The data integration tool market continues to fulfill enterprise-scale requirements, while project-oriented, rapid deployments have increased. Demands emphasize comprehensive data delivery, support of emergent analytics and big data, synergy across data management, and quality customer experience.

Market Definition/Description
The data integration tool market comprises vendors that offer software products to enable the construction and implementation of data access and data 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 analytics purposes. BI and data warehousing remain mainstays of the demand for data integration tools.

- **Consolidation and delivery of master data in support of master data management (MDM)**: 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**: Although 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**: In a similar concept to each of the previous scenarios, data integration tools provide the ability to ensure database-level consistency across applications, both on an internal and an interenterprise basis (for example, involving data structures for software-as-a-service [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, business partners and others). Data integration tools are relevant in addressing these challenges, 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 use of
data integration itself, data services represent an emerging trend for the role and
implementation of data integration capabilities within service-oriented architectures (SOAs).
Data integration tools will increasingly enable the delivery of many types of data services.

Gartner has defined multiple classes of functional capability 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)**: The ability to interact
with a range of different types of data structure, including:
  - Relational databases
  - Legacy and nonrelational databases
  - Various file formats
  - XML
  - Packaged applications, such as CRM and supply chain management
  - SaaS and cloud-based applications and sources
  - Industry-standard message formats such as electronic data interchange (EDI), Swift and
    Health Level Seven International (HL7)
  - Externalized parallel distributed processing (such as Hadoop Distributed File System
    [HDFS] and other noSQL-type repositories)
  - 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 email, 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 (CDC) — 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, including:
- Scheduled batch delivery
- Streaming/near-real-time delivery
- Event-driven delivery of data based on identification of a relevant event

**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 free-form 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 support capabilities (via interoperation with data quality, profiling and mining capabilities):** Mechanisms to work with related capabilities 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 the 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)
- Parallel distributed processing (such as Hadoop, MapReduce)
- **Operations and administration capabilities:** Facilities for enabling adequate ongoing support, management, monitoring and control of the 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 capabilities:** 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 (a 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 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 service 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 development and administration environments, so that external tools and applications can dynamically modify and control the runtime behavior of the tools
Vendor Strengths and Cautions

IBM

Located in Armonk, New York, IBM (www.ibm.com) offers the following products: IBM InfoSphere Information Server Enterprise Edition (including these components: InfoSphere DataStage, InfoSphere QualityStage and InfoSphere Business Information Exchange), InfoSphere Federation Server, InfoSphere Replication Server and InfoSphere Data Event Publisher. The vendor’s customer base is estimated at approximately 9,400.

Strengths

- **Breadth of functionality:** IBM provides an extensive range of data integration functions, including bulk-batch extraction, transformation and loading (ETL), CDC and propagation, data replication, and data federation. IBM continues to demonstrate strong vision in the market for extensive data integration capabilities comprising products sold both independently and in InfoSphere Information Server Packages. Reference customers cited the broad portfolio of
capabilities and the alignment with demand trends to support comprehensive data management challenges as significant factors for choosing IBM’s data integration offerings.

- **Installed base and diversity of usage:** IBM’s tools continue to be adopted as enterprisewide data integration technology standards, and many IBM customers are applying the tools to multiple and diverse project types. IBM’s customers often address data integration projects of greater scale and complexity than are attempted with many of its competitors’ products. The tool deployments reflect a range of deployment use cases, including BI and data warehousing, MDM, data migration, and operational integration scenarios, and by multiple projects involving teams of varying sizes.

- **Synergy with related InfoSphere products:** IBM positions its data integration capabilities for stand-alone deployment, as well as in support of and in a synergistic relationship with other InfoSphere capabilities, such as its data quality tooling and MDM offerings. The combination of data integration capabilities to support broad data management functionality and other components of the portfolio, achieved via common and shared metadata, is often cited by reference customers as a strength. The release of version 8.7 in November 2011 offered enhanced manageability with the introduction of expanded real-time-operations console functionality and enhanced support for big data.

### Cautions

- **Degree of integration within product portfolio:** Reference customers cited challenges with overall complexity of the product set, especially when multiple products are used in an integrated fashion. Some reference customers indicated that the actual level of product integration was less than expected. IBM is addressing these issues by delivering features that improve ease of integration across products as well as by offering its Concierge Program to provide expertise and guidance for product upgrade assistance.

- **General usability challenges:** IBM’s data integration tool customers continue to identify longer learning curves, greater complexity and longer time to value as challenges. Although this is likely to be partly due to the more complex problems addressed by some of these implementations, IBM’s customers commonly express a desire for improved usability. Greater clarity for error warnings was cited as necessary when interpreting runtime error or warning messages to determine causes and resolutions. IBM’s product road map and the next significant release of version 9.1, expected in 4Q12, include enhancing user experience with improvements for guiding troubleshooting, easing developers’ efforts and supporting self-service.

- **Cost model:** While customers recognize a reasonable connection of IBM’s data integration tool pricing to anticipated value, reference customers and many prospective customers indicate that prices can be prohibitive and their perception is of a high total cost of ownership (TCO). IBM’s new packaging options, including Enterprise and Workgroup editions and data warehousing offerings, are aimed at mitigating these concerns by providing commonly used bundles of components for functionality required in a specific use case, and entry-level prices suitable for smaller customers and implementations.
Informatica

Located in Redwood City, California, Informatica (www.informatica.com) offers the following products: Informatica Platform (including these components: PowerCenter, PowerExchange, Data Services, Data Replication, Ultra Messaging and Cloud Data Integration). The vendor’s customer base is estimated at approximately 5,000.

