February 27, 2012

The Forrester Wave™: Enterprise ETL, Q1 2012

by Noel Yuhanna
for Application Development & Delivery Professionals

February 27, 2012

The Forrester Wave™: Enterprise ETL, Q1 2012
Informatica, IBM, Oracle, SAP, SAS, Ab Initio, And Talend Lead, With Pervasive, Microsoft, And iWay Close Behind

by Noel Yuhanna
with Stephen Powers and Andrew Magarie

EXECUTIVE SUMMARY

In Forrester's 60-criteria evaluation of enterprise extract, transform, and load (ETL) vendors, we found that Informatica, IBM, Oracle, and SAP maintain leadership positions thanks to their ability to innovate and scale to support complex data integration environments. SAS and Ab Initio also emerged as Leaders; they have strong capabilities in scalability, performance, and connectivity and provide a variety of integration options. Another Leader, Talend, was the only open source ETL vendor we evaluated; it supported deployments of moderate scale and complexity at significant software license cost savings compared with the other front-runners. Pervasive Software, Microsoft, and iWay Software are Strong Performers; each offers viable options for many organizations looking for unique — and, in the cases of Pervasive and Microsoft, very cost-effective — data integration capabilities to support moderate to complex deployments.

TABLE OF CONTENTS

NOTES & RESOURCES

Forrester conducted product evaluations in Q1 and Q2 2011 and interviewed 10 vendor companies, including Ab Initio, IBM, Informatica, iWay Software, Microsoft, Oracle, Pervasive Software, SAP, SAS, and Talend. Forrester also conducted an online customer reference survey among current customers of the evaluated products.

Related Research Documents

"Trends In ETL Adoption"
February 14, 2012

"Enterprise ETL: Evolving And Indispensible To Your Data Management Strategy"
May 12, 2010

"Forrester TechRadar™: Enterprise Data Integration, Q1 2010"
February 4, 2010

"The Forrester Wave™: Enterprise ETL, Q2 2007"
May 2, 2007

ENTEPRISE ETL SUPPORTS NEW AND EMERGING DATA MANAGEMENT INITIATIVES

Data movement is critical in any organization to support data management initiatives, such as data warehousing (DW), business intelligence (BI), application migrations and upgrades, master data management (MDM), and other initiatives that focus on data integration. Besides moving data, ETL supports complex transformations like cleansing, reformatting, aggregating, and converting very large volumes of data from many sources. In a mature integration architecture, ETL complements change data capture (CDC) and data replication technologies to support real-time data requirements and combines with application integration tools to support messaging and transactional integration. Although ETL is still used extensively to support traditional scheduled batch data feeds into DW and BI environments, the scope of ETL has evolved over the past five years to support new and emerging data management initiatives, including:

- **Data virtualization.** Moving data from multiple repositories like databases and data warehouses to a virtualized data services layer is a critical component of any data virtualization initiative. Because ETL is a proven, mature technology for moving, transforming, and loading very large amounts of data quickly, many data virtualization solutions continue to leverage it. In addition, ETL's strong capability to integrate with many heterogeneous sources — including mainframes, distributed databases, and different database types — and support complex transformations makes it essential for any data virtualization initiative.

- **Cloud integration.** Today, more enterprises are considering options to store data in the public cloud to lower IT costs, improve collaboration, and support new applications like mobile and department-specific apps. ETL is extending its capability to integrate on-premises data with these public and private clouds, offering a powerful platform for seamless integration. ETL solutions can be configured to support variable data loading and unloading frequencies and ensure transactional integrity and security. While the hype around cloud platforms, applications, and services continues to grow, from a data integration standpoint Forrester finds that the vast majority of cloud requirements continue to focus on integration between salesforce.com's software-as-a-service (SaaS) customer relationship management (CRM) applications and on-premises targets like enterprise resource planning (ERP), DW, and order management systems.

- **Big data.** Big data is all about processing and analyzing very large amounts of structured, unstructured, or semistructured data very quickly. Although Hadoop offers a scalable data platform to process very large amounts of data for analytics purposes, getting data into the Hadoop platform is often not easy. Most leading ETL vendors are extending their solutions to integrate with Hadoop to offload large amounts of data from databases and data warehouses.

