May 2, 2007

The Forrester Wave™: Enterprise ETL, Q2 2007

by Rob Karel

TECH CHOICES

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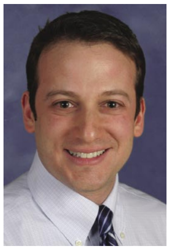

May 2, 2007

The Forrester Wave™: Enterprise ETL, Q2 2007

IBM And Informatica Lead, With Business Objects And Oracle Close Behind

by Rob Karel
with Connie Moore and Shelby Semmes

EXECUTIVE SUMMARY

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.

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NOTES & RESOURCES

Forrester conducted product evaluations in September 2006 and interviewed nine vendors and their reference customers: Business Objects, IBM, Informatica, iWay Software, Microsoft, Oracle, Pervasive Software, SAS Institute, and Sybase. Ab Initio and Sunopsis (acquired by Oracle) did not fully participate in the process but are also included in the evaluation.

Related Research Documents

"Evaluating Integration Technology Options"
March 19, 2007, Tech Choices

"The Forrester Wave™: Information Quality Software, Q1 2006"
January 17, 2006, Tech Choices

TARGET AUDIENCE

Information and knowledge management professional

ENTERPRISE ETL IS THE BACKBONE OF AN INFORMATION MANAGEMENT STRATEGY

Traditionally, enterprise ETL technology has specialized in: 1) the batch extraction of high volumes of data from one or more sources; 2) the ability to run complex transformations on the data which could include cleansing, reformatting, standardization, aggregation, or the application of any number of business rules; and 3) the loading of the resulting data set into specified target systems or file formats.

While ETL technology is still heavily used for data warehousing (DW) and business intelligence (BI) initiatives, information and knowledge management professionals demand additional data integration capabilities from their ETL vendors to support increasingly complex data integration challenges. These challenges may often include real-time or near real-time data integration requirements that would benefit from techniques such as enterprise information integration (EII), also known as data federation, or more targeted and less invasive source data access methods such as change data capture (CDC).[1] Customer trends in non-DW integration scenarios include:

- **Data migrations.** Legacy data migration is an operational application of ETL technology that is gaining popularity where traditional data replication software and custom code no longer provide the necessary source system analysis, data profiling, metadata management, and data quality compliance now required. Common data migration examples include the implementation of a new ERP application from one or more legacy applications, an upgrade to the latest version of an enterprise application, or the integration of data from a merger or acquisition.

- **Compliance.** Sarbanes-Oxley, Basel II, privacy laws, and other regulatory edicts are requiring organizations across multiple industries — most notably financial services — to improve their ability to track and audit the movement of sensitive data from capture through consumption. The metadata accumulated in the design and implementation of an ETL process flow can often provide the source-to-target insights necessary to meet these auditing demands.

- **Master data management.** The quest for a single version of truth for critical enterprise data (customer, product, employee, etc) is quietly moving from nice-to-have to must-have, and ETL technology is often a foundational component of the MDM ecosystem.[2]

- **Operational BI.** Providing context-rich, process-aware business intelligence reporting and analysis is a growing business requirement. Enterprise architects and information management professionals are increasingly leveraging a combination of data integration techniques such as ETL, EII, enterprise application integration (EAI) and CDC to meet the needs of targeted operational BI capabilities.[3]

The ill-defined data integration market can arguably include ETL, EII, CDC, EAI, enterprise service bus (ESB), Web services, and service-oriented architectures (SOA), to name just a few integration technologies. As demonstrated by the solutions offered by many of the vendors assessed in this Enterprise ETL Wave, the data integration market is quickly evolving from pure-play single product offerings to data integration suites comprising many of the above capabilities. Yet the connectivity, scalability, and data management functionality within an Enterprise ETL solution still remains the cornerstone and deciding factor for most enterprise data integration investments.

ETL Is No Longer Simply Extract, Transform, And Load

Not all data integration initiatives are complex. The demand for more targeted departmental- or project-based batch data integration does still exist, but to accommodate these efforts, many large enterprises support multiple redundant ETL products at a significant cost — with limited ability to share skilled resources across these disparate tools. Enterprise architects are increasingly being asked by senior management to identify and recommend a strategy for standardizing on a single ETL platform for the enterprise.

