only wait until this dirty data flows downstream throughout the enterprise and comes to rest in the polluted lakes that fill most DW/BI environments. To mitigate these upstream data dependencies, leading BI vendors such as IBM (Cognos, SPSS), Information Builders, Microsoft, Oracle, SAP (Business Objects), and SAS Institute offer data quality solutions (either via acquisition or OEM partners) as part of their product portfolios.⁴

- **Enterprise apps from vendors that realize that without quality data, they don’t deliver.** Oracle, salesforce.com, SAP, and others have built enterprise apps software empires with ERP and CRM software supporting operational business processes focused on manufacturing, supply chain management, financial management, call center operations, and sales force automation,
among other applications. Customers of these enterprise applications have spent tens of billions of dollars in software and implementation services over the years to capture relevant data, but traditionally they’ve invested little to ensure that the quality and usefulness of the data flowing through these investments was up to par.

Ironically, these customers often view the quality of the data as the primary failure in their implementation efforts. Oracle has primarily addressed data quality through partnerships with vendors like Informatica and Trillium Software, although it does have some additional data quality capabilities and purchased product data quality specialist Silver Creek Systems in early 2010. SAP, on the other hand, significantly enhanced its data quality portfolio when it acquired Business Objects in early 2008. In 2010, salesforce.com acquired Jigsaw to support some of its customer data management requirements but also offers an open platform with a wide variety of partners addressing DQ requirements through its AppExchange marketplace.

Not surprisingly, master data management (MDM) vendors have also been caught up in this M&A feeding frenzy, and many of the same acquirers of data quality software solutions are acquiring or OEMing MDM solutions to incorporate into their growing data management portfolios, or already have MDM solutions that are actively being integrated with their DQ software investments. Examples include Dun & Bradstreet's acquisition of Purisma and Microsoft's acquisition of Stratature in 2007, and more recently Informatica's acquisition of Siperian and IBM's acquisition of Initiate Systems in 2010.
Figure 3 The Consolidation Of The Data Quality Market

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 1999</td>
<td>Sagent acquires QMSoft</td>
</tr>
<tr>
<td>June 2000</td>
<td>SAS acquires DataFlux</td>
</tr>
<tr>
<td>January 2000</td>
<td>Oracle acquires Carleton</td>
</tr>
<tr>
<td>October 2003</td>
<td>Group 1 acquires Sagent</td>
</tr>
<tr>
<td>July 2004</td>
<td>Pitney Bowes acquires Group 1</td>
</tr>
<tr>
<td>January 2005</td>
<td>IBM acquires SRD</td>
</tr>
<tr>
<td>July 2005</td>
<td>Similarity acquires Evoke</td>
</tr>
<tr>
<td>January 2006</td>
<td>Informatica acquires Similarity</td>
</tr>
<tr>
<td>May 2006</td>
<td>Hyperion acquires Upstream</td>
</tr>
<tr>
<td>April 2007</td>
<td>Oracle acquires Hyperion</td>
</tr>
<tr>
<td>October 2007</td>
<td>Business Objects acquires Fuzzy! Informatik</td>
</tr>
<tr>
<td>April 2008</td>
<td>Informatica acquires Identity Systems</td>
</tr>
<tr>
<td>June 2009</td>
<td>Informatica acquires AddressDoctor</td>
</tr>
<tr>
<td>March 2010</td>
<td>TIBCO acquires Netrics</td>
</tr>
<tr>
<td>April 2010</td>
<td>salesforce.com acquires Jigsaw</td>
</tr>
<tr>
<td>February 2011</td>
<td>SAP acquires Business Objects</td>
</tr>
<tr>
<td>July 2012</td>
<td>Microsoft acquires Zoomix</td>
</tr>
<tr>
<td>February 2012</td>
<td>iWay Software (Information Builders) OEMs Ataccama</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.
ENTERPRISE DATA QUALITY PLATFORMS EVALUATION OVERVIEW

To assess the state of the enterprise data quality platforms market and see how the vendors stack up against each other, Forrester evaluated the strengths and weaknesses of top enterprise data quality platform vendors.