  Real-time data warehousing. ETL has been supporting DW initiatives for decades, but in recent years enterprises have leveraged it alongside CDC capabilities to support real-time, operational BI requirements. Today, many enterprises are shrinking their daily ETL job cycles to hourly ones; some run every few minutes. To support this use case, most ETL solutions we evaluated embed, integrate with, or OEM CDC functionality or optimize ETL to run in near real time.

- **Data migration and application retirement.** Companies have been retiring more applications over the past few years. Many enterprises have chosen to offload data from old legacy systems to archival repositories or data warehouses to support purposes like reporting and compliance. We see ETL playing an important role in application retirement by unloading, transforming, and loading selective data from legacy systems. ETL is also being used for data migrations to support application modernization and version upgrades; many ETL vendors target this use case with prepackaged data migration solutions with relevant ETL functional components and pricing.

- **Master data management.** MDM's objective is to enable that elusive single trusted view of critical master data (customer, product, employee, location, security, etc.) across complex organizations in order to optimize the business-critical processes, decisions, and interactions that rely on that data. But as Forrester's MDM maturity model demonstrates, those with MDM visions must walk before they can run.1 Level one of MDM maturity focuses on data integration, because if you can't move data from point A to point B with integrity, how can you possibly create a single view of any data domain across a complex, heterogeneous app environment? ETL technology is the foundation of many MDM implementations supporting the high-volume batch loads required to migrate data from new sources to the MDM hub and publish the cleansed master data in multiple target environments.

The Enterprise ETL Market Is Expected To Grow Significantly In The Coming Years

The enterprise ETL market continues to grow at a healthy pace as more enterprises replace manual scripts with packaged ETL solutions. This migration away from black-box custom code and toward ETL tools is driven by the need to support growing and increasingly complex data management requirements, provide greater developer agility through object reuse, and increase the transparency into and auditability of the code to improve troubleshooting and reduce compliance risk. Although ETL capabilities often overlap with those of products in adjacent markets, such as enterprise information integration (EII), enterprise application integration (EAI), CDC, replication, enterprise service bus (ESB), and data virtualization, ETL offers significant business value as a standalone solution. Product marketers working for ETL vendors have worked feverishly to lose the "ETL" from their product names, marketing collateral, and websites, instead positioning their solutions as comprehensive data integration platforms. And while the "data integration platform" moniker is accurate for most of the vendors that have since added complementary capabilities like data profiling, data quality, metadata management, CDC, and data federation to complement their ETL core, the fact remains that many of their customers are only looking for an ETL solution.

ETL is still evolving to support new data management initiatives: Most leading ETL vendors are extending their solutions to support new and emerging technologies and initiatives, such as Hadoop, NoSQL, the cloud, social media, and data services. We believe that growing data volumes will further increase firms' dependence on ETL to support the heavy lifting of data from transactional systems to operational data stores, data warehouses, BI platforms, MDM hubs, the cloud, and Hadoop platforms. As a result, Forrester expects the ETL market to grow significantly in the coming

years, especially as data volumes continue to grow and organizations start to leverage Hadoop and the cloud. Top vendors, such as the ones evaluated in this enterprise ETL Wave, will continue to extend their ETL products to deliver innovative solutions.

The ETL market can be segmented into three key categories:

- **Large software vendors that offer broader data management coverage.** Large software vendors, such as Ab Initio, IBM, Informatica, Microsoft, Oracle, SAP, and SAS, primarily offer ETL as part of a bigger data management offering that includes database management, application development, data virtualization, data integration, enterprise information management (EIM), or BI. All of these large vendors continue to integrate ETL capabilities with their broader data management solutions.

- **Specialized pure-play vendors that offer greater automation and lower costs.** The specialized pure-play vendors, including iWay Software, Pervasive Software, and Talend, differentiate themselves from their larger platform counterparts by offering strong, highly functional, user-friendly solutions that can effectively support small enterprises or departmental use cases at larger enterprises, often at a lower cost (such as in the cases of Pervasive and Talend). Specialized vendors of note not evaluated in this Wave include Syncsort and Pentaho. Syncsort is a data management company that is best known for its capabilities in mainframe data sorting and data protection; it also offers a parallel processing data integration solution positioned to support extreme data performance requirements. Pentaho is best known for its open source BI solutions and offers an open source ETL solution to complement its BI portfolio.

