Market conditions favor offerings with low costs and rapid time to value, but buyers that see data integration as strategic also seek rich capabilities to fuel their information infrastructure. More vendors in the data integration tools market understand these needs, but execution challenges remain.

This document was revised on 24 November 2010. For more information, see the Corrections page on gartner.com.

WHAT YOU NEED TO KNOW

IT leaders focused on data integration competencies must be aware of key trends and developments in the data integration tools market. During 2010, organizations continued to emphasize cost-effectiveness (a balance of functionality and value relative to cost), broader usage (with increased emphasis on data migration, master data management, and operational application integration scenarios), and high-quality customer service and support. Vendors responded in various ways, including new pricing and delivery models, and greater transparency in pricing. The desire for “good enough” technology at attractive price points drove interest in lower-cost and open-source solutions. At the same time, consolidation in this and related markets caused preferences to shift toward incumbent providers of applications or other information management infrastructure. Despite these trends, several providers focused primarily on data integration (independent of applications or business intelligence offerings) and continue to fare well despite growing competitive pressure. Many providers expanded their support for styles of data integration beyond bulk/batch, tightened their links to data quality tools, and moved toward a model-driven approach leveraging common metadata across their suites. These developments indicate growing maturity in this market relative to Gartner’s vision and buyers’ desires. In addition, as convergence with the related market of data quality tools continued to progress, an emphasis on governance began to emerge and some data integration practitioners began to emphasize data quality with higher priority than the mechanics of integration. The increasing maturity of the data integration tools and data quality tools markets and the rapidly growing overlap between them (in terms of both providers and buyers) signals the pending arrival of complete market convergence. Further trends emerging or advancing in 2010 and impacting this market included attention to problems of extreme data volumes (with many vendors exploring and
some delivering Hadoop-based deployment models) and cloud-based data integration services.

**MAGIC QUADRANT**

**Market Overview**

The discipline of data integration comprises the practices, architectural techniques and tools for achieving consistent access to, and delivery of, data across the spectrum of data subject areas and data structure types in the enterprise, to meet the data consumption requirements of all applications and business processes. As such, data integration capabilities are at the heart of the information-centric infrastructure and will power the frictionless sharing of data across all organizational and system boundaries. Contemporary pressures are leading to an increased investment in data integration in all industries and geographic regions. Business drivers, such as the imperative for speed to market, the agility to change business processes and models, and the desire to detect and harness patterns and capture events are forcing organizations to manage their data assets differently. Simplification of processes and the IT infrastructure is necessary to achieve transparency, and transparency requires a consistent and complete view of the data, which represents the performance and operation of the business. Data integration is a critical component of an overall enterprise information management (EIM) strategy and information infrastructure that can address these data-oriented issues.

Specifically, market demand is becoming more diversified, as buyers procure tools with intent to support multiple use-cases. The traditional focus of activity has been in support of business intelligence initiatives. While this remains the most significant use-case driving demand, many others have emerged. Data migrations in support of modernization and consolidation initiatives represent a fast-growth area of demand, with data integration capabilities (and the related technology space of data quality) providing critical infrastructure for such efforts. As master data management (MDM) programs increase in number and scope, organizations also seek to apply investments in data integration technology to those initiatives, since movement, transformation, and federation of master data is a fundamental component. Further, synchronization of data between operational applications and across enterprise boundaries (between trading partners or between on-premises and cloud-based applications) also represent areas of growth. These requirements have generally been met via point-to-point interfaces supported by data integration tools, but the architectural concept of a “data integration hub” to address these needs is gaining interest in the market. Increasingly, end-user organizations are deploying data integration services beneath and supporting wider service-oriented architecture (SOA) initiatives. In all ways, organizations increasingly recognize that applying their investments in data integration tools to multiple use-cases will increase their leverage and value from the tools.
With the ongoing evolution of the data integration tools market, separate and distinct submarkets continue to converge, both at the vendor level and the technology level. This is being driven by buyers’ demands. Specifically, organizations increasingly acknowledge a diversity of data integration problem types that are supported by equally diverse architectural styles and patterns for data delivery. It is also being driven by vendors’ actions – specifically, vendors in individual data integration submarkets organically expanding their capabilities into neighboring areas, and acquisition activity bringing vendors from multiple submarkets together. The result is a progressively maturing market for complete data integration tools that address a range of different data integration styles based on common design tooling, metadata and runtime architecture. This market has supplant the former data integration tools submarkets, such as extraction, transformation and loading (ETL), and represents the competitive landscape in which Gartner evaluates vendors for placement within this Magic Quadrant. More examples exist of vendor vision and product road maps that exhibit these characteristics. While many vendors that supply multiple types of data integration technology generally exhibit an overwhelming strength in one delivery style, more examples are emerging of better balance in support of multiple styles.

2009 was a challenging year in the data integration tools market, as the economic conditions slowed growth substantially from that seen in 2008. With overall growth of 2.2%, this market was one of many impacted negatively by these conditions. Yet, specific vendors demonstrated growth well beyond the market average. Gartner estimates the size of the market for data integration tools at approximately $1.35 billion as of the end of 2009, and forecasts growth of approximately 6% in 2010. A projected five-year compound annual rate of approximately 9.4% will yield a market of approximately $2.1 billion by 2014. While the forecast growth has been substantially curtailed from estimates two years ago due to current economic conditions, this growth rate remains very healthy. Services revenue from implementations of data integration tools is also growing (notably in architectural design and implementation best practices), with the time and effort required to implement the tools varying widely depending on the scope and complexity of the deployment.

Several key trends and developments had significant impact on the market for data integration tools during 2010. These trends represent an ongoing shift in demand from buyers, as well as areas of opportunity for technology providers to provide thought leadership and innovation that extends the boundaries of this market:

Customers are seeking low-cost, “good enough” data integration capabilities – the economic conditions continue to push organizations to scrutinize their investments and optimize costs. In this market, this manifests as aggressive behavior on the part of buyers when negotiating price with vendors, as well as a growing number of organizations that are seeking solutions with solid basic capabilities (“good enough”) offered at attractive price points. As such, Gartner continued to note growing adoption of solutions such as those from Pervasive Software, Microsoft, and Syncsort, and others with offerings priced far below the levels of the market leaders. In addition, the level of activity around open-source solutions continues to grow, since these are viewed by buyers as providing a more attractive cost model. Talend, Pentaho, and other open-source providers in this market see increasing benefit from this trend.

Customers place a premium on support and service – with reduced staff and budget, and amid mounting pressure for faster and higher quality delivery of solutions, buyers in the market demand a superior customer service and support experience from their technology providers. In addition to highly responsive and high quality-product technical support, customers desire direct and frequent interactions with sales teams and executives. An extension of this interest in higher-quality service and support is a strong focus by buyer on the availability of skills (within a provider’s installed base as well as via system integrator partners) and forums where they can share experiences, lessons, and solutions with their peers.

Convergence of data integration tools and data quality tools markets accelerates – during 2010, buyer demand showed a clear preference for solutions which offer both data integration and data quality functionality. Many purchases of data integration tools executed during the year also included data quality functionality from the same provider. Many organizations not purchasing data quality functionality at minimum had made it a point of consideration during their evaluations of providers, with intent of possible future adoption. Organizations increasingly recognize that both are required in order to support critical initiatives in business intelligence, master data management, and application modernization. Those providers with complementary technology in these two (and other related) markets – such as IBM, Informatica, Oracle, Pitney Bowes, SAS/DataFlux, SAP, iWay Software, Talend and others – continue to enjoy the benefits of this trend, in the form of greater market mind-share and traction. However, a critical differentiating factor across vendors will be the ability to address new users with less technical skills such as data steward and business analyst roles outside of IT. Acquisitions of data quality technology (for example, Oracle buying Silver Creek Systems) and creation of new partnerships continued. Many of these developments were designed to support the growing demand for data quality and governance capability in the data integration discipline. Gartner believes that while the vendor trend is for data integration tools to be the dominant branding strategy, it is the leveraging of data quality management which is becoming the true value of a converged market.

Data management operations deployed as data services – organizations continue to find themselves unable to consistently and flexibly deliver data for all applications and business processes across the enterprise. Because they have embedded business rules for transforming and quality-assuring data into individual applications and databases, they struggle with effecting change in and governing these rules for consistency and accuracy. Forward-thinking organizations are leveraging principles of service-orientation to address these challenges. Data integration tools will play a critical role, providing a layer of abstraction and control over how data is accessed, transformed, and delivered to all types of consuming applications, tools, and people. Buyers of these
tools are increasingly seeking service-enablement properties, where combinations of data access, transformation, and delivery operations can be deployed as discoverable, callable, and reusable data services.