Strengths

- **Range of functionality across data integration styles**: Informatica provides support for all key data integration styles, including bulk-batch ETL, real-time and granular data flow via CDC/propagation and replication, data federation, and messaging. This range of functionality aligns well with evolving demands in the data integration tool market. Informatica continues to develop points of linkage and integration between and across these data integration styles, enabling customers to leverage them in a synergistic manner.

- **Proven capabilities for a wide range of use cases**: The Informatica customer base reflects a diverse set of use cases and a good number of large deployments in which Informatica is the enterprisewide standard for data integration tooling. Reference customers cite the core functionality of the platform (primarily the range of connectivity, transformation capabilities, scalability and developer productivity), as well as the general level of service and support provided by the vendor, as key strengths and reasons for their ongoing use of the technology.

- **Product delivery aligned to demand trends**: Informatica’s product strategy and road map align well with demand trends, including a current focus on big data. Version 9.5 adds increased support for Hadoop and popular analytics database applications (such as Oracle Exadata and EMC Greenplum) and connectivity and natural language processing for social media, among other new features. While many competitors have added capabilities to deliver data to Hadoop and other big data environments, Informatica differentiates by enabling this across a range of latencies and granularities — customers can deliver data to these environments in bulk/batch mode, via replication or via messaging architectures. In addition, the vendor supports the ability for Hadoop-based data to participate in federated views, as well as the ability to run some data transformation tasks directly on Hadoop.

Cautions

- **Degree of marketing focus on traditional use cases**: While its product road map is aligned with future demand trends, Informatica needs to be careful of developing and marketing too far ahead of mainstream market demand. The vast majority of customers and prospects, while interested in future opportunities with cloud computing and big data, remain focused on more mature use cases and deployment models. While product development activities are addressing both traditional and visionary use cases, Informatica needs to balance its messaging around expansion into new areas, with a focus on the interests of more-conservative customers and those interested in traditional use cases.

- **Ongoing product integration requirements**: While the overall range of functionality provided by Informatica is significant and customers find the core capabilities to be strong, they also desire greater integration among the products. Informatica must continue to progress toward
rationalized design environments and metadata across the full range of integration styles, as well as across related product lines.

- **Pricing and perceptions of TCO:** Informatica’s price points and pricing model remain a challenge, with nearly 50% of reference customers in a recent sample noting this as one of the most significant issues they find in working with the vendor. This includes both the initial cost of purchasing Informatica’s products, as well as the perceived high cost of add-on options, which some customers cite as an inhibitor for them in adding further functionality. With growing competition from vendors with pricing models that afford customers a more consumable entry point into the technology, Informatica will be increasingly pressured to evolve its pricing approach. The recent release of various solution-oriented bundles of Informatica products is an example of how the vendor is attempting to address these challenges.

**Information Builders-iWay Software**

Located in New York, New York, Information Builders-iWay Software ([www.informationbuilders.com](http://www.informationbuilders.com)) offers the following products: Data Integration Solutions (iWay Service Manager, iWay DataMigrator, iWay DataMigrator CDC and iWay Universal Adapter Suite) and Integrity Solutions (data quality and data governance). The vendor's customer base is estimated at more than 425.

**Strengths**

- **Product depth and perceived value:** Through iWay products, Information Builders offers capabilities for physical data movement and delivery (via its DataMigrator ETL tool), real-time message-oriented integration (supported by the Service Manager product) and data federation (via the iWay Data Hub product). iWay has always been known for its adapters and connectivity; however, in 2011, customers also began to report ease of use and interoperability with its data quality tools. Customers indicate that the tools perform as advertised.

- **Cloud and big data:** iWay Service Manager has supported MapReduce functionality for use on both structured information and content since March 2011. The tool supports complex event process models (since July 2011) — good models for supporting cloud and big data in combination, and specifically targeted for social media analytics.

- **Capturing governance and data management trends:** Information Builders' solution strategy combines data integration with data management and governance through interoperability with its MDM products, data quality and data-profiling capabilities. With a wide array of bidirectional connectivity adapters, the tools can capture data from sources, analyze the data for governance rules and then deliver data to targets. This allows for the incremental expansion of its product footprint beyond data integration.

- **Leveraging presence in BI platform market and customer experience:** With a solid partner program, iWay offerings include software and hardware partners as well as implementation solution providers. In 2012, Information Builders has begun to see benefits from its 2010 expansion in sales force expansion, presence in Europe and competitive positioning in leveraging the large WebFOCUS customer base. "Adaptable" and "support" are two words
repeated every year and in Gartner’s surveys and client inquiries since October 2011. Customers indicate that the vendor offers a framework that supports existing architectures and extends them. The adapters and connectors are reported as almost peerless. Support is equally touted by value-added resellers, OEM partners and end users. Ease of use is a very close third-most-frequent comment.

Cautions

- **Mind share in the market:** Information Builders is not considered in bids for data integration tools as frequently as its market-leading competitors. Customers report that they often do not compare the vendor’s data integration solutions against major competitors such as Informatica, although, relatively, Information Builders has more participation in competitive bids involving IBM and SAP. iWay offerings work with a lack of relative mainstream recognition for its data integration solutions, often at departmental-level implementations for limited projects, with few users working with the tools.