While standardizing on a single ETL product allows enterprises to manage costs and realize productivity gains by leveraging shared integration resources, other economies of scale are available. Most enterprise ETL vendors have recognized and adopted the evolution of ETL from a standalone IT tool to a multifunctional single-vendor-supported data integration and data management suite or platform. In addition to ETL's traditional source and target connectivity, server scalability, and configurable transformation libraries, many data integration suites now include advanced data quality management, data profiling, metadata management, data lineage, and support for integrating semi-structured and unstructured content as core embedded components of the data integration workflow. Many of these suites also offer additional data integration techniques such as EII, CDC, or support for Web services that can leverage objects designed in an ETL process, but within an operational context. Such an offering makes ETL a powerful and critical component in any enterprise's information management strategy.

While many of the vendors evaluated provide EII or CDC capabilities within their product suites, many information and knowledge management professionals will have good reason to select from best-of-breed data integration vendors. A best-of-breed approach can combine a top-notch ETL solution with a niche EII or CDC specialist that offers more experience in leveraging these near real-time operational integration techniques. Although not a part of this evaluation, some pure-play EII vendors to consider include — but are not limited to — Attunity, BEA Systems, Composite Software, Ipedo, and MetaMatrix. Highly regarded pure-play CDC vendors include — but are not limited to — DataMirror and Golden Gate Software.

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.

Evaluation Criteria: Offering, Strategy, And Market Presence

After examining past research, user need assessments, and vendor and expert interviews, we developed a comprehensive set of evaluation criteria (see Figure 1). We evaluated vendors against 68 criteria, which we grouped into three high-level buckets:

- **Current offering.** To assess product strength, we evaluated each offering against six groups of criteria: server capability, integration options, tool environments, support and training, additional data integration techniques, and information management.

- **Strategy.** We reviewed each vendor's strategy and considered how well each vendor's plans for product enhancement position it to meet future customer demands. We also looked at the financial resources the company has available to support its strategy, its go-to-market pricing strategy, and how the vendor is leveraging technology, channel, and service partnerships to expand its reach and the value made available to its customers.

- **Market presence.** To establish a product's market presence, we combined information about each vendor's financial performance, installed base, and number of employees.

Evaluated Vendors Must Meet Latency, Information Management And Scalability Criteria

Forrester included 11 vendors in the assessment: Ab Initio, Business Objects, IBM, Informatica, iWay Software, Microsoft, Oracle, Pervasive Software, SAS Institute, Sunopsis (acquired by Oracle), and Sybase.[4] Each of these vendors has (see Figure 2):

- **Support for alternate integration techniques.** We included vendors that have recognized the growing need to support data integration techniques such as EII, CDC, or Web services to complement traditional batch-oriented ETL processes.

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

- **Client interest.** Finally, we selected vendors that were frequently mentioned or inquired about by enterprise customers in the context of data integration projects.

Figure 1 Evaluation Criteria

CURRENT OFFERING	
Server capability	Server capabilities determine how well an ETL tool is suited for enterprise-scale deployments.
Integration options	ETL must support diverse data sources/targets, integration tools, data delivery speeds, and reusability.
Tool environments	Ease of use and collaboration are required for design, metadata, and admin tasks.
Support and training	Beyond the server and tools, ETL requires tech support, training, documentation, and internationalization.
Additional data integration techniques	ETL is one data integration technique; what other techniques are supported?
Information management	Beyond data integration, what other information management capabilities such as the ability to manage complex transformations, data quality management and profiling, data lineage, and the management of unstructured content — which are all core components of an effective enterprise ETL solution — are offered?
STRATEGY	
Product strategy	This criteria is defined by its subattributes: Key technology partners and Differentiation.
Corporate strategy	This criteria is defined by its subattributes: Product contribution and R&D commitment
Cost	What is the cost of this product?
Partnerships extending reach	How strongly do technology partners support this product, enabling the reach and influence of the product to grow?
MARKET PRESENCE	
Company financials	How strong is the vendor's financial position? Does the company have sufficient revenues, profits, and cash flow to support its strategies? (This answer is based on financial results over the past four quarters.)
Installed base	How large is the vendor's installed base of customers for this product and for all products?
Employees	How many employees does the vendor have dedicated to this product?