**Early-stage interest in the intersection of cloud computing and data integration** – with the hype around cloud computing across the IT landscape, it is not surprising that data integration practitioners (and technology providers) are seeking to identify points of value and opportunity in this market. Several providers have delivered cloud-based offerings of various types (for example, Informatica and Pervasive), with the major emphasis on simple cloud-based services addressing common integration tasks for organizations with limited resources. Midsize enterprises and business analysts outside of IT in larger organizations are beginning to adopt these capabilities to move data between popular cloud-based applications such as salesforce.com and on-premises databases. Likewise, providers of software as a service (SaaS)-based applications are beginning to look toward simple cloud-based data integration services as a way to ease the challenge of onboarding new customers. IT groups in larger organizations are also beginning to look at public and private cloud-based infrastructure as a way to provision non-production (development, test, and quality assurance) environments for their chosen data integration tools. However, large-scale production deployments on cloud-based infrastructure remain scarce.

**Increasing focus on problems and opportunities created by massive data volumes** – with growing pressure created by escalating data volumes, as well as the potential opportunities to identify meaningful patterns given the massive volumes of data at the disposal of most organizations, both data integration practitioners and technology providers are beginning to explore alternative approaches to performing the required computational workloads (perforimg complex transformations in a data integration context, mining events for hidden patterns, or calculating various types of metrics to support analytic requirements) over large data volumes. Leading-edge end-user organizations and various technology providers in the data integration tools market are experimenting with algorithms such as MapReduce, Hadoop-based runtime environments for data transformation workload, and leverage of in-memory database technology. This trend is also related to cloud computing interest, as the randomly scalable properties of cloud-based infrastructure are increasingly delivered via these types of techniques.

**The increasing gap between organizations “leading” versus “lagging” in data management competency** – the gap between those organizations treating data management (and specifically, data integration) as a strategic competency and those approaching it in a reactive, tactical fashion is growing. Those that focus solely on running the business and growing the business – business as usual, with a focus only on implementing data integration architectures as cheaply as possible and optimized for narrow needs – will continue to fall farther behind their competition. In contrast, those organizations that focus on effective data integration capabilities as a way to transform the business are beginning to reap substantial benefits. Technology providers need to recognize this dichotomy in the market and make wise choices about which segment they wish to serve. Both segments represent opportunity, but will require very different approaches to packaging and selling data integration tools.

**Market Definition/Description**

The data integration tools market comprises vendors that offer software products to enable the construction and implementation of data access and delivery infrastructure for a variety of data integration scenarios, including:

- **Data acquisition for business intelligence (BI) and data warehousing.** Extracting data from operational systems, transforming and merging that data, and delivering it to integrated data structures for analytic purposes. BI and data warehousing remain mainstays of the demand for data integration tools.

- **Creation of integrated master data stores.** Enabling the consolidation and rationalization of the data, representing critical business entities such as customers, products and employees. MDM may or may not be subject-based, and data integration tools can be used to build the data consolidation and synchronization processes that are key to success.

- **Data migrations/conversions.** Traditionally addressed most often via the custom coding of conversion programs, data integration tools are increasingly addressing the data movement and transformation challenges inherent in the replacement of legacy applications and consolidation efforts during mergers and acquisitions.

- **Synchronization of data between operational applications.** Similar in concept to each of the previous scenarios, data integration tools provide the capability to ensure database-level consistency across applications, both on an internal and interenterprise basis (for example, involving data structures for SaaS applications or cloud-resident data sources), and in a bidirectional or unidirectional manner.

- **Interenterprise data sharing.** Organizations are increasingly required to provide data to and receive data from external trading partners (customers, suppliers and others). Data integration tools may be relevant for certain types of these requirements, which often consist of the same types of data access, transformation and movement components found in other common use cases.

- **Delivery of data services in an SOA context.** An architectural technique, rather than a usage of data integration itself, data services are the emerging trend for the role and implementation of data integration capabilities within SOAs. Data integration tools will increasingly enable the delivery of many types of data services.
Gartner has defined multiple classes of functional capabilities that vendors of data integration tools must possess to deliver optimal value to organizations in support of a full range of data integration scenarios:

- Connectivity/adapter capabilities (data source and target support).
- Data delivery capabilities.
- Data transformation capabilities.
- Metadata and data modeling capabilities.
- Design and development environment capabilities.
- Data governance capabilities (data quality, profiling and mining).
- Deployment options and runtime platform capabilities.
- Operations and administration capabilities.
- Architecture and integration.
- Service-enablement capabilities.

**Connectivity/Adapter Capabilities (Data Source and Target Support)**

The ability to interact with a range of different data structures types, including:

- Relational databases.
- Legacy and nonrelational databases.
- Various file formats.
- XML.
- Packaged applications such as CRM and supply chain management.
- Software-as-a-service (SaaS) and cloud-based applications and sources.
- Industry-standard message formats such as electronic data interchange (EDI), SWIFT and Health Level Seven (HL7).
- Message queues, including those provided by application integration middleware products and standards-based products (such as Java Message Service [JMS]).

- Emergent data types of a less-structured nature, such as e-mail, websites, office productivity tools and content repositories.

In addition, data integration tools must support different modes of interaction with this range of data structure types, including:

- Bulk acquisition and delivery.
- Granular trickle-feed acquisition and delivery.
- Changed-data capture (the ability to identify and extract modified data).
- Event-based acquisition (time-based or data-value-based).

**Data Delivery Capabilities**

The ability to provide data to consuming applications, processes and databases in a variety of modes, including:

- Physical bulk data movement between data repositories.
- Federated views formulated in memory.
- Message-oriented movement via encapsulation.
- Replication of data between homogeneous or heterogeneous database management systems (DBMSs) and schemas.

In addition, support for the delivery of data across the range of latency requirements is important:

- Scheduled batch delivery.
- Streaming/real-time delivery.
- Event-driven delivery.

**Data Transformation Capabilities**

Built-in capabilities for achieving data transformation operations of varying complexity, including:

- Basic transformations, such as data type conversions, string manipulations and simple calculations.
- Intermediate-complexity transformations, such as lookup and replace operations, aggregations, summarizations, deterministic matching and the management of slowly changing dimensions.
- Complex transformations, such as sophisticated parsing operations on freeform text and rich media.
In addition, the tools must provide facilities for developing custom transformations and extending packaged transformations.

**Metadata and Data Modeling Capabilities**

As the increasingly important heart of data integration capabilities, metadata management and data modeling requirements include:

- Automated discovery and acquisition of metadata from data sources, applications and other tools.
- Data model creation and maintenance.
- Physical to logical model mapping and rationalization.
- Defining model-to-model relationships via graphical attribute-level mapping.
- Lineage and impact analysis reporting, via graphical and tabular format.
- An open metadata repository, with the ability to share metadata bidirectionally with other tools.
- Automated synchronization of metadata across multiple instances of the tools.
- Ability to extend the metadata repository with customer-defined metadata attributes and relationships.
- Documentation of project/program delivery definitions and design principles in support of requirements definition activities.
- Business analyst/end-user interface to view and work with metadata.

**Design and Development Environment Capabilities**

Facilities for enabling the specification and construction of data integration processes, including:

- Graphical representation of repository objects, data models and data flows.
- Workflow management for the development process, addressing requirements such as approvals and promotions.
- Granular role-based and developer-based security.
- Team-based development capabilities, such as version control and collaboration.
- Functionality to support reuse across developers and projects, and to facilitate the identification of redundancies.
- Support for testing and debugging.

**Data Governance Capabilities (Data Quality, Profiling and Mining)**

Mechanisms to help the understanding and assurance of data quality over time, including interoperability with:

- Data profiling tools.
- Data mining tools.
- Data quality tools.

**Deployment Options and Runtime Platform Capabilities**

Breadth of support for hardware and operating systems on which data integration processes may be deployed, and the choices of delivery model; specifically:

- Mainframe environments, such as IBM z/OS and z/Linux.
- Midrange environments, such as IBM System i (formerly AS/400) or HP Tandem.
- Unix-based environments.
- Windows environments.
- Linux environments.
- Traditional on-premises (at the customer site) installation and deployment of software.
- Hosted off-premises software deployment (SaaS model).
- Server virtualization (support for shared, virtualized implementations).

**Operations and Administration Capabilities**

Facilities for enabling adequate ongoing support, management, monitoring and control of data integration processes implemented via the tools, such as:

- Error-handling functionality, both predefined and customizable.
- The monitoring and control of runtime processes, both via functionality in the tools and interoperability with other IT operations technologies.
- The collection of runtime statistics to determine use and efficiency, as well as an application-style interface for visualization and evaluation.
• Security controls, for both data “in flight” and administrator processes.