- **Positioning and relevance in bid process:** Almost all of our respondents indicated that understanding business processes and technical standards was important. But, in iWay’s case, the normalized responses indicate that these factors were considered only moderately important (5 out of 7) more often than their competitors. This implies iWay customers tolerate variance from their standards when beginning with iWay products, and are more forgiving of the absence of industry vertical and business process experience. At the same time, customers reported that they expected more thorough and complete responses from iWay during the acquisition process, including a good understanding of iWay’s recommended implementation methodology and solid references. New iWay customers want a solid methodology and customer reference validation when adding iWay and Information Builders products to their environment, and their confidence grows through experience with this vendor.

- **Customer experience:** Almost every weakness cited by references of iWay products is related to the availability of skilled users and/or training resources for the tools. Some organizations established in-house training and built up their expertise in response. Duration of iWay projects from point of purchase of the vendor’s data integration tools to reaching production deployment reflects somewhat longer time to deliver than projects implemented with competitors’ tools. The skills gap is a significant driver that slowed deployment. Some customers reported licensing costs, with specific complaints that the development and test environments’ pricing was too high.

Microsoft

Located in Redmond, Washington, Microsoft ([www.microsoft.com](http://www.microsoft.com)) offers the following products: SQL Server Integration Services (SSIS) and BizTalk Server. The vendor’s customer base is estimated at more than 12,000.

**Strengths**

- **Solid coverage of core capabilities:** Microsoft’s main offering in the data integration tool market is SSIS, which is largely focused on bulk/batch-oriented data delivery. SSIS is in broad
deployment within the SQL Server customer base, addressing the range of core data integration functions most relevant to predominant market demand among the established installed base. Reference customers cite SSIS’s low TCO, speed of implementation, ease of use and tight integration with other capabilities of Microsoft SQL Server as main value points. With the addition of Data Quality Services (DQS) in SQL Server 2012 (where DQS can be deployed independently of SSIS), Microsoft now offers customers the ability to embed data quality operations in SSIS-driven data integration processes.

- **Track record and implementation scale**: Reference customers continue to recognize SSIS as a stable and maturing data integration tool capable of supporting enterprise-scale implementations in Microsoft-centric environments. Deployment scenarios are expanding beyond BI and data warehousing to broadening uses in support of data consistency between operational applications and data migrations. Wide use of SSIS by SQL Server customers has resulted in widely available community support, training and third-party documentation on implementation practices and approaches to problem resolution.

- **Brand awareness and market presence**: Microsoft’s size and global presence provide a huge customer base and a distribution model that supports both direct and channel partner sales. Customer references generally report a very positive support and service experience, including product documentation and online support mechanisms.

**Cautions**

- **Breadth of functionality**: Although Microsoft’s emphasis addresses core data integration requirements, its present product capability does not articulate a comprehensive data integration vision in the market. Implementations for supporting diverse data integration styles, such as data federation, replication-style data delivery and CDC, remain relatively limited. These functions are achievable via SQL Server functionality for SQL Server-oriented datasets, and use of functionality via technology partners for CDC and heterogeneous data replication. The product road map for Microsoft’s data integration capabilities promises to address frequently cited weaknesses for impact and lineage metadata management capabilities, to address current limitations in metadata discovery, lineage and dependency reporting.

- **Broad platform support**: The inability to deploy data integration workloads on non-Windows environments is a limitation for customers wishing to leverage the processing power of diverse hardware and operating system platforms.

- **Synergy across product portfolio**: Microsoft offers additional functionality in the related market of application integration, support for MDM solutions and, more recently, data quality offerings. However, implementations increasingly require reduced development efforts for data integration involving a broad product set, such as flexibly operating across multiple data delivery styles, and between SSIS and multiple products.
Oracle

Located in Redwood Shores, California, Oracle (www.oracle.com) offers the following products: Oracle Data Integrator, Oracle Data Service Integrator, Oracle GoldenGate and Oracle Warehouse Builder. The vendor’s customer base is estimated at more than 3,500.

Strengths

- **Breadth of functionality:** The efforts during the past two years of Oracle's unified product development approach for data integration offerings have delivered breadth and depth of functionality and experience. Oracle's data integration capabilities center on Oracle Data Integrator for bulk-batch data movement and Oracle GoldenGate for CDC and real-time data delivery. Oracle Data Service Integrator provides data federation capabilities. Oracle Warehouse Builder also supports bulk-batch data movement and is bundled with the Oracle DBMS. These primary data integration products, along with the message-oriented functionality of Oracle WebLogic, enable the vendor to support each of the major data delivery styles in this market.

- **Usability of core functionality across use cases:** References using Oracle Data Integrator like its ease of use, and these customers also exhibit a mix of use cases and project types. While the vast majority use the tools in support of BI, increasing activities are represented in enabling data consistency between operational applications and data migrations. Ongoing embedding of the Oracle Data Integrator technology across Oracle’s portfolio, along with extended knowledge modules, have enhanced data connectivity and transformation to support big data. Adoption of both Oracle Data Integrator and Oracle GoldenGate continues to grow within the Oracle DBMS and application customer base.

- **Addressing data challenges across a range of application- and data-oriented customer bases:** As main reasons for selecting Oracle’s tools in this market, reference customers perceived Oracle as a comprehensive provider for their potential data integration and other data management functionality requirements, such as data quality tools and MDM solutions. Oracle has a great deal of potential to grow its presence, revenue and share in the data integration tool market by cross-selling to its very large application, BI/analytics, DBMS and database appliance customer bases.