Buyers Focus On Architecture, Breadth Of Functionality And Governance Capabilities

After examining past research, user need assessments, and vendor and expert interviews, we developed a comprehensive set of evaluation criteria. We evaluated vendors against 124 criteria, which we grouped into three high-level buckets:

- **Current offering.** We looked at the breadth of each vendor’s product offering across 86 criteria, including architecture, functionality, security, and data stewardship.

- **Strategy.** We looked at the strength of each vendor’s product strategy and vision and reviewed the ways in which it intends to be a leader in the enterprise data quality platforms market. We evaluated strategy based on 22 criteria, including product strategy, corporate strategy, go-to-market strategy, and cost, with a significant focus on how well each vendor is addressing its current customers’ needs.

- **Market presence.** We evaluated each vendor’s penetration in the current enterprise data quality platforms market using 17 criteria, including company financials, installed base, and number of employees.

Evaluated Vendors Boast A Large Global Install Base With Well-Integrated DQ And Profiling

Forrester included six vendors in this assessment: DataFlux, Harte-Hanks Trillium Software, IBM, Informatica, Pitney Bowes Business Insight, and SAP BusinessObjects. Each of these vendors has (see Figure 4):

- More than 100 customers in production, with at least 50 customers in two distinct global geographic segments.

- A product that offers both data quality management and data profiling capabilities.

- Frequent mentions from Forrester enterprise customers placing inquiries about data quality management.
### Figure 4 Evaluated Vendors: Product Information And Selection Criteria

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Product evaluated</th>
<th>Product version evaluated</th>
<th>Date evaluated</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM</td>
<td>IBM InfoSphere QualityStage</td>
<td>8.1</td>
<td>Q2 2010</td>
</tr>
<tr>
<td></td>
<td>IBM InfoSphere Information Analyzer</td>
<td>8.1</td>
<td>Q2 2010</td>
</tr>
<tr>
<td>DataFlux</td>
<td>DataFlux Data Quality Integration Platform</td>
<td>8.2</td>
<td>Q2 2010</td>
</tr>
<tr>
<td>Informatica</td>
<td>Informatica Data Quality</td>
<td>9</td>
<td>Q2 2010</td>
</tr>
<tr>
<td>SAP BusinessObjects</td>
<td>SAP BusinessObjects Data Services</td>
<td>3.2</td>
<td>Q2 2010</td>
</tr>
<tr>
<td>Harte-Hanks Trillium Software</td>
<td>Trillium Software System</td>
<td>12</td>
<td>Q2 2010</td>
</tr>
<tr>
<td>Pitney Bowes Business Insight</td>
<td>Pitney Bowes Spectrum Technology Platform</td>
<td>6.0</td>
<td>Q2 2010</td>
</tr>
</tbody>
</table>

**Vendor selection criteria**

- More than 100 customers in production — with at least 50 customers each in two distinct geographies.
- A product that offers both data quality management and data profiling capabilities.
- Frequently mentioned or inquired about by Forrester enterprise customers in the context of data quality.

Source: Forrester Research, Inc.

**THE FORRESTER WAVE REVEALS A MATURE, YET INNOVATIVE, DATA QUALITY LANDSCAPE**

This Forrester Wave evaluation uncovered a market in which (see Figure 5):

- **Informatica, DataFlux, and Trillium Software lead the pack.** All three of these vendors offer highly scalable and feature-rich data quality platforms. Informatica has made strides in delivering business user data stewardship capabilities to support business/IT collaboration — a weakness across the DQ market as a whole — and Trillium Software continues to offer an important balance across depth and breadth of DQ and profiling functionality. But what really differentiated these vendors in this evaluation is the quality of their solutions, along with the strength of their customer references. While all three vendors had very positive feedback from customers, DataFlux and Informatica in particular stood out for their ability to generate customer loyalty through product ease of use, managing pricing complexity, effectively meeting and exceeding customer expectations, and delivering a positive account management experience.