• A runtime architecture that ensures performance and scalability.

Architecture and Integration

The degree of commonality, consistency and interoperability between the various components of the data integration toolset, including:

• A minimal number of products (ideally one) supporting all data delivery modes.

• Common metadata (single repository) and/or the ability to share metadata across all components and data delivery modes.

• A common design environment to support all data delivery modes.

• The ability to switch seamlessly and transparently between delivery modes (bulk/batch vs. granular real-time vs. federation) with minimal rework.

• Interoperability with other integration tools and applications, via certified interfaces and robust application programming interfaces (APIs).

• Efficient support for all data delivery modes regardless of runtime architecture type (centralized server engine versus distributed runtime).

Service-Enablement Capabilities

As acceptance of data services concepts continues to grow, data integration tools must exhibit service-oriented characteristics and provide support for SOA deployments, such as:

• The ability to deploy all aspects of runtime functionality as data services.

• Management of publication and testing of data services.

• Interaction with service repositories and registries.

• Service enablement of the development and administration environments, such that external tools and applications can dynamically modify and control the runtime behavior of the tools.

Inclusion and Exclusion Criteria

For vendors to be included in this Magic Quadrant, they must meet the following functional requirements.

They must possess within their technology portfolio the subset of capabilities identified by Gartner as most critical from within the overall range of capabilities expected in data integration tools. Specifically, vendors must deliver the following functional requirements:

• Range of connectivity/adapter support (sources and targets): native access to relational DBMS products plus access to nonrelational legacy data structures, flat files, XML and message queues.

• Mode of connectivity/adapter support (against a range of sources and targets): bulk/batch and changed-data capture.

• Data delivery modes support: bulk/batch (ETL-style) delivery, plus at least one additional mode (federated views, message-oriented delivery or data replication).

• Data transformation support: at a minimum, packaged capabilities for basic transformations (such as data type conversions, string manipulations and calculations).

• Metadata and data modeling support: automated metadata discovery, lineage and impact analysis reporting, ability to synchronize metadata across multiple instances of the tool, and an open metadata repository including mechanisms for bidirectional sharing of metadata with other tools.

• Design and development support: graphical design/development environment and team development capabilities (such as version control and collaboration).

• Data governance support: ability to interoperate at a metadata level with data profiling and/or data quality tools.

• Runtime platform support: Windows, Unix or Linux operating systems.

• Service enablement (ability to deploy functionality as services conforming to SOA principles).

In addition, vendors must satisfy the following quantitative requirements regarding their market penetration and customer base:

• They must generate at least $20 million of annual software revenue from data integration tools or maintain at least 300 maintenance-paying customers for their data integration tools.

• They must support data integration tools customers in at least two of the major geographic regions (North America, Latin America, EMEA, and Asia/Pacific).

• They must produce at least 10 responsive references to participate in the customer survey as part of the Magic Quadrant process.
We excluded vendors that focus on only one specific data subject area (for example, the integration of customer data only), a single industry, or only their own data models and architectures.

Many other vendors of data integration tools exist beyond those included in this Magic Quadrant. However, most do not meet the above criteria and, therefore, we have not included them in this analysis. Market trends in the past three years indicate that organizations want to use data integration tools that provide flexible data access, delivery and operational management capabilities within a single vendor solution. Excluded vendors frequently provide products to address one very specific style of data delivery (for example, only data federation) but cannot support other styles. Others provide a range of functionality, but operate only in a specific technical environment. Still others operate only in a single region or support only narrow, departmental implementations.

Some vendors meet all the functional, deployment and geographic requirements but are very new to the data integration tools market, and have limited revenue and few production customers. The following vendors are sometimes considered by Gartner clients alongside those appearing in the Magic Quadrant, when deployment needs are aligned with their specific capabilities, or are newer market entrants with relevant capabilities:


**Arbutus Software**, Burnaby, British Columbia, Canada, www.arbutussoftware.com – provides solutions for mainframe legacy data connectivity and access, in support of data integration and other use-cases.

**Attunity**, Burlington, Massachusetts, U.S., www.attunity.com – A range of data-integration-oriented products, including adapters (Attunity Connect), change data capture (Attunity Stream) and data federation (Attunity Federate) for various platforms and database/file types.

**BackOffice Associates**, South Harwich, Massachusetts, U.S., www.boaweb.com – Offers services and technology, including data integration capabilities, for data migrations, with a focus on SAP and other ERP environments.


**Columba Global Systems**, Dublin, Ireland, www.columba.com – Positioned as “data fusion platform” technology, the Exprimer solution supports federated approaches to data integration.

**Composite Software**, San Mateo, California, U.S., www.compositeaw.com – Composite Information Server provides data federation capabilities and supports the delivery of data access services.


HiT Software, San Jose, California, U.S., [www.hitsw.com](http://www.hitsw.com) – Offers database replication (DBMoto), database-to-XML transformation and mapping (Allora) and DB2 connectivity products. HiT was acquired by BackOffice Associates during 2010, but still operates under the HiT brand.

HVR Software, Amsterdam, The Netherlands, [www.hvr-software.com](http://www.hvr-software.com) – the HVR (High Volume Replicator) technology supports change-capture, propagation, and replication patterns against various data source and platform types.

Ikan Group, Mechelen, Belgium, [www.etl4all.com](http://www.etl4all.com) – Java-based ETL technology named ETL4ALL, supporting transformation servers on Windows, Linux, Unix and IBM iSeries.


Jitterbit, Oakland, California, U.S., [www.jitterbit.com](http://www.jitterbit.com) – Freely downloadable software with a focus on both application integration (event- and message-based) and data integration.

Metamotix, Dedham, Massachusetts, U.S., [www.metamotix.com](http://www.metamotix.com) – Follows a semantics-based approach to the creation of data sources and federated views of data across multiple data sources.


OpenText, Waterloo, Ontario, Canada, [www.opentext.com](http://www.opentext.com) – offers OpenText Data Integration for bulk/batch-oriented data movement across a range of data source and target types.

Pentaho, Orlando, Florida, U.S., [www.pentaho.org](http://www.pentaho.org) – A provider of open-source BI solutions, Pentaho has added data integration tools to its portfolio by leveraging the Kettle open-source project and providing services and support.

Progress Software, Bedford, Massachusetts, U.S., [www.progress.com](http://www.progress.com) – The DataXtend and DataDirect product lines provide tools for data access, replication and synchronization.

Queplix, Sunnyvale, California, U.S., [www.queplix.com](http://www.queplix.com) – offers the Virtual Data Viewer and Virtual Data Manager products for integration of cloud-based, SaaS, and on-premises applications and data.

Quest Software, Aliso Viejo, California, U.S., [www.quest.com](http://www.quest.com) – SharePlex provides real-time replication support for Oracle DBMS environments and is targeted primarily at high-availability applications.

Red Hat/MetaMatrix, Raleigh, North Carolina, U.S., [www.redhat.com](http://www.redhat.com) – The MetaMatrix Server, Enterprise and Query products support the creation of data models and model-driven federated views of data.

Relational Solutions, Westlake, Ohio, U.S., [www.relationshions.com](http://www.relationshions.com) – The BlueSky Integration Studio provides ETL capabilities in a simplified, low-cost toolset that runs in the Windows environment.

Safe Software, Surrey, British Columbia, Canada, [www.safe.com](http://www.safe.com) – The FME platform delivers ETL capabilities for spatially oriented data sources commonly used in geographic information system applications.

SchemaLogic, Kirkland, Washington, U.S., [www.schemalogic.com](http://www.schemalogic.com) – Enables the creation and maintenance of data models (Workshop) and business models (SchemaServer), and the ability to propagate models and data across applications (Integration Service).


SnapLogic, San Mateo, California, U.S., [www.snaplogic.com](http://www.snaplogic.com) – Dataflow supports real-time and federated integration of data with a focus on diverse data sources, including SaaS- and cloud-based sources, and via Web-oriented architectural approaches.

Software AG, Darmstadt, Germany, [www.softwareag.com](http://www.softwareag.com) – The CentraSite product provides data and metadata federation capabilities and is geared toward SOA deployments. The vendor’s webMethods product line provides process-oriented integration capabilities.

Software Labs, Roseville, California, U.S., [www.softlabsco.com](http://www.softlabsco.com) – The xFusion Studio product provides ETL functionality positioned toward a range of use cases including BI and migrations.

SQData, Addison, Texas, U.S., [www.sqdata.com](http://www.sqdata.com) – the SQData product line provides changed-data capture (CDC) and ETL functionality focused on delivering mainframe data sources and popular relational DBMSs.