Source: Forrester Research, Inc.

Figure 2 Evaluated Vendors: Product Information And Selection Criteria

Vendor	Product evaluated	Product version evaluated	Version release date
Business Objects	Data Integrator	11.6	April 2006
IBM	Information Server	8	December 2006
Informatica	PowerCenter	8.1	May 2006
iWay Software	DataMigrator	7.1	September 2006
Microsoft	SQL Server 2005 Integration Services (SISS)	2005	November 2005
Oracle	Oracle Warehouse Builder	10g Rel 2	April 2006
Pervasive Software	Business Integrator Pro; Data Integrator	8.12	September 2006
SAS Institute	Data Integration Server; Data Integration Studio; Enterprise Integration Server	3.4	July 2006
Sybase	Sybase ETL, Data Integration Suite	4.0	July 2006

Vendor selection criteria
Vendor has recognized the growing need to support data integration techniques such as EII, CDC, or Web services to complement traditional batch-oriented ETL processes.
Vendor has a demonstrated offering, or investment in, embedded data quality management, data profiling, metadata management, data lineage analysis, and support for unstructured content.
Vendor was frequently mentioned or inquired about by enterprise customers in the context of data integration.

Source: Forrester Research, Inc.

ENTERPRISE ETL CAN BE ADDRESSED FROM MULTIPLE POINTS OF VIEW

The evaluation uncovered a market in which (see Figure 3):

- **IBM, Informatica, Business Objects, and Oracle are the Leaders.** Interestingly, the main thing these four vendors have in common is that they have so little in common. IBM is a $91 billion technology giant that generates almost 78% of its revenue from services and hardware, but it also is a top DBMS platform provider (DB2) and leads in most of the business software markets where it chooses to compete.[5] IBM's Information Server seamlessly integrates its DataStage and QualityStage offerings, among others, using a shared metadata platform.[6]

  Informatica, in contrast, is one of the few remaining pure-play DI vendors, and it has successfully differentiated itself and its PowerCenter product as an enterprise-class DI solution that has no other platform, enterprise application, or BI-driven cross-sell agenda. In addition, Informatica has enhanced its DI platform with acquisitions of Itemfield for unstructured data integration and Similarity Systems for data quality.[7] Business Objects is a leading BI analytics and reporting vendor with a large and loyal installed base, but it looks to leverage its Data Integrator and other information management solutions, including its acquisition of Firstlogic for data quality, to move beyond its business intelligence core.[8]

  Like IBM, Oracle also offers a popular DBMS platform and is a leading provider of business applications such as ERP, CRM, and HRMS.[9] The Oracle Warehouse Builder (OWB) product is embedded in Oracle's 10gr2 database and is a no-cost to low-cost ETL solution optimized for Oracle databases and data warehouses. Despite evolving from different heritages, IBM, Informatica, Business Objects, and Oracle all offer highly scalable user-friendly and role-based enterprise-class ETL solutions with best-in-class integrated information management capabilities.

- **Ab Initio, SAS, Pervasive, Microsoft, iWay, and Sunopsis offer competitive alternatives.** Ab Initio's Co>Operating System is a highly scalable and configurable data processing platform that can be used for ETL-like functions, but it has enterprise applications that go well beyond the bulk data movement technology space. This platform can support high-volume, real-time transactional information management requirements, as well as batch scheduled data movement, and it can support complex data and rules as well as heterogeneous environments. Ab Initio remains a very private and secretive company that marches to its own drummer. It prefers not to market itself but instead relies on a loyal customer base and word-of-mouth referrals to maintain and grow the business. This strategy has made it extremely difficult for many prospects to determine when it would be appropriate to consider Ab Initio for its information management challenges.

  SAS also offers a scalable ETL platform that supports heterogeneous data environments and advanced data quality and profiling capabilities through its DataFlux subsidiary.[10] One of the major benefits and limitations to SAS Data Integration Studio is the SAS programming language. Since knowledge of this powerful — yet proprietary — SAS code is a useful prerequisite to performing complex transformations and for most rules troubleshooting, SAS Data Integration Studio will remain most attractive to enterprises that have experienced SAS programmers on staff.