- **Service providers that offer support for complex data integration and ETL projects.** The majority of the customer references we surveyed stated that their internal IT organization conducted the primary implementation of their ETL solution. But 26% of these companies reported that they used vendor professional services or systems integrators to lead their implementation. Forrester believes that organizations are more likely to engage a service provider for large or highly complex data integration initiatives that aim to reduce implementation risk. Service providers like Accenture, BearingPoint, CSC, Deloitte, EDS, IBM GS, SAP, TCS, and Wipro offer a range of consulting services to support data integration and often work with leading ETL vendors to offer complete coverage.

ENTERPRISE ETL EVALUATION OVERVIEW

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

The Evaluation Focused On Enterprisewide Features, Performance, Usability, And Support

After examining past research and user needs assessments and conducting vendor and expert interviews, we developed a comprehensive set of evaluation criteria. We evaluated vendors against 60 criteria, which we grouped into three high-level buckets:

- **Current offering.** We evaluated the vendors against 26 criteria that focus on core and advanced functionality. We evaluated runtime capability, integration options, tool environments, support and training, additional data integration techniques, and information management.

- **Strategy.** To evaluate each vendor's strategy, we assessed 20 criteria, including product strategy, corporate strategy, go-to-market pricing strategy, and partnerships to expand market reach, with a significant focus on how well each vendor is addressing its current customers' needs.

- **Market presence.** To evaluate each vendor's penetration in the enterprise ETL market, we evaluated 14 criteria, including the vendor's financial performance, installed base, and number of employees.

Evaluated Vendors Have Viable Offerings And An Established Presence In The Market

Forrester looked at more than two dozen vendors in the enterprise ETL space, but shortlisted 10 vendors that met our requirements. The 10 vendors we assessed were Ab Initio, IBM, Informatica, iWay Software, Microsoft, Oracle, Pervasive Software, SAP, SAS, and Talend. Each of these vendors has (see Figure 1):

- **An established enterprise ETL offering.** The participating players must actively market a productized ETL solution. The vendor must have initially released the product version included in the evaluation prior to August 2011.

- **A credible installed base.** We evaluated vendors that had 50 or more customers using their enterprise ETL in production at large enterprises.

- **A suite of complementary information management capabilities.** We focused on enterprise ETL vendors that demonstrated that they were offering, or investing significantly in, embedded data quality management, data profiling, metadata management, data lineage analysis, and support for unstructured data management.

- **At least 12 mentions by Forrester clients in inquiries over the past 12 months.** Vendors must be top of mind for Forrester customers in order to be included in this Wave.

Figure 1 Evaluated Vendors: Product Information And Selection Criteria

Vendor	Product evaluated	Product version evaluated	Version release date
Ab Initio	Co>Operating System	3.0.6	June 2011
IBM	InfoSphere Information Server, including IBM InfoSphere Classic Federation Server, IBM InfoSphere Change Data Capture	8.5	October 2010
Informatica	PowerCenter	9.1	June 2011
iWay Software	EIM Server bundle including the following product suite: iWay Data Quality Center, iWay Service Manager, iWay DataMigrator	7.0.3, 6.1.1, 7.7.3	August 2011 August 2011 June 2011
Microsoft	SQL Server Integration Services and SQL Server	2008 R2	May 2010
Oracle	Oracle Data Integrator Enterprise Edition	11.1.1.5	H1 2011
Pervasive Software	Pervasive Data Integrator	v10	April 2011
SAP	SAP BusinessObjects Data Services	4.0	December 2010
SAS	Enterprise Data Integration Server/Studio, Data Migration, Data Quality Solution	4.3, 9.3, 9.3	July 2011
Talend	Talend Enterprise Data Integration	4.2	May 2011

Vendor selection criteria

Vendors must have initially released the product version included in the evaluation prior to August 2011.

Vendors must have 50 or more customers using their enterprise ETL in production at large enterprises.

Vendors must demonstrate that they are offering, or investing significantly in, embedded data quality management, data profiling, metadata management, data lineage analysis, and support for unstructured data management.