Sypherlink, Dublin, Ohio, U.S., [www.sypherlink.com](http://www.sypherlink.com) – Metadata discovery and mapping via Harvester, and access to data sources for the creation of integrated views via Exploratory Warehouse.
TigerLogic (formerly Raining Data), Irvine, California, U.S., www.tigerlogic.com – TigerLogic XDMS provides XML-based data federation and persistence, as well as the delivery of data services.


**Added**

No new vendors have been added in this iteration of the Magic Quadrant.

**Dropped**

ETI – excluded due to gaps relative to market presence criteria (number of customers and revenue) and to functional inclusion criteria.

OpenText – excluded due to vendor’s de-positioning from the data integration tools market, and gaps relative to functional inclusion criteria.

Sybase – excluded due to acquisition by SAP. The analysis of SAP in this iteration of the Magic Quadrant includes consideration of the Sybase capabilities in this market.

**Evaluation Criteria**

**Ability to Execute**

Gartner analysts evaluate technology providers on the quality and efficacy of the processes, systems, methods or procedures that enable IT providers’ performance to be competitive, efficient and effective, and to positively affect revenue, retention and reputation. Ultimately, technology providers are judged on their ability to capitalize on their vision, and their success in doing so.

We evaluate vendors’ ability to execute in the data integration tools market by using the following criteria:

- **Product/Service.** How well the vendor supports the range of data integration functionality required by the market, the manner (architecture) in which this functionality is delivered, and the overall usability of the tools. Product capabilities are critical to the success of data integration tool deployments and, therefore, receive a high weighting.

- **Overall Viability.** The magnitude of the vendor’s financial resources and the continuity of its people and technology. In this iteration of the Magic Quadrant we place a high weighting on this criterion to reflect buyers’ continuing concerns over the risk associated with vendors as a result of current economic conditions.

- **Sales Execution/Pricing.** The effectiveness of the vendor’s pricing model and the effectiveness of its direct and indirect sales channels. Due to the sustained scrutiny on cost issues and the highly competitive nature of this market, we increase the weighting of this criterion into the high range in this iteration of the Magic Quadrant.

- **Market Responsiveness and Track Record.** The degree to which the vendor has demonstrated the ability to respond successfully to market demand for data integration capabilities over an extended period.

- **Marketing Execution.** The overall effectiveness of the vendor’s marketing efforts, which impacts the degree of “mind share,” market share and account penetration the vendor has achieved.

- **Customer Experience.** The level of satisfaction expressed by customers regarding the vendor’s product support, professional services, and overall relationship with the vendor, as well as the customers’ perceptions of value of the vendor’s data integration tools relative to costs and expectations. In this iteration of the Magic Quadrant we have retained the high weighting of this criterion to reflect the continued strong scrutiny that buyers are placing on these considerations as a result of economic conditions and budgetary pressures. Analysis and rating of vendors against this criterion are driven directly by responses of customers participating in the reference customer survey executed as part of the Magic Quadrant process.

**Table 1. Ability to Execute Evaluation Criteria**

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weighting</th>
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<tbody>
<tr>
<td>Product/Service</td>
<td>high</td>
</tr>
<tr>
<td>Overall Viability (Business Unit, Financial, Strategy, Organization)</td>
<td>high</td>
</tr>
<tr>
<td>Sales Execution/Pricing</td>
<td>high</td>
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<tr>
<td>Market Responsiveness and Track Record</td>
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<tr>
<td>Marketing Execution</td>
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<tr>
<td>Customer Experience</td>
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</tr>
<tr>
<td>Operations</td>
<td>no rating</td>
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</tbody>
</table>

Source: Gartner (November 2010)
Companions of Vision

Gartner analysts evaluate technology providers on their ability to convincingly articulate logical statements about current and future market direction, innovation, customer needs and competitive forces, as well as how they map to the Gartner position. Ultimately, technology providers are assessed on their understanding of the ways that market forces can be exploited to create opportunities.

We assess vendors’ completeness of vision for the data integration tools market by using the following criteria:

- **Market Understanding.** The degree to which the vendor leads the market in new directions (technology, product, services or otherwise), and its ability to adapt to significant market changes and disruptions. Given the dynamic nature of this market, this item receives a high weighting.

- **Marketing Strategy.** The degree to which the vendor’s marketing approach aligns with and/or exploits emerging trends and the overall direction of the market.

- **Sales Strategy.** The alignment of the vendor’s sales model with the way that customers’ preferred buying approaches will evolve over time.

- **Offering (Product) Strategy.** The degree to which the vendor’s product road map reflects demand trends in the market, fills current gaps or weaknesses, and includes developments which create competitive differentiation and increased value for customers. In addition, given the requirement for data integration tools to support diverse environments from a data domain, platform, and vendor mix perspective, we assess the vendors on the degree of openness of their technology and product strategy. With the growth in diversity of data and environments involved in data integration initiatives, this criterion received a high weighting.

- **Business Model.** The overall approach the vendor takes to execute its strategy for the data integration tools market.

- **Vertical/Industry Strategy.** The level of emphasis the vendor places on vertical solutions, and the vendor’s depth of vertical expertise.

- **Innovation.** The degree to which the vendor has demonstrated a willingness to make new investments to support its strategy and enhance its product capabilities, the level of investment in R&D directed toward development of the tools, and the extent to which the vendor demonstrates creative energy. Given the pace of expansion of data integration requirements and the highly competitive nature of the market, this criterion receives a high weighting.

- **Geographic Strategy.** The approach to global presence which the vendor is pursuing (for example, direct local presence, resellers and distributors), and the vendor’s strategy and approach for expanding its reach into markets beyond its home region/country.

### Table 2. Completeness of Vision Evaluation Criteria

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weighting</th>
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<tbody>
<tr>
<td>Market Understanding</td>
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<tr>
<td>Marketing Strategy</td>
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<tr>
<td>Sales Strategy</td>
<td>standard</td>
</tr>
<tr>
<td>Offering (Product) Strategy</td>
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<tr>
<td>Vertical/Industry Strategy</td>
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<tr>
<td>Innovation</td>
<td>high</td>
</tr>
<tr>
<td>Geographic Strategy</td>
<td>standard</td>
</tr>
</tbody>
</table>

Source: Gartner (November 2010)

**Leaders**

Leaders in the data integration tools market are front runners in the convergence of single-purpose tools into an offering that supports a range of data delivery styles. These vendors are strong in the more traditional data integration patterns. They also support newer patterns and provide capabilities that enable data services in the context of SOA. Leaders have significant mind share in the market, and resources that are skilled in their tools are readily available. These vendors establish market trends, to a large degree, by providing new functional capabilities in their products, and by identifying new types of business problems where data integration tools can bring significant value. Examples of deployments that span multiple projects and types of use case are commonplace in their customer base.

**Challengers**

Challengers in the data integration tools market are well positioned in light of the key trends in the market, such as the need to support multiple styles of data delivery. However, they may not provide comprehensive breadth of functionality, or they may be limited to specific technical environments or application domains. In addition, their vision may be hampered by the lack of a coordinated strategy across the various products in their data integration tools portfolio. Challengers can vary significantly with regard to their financial strength and global presence. They are often large players in related markets that have only recently placed an emphasis on data integration tools. Challengers’ customer base is generally substantial in size, though implementations are often of a single project nature, or reflect multiple projects of a single type (for example, all ETL-oriented use cases).

**Visionaries**

Visionaries in the data integration tools market will have a solid understanding of the emerging technology and business trends, or a position that is well aligned with current demand but lacks market awareness or credibility beyond their customer base or outside a single application domain. Challengers also may also fail to provide a comprehensive set of product capabilities. Visionaries may be new market entrants lacking the installed base and global presence of larger vendors, though they could also be well established, large players in related markets that have only recently placed an emphasis on data integration tools.
Niche Players

Niche Players in the data integration tools market have gaps in both vision and ability to execute, often lacking key aspects of product functionality and/or exhibiting a narrow focus within their own architecture and installed base. These vendors have little mind share in the market and are not recognized as proven providers of data integration tools for enterprise-class deployments. Many Niche Players have very strong offerings for a specific range of data integration problems (for example, a particular set of technical environments or application domains) and deliver substantial value for their customers in that segment. Niche Players are notable in that they meet all the inclusion criteria for the Magic Quadrant, thereby differentiating them from excluded vendors.