Cautions

- **Enabling product migration:** The increasing adoption of Oracle Data Integrator as a replacement for Oracle Warehouse Builder is raising demand in enterprises for an easier migration path. Oracle is addressing this need through plans to make available a migration wizard tool during the next year for supporting such migration efforts.

- **Complexity of integrated deployment across products:** Customers report that it is necessary to acquire multiple products to achieve a range of data integration functionality, and cited desires for simpler ways to achieve integrated deployment across Oracle's product set. While the development effort for deepening the integration of Oracle’s data integration products continues, Oracle Data Integrator, Oracle Data Service Integrator and Oracle GoldenGate adoptions reflect predominantly stand-alone deployments. Implementations that increasingly require the ability to interoperate flexibly between multiple data delivery styles are raising the
need for Oracle to have a cohesive offering. Tightened integration between products of multiple data delivery styles is necessary for meeting such demand.

- **Pricing perception and availability of skills:** Oracle’s reference customers perceived that the need for multiple products to achieve various desired functionality complicates pricing and drives up costs. The cost of the products, relative to their perceived value, and the availability of skills relating to the data integration product set are cited as challenges in customer experience related to the nonproduct aspects of adoptions.

**Pervasive Software**

Located in Austin, Texas, Pervasive Software ([http://integration.pervasive.com](http://integration.pervasive.com)) offers the following products: Data Integrator, Metadata Manager, Integration Hub, DataCloud and DataRush. The vendor’s customer base is estimated at more than 5,400.

**Note:** At the time this Magic Quadrant was published, Actian had made an unsolicited, nonbinding offer to acquire all outstanding stock of Pervasive Software. Pervasive’s Board of Directors instructed an independent financial advisor to solicit potential bids from interested parties and engage with them, including Actian, regarding their interest in acquiring Pervasive, although the company noted in an announcement that “there can be no assurance that the Board’s continued consideration of the Actian proposal or any alternative proposals that Pervasive may receive from any other parties will result in a transaction with Actian or any other party.”

**Strengths**

- **Revenue stability:** Pervasive demonstrates a track record of positive revenue growth with continued good capitalization. The percentage of revenue accrued from licenses as opposed to professional services (including support) is increasing, which is important for a small vendor because this represents annuity revenue in the future from the increased support revenue related to these new sales. Average deal sizes are small; however, in 2012, the average size increased by almost 20%.

- **Product depth and perceived value:** Pervasive offers tools that support bulk/batch-oriented data delivery and provide capabilities for real-time messaging-style solutions and SOA. As in 2011, customers continue to utilize the broad range of support for data sources and target types, 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 semistructured content repositories provided with the core products. Customer references almost universally indicate the pricing as highly favorable.

- **Cloud and big data:** In 2012, Pervasive has demonstrated its capability to serve as the data integration engine for organizations using SaaS (such as salesforce.com) and adding platform as a service (PaaS) for analytics (such as Google BigQuery) with its DataCloud product. In 2012, Pervasive Galaxy (a data integration marketplace for user-developed and Pervasive-vetted solutions) continued to grow, with more than 3,000 solution subscribers and hundreds of products.
Customer experience: Ease of use, intuitive interfacing, excellent product support and a rich set of connectors to platforms, sources and application data are all listed as positive experiences by customers. From an interfacing perspective, Pervasive introduced its version 10 Web browser user interface (UI), which emphasized business user/analyst collaboration on data integration efforts. Reduced incidences of software bugs are also cited with uses of version 10. A significant benefit of the low TCO and ease of integrating Pervasive’s solutions with existing in-house data integration architectures for focused solutions is indicated by references as well. Customers report that Pervasive’s functional fit and vertical experience (including business process knowledge) were important in their decision criteria. Pricing was also considered a major driver when selecting Pervasive.

Cautions

- **North America-centric:** The majority of Pervasive’s customer base is in North America (84%), and this has been consistent since 2009. While too small to be an effective global delivery vendor, there is a perceived weakness outside of its North American base (local skills, support, partners, references, etc.). Pervasive’s reach signifies a strength when approaching North American prospects, but its global footprint is limited from a broader market perspective. In our reference survey, a significant number of respondents indicated a desire for more European support.

- **Breadth of data integration styles and development tooling:** Implementation of Pervasive’s tools beyond physical bulk data movement remains limited. Support for CDC remains a relative weakness in comparison with major competitors in this market, although implementations for data synchronization are reflecting growing interests and adoptions. Pervasive does not provide data federation functionality, although support using, for example, data access and joins, is available. Other challenges, as cited by customer references, include support for metadata and modeling, uneven satisfaction of message oriented movement functionality, and synergistic deployment of data quality capability as part of data integration efforts. Rapid integration flow language (RIFL) is used in scripting jobs and execution. References report that the language has some functional gaps and that documentation is poor. Additionally, APIs and software development kits are the primary support for Java, and .NET is reported as unsupported by users, although with version 10, .NET interface components can be added.

- **Stability and version consistency:** Customers report a lack of transparency in the process flows and inconsistencies between the development and runtime environments, making testing difficult and complicating moves into production. However, customers report that, with version 10, the development and deployment environment is much improved.

- **Effectiveness of direct sales force:** Some clients indicate that Pervasive’s sales force has not adequately represented the tools capabilities and use-case applications. Some references report that they often must represent Pervasive to their internal peers regarding its functionality and capabilities, which, in effect, means they are intervening in the sales process on Pervasive’s behalf.
Located in Palo Alto, California, SAP (www.sap.com) offers the following products: Data Integrator, Data Services, NetWeaver Process Integration, Sybase Replication Server and Data Services OnDemand. The vendor's customer base is estimated at more than 10,000.