Vendors must be top of mind for Forrester customers (at least 12 mentions by Forrester clients in inquiries over the past 12 months).
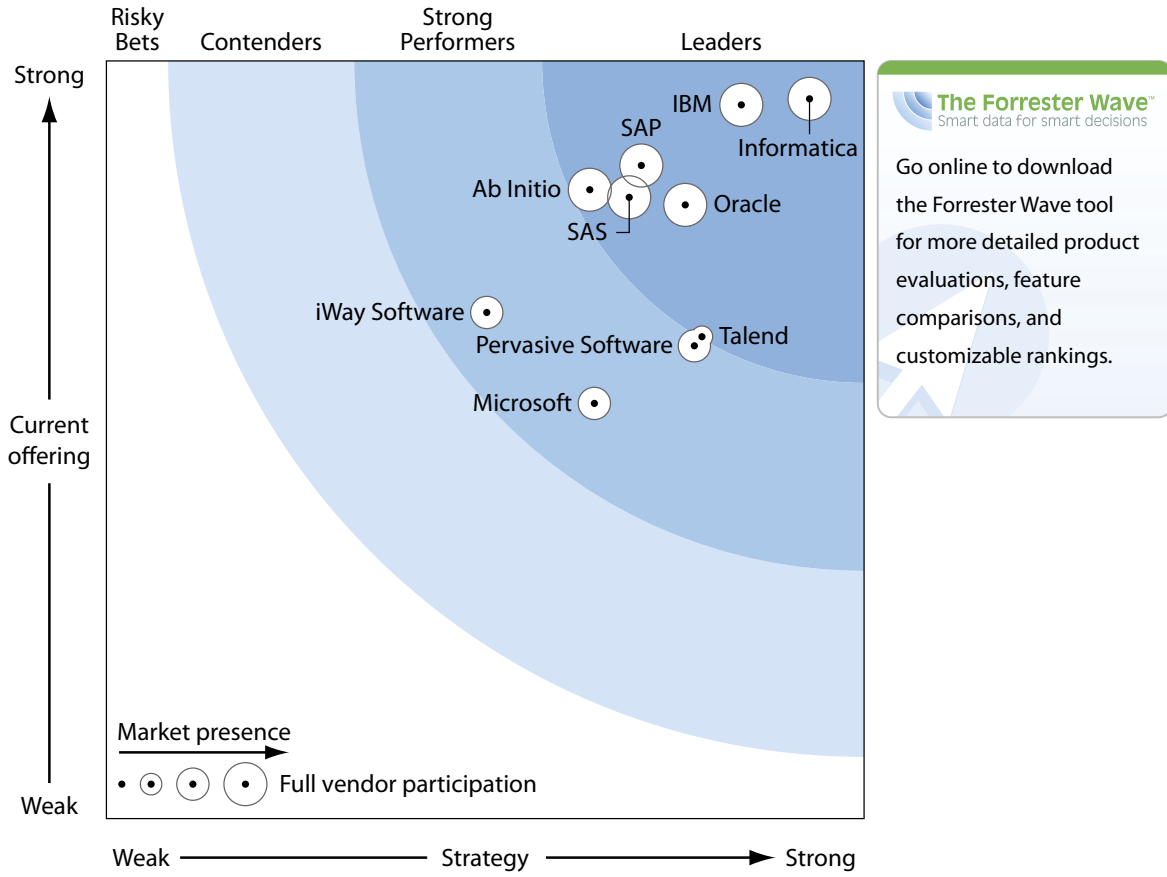
Source: Forrester Research, Inc.