Vendor Strengths and Cautions

iWay Software

New York, New York, U.S.

www.iwaysoftware.com

Products: DataMigrator, Data Hub, Service Manager, Universal Adapter Framework, EIM Suite

Customer base: 400+

Strengths

- A division of Information Builders, iWay Software creates and sells Information Builders’ integration technologies, with the goal of building an integration software business that is independent of the BI capabilities for which Information Builders is well known. iWay offers capabilities for physical data movement and delivery (via its DataMigrator ETL tool), data federation (via the iWay Data Hub product) and real-time message-oriented integration (supported by the Service Manager product). With the addition of data quality and MDM capabilities to form the iWay EIM Suite and the ability for customers to use the various products in an integrated, synergistic fashion, iWay is well-positioned in terms of both current and future market demand.

- Information Builders’ size and global presence afford iWay a strong foundation from which to execute its growth strategy. The creation of a dedicated iWay sales force, rather than solely selling through the Information Builders channel, will help the vendor to accelerate growth. According to Gartner data, iWay’s revenue has significantly exceeded the market average growth rate over the last year.

- Customer references cite the broad functional capabilities and the integration with Information Builders’ BI products (specifically WebFOCUS) as main drivers for their choice of iWay data integration tools. In particular, the wide range of adapters was identified as a significant functional strength. In addition, customers find compelling the ability to use multiple products together in a synergistic manner to solve complex problems. As a result of the range of the iWay product set and functional capabilities, the technology is seen in support of a diversity

of use-cases. While the majority of usage is in support of BI and data warehousing initiatives, the customer base includes many examples of operational data integration, master data consolidation and delivery, and interenterprise data sharing, among others.

Cautions

- iWay continues to suffer a low profile, rarely appearing in competitive situations versus the market leaders and lacking in mainstream recognition. Increasingly, iWay customers are buying the data integration tools first, without any prior Information Builders relationship. The expansion of the data management product portfolio into data quality and MDM, and the vendor’s modified messaging around these capabilities, should begin to address this issue.

- iWay continues to struggle with achieving consistency and quality of product releases, as reflected by a significant percentage of reference customers reporting bugs and instability issues when they install or upgrade products. Related to these issues, the feedback on iWay’s product support also indicates challenges in quality, particularly when addressing problems of a more complex nature. These issues will be inhibitors to iWay’s ongoing growth, since prospective buyers seek validation of positive service and support experiences when interacting with reference customers.

- While many customers like the availability of local support services in their region or country, experiences with iWay’s professional services have been inconsistent. During the last year, many customers indicate some improvement in this area, although some still cite it as an area of weakness. In several cases, customers chose alternative vendors because they perceived less availability of solid services skills and therefore less ability for iWay to be a strategic partner in their implementation. The comprehensiveness and quality of professional services are critical areas for iWay to improve as it pushes its customers to adopt the full range of functionality it offers, including combinations of sophisticated products such as its EIM Suite.

IBM

Armonk, New York, U.S.

www.ibm.com

Products: IBM InfoSphere Information Server (includes components: InfoSphere DataStage, InfoSphere QualityStage, InfoSphere Change Data Capture, InfoSphere Federation Server, InfoSphere Foundation Tools), InfoSphere Data Event Publisher, InfoSphere Replication Server

Customer base: estimated 9,000+
Strengths

- IBM’s customers often address data integration problems of substantial scale and complexity, to meet sophisticated data integration demands. IBM continues to demonstrate strong vision in the market for extensive data integration capabilities, while also executing well in increasing the adoption of the various components within existing IBM customers and beyond. Organizations adopting InfoSphere data integration tools tend to consider it the enterprise standard for data integration tooling, so IBM’s customer references reflect more multi-project use and larger average numbers of data integration developers per customer than most of its competitors. A growing base of customers apply the tools against MDM, migration/conversion and operational data interface problems.

- IBM continues to increase the level of integration between and consistency across the range of InfoSphere Information Server components. Significant deliverables in late 2008 and during 2009 included integrating the CDC technology (obtained in the DataMirror acquisition of 2006) with DataStage, the release of various Foundation Tools (for metadata management of various types, data profiling and industry models), and integrating DataStage with the InfoSphere MDM Server offering. Looking ahead, the product road map includes additional synergies with other IBM technologies, such as Optim for enabling data privacy rules in data integration processes. The 8.5 Information Server release late in 2010 addresses many of the previous configuration support complaints from 2009 and before.

- Real-time data integration across the breadth of data management environments benefited from enhanced change data capture capabilities in 2010. Distributed data, synchronization issues, business intelligence/data warehouse and master data management publication/subscription management all benefit from the CDC capability. Communication with message brokers, Web/Apps portals and direct from most commonly deployed relational databases is supported. While similar functionality is offered by some competitors, most competing offerings are limited to bulk/batch needs.

Cautions

- In 2010, fewer references reported issues with aligning the various components, but still report the vast number of “moving parts” makes it difficult to implement the solution. Clients also report the solution “hardens” well, indicating their implementation runs with high throughput, a low number of outages and solid job flow orchestration. The 8.5 Information Server release was notable in addressing many of these issues with a new installer, better patch handling and improved configuration support. The IBM long-standing reputation for complexity manifests in customer references which often report a greater effort than expected for initial installation. As a result, references report their overall experience is “challenging.” Despite these challenges a majority of customers indicate that they plan to procure additional products or licenses for deployed products from the InfoSphere portfolio in the next twelve months.

- The same situation existed in 2009. During 2010, IBM focused less on new functionality and more on enhancing the quality in the existing product set even further.

- Most customer references use the toolset for bulk/batch data delivery, granular CDC and propagation, and data replication. IBM states that the adoption of Federation Server is substantial (approximately 500 customers), although federation deployments appear infrequently in Gartner client interactions and within IBM-provided customer references. While IBM provides various integration points between the InfoSphere technologies and the WebSphere portfolio of process- and application-integration capabilities, customer references reflect a use of these two brands in separate projects – albeit they report separate successes as well.

- Pricing continues to be a major concern for IBM customers. The use of CPU speed as the main pricing parameter (adds complexity for customers auditing and modifying their implementation) and the relatively high cost of a typical implementation (compared with many of IBM’s competitors) cause some prospects to consider alternative providers or limit their investment to a small number of components (DataStage only, for example). For some midsize enterprises and those seeking a focused subset of the portfolio, the pricing approach may offer some advantages. Fewer customers and prospects in 2010 reported challenges in locating resources in their local geographies.

Informatica

Redwood City, California, U.S.

www.informatica.com

Products: Informatica Platform (includes components: PowerCenter, PowerExchange, Data Services, Cloud Data Integration)

Customer base: 4,200+

Strengths

- As one of the most widely recognized providers in this market, Informatica continues to grow its presence and retain its position, appearing in enterprise-scale data integration tool evaluations more frequently than all other providers in the market. The vendor’s data integration capabilities continue to expand with both organic functional additions and via acquisition (such as the most recent purchase of 29West). The vendor’s new release of Informatica 9 is well aligned with current market demand and evolving trends. The offering expands in delivering data federation and brings together both data integration and data quality capabilities in a single runtime architecture which aligns well with technology consolidation trends.
• The vast majority of customer references have established Informatica as their enterprise standard for data integration tools, with many applying the tools to large numbers of projects involving greater numbers of developers than the average. While nearly all of these customers apply the technology in the BI and data warehousing domain, a large percentage have additional use cases. Specifically, data migration/ conversion initiatives and the delivery of interfaces between operational applications were seen in most customer references, reflecting more diversity of use cases within individual enterprises than for most of Informatica’s competitors. Informatica’s customer base continues to express a high degree of satisfaction with time to value, performance, product support, availability of skills, and overall experience in the relationship with the vendor.

• Informatica continues to provide thought leadership in the market by exploring alternative delivery models for data integration capabilities. While still a minor component of its revenue relative to traditional on-premises deployments, the release of Informatica Cloud 9 delivers three types of data integration as a service offerings. Cloud Services are focused on salesforce.com integration, Cloud Platform is available for independent service providers and system integrators to develop cloud-based services, and Cloud Edition, an Informatica platform for deployments in a public cloud setting such as Amazon. The majority of adoption is seen in Cloud Services among the three non-traditional offerings. Customer references demonstrated early stage uses for entry-level cloud/ SaaS-based data integration functions.

Cautions

• While Informatica’s customer base reflects a diverse mix of use cases, deployment architectures remain heavily oriented on bulk, batch-oriented data delivery, with data replication and synchronization gaining adoptions in granular and low-latency data capture and propagation. Customer adoption of virtualized and federated approaches to data integration is low in comparison to the rest of the supported data delivery style. Informatica 9 helps address data federation needs but production adoptions of the new federation capability is not yet mainstream.

• The vendor faces strong competition from large application and infrastructure providers (IBM, Microsoft, Oracle and SAP), which are increasingly bundling data integration tools with their other offerings at limited additional cost to the customer. Informatica needs to grow its mind-share with non-IT executives. The vendor also must ensure the positioning of new capabilities from acquisitions are well perceived by the market to enhance product focus.