- **SAP, IBM, and Pitney Bowes Business Insight offer competitive options.** Both SAP BusinessObjects and IBM offer mature, widely adopted, and highly functional data quality platforms that can rival the Leaders in this evaluation in terms of performance, integration, data profiling, matching, and other capabilities. These two vendors seem to struggle more from
an execution and customer experience standpoint, however. They both received the poorest feedback from their customer references regarding product ease of use, pricing complexity, and how well they meet some functional and nonfunctional expectations. Alternatively, while Pitney Bowes Business Insight does not offer the same breadth of functionality as the other vendors evaluated in this Forrester Wave, it does offer strong customer and location-data quality capabilities, especially for mailstream management and direct marketing usage scenarios. When it came to this focus, PBBI's customer references were strong.

As evidenced through the customer reference feedback and ongoing anecdotal feedback from Forrester clients, Forrester believes that DQ customers don't think that SAP and IBM consider data quality to be a strategic focus area, unlike the other vendors in the evaluation. Informatica, DataFlux, Trillium Software, and Pitney Bowes Business Insight can boast data quality as either the primary source — or at least a significant percentage — of their overall revenue. SAP and IBM, on the other hand, are huge app and platform vendors that clearly have data quality software in their portfolios to help sell more enterprise apps, databases, data warehouses, BI platforms, and services. That said, SAP and IBM have a huge advantage because of their enormous product and service portfolios, as many CIOs prefer single-vendor footprints to best-of-breed. If SAP and IBM can improve their go-to-market execution and their overall customer experience, they can remain extremely relevant and competitive in the enterprise data quality platform market.

This evaluation of the enterprise data quality platform 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 Excel-based vendor comparison tool.
Figure 5 Forrester Wave™: Enterprise Data Quality Platforms, Q4 ‘10

Source: Forrester Research, Inc.

Go online to download the Forrester Wave tool for more detailed product evaluations, feature comparisons, and customizable rankings.
Figure 5 Forrester Wave™: Enterprise Data Quality Platforms, Q4 ‘10 (Cont.)

<table>
<thead>
<tr>
<th>Source: Forrester Research, Inc.</th>
</tr>
</thead>
</table>

**CURRENT OFFERING**

<table>
<thead>
<tr>
<th></th>
<th>Forrester’s Weighting</th>
<th>DataFlux</th>
<th>IBM</th>
<th>Informatica</th>
<th>Pitney Bowes Business Insight</th>
<th>SAP BusinessObjects</th>
<th>Harte-Hanks Trillium Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture</td>
<td>50%</td>
<td>3.71</td>
<td>3.77</td>
<td>3.94</td>
<td>3.30</td>
<td>3.80</td>
<td>4.03</td>
</tr>
<tr>
<td>Functionality</td>
<td>25%</td>
<td>4.14</td>
<td>4.64</td>
<td>4.30</td>
<td>3.68</td>
<td>4.36</td>
<td>4.25</td>
</tr>
<tr>
<td>Security</td>
<td>60%</td>
<td>3.68</td>
<td>3.56</td>
<td>3.83</td>
<td>3.51</td>
<td>3.88</td>
<td>4.17</td>
</tr>
<tr>
<td>Data stewardship</td>
<td>5%</td>
<td>2.80</td>
<td>2.80</td>
<td>3.70</td>
<td>2.10</td>
<td>3.00</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**STRATEGY**

|                      | 50%                   | 4.06     | 2.87 | 4.51        | 2.98                        | 3.05               | 3.42                        |
| Product strategy     | 40%                   | 3.80     | 3.40 | 4.45        | 2.75                        | 3.70               | 3.60                        |
| Corporate strategy   | 35%                   | 4.90     | 1.30 | 4.65        | 3.15                        | 1.55               | 3.50                        |
| Go-to-market strategy| 20%                   | 3.25     | 4.50 | 5.00        | 3.00                        | 4.00               | 3.00                        |