THE MATURE ENTERPRISE ETL MARKET OFFERS CHOICES TO FIT EVERY REQUIREMENT

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

- **Informatica, IBM, Oracle, SAP, SAS, Ab Initio, and Talend lead the pack.** These vendors offer a strong combination of enterprise-class scalability and performance, deployment options, integration techniques, multirole collaboration, administration, and CDC functionality. Informatica and IBM are neck and neck in the race for overall enterprise ETL leadership; both offer a comprehensive and scalable set of features and functionality to support the most complex requirements. Oracle continues to execute well and remains a viable option for deployments of Oracle databases, middleware, apps, and BI. SAS has significantly improved its product and strategy and thus raised its position in the Leader category, while SAP effectively leveraged its BusinessObjects acquisition to take its place among the Leaders. Unlike our previous enterprise ETL Wave in 2007, Ab Initio fully participated in this evaluation and performed well; it has a strong application-agnostic product offering and demonstrated why it continues to be a compelling platform alterative to IBM and Informatica for large global enterprises.[2] Talend is a new entrant to the Forrester Wave and combines a solid product offering with a strong strategy. Talend did well in integration and transformation techniques, deployment options, reusability, user interface (UI), data profiling, and extract and load connectivity.

- **Pervasive Software, Microsoft, and iWay Software offer competitive options.** Pervasive continues to dramatically improve and refine its ETL offering compared with its performance in the previous enterprise ETL Wave. Pervasive has strong support for security, extract and load connectivity, data profiling, metadata management, reusability, and monitoring. Microsoft has a good and extremely popular ETL offering with SSIS, but remains very focused on SQL Server and Windows, limiting its ability to act as an enterprise ETL standard. iWay Software remains a viable alternative, especially for organizations that have standardized on Information Builders' WebFOCUS BI solution, with strong platform support, deployment options, and extract and load connectivity.

This evaluation of the enterprise ETL 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 2 Forrester Wave™: Enterprise ETL, Q1 '12

Figure 2 Forrester Wave™: Enterprise ETL, Q1 '12 (Cont.)

	Forrester's Weighting	Ab Initio	IBM	Informatica	iWay Software	Microsoft	Oracle	Pervasive Software	SAP	SAS	Talend
CURRENT OFFERING	50%	4.15	4.71	4.75	3.34	2.74	4.05	3.12	4.31	4.10	3.18
Runtime capability	20%	4.60	4.35	4.55	3.65	2.75	4.00	3.05	3.65	3.85	3.40
Integration options	20%	4.40	4.65	4.85	3.60	2.75	4.00	3.85	4.60	4.45	3.90
Tool environments	20%	4.15	4.65	4.70	3.25	3.05	4.05	3.65	4.30	3.95	3.15
Support and training	10%	4.00	5.00	5.00	4.00	4.00	5.00	3.00	5.00	5.00	3.00
Additional data integration techniques	10%	3.00	5.00	4.50	3.00	2.50	4.00	2.50	4.00	3.50	2.50
Information management	20%	4.10	4.90	4.90	2.70	1.90	3.70	2.30	4.50	4.00	2.70
STRATEGY	50%	3.19	4.19	4.64	2.51	3.22	3.82	3.88	3.53	3.45	3.93
Product strategy	35%	3.00	4.85	4.70	2.75	2.20	3.60	3.45	3.95	3.80	3.65
Corporate strategy	25%	3.00	3.40	4.20	4.60	3.00	3.00	3.40	3.00	3.00	4.20
Cost	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Partnerships extending reach	10%	1.90	4.40	4.40	1.00	5.00	3.10	3.20	5.00	1.70	4.00
Customer reference survey	30%	4.00	4.00	5.00	1.00	4.00	5.00	5.00	3.00	4.00	4.00
MARKET PRESENCE	0%	4.10	4.58	4.73	3.15	3.72	4.58	3.39	4.58	4.04	2.82
Company financials	40%	5.00	4.40	5.00	3.30	3.30	5.00	3.60	5.00	4.40	2.70
Installed base	30%	2.50	4.40	4.10	1.60	3.50	3.60	3.50	3.60	3.60	2.80
Employees	30%	4.50	5.00	5.00	4.50	4.50	5.00	3.00	5.00	4.00	3.00

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

Source: Forrester Research, Inc.

VENDOR PROFILES

Leaders

- **Informatica offers the most comprehensive ETL solution to support any requirement.** Informatica continues to be one of the most dominant vendors in the ETL market. It has strong scalability, deployment options, security, transformation techniques, collaboration, and monitoring. In addition, Informatica's strong vision and strategy help maintain its powerful and well-respected data integration brand. Informatica v9 has advanced capabilities for data quality, profiling, and lineage; a model-driven approach to provisioning data services; performance enhancements; cloud integration; common metadata; and role-specific tools. Today, more than 4,500 companies worldwide use Informatica for information management initiatives ranging from ETL to data virtualization, test data management, data quality, and master data management, among others.