• Informatica has high price points relative to many competitors. The vendor must continue to articulate the value of broader functionality and wide applicability, or pricing will become an inhibitor in competitive situations. By offering cloud-based delivery models with on-demand and term-based pricing, the vendor hopes to address this challenge.

Microsoft

Redmond, Washington, U.S.

www.microsoft.com

Products: SQL Server Integration Services, BizTalk Server

Customer base: estimated 10,000+

Strengths

• Microsoft’s main offering in the data integration tools market is SQL Server Integration Services (SSIS), largely focused on bulk/batch-oriented data delivery. Customer references cite the overall low total cost of ownership, speed of implementation, ease of use, and the ability to integrate with the rest of the Microsoft SQL Server capabilities as the main reasons for choosing SSIS over alternatives.

• Customers references recognized SSIS as a stable and maturing data integration tool, capable of supporting enterprise-scale implementations in Microsoft-centric environments. The pervasive usage of SSIS within the SQL Server customer base have attained widely available community support, training and third party documentation on implementation practices and problem resolution approaches.

• Microsoft’s size and global presence provide a huge customer base for best practices, a prevalent skill base, and a distribution model that supports both direct and channel partner sales. In addition, customer references generally report a very positive post-sales support and service experience, including product documentation and online support mechanisms.

Cautions

• While SSIS can be integrated with BizTalk and Microsoft can also address replication-style data delivery via SQL Server functionality, present product strategy does not clearly articulate a comprehensive data integration vision to the market.

• The SQL Server 2008 R2 version of SSIS substantially expanded the vendor’s ability to support broader types of data connectivity requirements. However the absence of solid change data capture (CDC) and non-SQL Server source capabilities indicate that end-user organizations must deploy this capability via partners or their own best-of-breed implementations. The vendor is starting to fill the gap via a partnership.

• Customer references continue to cite metadata management capabilities (such as metadata discovery, lineage and dependency reporting) as a substantial weakness. Deployments involving interoperability between SSIS and multiple products (such as BizTalk and SQL Server 2008 Master Data Services)
are reported to have required extensive custom coding efforts. Customer references rarely demonstrate uses of SSIS that are synergistically linked with other Microsoft products for data integration purposes, such as for data replication or federation using BizTalk or SQL Server. However, Microsoft plans to address such integration needs through the next version of SQL Server, codenamed Denali, in 2011. Other functional gaps or weaknesses cited by customers include limitations in data quality/governance capabilities.

Oracle
Redwood Shores, California, U.S.

www.oracle.com

Products: Data Integrator, Data Service Integrator, Warehouse Builder, GoldenGate

Customer base: estimated 3,500+

Strengths

- Oracle’s data integration capabilities are centered on Oracle Data Integrator (ODI) and the GoldenGate-based offering. Oracle has stated it will not further enhance Oracle Warehouse Builder (OWB). Oracle Data Service Integrator (ODSI) adds federation capability to Oracle’s offering. In addition, Oracle’s acquisition of GoldenGate Software, completed in October 2009, has lived up to its potential, adding enterprise-class replication/synchronization capability to the suite.

- In 2010, references reported the ease-of-use and easily accomplished learning curve for ODI. ODI customers also report a small technology footprint, ease of integrating the solutions with existing infrastructure, leveraging of both extract, load and transform (ELT) and ETL approaches, solid knowledge modules and good connectivity as strengths.

- Adoption of both ODI and GoldenGate continues to grow within the Oracle DBMS and applications customer base, most commonly in traditional ETL-style implementations in support of BI and data warehousing – however, Oracle customers have recently demonstrated an uptake of other delivery styles. Adoption of Oracle products has increased with rapid uptake of former GoldenGate products. Customer references cite complete functionality for ETL, tight integration with the Oracle DBMS, integration with other Oracle Fusion Middleware components and applications (in the case of ODI), and Oracle’s overall market presence and viability as the main reasons for selecting these tools.

Cautions

- Customers report that it is necessary to acquire multiple products to achieve all the desired functionality and this drives up costs. Oracle pricing is transparent as a result, but remains complex. Oracle indicates customers can get pricing and licensing relief with the Oracle Data Integrator Enterprise Edition (ODIEE), which includes both OWB and ODI. Additional costs are associated with ODSI and GoldenGate and other additional components. Finally, it is important to note that the ODI 11G release was a combined effort from the now joint OWB/ODI team – a substantial delivery indicating that data integration at Oracle is moving toward a unified product development approach.

- A surprising survey finding reports that Oracle’s support seems unfamiliar with ODI and that Oracle professional services seem to lack knowledge about Oracle’s own products. Surprising because Gartner inquiries with clients and even the same survey respondents reported these tools as easy to learn. The combination of unease with Oracle’s support staff and consultants with the products seems to indicate that Oracle’s consulting and support staff have not emphasized training on some of these tools and ODI specifically. Oracle is currently growing it’s support staff in response to rapid product adoption and uneven support appears to be a symptom of growth.

- ODSI is reported as having a high incidence of software bugs (and a general lack of debugging functionality) with some references referring to it as the weakest component in the toolset. This runs contrary to Oracle’s own customer support data. It is possible that some inconsistency exists between Oracle’s metrics for support success and customer expectations which the vendor is expected to address over time. ODI customers report weak version management and control for development efforts (including limitations in rights management – which are reportedly addressed in the ODI 11g release). Related to the diversity of the tools, there is a lack of team development support. However, Oracle’s data integration sales are growing which is indicative of customers’ acceptance of Oracle’s go-to-market practices.

Pervasive Software
Austin, Texas, U.S.

www.pervasiveintegration.com

Products: Data Integrator, Metadata Manager, Integration Hub, DataCloud, DataRush

Customer base: 4,000+

Strengths

- With long tenure and profitability in this market, Pervasive offers solid and attractively priced data integration tools that support bulk/batch-oriented data delivery, but which also provide capabilities for real-time messaging-style solutions and SOA. The broad range of data source and target type support – including packaged applications, popular SaaS application APIs (such as for salesforce.com), industry-standard message formats (such as EDI documents, X12, the Health Insurance Portability and Accountability Act [HIPAA] and Health Level Seven [HL7]), and semi-structured content repositories
provided with the core products – represents substantial value for customers. By expanding its reach to address the diverse technology landscape common in large enterprises, and continuing to do so with an attractive cost model, Pervasive demonstrates good vision for this market.

- Customer references, including within large enterprises, reflect a very good balance of usage across the full range of common data integration use cases, with a particular emphasis on supporting interfaces between operational applications, data migration efforts, and interenterprise data sharing activities. This is a notable difference from the majority of Pervasive’s competitors, many of which show less diversity of use and are biased toward a particular use-case such as business intelligence. Proven use in a range of scenarios will serve the vendor well amid the growing recognition of data integration capabilities as a foundation for many types of initiatives. The increasing use of Pervasive’s technology in a cloud setting (both connecting to SaaS applications and via the vendor’s own cloud environment, Pervasive DataCloud, which the vendor states currently supports over 250 customers) will also be a benefit as demand for alternative data integration delivery models increases.

- Customers cite ease of implementation and ongoing use, mapping/transformation capabilities, and the broad range of data source and target support via packaged connectors as the most significant functional strengths of Pervasive’s offering. Performance and scalability are also commonly noted as positives, and the vendor’s new DataRush offering adds to the scalability story by offering the ability to execute data transformation workloads in a highly parallel fashion. In addition, customers give attractive pricing and a positive overall experience with the vendor as key reasons for their selection and ongoing use of Pervasive. These same characteristics have enabled Pervasive to continue to expand its indirect channel, and revenues via partners have continued to grow from year to year.

Cautions

- Pervasive is often in used in tactical scenarios, and many customers report multiple disconnected implementations across their organizations. While tactical implementations and a desire for quick results remain a common theme in the current market, Pervasive needs to provide more capabilities and guidance to customers to achieve greater manageability, leverage, and governance in multi-project deployments. The vendor must also deliver more examples of enterprise-wide use for mission-critical initiatives.

- Pervasive does not provide support for data federation. Other weaknesses, as cited by customer references, include metadata and modeling functionality, administrative capabilities (such as monitoring, tuning and error handling), and relatively limited (compared to larger competitors) availability of skills in the marketplace. Pervasive’s product road map includes enhanced real-time support, metadata management and administration/monitoring enhancements in the forthcoming version 10 release.