Pervasive Software differentiates not by its ETL product alone, which does not offer the same level of scalability, user friendliness, and depth of information management capabilities as demonstrated by the other vendors, but by its go-to-market strategy and price. Unlike all its competitors, who primarily target large enterprise end customers, Pervasive primarily targets independent software vendors and systems integrators, as well as business service providers and business process orchestration vendors. This channel of ETL users is less concerned with the additional features from competing offering and is instead attracted to Pervasive's low-cost and easily embeddable and OEM-able software — allowing its developers to plug and play into other more robust solutions.

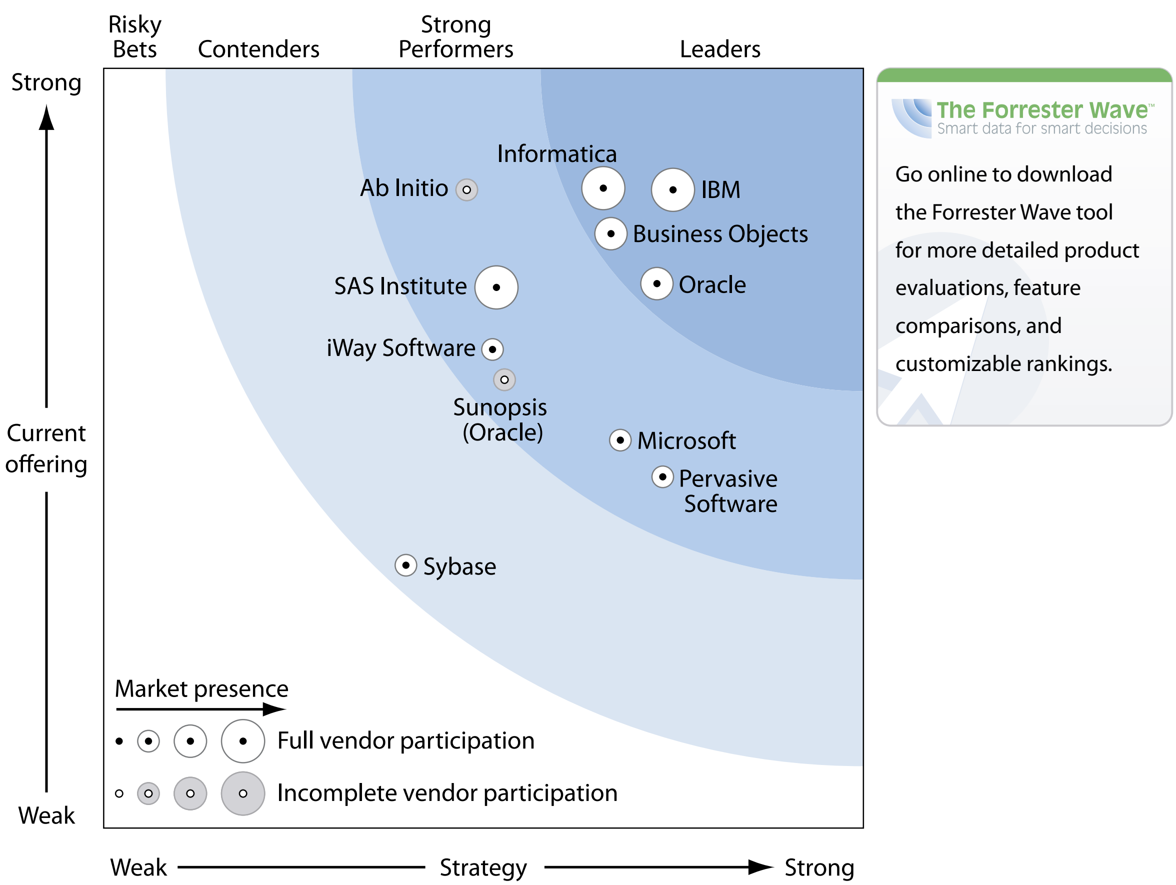
Microsoft offers SQL Server 2005 Integration Services (SSIS) embedded with SQL Server, and at prices ranging from low cost to no cost, Microsoft provides a scalable and fairly user-friendly project-based ETL tool that can meet most batch-oriented data integration requirements if the customer resides in a homogeneous Microsoft platform environment. In contrast, iWay Software, a subsidiary of Information Builders, is best known for its world-class information connectivity and leads all vendors in its platform support and real-time connectivity options, but it offers a less functional tooling environment and offers little in information management. iWay Software is most widely known and adopted by organizations that have standardized on Information Builder's WebFOCUS business intelligence solution.