**Strengths**

- **Breadth of functionality:** SAP has collected a good range of functional capabilities in this market, spanning bulk-batch ETL, data federation, message-oriented data delivery and CDC/replication. The combination of these capabilities allows the vendor to attract customers seeking support for a variety of data integration patterns and use cases. The majority of deployments center around the Data Services product, which exhibits strong support for bulk-batch data delivery. Version 4.1 of Data Services added enhanced support for text processing, relevant in dealing with unstructured data, Hadoop and other big data sources. The product road map calls for synergies across more of the products via what the vendor calls its "Real-Time Data Platform," with the Hana in-memory database technology at the core, as well as an initial delivery of data integration PaaS functionality via Data Services OnDemand.

- **Synergy with data quality and governance capabilities:** Well-aligned with the significant market trend of convergence between data integration and data quality functionality, SAP tightly integrates data quality into its Data Services offering. The depth of integration is cited by reference customers as a strength. In addition, SAP’s product road map for Data Services and Information Steward aims to further extend this support and more actively embed information governance into data integration processes.

- **Market presence and growth:** As a large and incumbent (in many thousands of enterprises) provider of applications and analytics solutions, SAP can naturally capture significant revenue in this market by leveraging its broader customer base. Its success in doing so is reflected in above-average revenue growth in the data integration tools market, as well as an increased awareness and skill base for customers to leverage.

**Cautions**

- **Degree of integration across product set:** Despite good support for each of the main data integration styles, SAP’s offerings lack deep integration in the form of a common design/development environment and metadata repository. Products such as Replication Server, NetWeaver Process Integration and the former Data Federator (now functionality that is bundled with SAP’s BI offering) share few capabilities with Data Services and are deployed independently. Substantial product development work remains ahead of SAP to achieve the ideal of all data integration styles driven from a common set of metadata models, design environment and administrative tooling.

- **Diversity of deployment patterns and use cases:** With the strong emphasis SAP has placed on Data Services, it is natural that a majority of its data integration tool customer base is active with ETL-type workloads — supporting bulk-batch data flow for BI purposes. However, customers generally are not deploying the tools for additional use cases. In comparison to
competitors’ deployments, a recent sample of SAP reference customers exhibited a narrower range of usage, with limited examples of CDC and granular real-time data flow, data federation, and messaging-oriented deployments.

- **Customer support and service experience:** While comparative analyses over several years show that SAP is making improvements in these areas, its scores from the recent reference customer set are still lower than those for all major competitors. SAP’s ongoing improvements to its support portal appear to be partially helping in addressing customer concerns. In addition, several reference customers cited quality challenges with professional services engaged to deploy various aspects of the SAP data integration product set.

**SAS-DataFlux**

Located in Cary, North Carolina, SAS-DataFlux ([www.sas.com](http://www.sas.com)) offers the following products: Enterprise Data Integration Server, DataFlux Data Management Platform, DataFlux Federation Server, SAS Data Migration and SAS/Access. The vendor’s customer base is estimated at more than 13,000.

**Strengths**

- **Range of functionality:** SAS delivers functionality to address many of the most active segments of the data integration tool market, specifically ETL, data federation, CDC and real-time data flow. This breadth of capabilities positions SAS well to engage in competing for contemporary data integration tool demand amid larger and more established vendors in this market.

- **Depth of integration with data quality functionality:** The substantial strength of the DataFlux data quality capabilities is cited by SAS reference customers as a main value point and reason for their selection of the vendor’s data integration tools. Consistent with market demand and convergence trends, SAS continues to provide seamless integration that enables customers to embed data quality operations into their data integration workloads. More than 80% of a recent reference customer sample set indicated using these capabilities.

- **Size, viability and global market presence:** With a long track record in related markets, a very large customer base and a local presence in more countries than most of its competition, SAS has a significant base of strength from which to grow in this market. During 2011, Gartner estimates that the vendor grew at slightly higher than the market average growth rate. SAS can maintain and even accelerate this growth by targeting a greater diversity of data integration tool deployment patterns and use cases.

- **Market vision and product road map:** Recent delivery of new versions of Enterprise Data Integration Server, DataFlux Data Management Platform and DataFlux Federation Server align well with key market demand trends, such as support for big data environments, cloud enablement, richer metadata management functionality, and improved ease of deployment and manageability. Specifically, current and future releases offer expanded support for in-database transformation execution, connectivity to increasingly popular big data technologies such as Hadoop and numerous usability enhancements.
Cautions

- **Diversity of deployment patterns and use cases:** With SAS’ strategy and experience base being rooted in analytics, it is natural that deployments of its data integration tools heavily reflect that bias. The reference customer sample shows far less diversity in use cases than other market leaders, with the vast majority of customers indicating they have deployed the tools in support of BI, with far less activity around other use cases. In addition, the customer base also reflects heavy usage for bulk-batch data delivery (ETL), but limited usage for other data integration styles. As demand has already expanded and is rapidly growing beyond ETL, SAS will need to rapidly grow its experience base and proof points for other use cases and delivery styles.

- **Perception of pricing and value relative to cost:** Customers and prospects continue to cite SAS’ product licensing approach and price points as a challenge. For many customers, the perception of high price, an inflexible licensing model and the complexity of the technology leads to a feeling of dissatisfaction regarding value and TCO. To start to address this challenge, SAS recently established a new set of use-case-specific bundles that enable customers to purchase only the subset of the portfolio most relevant to their needs. For customers with deeper SAS technology experience, particularly longtime SAS customers, complexity appears to be less of a concern and perceptions of TCO are more positive.