- Pervasive’s approach to the market using indirect channels (SaaS/cloud vendors, OEM relationships and resellers) understates its overall market presence. As a result, it struggles to establish itself as a corporate standard in large enterprises. While many buyers of data integration tools follow a consistency and standards approach, Pervasive offers a “choice” delivery model – it can be used as a standard or deployed tactically, implemented stand-alone or embedded in other solutions, and procured via resellers or directly. If an organization can use this model, it becomes a good fit.

Pitney Bowes Business Insight
Troy, New York, U.S.

www.pbinsight.com

Products: Data Flow

Customer base: 2,000+

Strengths

- Pitney Bowes Business Insight, a division of mainstream hardware and services vendor Pitney Bowes, competes in the data integration tools market via its Data Flow offering. While the vendor has not yet begun to market it heavily, its vision for the Spectrum Technology Platform seeks to align and coordinate all its key technologies, including Data Flow, into a harmonized solution for data management. The combination of data integration tools, data quality capabilities, and geospatially-focused BI and analytics provides an attractive bundling of functionality, particularly for those organizations focused on what Pitney Bowes calls “location intelligence” applications.

- Data Flow primarily supports bulk/batch implementation patterns, although limited data federation scenarios can also be achieved. Implementations generally reflect traditional ETL use cases in the BI domain – in fact, 100% of reference customers reported usage of this type. While the proven capabilities for bulk/batch data delivery is a strength, the customer base reflects far less diversity of use-cases than virtually all the competition. This represents a challenge, but also an opportunity for Pitney Bowes to grow.

- Reference customers indicate superior ease of use, rapid implementation times, and attractive pricing as the greatest strengths of Data Flow. This likely stems from the technologies long history (originally, as Sagent) delivering on the basic critical needs of the market. With overall time to value being a major consideration for buyers, Pitney Bowes’ can readily position Data Flow a cost-effective solution. Customers also generally cite performance, range of connectivity, the inclusion of basic data visualization capabilities, and the overall relationship with the vendor as positives.
Cautions

- Customers indicate periodic challenges with timeliness and quality of product support, as well as bugginess and stability issues in product releases. This is likely an indication of insufficient resources for support and for technical product development. Specific to product functionality, reference customers cite a need for greater support for real-time data acquisition, richer Web services support, and more robust team development capabilities. The forthcoming release of version 6.7, scheduled for late 1Q11, is expected to address the Web services deficiencies as well as add increased XML support and 64-bit support for Unix deployments.

- Pitney Bowes is rarely seen actively competing against the market leaders for new data integration tools opportunities at the enterprise level in North America and EMEA, although the vendor has recently won some larger deals in Asia. Additionally, there is little market expertise available when it comes to delivering with this tool – organizations having considered and rejected Data Flow often do so in part because of the limited availability of skills in the market as compared to other solutions. As such, Pitney Bowes will be challenged to gain momentum, and will need to take action to energize a growing community of users around Data Flow.

- Data Flow is mostly limited to bulk/batch-oriented data delivery in support of ETL patterns. The current market demand is for multiple delivery styles, beyond bulk/batch, via a similar set of tools in a suite, if not by a unified platform. While this represents a challenge for Pitney Bowes, ETL capabilities remain a mainstay component of demand, and the vendor has successfully leveraged Data Flow to support other offerings where these capabilities are critical (such as its customer communications management solutions).

SAP
Palo Alto, California, U.S.

www.sap.com/sapbusinessobjects

Products: Data Integrator, Data Federator, Data Services, NetWeaver Process Integration and Replication Server

Customer base: estimated 8,000+

Strengths

- The breadth of functionality available across the portfolio (a wide range of data delivery styles, plus options to integrate with data quality capabilities and SAP’s MDM offering) continues to be attractive to SAP’s customers and prospects. Functionality includes: bulk batch, federation, message queues as sources and targets, master data management, metadata management, auditing features and collaborative development. More importantly, Sybase PowerDesigner and Replication Server were added to SAP’s arsenal – a modeling tool and changed data capture support which provide for a integrated stack to enhance the metadata capabilities and change detection for SAP’s offering. Feedback from customer references indicates that the most significant strengths of SAP’s offering are the ease of implementation and ongoing ease of use of Data Integrator, and straightforward version upgrades (this is important as the complexity of some of the tools in the Leaders’ quadrant are specifically cited as creating upgrade issues).

- In 2010, SAP finally started to flex its broader market muscle to enhance its data management position overall, and this is being reflected in market growth for its Data Integration offering. The Data Integration tool offers capable support for data marts/warehouses, operational application integration, including services deployment and orchestration for data integration/ data quality combined, and complex events support. Gartner’s own data indicates that SAP’s growth in this market exceeds the market rate. SAP has established a vision for how the former Business Objects tools (Data Integrator, Data Federator and Metadata Management will be integrated and rationalized with SAP’s own data integration capabilities (the extractors for SAP NetWeaver Business Warehouse and NetWeaver Process Integration).

- SAP’s Data Services, continues to gain traction in the market. The presence of a single runtime platform which combines data quality with data integration services is reported by customers as one key to the ease of implementation. This combination of data integration and data quality capabilities is consistent with market demand trends. Future indications include a focus on data governance and information life cycle management with plans for data steward and other information “governors” support. Additionally, most of the product development efforts for the next major release has been to integrate with the semantic layer to enable BI workflows. This is part of a larger strategy to create a complete modeling experience which encompasses data integration.

Cautions

- References report frustration that the product does not have better integration with the remainder of the SAP stack. Difficulties supporting various types of complex sources (e.g., XML issues) are reported. Security and sign-on issues are reported as frustrating which creates some difficulties in team-based development. Finally, lagging development for Linux platform support is reported. On the positive side, SAP customers also report a lower instance of support frustration – support is not yet a strength and issues remain, but the number of reported support and performance issues are lower than in previous years. SAP needs to do a better job of communicating the resolution to some of these issues as many have been addressed and additional enhancements are expected in the Data Services 4.0 release.

- Once again, 2010 references report concerns regarding the degree to which Data Integrator, Data Federator and Data Services will remain “environment-agnostic” (providing...
equal support for both SAP and non-SAP data structures and applications). SAP’s stated roadmap is to pursue data integration as an agnostic solution, but this differs from customers’ past experience with SAP products. The fear of the offerings becoming too tightly attuned to SAP applications has caused some customers and prospects to limit their investments. Pricing and licensing complexity have also complicated SAP’s penetration into the market and confused efforts to grow the “footprint” in existing accounts.

- Implementations of SAP data integration tools continue to reflect a bias toward bulk/batch-oriented data delivery (such as ETL architectures). The customer base shows relatively limited adoption of Data Federator, and extremely limited use of real-time and granular data delivery capabilities even though Replication Server and NetWeaver enable additional delivery styles and data bus capabilities. However, more customers report efforts to utilize MDM capabilities in the stack. While MDM is not the focus of this report, the presence of integrated or consolidated data management within a data integration toolset indicates a combined solution to improve overall data governance. The vendor must continue to develop competency and proof points regarding the full range of data delivery styles (for example, via bringing the Data Federator capabilities into the Data Services offering) in order to better align with evolving market demand.

SAS/DataFlux
Cary, North Carolina, U.S.


Products: Enterprise Data Integration Server, Data Integration Server, SAS for Data Migration, SAS/ACCESS, DataFlux Integration Server

Customer base: estimated 12,000+

Strengths

- Through late 2009 and 2010, SAS introduced product enhancements for collaborative development and workflow support as well as metadata tools for analyzing and managing integrated/transformed data. Federation was also introduced in 2010. Best practices and methodology were introduced including prebuilt auditing modules and data management architecture guidelines. In the high-performance computing arena, SAS introduced “cloud” computing support via management of processing in a shared pool environment as well as services deployment for data selection and evaluation tasks to source databases and file systems. These constitute solid product improvements which meet the technical requirements and exemplary vision relative to the needs of the market.

- SAS’s size, global presence and long experience supporting data integration activities give it a solid position. Users report strong visual workflow management tools and a high quality of SAS professional services. The resulting product delivery model includes positive reviews of its product support and service experiences worldwide. In 2010, SAS re-organized its data management delivery under the DataFlux brand and combined data integration, data quality and MDM capabilities to launch the DataFlux Data Management Platform. The strong indication to focus on quality and governance places SAS in a strong position to pursue data management services offerings.

- The Enterprise Data Integration Server has connectivity to virtually every data source, including packaged applications, data warehouse appliances and many data sources on the mainframe. SAS can run on every major operating system, including various Unix and Linux flavors and z/OS, and it can connect to SaaS data as well as to various data warehouse appliances. Additionally, SAS has multiple data integration approaches and tools supporting ELT/ETL, SOA and many other architectural forms.