Prior to its acquisition by Oracle, Sunopsis was best known for its E-LT (extract, load, then transform) branded approach to data integration that eliminates the need for an ETL transformation server by leveraging a pushdown optimization technique that made use of the processing power from source or target systems within the ETL flow. This approach, along with Sunopsis' strong heterogeneous connectivity, is an attractive option for some IT environments, and was very attractive to Oracle. Oracle acquired Sunopsis to provide that heterogeneous connectivity in the data management layer of its Fusion Middleware product family to support growth in its SOA, business intelligence, and master data management offerings. Oracle's OWB ETL solution remains part of Oracle's database group and will continue to complement Oracle's data warehousing business.

- **As a new entrant to the ETL market, Sybase lags behind.** Sybase's primary competitors in the database business — IBM, Oracle, and Microsoft — have all made significant investments in data integration, and while its data replication software is a popular and highly functional product, Sybase has been playing catch-up by acquiring a number of other pure-play DI vendors in the past few years. The acquisitions include Avaki for EII and, most recently, Solande for ETL in June 2006, which has been renamed Sybase ETL. Sybase ETL does not yet offer the breadth and depth of scalability, connectivity, user friendliness, real-time integration capabilities, and information management features seen by its competitors. Through acquisitions, Sybase has many of the raw materials necessary to build the data integration suite it envisions, but Sybase's strategy for making a significant dent in an already crowded DI marketplace remains unclear.

This evaluation of the Enterprise ETL market is intended to be a starting point only. Readers are encouraged 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 3 Forrester Wave™: Enterprise ETL, Q2 '07



Source: Forrester Research, Inc.

Figure 3 Forrester Wave™: Enterprise ETL, Q2 '07 (Cont.)

	Forrester's Weighting	Business Objects	IBM	Informatica	iWay Software	Microsoft	Oracle	Pervasive Software	SAS Institute	Sybase
CURRENT OFFERING	50%	3.91	4.20	4.21	3.15	2.56	3.58	2.32	3.57	1.73
Server capability	20%	3.80	4.15	4.45	3.70	2.85	3.55	2.00	3.85	2.15
Integration options	20%	4.45	4.75	4.45	4.15	2.30	3.40	3.20	4.45	2.20
Tool environments	20%	4.15	4.15	4.15	2.60	2.90	4.00	1.90	3.60	1.70
Support and training	5%	3.95	4.50	4.05	3.55	4.25	4.90	2.95	4.65	2.45
Additional data integration techniques	10%	3.40	3.60	4.00	4.20	2.00	2.60	1.60	0.80	1.20
Information management	25%	3.55	4.00	4.00	1.85	2.15	3.55	2.35	3.50	1.10
STRATEGY	50%	3.34	3.75	3.29	2.56	3.40	3.64	3.68	2.59	1.99
Product strategy	35%	4.00	4.50	4.00	2.50	3.50	3.50	3.50	3.00	2.00
Corporate strategy	15%	3.00	3.65	3.70	3.00	3.00	3.00	3.00	3.00	3.00
Cost	25%	3.10	2.20	2.20	3.10	4.00	4.00	4.20	2.50	3.00
Partnerships extending reach	25%	2.85	4.30	3.15	1.85	2.90	3.85	3.80	1.85	0.35
MARKET PRESENCE		3.44	4.55	4.35	2.18	2.67	3.82	2.95	4.25	2.53
Company financials	30%	4.00	4.50	4.75	2.25	2.75	2.75	2.75	5.00	2.25
Installed base	50%	3.20	4.40	4.00	1.80	2.00	4.30	3.20	3.50	2.50
Employees	20%	3.20	5.00	4.60	3.00	4.20	4.20	2.60	5.00	3.00

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

Source: Forrester Research, Inc.