- **IBM has a strong ETL solution that is part of its broader information management offering.** IBM was a very close second place in the Leaders category; its highly scalable DataStage product has strong integration options and runtime capabilities. IBM InfoSphere Information Server offers integration between DataStage and many other IBM products, including Information Analyzer, QualityStage, CDC, InfoSphere Data Architect, and Federation Server, to deliver a comprehensive data management platform. Today, customers deploy IBM InfoSphere Information Server across various industries, including banks, insurance, government agencies, oil and gas, manufacturing, retail, and telecom, to support some of the largest data management projects in the world. We find that large enterprises, especially those that deal with very large data volumes and already have a large IBM IT footprint, often shortlist IBM InfoSphere Information Server.

- **Oracle provides an enterprise ETL offering optimized for Oracle databases.** Oracle positions Oracle Data Integration (ODI) as its primary ETL solution over its legacy ETL product, Oracle Warehouse Builder (OWB), for which Oracle has announced the terminal release. ODI, which Oracle acquired via its purchase of Sunopsis in late 2006, thus forms the core of Oracle's data integration strategy. Oracle has done well over the years, improving its solution around performance and scalability; adding advanced transformation, monitoring, and security capabilities; and delivering innovative products. Oracle also acquired Silver Creek Systems and Datanomic in 2010 and 2011, respectively, bringing data quality capabilities in house to replace its former reliance on OEM partners like Informatica and Trillium Software. In addition, Oracle acquired GoldenGate Software in 2009, further extending its CDC capabilities to include support for real-time data integration.

  Today, Oracle customers are using ODI and GoldenGate to support some of the most complex data integration deployments for Oracle databases in existence. Although ODI supports non-Oracle databases, its integration with and optimization for the Oracle platform make it appealing to Oracle customers. ODI also integrates well with Oracle Exadata Database Machine to deliver extremely high performance for loading, transforming, and unloading data. Oracle recently released Oracle Big Data Connectors software, which can be used with Oracle Big Data Appliance and other Apache Hadoop-based systems.[3] The bundle includes ODI Application Adapter for Hadoop that enables ODIs to generate Hadoop MapReduce programs.

- **SAP ramped up its ETL offering through its acquisition of BusinessObjects.** Although BusinessObjects' Data Integrator solution was heavily optimized for DW and BI initiatives, the acquisition by SAP has helped it gain credibility as part of a broader SAP Data Services solution. Customers that use SAP applications are more likely to find that SAP Data Services offers a strong integrated framework to support data integration; it supports database and application migration efforts as well as traditional analytical use cases. SAP continues to extend its abilities, supporting big data, real-time data integration using Sybase replication, and mobile application clients. In addition, the integration of Data Services with the SAP HANA in-memory cache tier allows it to deliver a high-performance layer for data services.

- **SAS continues to build on its BI and analytics competencies.** Although SAS's ETL adoption continues to remain primarily within its SAS Business Intelligence and SAS Analytics installed base, it has done extremely well to move into the Leaders category in this enterprise ETL Wave. Its support for Hadoop, ELT, and various deployment options, databases, and applications; improvements in transformation and integration techniques; and overall monitoring and administration have made a dramatic difference: It's a stronger high-end solution. It's important to note that we only evaluated SAS Data Integration in this Wave, even though SAS and DataFlux, the SAS subsidiary best known for its data quality solution, consolidated the R&D of both businesses under DataFlux for data integration purposes. DataFlux in fact offers a separate solution — the DataFlux Data Management platform — that combines ETL, data quality, and MDM capabilities with support for data governance processes in a single offering and targets a market beyond the SAS Analytics installed base.