**MARKET PRESENCE**

|                      | 5%                    | 3.50     | 3.00 | 2.00        | 3.50                        | 4.50               | 3.00                        |
| Company financials   | 0%                    | 3.32     | 3.48 | 3.51        | 3.86                        | 4.43               | 3.02                        |
| Installed base       | 35%                   | 4.60     | 4.20 | 5.00        | 5.00                        | 4.20               | 4.20                        |
| Employees            | 45%                   | 3.00     | 3.00 | 2.00        | 3.75                        | 4.75               | 2.25                        |
| Employees            | 20%                   | 1.80     | 3.30 | 4.30        | 2.10                        | 4.10               | 2.70                        |

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

**VENDOR PROFILES**

Leaders Feature A Clear, Dedicated Focus On Data Quality Software Innovation

- **Informatica effectively marries data quality with its popular data integration platform.** Informatica, best known for PowerCenter, its data integration platform, entered the data quality space with its acquisition of Similarity Systems in 2006. While Similarity was not considered a top-tier data quality vendor at the time, Informatica invested heavily in enhancing and enriching its DQ foundation through internal development as well as significant follow-up acquisitions of Identity Systems for high-end matching and AddressDoctor for global address verification. In addition, Informatica successfully ensured that its recent release of Informatica Data Quality is closely embedded — and now shares the same architecture — as PowerCenter. With this technology marriage, along with a strong focus on usability and a clear product strategy, Informatica emerges as a Leader in enterprise data quality.

- **DataFlux delivers a positive user experience for data quality, with sights set higher.** When SAS Institute acquired DataFlux more than 10 years ago, it made a very smart and effective decision: It retained the DataFlux brand and kept it as a wholly owned, but separately managed,
subsidiary. This allowed DataFlux to leverage the significant upsell and cross-sell opportunities into the huge and loyal SAS business intelligence and analytics install base, but it did not require DataFlux to lose its laser-like focus on solving its customers’ unique data quality management problems. DataFlux has been very successful in delivering value to its data quality customers, as indicated by the strong customer reference feedback within this Forrester Wave evaluation. Most recently, DataFlux took over management of the SAS data integration product portfolio, and earlier this year, the vendor released its DataFlux Data Management Platform, which combines its data quality, data integration, and master data management products into a single platform. This platform was released too late to be considered in this Forrester Wave evaluation, and it’s too early to tell if the market is ready to embrace DataFlux for its complete data management stack beyond data quality.

• **Harte-Hanks Trillium Software positions itself as the premier unbiased DQ pure play.**
Similar to the SAS Institute/DataFlux relationship, Trillium Software’s parent company, direct marketing services vendor Harte-Hanks, allows Trillium to operate its data quality software business without interference. This allows Trillium to effectively position itself as the undisputed leader in pure-play data quality software vendors. Most of its competitors now embed their core data quality and profiling capabilities within broader data management stacks including business intelligence, data warehousing, master data management, and data integration. Trillium differentiates itself with consistent best-of-breed data quality positioning and a completely open solution that has no bias toward any enterprise application, BI platform, ETL tool, and so on. As a result, although Trillium doesn’t have as large an install base as some of its bigger platform competitors, Forrester sees Trillium very often on vendor shortlists from large enterprises that are considering an investment in data quality software.