VENDOR PROFILES

Leaders: Comprehensive Integration Suites And Strategies To Support Most Enterprises

- **IBM leads with a comprehensive suite.** IBM leads the way in the next evolution of the enterprise ETL market with its introduction of IBM Information Server (IIS), which embeds comprehensive data integration and data management capabilities into a collaborative suite. While continuing to support complex heterogeneous environments, IBM's strategy is to bridge IIS capabilities with IBM's metadata, master data, content, and other complementary information management solutions.[11]

- **Informatica shines as a pure play.** Informatica follows at a very close second place in the Leaders category with a highly scalable and user-friendly integration suite of its own, with its PowerCenter product at the core and popular add-ons such as Data Quality and its Unstructured Data option. Informatica's primary differentiation from IBM and the other

Leaders is its pure-play focus on data integration, leveraging its platform and application neutrality to attract a wide variety of partners and customers that may choose to bypass vendors focusing on larger architectural footprints.[12]

- **Business Objects leads by leveraging its BI roots.** Compared with IBM and Informatica, Business Object's Data Integrator is a somewhat more affordable enterprise-class ETL solution that incorporates strong information management capabilities — further enhanced by its acquisition of data quality management vendor Firstlogic. Data Integrator adoption is still heavily weighted toward data warehousing and business intelligence (BI) initiatives to complement Business Objects BI solutions but has not been able to prove through referential customer case studies that Data Integrator can be successful in supporting operational data integration solutions.[13]

- **Oracle delivers powerful data integration at the right price.** With the long-awaited (and oft-delayed) "Paris" release of Oracle Warehouse Builder 10gR2 (OWB) finally available, Oracle has delivered a scalable, user-friendly, and feature-rich ETL solution at a much more attractive price than the other Leaders: Free. Core OWB functionality is bundled at no charge with the purchase of an Oracle Standard Edition One, Standard Edition, or Enterprise Edition database.[14] That's great news for enterprises that are already using or are planning to use Oracle databases in their environment, but you can't purchase OWB without an Oracle DB, which is a limiting factor for some enterprises. OWB also offers improved connectivity to non-Oracle source platforms and applications, but target load and connectivity is still optimized for Oracle databases and data warehousing environments. Oracle also trails the other Leaders in how well it supports more operational data integration techniques like EII and CDC. [15]

Strong Performers: Robust Solutions For Targeted Environments

- **Ab Initio packs a powerful, scalable punch.** Ab Initio's Co>Operating System offers high scalability using data parallelism, heterogeneous execution and connectivity, and extremely strong metadata management and data lineage functionality. It also supports extremely high transaction volumes for both batch and operational applications. Ab Initio is the only vendor we evaluated that has architected its end-to-end solution from scratch without the added complexity and patches necessary to integrate disparate code bases from acquired, co-developed, or OEM'd technology. Ab Initio performs very well across most core enterprise ETL capabilities, except it doesn't embed advanced data quality management logic such as match and merge. The product does offer advanced data profiling and can integrate well with third-party data quality tools such as Trillium. Ab Initio's weakness lies in its choice to be a secretive and anonymous player, declining to proactively educate the market its impressive offerings. This leaves potential customers with the challenge of deciding whether to invest the time to engage Ab Initio and become educated on its offering, or make a faster decision with the remaining players on the market.[16]

- **SAS Institute builds on its BI and analytics competency.** SAS' Data Integration Studio remains a Strong Performer with good server capabilities, strong connectivity, user-friendly tools, and a world-class support and training organization. Like Business Objects, SAS ETL adoption remains primarily within its SAS business intelligence and analytics install base and has not yet been widely utilized as an enterprise standard crossing both SAS BI projects and non-SAS operational initiatives.[17]

- **Pervasive Software competes against custom coding.** While Pervasive's Business Integrator Pro and Data Integrator products do not compete head to head on scalability, user friendliness, and feature richness compared with most other vendors in this Forrester Wave evaluation, that is in line with Pervasive's strategy because it does not target the same end users. Pervasive's primary competitor is custom-coded integration solutions. Its primary users are not enterprise and integration architects, but instead independent software vendors and systems integrators that are looking for a data integration solution with a small footprint that is easily and seamlessly embeddable in more complex information management solutions.[18]