- **Recent organization and strategy changes:** In 4Q11, the DataFlux sales force was absorbed into the SAS sales organization, potentially diminishing the focus on the DataFlux brand and technologies, as distinct from SAS’s analytics offerings. SAS recently announced a reorganization that eliminates the DataFlux organization as a stand-alone entity and combines all remaining DataFlux functions into SAS. This move raises questions about the importance of the DataFlux brand and SAS’s desire to focus on nonanalytics information infrastructure opportunities. SAS states that the rationale for this organizational change is to increase its scale in the market by using SAS’s substantial resources and customer base to better compete against other large incumbent providers.

**Syncsort**

Located in Woodcliff Lake, New Jersey, Syncsort ([www.syncsort.com](http://www.syncsort.com)) offers the product DMExpress. The vendor’s customer base is estimated at more than 1,000.

**Strengths**

- **Bulk-batch strength and cost of ownership:** Syncsort continues to provide high-performance bulk-batch (ETL) capabilities with attractive cost of ownership and faster time to implementation than many competitors. These strengths continue to benefit the vendor, given the demand for targeted functionality and superior time to value. Although DMExpress is less mature in advanced functional capabilities, such as metadata management and data quality, its ease of use and scalability prompt customers to select it for targeted implementation scenarios. The latest release of DMExpress adds expanded real-time support via interaction with message...
queues, deeper integration with Hadoop and expanded connectivity options — all items that align with current and emerging market demand.

- **Track record and responsiveness:** With 40 years' experience in high-performance data processing, sustained profitability, and a large and loyal customer base, Syncsort has a solid foundation on which to grow its market presence. The vendor continues to evolve its management team and to strengthen its organization in general, by attracting experienced resources from competitors. Syncsort offers a high quality of service and support, and many customers identify product technical support and their overall relationship with the vendor as positives. The combination of these characteristics and the increased demand for targeted and cost-effective solutions has contributed to the vendor’s above-average revenue growth rate and strong customer base expansion in this market.

- **Expanding range of use cases:** Syncsort has historically been adopted to resolve performance bottlenecks in ETL processes supporting BI and analytics. Recent reference customer samples show a clear trend toward broader adoption, with many customers now using the technology to fuel data migration, MDM and operational integration needs.

**Cautions**

- **Metadata management functionality compared with the competition:** Syncsort continues to add metadata capabilities with each new release. However, reference customers continue to cite metadata management as an area of relative weakness. In particular, with Syncsort’s expansion into big data environments, the increased distribution of information assets and complexity of such environments means that metadata discovery, modeling and dynamic use of metadata to drive runtime execution of data integration workloads will be critical.

- **Capabilities and product road map for breadth of data integration styles:** Syncsort’s data integration roots are squarely focused on bulk-batch and physical data movement, and the vendor’s strengths and product road map for core capabilities continue to focus there. While the product road map includes expanded support for real-time data flow, this will be achieved via connectivity to things outside the Syncsort technology set, rather than inherent within it. Organizations seeking providers with a breadth of data integration styles and limited capabilities to integrate disparate solutions will find this to be a weakness.

- **Release management and quality assurance:** While the Syncsort customer base rates the vendor positively overall for product support and customer service, reference customers do occasionally cite challenges with bugs in new releases, as well as technical complexity of version upgrades.

**Talend**

Located in Los Altos, California, and Suresnes, France, Talend ([www.talend.com](http://www.talend.com)) offers the following products: Talend Open Studio for Data Integration, Talend Open Studio for Big Data and Talend Enterprise Data Integration. The vendor’s customer base is estimated at more than 2,500.
Strengths

- **Breadth of functionality and integration**: The evolution of Talend Unified Platform improved the synergy between Talend's data integration and application integration capabilities, which aligns with demand trends. Integrated product sets built on a single code base provide reduced complexity and enhanced customer experience in implementations, such as efforts for modeling data integration processes.

- **Usability of core functionality**: Reference customers generally report ease of use and speed of deployment as strengths of Talend's technology. They also consider the configurability of Talend’s tools to be flexible enough to adapt to the business requirements of data integration processes. The availability of artifacts built by Talend’s developer and user community has contributed to high developer productivity.

- **Cost model**: Most Talend customers are attracted to the tool because of its low price relative to most competitors. The combination of the free Open Studio for Data Integration product and modest subscription pricing for Enterprise Data Integration represent an attractive option for customers seeking lower-cost options and continues to generate positive customer perceptions of value relative to cost.

- **Links to related data management capabilities**: As part of its portfolio that the data integration functionality is able to leverage, Talend offers data quality functionality, enterprise service bus and MDM solutions. Talend’s ability to position a broad set of data management capabilities that are able to interoperate with data integration processes is well-aligned with demand trends, along with supporting requirements for processing of big data, interacting with cloud data sources and deploying on cloud infrastructure.

Cautions

- **Implementation scope and vendor mind share**: Talend’s tools are predominantly deployed for bulk/batch-oriented data delivery, with limited visibility in the market for supporting demand trends across a broad range of data delivery needs. Opportunities remain to increase the range of adoptions, such as using Talend for message-based data delivery and granular, low-latency data capture and propagation. The predominant appeal of Talend’s tools is established with the developer community, but traction for engaging IT management in customer organizations is more of a challenge for the vendor, relative to its competition.