- **Ab Initio excels at ETL requirements, but it's not an ETL tool.** Ab Initio also emerged as a Leader in enterprise ETL — which is all the more impressive because Ab Initio's technology has always been aimed at a broader category of use. Ab Initio remains unique in this category by offering a highly scalable multipurpose computing platform that effectively supports high-end data integration and real-time, transactional, and batch transaction processing requirements. Applications developed on its Co>Operating System development platform work well with legacy environments, existing customer-built programs, and third-party products. This platform's deployment at large companies is frequently very broad due to its ability to process high volumes of complex data. In addition to many common complementary data management capabilities, such as data quality, data profiling, and first-class metadata management, Ab Initio has also packaged a number of unique applications that run on top of its Co>Operating System, most notably its Business Rules Environment, which adds a powerful business rules platform to this portfolio. Ab Initio is the only vendor we evaluated that has seamlessly integrated a business rules engine with its ETL capabilities.

- **Talend offers a good alternative, especially when open source is essential.** Talend is a commercial open source software vendor that provides data integration, data management, and application integration software and solutions. Talend Open Studio for Data Integration is the open source version, while Talend Enterprise Data Integration is the premium commercial version supported by the vendor. Talend, a new entrant in the Forrester Wave, has done extremely well to gain a spot in the Leaders category, offering strong support for deployment options, integration techniques, and connectivity to various data sources. Talend provides a unified platform that supports ETL, ELT, ELT-like Hadoop loading and transformation (Pig and Hive), log- and trigger-based CDC, JMS-compliant message queues, and integration with the Talend ESB. Talend currently has more than 3,500 paying customers worldwide, of which 40% are in the Americas and 57% are in EMEA. Talend also offers open source data quality and MDM solutions as part of its platform, but those offerings have not reached the same level of credibility and effectiveness as its successful data integration offering.

Strong Performers

- **Pervasive Software continues to set itself apart with its unique go-to-market strategy.** The vendor's Pervasive Data Integrator ETL solution remains unique in the enterprise ETL market in a number of ways. As discussed in prior research, the small footprint and "embeddability" of Pervasive's ETL technology makes it an ideal OEM option to enable integration capabilities within independent software vendor (ISV) solutions.[4] This also makes the solution popular among SIs building out custom solutions for IT clients. In addition, Pervasive goes to market at a much lower price point, making it a much more affordable packaged ETL option relative to all of the Leaders in this Wave. This is a major advantage for small businesses and project-based or departmental enterprise ETL implementations where cost is the top concern. While the breadth and depth of functionality offered by Pervasive may not compare with its larger platform competitors in every respect, it does offer strong deployment options, including support for public and private cloud via its Pervasive DataCloud platform. In addition, Pervasive offers strong connectivity across multiple integration techniques and has significantly improved its UI and tooling environment since the last Forrester Wave evaluation.

- **Microsoft provides a good ETL utility for SQL Server databases.** Microsoft continues to improve its SQL Server Integration Services (SSIS): The latest SQL Server 2008 R2 release, which offers data profiling task functionality as well as the ability to write scripts from the .NET platform, use thread polling and enhanced lookup transformation, and import and export wizard enhancements. Microsoft SQL Server 2008 SSIS has also improved in performance and scale, offering even faster unloading and loading of data. Customers often like SSIS's low cost, as it is freely bundled with SQL Server software. SSIS's easy-to-use, user-friendly development and administration tools, good performance and scale, low cost, and strong support for the Windows platform makes it an attractive option for SQL Server customers. Due to its limited support for more complex, heterogeneous, cross-enterprise ETL requirements that go beyond SQL Server and Windows environments, many large enterprise customers use Microsoft SSIS as a complement to other enterprise ETL software that can support broader integration efforts.

- **iWay Software offers solid ETL support, but with minimal product evolution.** As discussed in prior research, iWay continues to struggle to be a relevant factor in the ETL market beyond Information Builders' BI installed base.[5] Since Forrester evaluated iWay's ETL software in the 2007 enterprise ETL Wave, we have not seen any significant innovations in or improvements to the core ETL software from a feature, functionality, or user experience standpoint. It continues to offer strong deployment options and a wide range of connectivity — especially to legacy environments — as well as broad platform support. But the majority of iWay's data management focus over the past few years seems to be focused on building out its EIM platform to include complementary capabilities in data quality, MDM, and metadata management. Forrester has not seen much interest from our clients in these much less mature data management capabilities, but it is an opportunity for iWay to capitalize through further progress and innovation.