- **Microsoft provides good tools for Microsoft shops.** With the release of SQL Server 2005 Integration Services (SSIS), Microsoft has significantly improved on its previous Data Transformation Services (DTS) ETL offering as a valuable data integration tool for homogeneous Microsoft platform customers. While SSIS offers decent scalability with user-friendly development and administration tools, it significantly lacks the heterogeneous platform support and source to target connectivity options provided from the other Leaders and Strong Performers evaluated here. Microsoft also lacks the embedded integration of data quality management and data profiling technology.[19]

- **iWay Software builds on the parent company's heritage.** iWay's DataMigrator ETL tool is best known and used by the Information Builders installed base, its BI-focused parent company. iWay Software's primary differentiation is its ability to offer extract and load connectivity to a vast array of legacy sources. A number of iWay Software's data integration competitors, including IBM, Oracle, and Microsoft, OEM iWay Software's connectors to enhance their application and source integration capabilities. iWay Software lacks many of the complementary information management capabilities expected of enterprise-class ETL providers including data profiling, data quality management, metadata management, and data lineage.[20]

- **Sunopsis (Oracle) is core to Oracle's Fusion Middleware strategy.** Following its acquisition of Sunopsis, Oracle has rebranded Sunopsis' Data Conductor as Oracle Data Integrator (ODI). Oracle considers ODI to be a critical component in its Fusion Middleware strategy, and it was especially attracted to Sunopsis' pushdown optimization, strong heterogeneous connectivity, and business-rule-oriented versus process-oriented approach, which leverages knowledge modules —reusable connectivity, transformation, and integration objects.[21]

Contenders: Require Product Integration And Targeted Strategy

- **Sybase's capabilities reflect its recent market entry.** The Sybase ETL product can be a useful project- or department-based ETL tool for easy to moderate integration challenges as an alternative to custom code, but it does not yet offer the necessary scalability, connectivity, user friendliness, and information management capabilities required for an enterprise ETL standard. While less expensive than many of the Leaders, Sybase ETL is currently priced higher than would be expected, considering the gaps in capabilities — especially when compared with the free ETL solutions offered by Oracle and Microsoft, two of Sybase's database platform competitors. While experienced and successful in the data replication market, Sybase recognizes that it is new to the ETL and broader data integration market. Its challenge lies in determining how to differentiate from the variety of options already in this crowded space.[22]

SUPPLEMENTAL MATERIAL

Online Resource

The online version of Figure 3 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 calls.** To validate product and vendor qualifications, Forrester also conducted reference calls with two of each vendor's current customers.

The Forrester Wave Methodology

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

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

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 readers are encouraged 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] EII is an umbrella term that covers a collection of technologies and best practices for providing custom views into multiple data sources as a way of integrating data and content for real-time read and write access by applications. See the December 23, 2002, Idea Byte "Defining Enterprise Information Integration (EII)." Change data capture is a small link in a larger data integration chain, yet it can reduce the volume of extracted data to enable data integration scalability and can speed up data integration cycles to enable fast-paced business activities. See the September 27, 2004, Best Practices "Change Data Capture Gives Data Integration Greater Scale And Speed."

[2] MDM is a business capability that requires business process improvements and organizational commitments, as well as an ecosystem of technologies to allow the creation, management, and distribution of high-quality master data throughout the organization. See the November 10, 2006, Trends "Introducing Master Data Management."

[3] EAI tools have been the traditional means of connecting applications for the past 10 to 15 years. These products, which started out as rudimentary software that supported basic messaging, routing, and data transformation needs, have recently grown into more sophisticated tools that now also provide full support for SOA, as well as electronic data interchange (EDI) and RosettaNet interactions. See the March 19, 2007, Tech Choices "Evaluating Integration Technology Options."

[4] Oracle acquired Sunopsis in October 2006, adding a more heterogeneous data integration technology to its middleware portfolio. See the October 19, 2006, Quick Take "Oracle Makes Serious Move In Data Heterogeneity By Acquiring Sunopsis."