Cautions

- SAS’s customer references reflect a wide diversity of use cases, industries and implementation styles, but also varied experiences. Customer references provide inconsistent feedback on the ease of deployment/implementation. Reference customers utilizing professional services report more consistent and efficient delivery. This indicates that customer experiences are highly individualized, so success depends greatly on the customer’s skills and the vendor’s support capability. In addition, SAS customers are completing significantly complex data integration tasks which increase the difficulty of implementations.

- SAS’s user experiences complain of complex licensing and pricing. Many feel this complexity increases the cost over all, with individual purchases required for multiple components. This component pricing approach increases the complexity of delivery and frequently, SAS’s own professional services staff encounter deployment delays because of confusion regarding what clients actually own. Overall, this detracts from SAS’s ability to market and execute in new sales – even given SAS’s very large customer base. Some customers report that the price is high and that obtaining value for the price paid is difficult, while other customers indicate good value.

- As before, in 2010 the reference customers report inconsistent performance when completing upgrades. Similar issues are reported when moving from test to production. Many implementations require work-around solutions and this is the genesis of many of these issues as clients report that the integration of the various components is problematic. Source-level control is also reportedly weak. Importantly, the majority of client/reference feedback is relative to older versions prior to the release of the DataFlux Data Management Platform.
Syncsort
Woodcliff Lake, New Jersey, U.S.

www.syncsort.com

Products: DMExpress
Customer base: 900+

Strengths

• Syncsort furthered its growth in the data integration tools market, with the customer base for DMExpress showing ongoing substantial growth during 2010. Contemporary demand for tools with a lower-cost footprint, short time to implementation and targeted functionality with bulk/batch data delivery capabilities at the core is helping to fuel this growth. It is exactly these characteristics (lower price compared to the market leaders, ease of use, strong performance for ETL workloads) that Syncsort customer references cite as their main reasons for selecting DMExpress, and it is precisely these types of customers which Syncsort targets with its marketing. Performance (good throughput over large data volumes) appears to be the most significant factor in Syncsort’s ability to win business in this market, with a majority of customer references indicating performance as the top concern in their evaluation of vendors.

• With 40 years of experience in high-performance data processing, sustained profitability and a large and loyal customer base, Syncsort has a solid base on which to grow its market presence. The recent changes to Syncsort’s management team (including a new chief executive, sales, marketing, product management and engineering leadership) are increasing the operational and sales effectiveness of the organization. Amid significant organizational change, the vendor has been able to maintain a high quality of service and support, with many customers identifying product technical support and the overall relationship as positives.

• DMExpress users often have investments in tools from the market leaders or other competitive vendors, and they use Syncsort’s technology to fine-tune the performance of end-to-end processes supported by such vendors. However, in recent interactions with the vendor’s customers, a growing percentage state that DMExpress has become a standard in their organizations. While partnerships with vendors offering extended functionality (for example, Attunity for CDC and Trillium Software for data quality) allow Syncsort to position toward broader usage demand, its own capabilities remain very ETL-centric. Syncsort has also begun to build partnerships with system integrators such as Accenture and Cognizant, which should also help to grow mind share in the market.

Cautions

• Syncsort’s recent release of DMExpress version 6.2 provided further performance enhancements and simplified the process of upgrades from earlier versions. Version 6.5, scheduled for delivery by YE2010, adds metadata interoperability with other data integration tools as well as improved developer productivity and performance enhancements. However, the most significant improvements that Syncsort needs to deliver remain as futures in the product road map. These largely consist of further metadata management capabilities and service enablement. Customer demand for richer modeling, metadata discovery and the dynamic leverage of metadata for optimized data flow continues to grow, creating an ongoing challenge for the vendor to keep pace. Customer references rate metadata functionality and service enablement below the market average across the competitive landscape.

• To compete well in the longer-term, Syncsort must expand its vision of data integration beyond just the physical bulk movement of data. It does not directly support additional styles via its own technology; the Attunity partnership (for add-on real-time CDC functionality) is at an early stage; and a relationship with Composite Software for data federation remains unproven in actual implementations. In addition, the vendor must address a broader set of customer demand trends beyond high-performance (for example, the ability to deal with greater levels of complexity in business rules for data transformation, and the ability to understand and leverage less-structured data sources).

• While Syncsort’s customer references are very satisfied with the price points of the software, they express dissatisfaction with the complexity of the pricing model – specifically, the governance/auditing of licenses (license keys being linked to specific physical hardware assets, and the limitations/costs associated with changes in the hardware environment). The vendor has recently introduced self-service license keys and removed administration change fees to address these concerns. Customers also indicate that the product documentation and training could be improved. Documentation enhancements are planned as part of future product releases.

Talend
Los Altos, California, U.S. and Suresnes, France

www.talend.com

Products: Talend Open Studio, Talend Integration Suite, Talend Integration Suite MPx, Talend Integration Suite RTx
Customer base: 1,500+
Strengths

- Talend positions itself well, with both a subscription-based data integration product (Talend Integration Suite) and a freely downloadable open-source offering (Talend Open Studio), to appeal to different segments of the data integration tools market. Gartner has seen increased interest in both of Talend’s offerings, and the vendor is gaining mind share in the market.

- Referenced organizations largely reported ease of use and speed of deployment as recognized benefits with using Talend’s technology. This is a qualified response, in that price is always compared to the depth of features/functions available, and organizations mention that with Talend they are tolerating less functionality than they would otherwise acquire in competitive tools. Price is very much a driving factor in terms of initial interest. Once the initial interest is achieved, the tool also delivers expected functionality. Gartner believes that the features/functionality of Talend’s tools are also evaluated relative to pricing, and that the features and functionality begin to stand on their own merits – for either the open-source or the subscription version.

- Good connectivity is reported, as well as significant compatibility in Java and open-source environments in general. Additional functionality is achieved using Talend’s profiling and data quality capabilities, and the vendor has also added an MDM offering to the portfolio. The recent delivery of support for Hadoop aligns with the vendor’s open-source orientation and is consistent with demand trends. Tool configurability was cited as being flexible to adapt to business requirements of data integration processes, and the large component base of the vendor’s tool contributed to high developer productivity.

Cautions

- Talend is at an early stage of developing brand recognition and financial viability. Recent additions of indirect channels (e.g., data warehouse appliance and business intelligence vendors) will cultivate wider competencies in the service providers community, and help respond to the increasing demand for skills availability to meet future implementation needs.

- Talend is largely deployed to support bulk/batch-oriented data delivery although there is traction in the market for usage to meet data replication requirements. The vendor will need to broaden the tool functionality to address other styles of data delivery such as data federation, and further expand adoptions for delivery styles beyond bulk/batch data movement.

- Relative to the user base and market acceptance, Talend has established a presence in Europe and North America, but has little presence so far in other global regions. In addition, compared to market leaders, Talend’s skills are still less prevalent inside large system integrators and in the market in general.

Vendors Added or Dropped

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor appearing in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. This may be a reflection of a change in the market and, therefore, changed evaluation criteria, or a change of focus by a vendor.
**Evaluation Criteria Definitions**

**Ability to Execute**

**Product/Service:** Core goods and services offered by the vendor that compete in/serve the defined market. This includes current product/service capabilities, quality, feature sets, skills, etc., whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

**Overall Viability (Business Unit, Financial, Strategy, Organization):** Viability includes an assessment of the overall organization’s financial health, the financial and practical success of the business unit, and the likelihood of the individual business unit to continue investing in the product, to continue offering the product and to advance the state of the art within the organization’s portfolio of products.

**Sales Execution/Pricing:** The vendor’s capabilities in all pre-sales activities and the structure that supports them. This includes deal management, pricing and negotiation, pre-sales support and the overall effectiveness of the sales channel.

**Market Responsiveness and Track Record:** Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor’s history of responsiveness.

**Marketing Execution:** The clarity, quality, creativity and efficacy of programs designed to deliver the organization’s message in order to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This “mind share” can be driven by a combination of publicity, promotional, thought leadership, word-of-mouth and sales activities.

**Customer Experience:** Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements, etc.

**Operations:** The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

**Completeness of Vision**

**Market Understanding:** Ability of the vendor to understand buyers’ wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen and understand buyers’ wants and needs, and can shape or enhance those with their added vision.

**Marketing Strategy:** A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

**Sales Strategy:** The strategy for selling product that uses the appropriate network of direct and indirect sales, marketing, service and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

**Offering (Product) Strategy:** The vendor’s approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature set as they map to current and future requirements.

**Business Model:** The soundness and logic of the vendor’s underlying business proposition.

**Vertical/Industry Strategy:** The vendor’s strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including verticals.

**Innovation:** Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

**Geographic Strategy:** The vendor’s strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the “home” or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.