**Strong Performers Provide Compelling Alternatives For Targeted Business Environments**

• **SAP BusinessObjects extends data quality usage scenarios to enterprise apps environments.**
Business Objects’ acquisition of Firstlogic in 2006 effectively erased the data quality market's awareness of this solution from all but the Business Objects BI customers, who saw DQ as a cross-sell option. But SAP’s acquisition of Business Objects in 2008 reopened this door to address a number of unmet data quality needs for SAP customers. These include filling in significant functional gaps in SAP MDM, introducing data quality into application migrations and upgrades, and offering prepackaged app-specific DQ modules — in addition to traditional data warehousing and BI use cases. While SAP boasts a very large install base for its data quality products, it has not provided sufficient business data stewardship functionality for its DQ products. Instead, the vendor promotes SAP MDM as the option when customers require collaborative, workflow-enabled stewardship across business and IT roles. In addition, the results of SAP’s customer reference survey, while expressing satisfaction in some functional areas such as performance, matching, and postal address support, indicated some significant concerns around the product’s ease of use, the complexity of its pricing, and the effectiveness of the SAP account management teams.
• **IBM embeds data quality as a part of a comprehensive information management strategy.** IBM offers the broadest portfolio and vision for how data quality plays in a comprehensive information management strategy and architecture that spans structured data, unstructured content, advanced analytics, and collaboration tools. This robust, single-vendor platform attracts CIOs and enterprise architects looking for a one-stop-shop strategic IT partner to scale a large global organization. Unfortunately, IBM may overlook the frontline data quality professional with a very real set of business problems that must be mitigated through a targeted data quality investment. IBM’s QualityStage offers a well-balanced set of data quality features and functionality including strong performance, real-time data quality services, broad connectivity, and very good data profiling, but — like SAP — it is less successful in delivering a stellar end user experience. Forrester’s March 2010 Global Data Quality Forrester Wave Customer Reference Online Survey and August 2010 Global Data Quality Online Survey indicate that IBM customers are pleased with how well the product delivers technical capabilities, but they’re critical of IBM’s product ease of use, the complexity of IBM’s pricing, and the ability of IBM’s professional services, help desk, and support organizations to assist them.

• **Pitney Bowes Business Insight delivers strong location intelligence and marketing support.** Pitney Bowes Business Insight does not offer the same balanced depth of enterprise data quality functionality as some competitors, but it does offer an attractive option for data quality professionals prioritizing direct marketing, mailstream management, and location intelligence use cases. PBBI’s strengths lie in its ability to offer postal address validation, verification, and enrichment, especially in geocoding and other location-intelligence-centric capabilities, while still offering strong core data cleansing and standardization data quality rule management — especially for customer name and address data. PBBI’s solution is more limited in metadata management and reusability, breadth of connectivity options, flexibility of data profiling, and DQ monitoring and data stewardship capabilities.
SUPPLEMENTAL MATERIAL

Online Resource

The online version of Figure 5 is an Excel-based vendor comparison tool that provides detailed product evaluations and customizable rankings.

Data Sources Used In This Forrester Wave

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

- **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 surveys.** To validate product and vendor qualifications, Forrester also conducted reference surveys, requesting at least 10 of each vendor’s current customers using the evaluated product. DataFlux, Informatica, Pitney Bowes, and Trillium Software all provided 10 or more customer references who responded to our survey, while IBM and SAP only provided eight customer references each who responded. Using a 5-point scale, we asked these respondents to provide feedback based on overall experience with the vendor and the product. The March 2010 Global Data Quality Forrester Wave Customer Reference Online Survey included questions targeting product ease of use, pricing complexity, the overall quality of support from the vendor, and how well the DQ product met expectations on specific functional capabilities.

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.

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

1 For more research on data governance best practices, see the September 10, 2007, “Data Governance: What Works And What Doesn’t” report.

2 Forrester’s November 2009 Global ETL Online Survey of 146 IT professionals familiar with their respective organization's data integration efforts showed that data profiling and data quality management were the top two complementary data management solutions that the respondents also purchased through their ETL vendor, with 22% purchasing data profiling and 21% purchasing data quality management software. See the May 12, 2010, “Enterprise ETL: Evolving and Indispensable To Your Data Management Strategy” report.

3 For more information on the connection between process pros and their data counterparts, see the September 21, 2009, “Warning: Don't Assume Your Business Processes Use Master Data” report.

4 For more information on the importance of upstream data quality, See the October 2, 2008, “It's Time To Invest In Upstream Data Quality” report.

5 Business Objects had previously acquired popular data quality vendor Firstlogic in April 2006 and subsequently purchased Fuzzy! Informatik in October 2007.

6 Alternatively, SAS’ business intelligence (BI) competitor Business Objects (now SAP), for example, acquired Firstlogic and immediately eliminated the strong Firstlogic data quality brand to be subservient to the BI-centric Business Objects brand — and almost immediately eliminated its ability to compete for standalone data quality business that didn't involve a Business Objects BI implementation.

7 The new DataFlux Data Management Platform was released in February 2010.
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