[5] IBM financial results from IBM's Web site: consolidated statement of earnings for 2006. Forrester analyzed IBM's business software portfolio and found IBM to be strong in information management and middleware. See the January 17, 2007, Tech Choices "Business Software Platform Vendor Profile: IBM."

[6] IBM repackaged its existing ETL, data quality, and data profiling products — among others — as the IBM Information Server as part of its larger Information On Demand strategy. See the December 28, 2006, Quick Take "Information Server Takes IBM One Step Closer To Delivering Information-As-A-Service."

[7] Informatica, an enterprise class data integration vendor best known for moving high volumes of structured data using extract, transform, and load (ETL) technology, acquired Itemfield, a privately held unstructured and semi-structured data integration vendor. See the January 10, 2007, Quick Take "Informatica Acquires Itemfield."

[8] Informatica acquired Similarity Systems and Business Objects acquired Firstlogic, both vendors bringing data quality and profiling expertise in-house. See the April 27, 2006, Quick Take "Business Objects And Informatica Acquire Information Quality Software Vendors." Business Objects was evaluated and found to be a Leader for BI reporting and analysis platforms. See the February 8, 2006, Tech Choices "The Forrester Wave™: BI Reporting And Analysis Platforms, Q1 2006."

[9] Forrester analyzed Oracle's business software business and found Oracle to have the richest applications portfolio. See the October 30, 2006, Tech Choices "Business Software Platform Vendor Profile: Oracle."

[10] DataFlux was evaluated and found to be a Strong Performer in information quality management. See the January 17, 2006, Tech Choices "The Forrester Wave™: Information Quality Software, Q1 2006."

[11] View the vendor summary for more detailed analysis on how IBM fared in this evaluation. See the May 2, 2007, Tech Choices "IBM Leads In Enterprise ETL With A Comprehensive Information Management Suite."

[12] View the vendor summary for more detailed analysis on how Informatica fared in this evaluation. See the May 2, 2007, Tech Choices "Informatica: A Leader in Enterprise ETL, With A Pure-Play Solution."

[13] View the vendor summary for more detailed analysis on how Business Objects fared in this evaluation. See the May 2, 2007, Tech Choices "Business Objects: A Leader In Enterprise ETL, With A Strong Focus On Information Management."

[14] For those that purchase the Enterprise Edition (EE) database, Oracle offers additional licensing options for Enterprise ETL, Data Quality, and connectors to other ERP/CRM sources such as SAP, Oracle E-Business Suite, and PeopleSoft. See the Oracle Web site at http://www.oracle.com/technology/products/warehouse/htdocs/owb_10gr2_faq.html#26.

[15] View the vendor summary for more detailed analysis on how Oracle fared in this evaluation. See the May 2, 2007, Tech Choices "Oracle Is A Leader In Enterprise ETL With A Free, Bundled Solution For Its DBMS."

[16] Ab Initio chose not to participate in the complete Forrester Wave process, so a vendor summary is not provided.

[17] View the vendor summary for more detailed analysis on how SAS Institute fared in this evaluation. See the May 2, 2007, Tech Choices "SAS Institute: A Strong Performer In Enterprise ETL With A BI And Analytics Focus."

[18] View the vendor summary for more detailed analysis on how Pervasive Software fared in this evaluation. See the May 2, 2007, Tech Choices "Pervasive Software: A Strong Performer In Enterprise ETL Targeted At ISVs And Integrators."

[19] View the vendor summary for more detailed analysis on how Microsoft fared in this evaluation. See the May 2, 2007, Tech Choices "Microsoft Is A Strong Performer In Enterprise ETL When Targeting Microsoft Shops."

[20] View the vendor summary for more detailed analysis on how iWay Software fared in this evaluation. See the May 2, 2007, Tech Choices "iWay Software Is A Strong Performer In Enterprise ETL With Broad Connectivity."

[21] Sunopsis did initially participate in the Forrester Wave process and provided Forrester with detailed company and product information, customer references, and a product demo. Following Oracle's acquisition of Sunopsis, Oracle chose not to complete its participation, so a vendor summary is not provided.

[22] View the vendor summary for more detailed analysis on how Sybase fared in this evaluation. See the May 2, 2007, Tech Choices "Sybase Enters The Enterprise ETL Market As A Contender."

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