- **Product reliability**: Feedback on Talend’s technology in this market indicated concerns related to product stability, particularly for new releases. References indicated difficulty in expanding implementations for a large-scale environment, with concerns regarding reliability, bugs, incidences of recurring bugs formerly fixed and limited documented guidance. Talend is attempting to address these challenges through improvements in its testing and quality assurance processes, as well as with more formalized and documented processes and timelines for release management.

- **Customer support and service experience**: Despite a generally positive perception of the capabilities and value of the technology, Talend references report an overall decline in quality of
service and support. Areas of challenges cited include support for issue resolution, product upgrade, technical help for using added or enhanced components, and documentation. These are common issues for vendors that evolve as fast-growing businesses, but at times are challenged to keep up with customer demand, and can adversely affect Talend’s ability to capture and retain enterprise-level deployments.

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.

Added
- No vendors have been added to this Magic Quadrant.

Dropped
- No vendors have been dropped from this Magic Quadrant.
- iWay Software now appears as Information Builders-iWay Software.

Inclusion and Exclusion Criteria

To be included in this Magic Quadrant, vendors must possess within their technology portfolio the subset of capabilities identified by Gartner as the most critical from within the overall range of capabilities expected of 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 CDC
- 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 had to 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 tool customers in at least two of the major geographic regions (North America, Latin America, Europe, the Middle East and Africa, and the Asia/Pacific region).

We excluded vendors that focus on only one specific data subject area (for example, the integration of customer data only), a single industry, or on 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 our analysis. Market trends during 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, data federation only) and 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 tool market, and have limited revenue and few production customers.

The following vendors are sometimes considered by Gartner clients, along with those appearing in this Magic Quadrant, when deployment needs match their specific capabilities (this list also includes recent market entrants with relevant capabilities). This list is not intended to be comprehensive:

- **Ab Initio**, Lexington, Massachusetts ([www.abinitio.com](http://www.abinitio.com)) — Application development toolbox (Co>Operating System) and component library for metadata management and data integration.
- **Adeptia**, Chicago, Illinois ([www.adeptia.com](http://www.adeptia.com)) — ETL Suite for bulk/batch-oriented data integration patterns, and other integration products, such as ESB Suite for application-to-application data consistency.
- **Alebra Technologies**, New Brighton, Minnesota (www.alebra.com) — Parallel Data Mover for cross-platform file and database copying and sharing.

- **Altibase**, Palo Alto, California (www.altibase.com) — Data Stream Middleware for supporting event-based data delivery for application and data integration.

- **Apata**, Walnut, California (www.apata.com) — Open-source data integration tools focused on ETL and data federation scenarios.

- **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.

- **Astera Software**, Simi Valley, California (www.astera.com) — Provides ETL, CDC and B2B data integration capabilities via the Centerprise Data Integrator product.

- **Attunity**, Burlington, Massachusetts (www.attunity.com) — A range of data-integration-oriented products, including adapters (Attunity Connect), CDC (Attunity CDC), replication (Attunity Replicate) and data federation (Attunity Federate) for various platforms and database/file types.

- **Axway**, Phoenix, Arizona (www.axway.com) — Offers software and services, such as B2B data integration capabilities in support of various data sources, including variants of XML and EDI.

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


- **C3 Business Solutions**, Melbourne, Australia (http://c3businesssolutions.com) — Offers a simplified set of tools for consolidating data, validating data and acquiring data from sources including Excel, Access, comma-separated values (CSV), and fixed-width and XML-standard data formats.

- **CA Technologies**, Islandia, New York (www.ca.com) — Advantage Data Transformer provides ETL-oriented data integration. InfoRefiner provides replication and propagation capabilities for mainframe data repositories.

- **CDB Software**, Houston, Texas (www.cdbsoftware.com) — CDB/Delta provides CDC and replication capabilities for IBM DB2 on the z/OS platform.

- **Composite Software**, San Mateo, California (www.compositesw.com) — Composite Data Virtualization Platform provides data federation capabilities and supports the delivery of data access services.

- **DataStream**, Korea ([www.datastreams.co.kr](http://www.datastreams.co.kr)) — Provides capabilities for ETL, CDC and near-real-time integration of data via a range of offerings, including TeraStream and DeltaStream.

- **Datawatch**, Chelmsford, Massachusetts ([www.datawatch.com](http://www.datawatch.com)) — The Monarch Data Pump product provides ETL functionality with a bias toward extracting data from report text, PDF files, spreadsheets and other less-structured data sources.

- **DBSync**, Brentwood, Tennessee ([www.mydbsync.com](http://www.mydbsync.com)) — Offers the dbsync integration platform for integration of data between databases and applications, both on-premises and via SaaS.

- **Dell Boomi**, Berwyn, Pennsylvania ([www.boomi.com](http://www.boomi.com)) — Acquired by Dell, Boomi provides technology for integration of data to and between SaaS-based applications and data sources.

- **Denodo Technologies**, Palo Alto, California, Madrid and London ([www.denodo.com](http://www.denodo.com)) — The Denodo Platform provides data federation and mashup enablement capabilities for joining structured data sources with data from websites, documents and other less-structured repositories.

- **DFI**, Dublin, Ireland ([www.datafusion.ie](http://www.datafusion.ie)) — Positioned as a data and content fusion technology, the Infinity solution supports federated approaches to data integration.

- **Diyotta**, Charlotte, North Carolina ([www.diyotta.com](http://www.diyotta.com)) — Focuses on extraction, loading, transformation (ELT)-style workloads leveraging database appliances, such as IBM Netezza, via its Diyotta offering.