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.

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.

- **Strategy briefings.** Forrester participated in a two-hour strategy briefing with each vendor to review its strategy and future road map.

- **Customer reference survey.** To validate product and vendor qualifications, Forrester also conducted an online customer reference survey with the vendors' customers. Each vendor was asked to supply at least 10 current customers using the evaluated product. Ab Initio, IBM, Informatica, Oracle, Pervasive Software, SAS, and Talend all provided 10 or more customer references that responded to our survey. Microsoft and SAP each provided nine customer references that responded, while just one iWay Software customer responded to the survey.

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.

Note: Former Forrester principal analyst Rob Karel contributed to the enterprise ETL Wave. Prior to the research's publication date, he resigned from Forrester to join one of the vendors evaluated in this Wave.

ENDNOTES

[1] Forrester surveyed 188 DQ-savvy IT professionals in November 2010. Most respondents were selected based on a data quality readership analysis, and responses were collected via email during a two-week period. Others responses were received via a Twitter deployment of the survey. Each person who completed the survey was offered a complimentary copy of the resulting research. See the December 10, 2010, "Current State Of MDM Maturity" report.

[2] Forrester evaluated leading enterprise extract, transform, and load (ETL) vendors across 68 criteria and found that IBM and Informatica maintain leadership positions in enterprise ETL thanks to their ability to scale and perform batch and operational data integration (DI) in complex environments, as well as to maintain a consistent focus on providing robust data management capabilities. Business Objects and Oracle have also emerged as Leaders with significant usability and scalability improvements, but they are still primarily used in data warehousing environments and have not been widely adopted for operational DI needs. SAS is a Strong Performer, but it remains most attractive as an integrated piece of a SAS BI platform. Ab Initio offers a highly scalable and configurable data processing platform, but its secretive corporate culture limits prospective customers' visibility into its strategy. iWay Software, Microsoft, Pervasive, and Sunopsis (acquired by Oracle) round out the Strong Performers best suited for a more targeted subset of DI professionals. As a new player in enterprise ETL, Sybase has some of the raw materials needed to develop a competitive solution, but it must integrate the tools it has acquired into a DI suite with a clear differentiation strategy to gain traction in this crowded market. See the May 2, 2007, "The Forrester Wave™: Enterprise ETL, Q2 2007" report.

[3] Oracle recently announced the availability of its Big Data Appliance and Big Data Connectors. Source: "Oracle Announces Availability of Oracle Big Data Appliance," Oracle press release, January 10, 2012 (http://www.oracle.com/us/corporate/press/1453721).

[4] Pervasive Software's Business Integrator Pro and Data Integrator products do not compete head to head on scalability, user friendliness, and feature richness compared with most of the other enterprise ETL vendors we evaluated, but that is in line with Pervasive's strategy — it doesn't target the same end users. Pervasive's primary competitor is custom-coded integration solutions, and its primary customers are not enterprise and integration architects, but instead independent software vendors (ISV) and systems integrators (SI). These partners seek a data integration solution with a small footprint that is easily and seamlessly embeddable in more complex information management solutions. See the May 2, 2007, "Pervasive Software: A Strong Performer In Enterprise ETL Targeted At ISVs And Integrators" report.

[5] iWay Software, a subsidiary of Information Builders, is best known for its world-class information connectivity and also leads all vendors in its platform support and real-time connectivity options. iWay Software's ETL product, DataMigrator, offers a less functional tooling environment and offers little in information management compared with other ETL vendors. iWay Software is most widely known and adopted by organizations that have standardized on Information Builders' WebFOCUS business intelligence (BI) solution. See the May 2, 2007, "iWay Software Is A Strong Performer In Enterprise ETL With Broad Connectivity" report.

FORRESTER®

Making Leaders Successful Every Day

Forrester Research, Inc. (Nasdaq: FORR) is an independent research company that provides pragmatic and forward-thinking advice to global leaders in business and technology. Forrester works with professionals in 19 key roles at major companies providing proprietary research, customer insight, consulting, events, and peer-to-peer executive programs. For more than 28 years, Forrester has been making IT, marketing, and technology industry leaders successful every day. For more information, visit www.forrester.com.

FORRESTER®