- **ETI**, Austin, Texas, acquired by Versata ([www.versata.com](http://www.versata.com)) — The ETI solution has a code-generation architecture focused on bulk/batch-oriented data movement.

- **ETL Solutions**, Bangor, U.K. ([www.etlsolutions.com](http://www.etlsolutions.com)) — Transformation Manager provides a metadata-driven toolset for the authoring, testing, debugging and deployment of various data integration requirements.

- **Gamma Soft**, Ivry-sur-Seine, France ([www.gamma-soft.com](http://www.gamma-soft.com)) — Supports CDC and data replication for various heterogeneous data source types via a data distribution product.

- **GSS Group**, Markham, Ontario, Canada ([www.gssgrp.com](http://www.gssgrp.com)) — Vigilance Xpress is a Web-based solution for SQL Server data marts supporting Microsoft’s .NET Framework, SQL Server and SQL Server Reporting Services.

- **GT Software**, Atlanta, Georgia ([www.gtsoftware.com](http://www.gtsoftware.com)) — The Ivory Suite product line supports connectivity to, and integration with, mainframe-based data sources of various types.

- **HiT Software**, San Jose, California ([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 in 2010, but still operates under the HiT brand.

- **HVR Software**, Amsterdam, The Netherlands ([www.hvr-software.com](http://www.hvr-software.com)) — The HVR Realtime Data Integration product supports CDC, propagation and replication patterns against various data source and platform types.
Innovative Routines International (The CoSort Company), Melbourne, Florida ([www.iri.com](http://www.iri.com)) — Its Fast Extract and SortCL tools provide for the rapid unloading and transformation of data in Oracle and IBM DB2 databases in support of ETL processes.


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

JumpMind, Columbus, Ohio ([www.jumpmind.com](http://www.jumpmind.com)) — The open-source SymmetricDS product set offers data replication capabilities for a variety of relational DBMS environments.

Kapow Software, Palo Alto, California ([www.kapowsoftware.com](http://www.kapowsoftware.com)) — The Kapow Katalyst and Kapow Kapplets provide a browser-based approach to integrating data across on-premises and cloud-based applications and websites.

Kinetic Networks, San Francisco, California ([www.kineticnetworks.com](http://www.kineticnetworks.com) and [www.ketl.org](http://www.ketl.org)) — Supports ETL capabilities via KETL, an open-source data integration tool.

Metamatrix, Dedham, Massachusetts, acquired by Versata ([www.versata.com](http://www.versata.com)) — Follows a semantics-based approach to the creation of data services and federated views of data across multiple data sources.


Pentaho, Orlando, Florida ([www.pentaho.com](http://www.pentaho.com) and [kettle.pentaho.com](http://kettle.pentaho.com)) — A provider of open-source BI solutions, Pentaho offers data integration tools as part of its portfolio by leveraging the Kettle open-source project and providing services and support.

Pitney Bowes Software, Stamford, Connecticut ([www.pb.com](http://www.pb.com)) — A software and service division of customer communications management vendor Pitney Bowes, it competes in the data integration tool market with the Spectrum Technology Platform, which includes ETL capabilities.

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

QlikTech, Radnor, Pennsylvania ([www.qlikview.com](http://www.qlikview.com)) — Acquired by QlikTech, the QlikView Expressor product is based on a semantic approach to designing and managing data integration processes.

Quest Software, Aliso Viejo, California ([www.quest.com](http://www.quest.com)) — Acquired by Dell in 3Q12, Quest Software’s SharePlex provides real-time replication support for Oracle DBMS environments and is aimed primarily at high-availability applications.

Red Hat, Raleigh, North Carolina ([www.redhat.com](http://www.redhat.com)) — The Teiid products support the creation of data models and model-driven federated views of data.
- **RedPoint**, Wellesley Hills, Massachusetts ([www.redpoint.net](http://www.redpoint.net)) — Acquired by DataLever in 4Q11, the vendor offers RedPoint Data Management supporting ETL workloads and integrated data quality capabilities.

- **Relational Solutions**, Westlake, Ohio ([www.relationalsolutions.com](http://www.relationalsolutions.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 Feature Manipulation Engine (FME) technology platform delivers ETL capabilities for spatially oriented data sources commonly used in geographic information system applications.

- **SchemaLogic**, Kirkland, Washington ([www.schemalogic.com](http://www.schemalogic.com)) — SchemaLogic Enterprise Suite enables the creation and maintenance of data models and business models, and the ability to propagate models and data across applications.

- **Scribe**, Manchester, New Hampshire ([www.scribesoft.com](http://www.scribesoft.com)) — Provides data migration and integration solutions supporting deployments of business applications, with a focus on Microsoft Dynamics.

- **Sesame Software**, Los Angeles, California ([www.sesamesoftware.com](http://www.sesamesoftware.com)) — Offers the Relational Junction product suite for synchronization of data between popular packaged and SaaS applications, with a focus on ETL-oriented patterns of integration.

- **SnapLogic**, San Mateo, California ([www.snaplogic.com](http://www.snaplogic.com)) — SnapLogic Integration Platform 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 Software AG product line provides process-oriented integration capabilities.

- **SQData**, Addison, Texas ([www.sqdata.com](http://www.sqdata.com)) — The SQData product line provides CDC and ETL functionality focused on delivering mainframe data sources and popular relational DBMSs.

- **Stone Bond**, Houston, Texas ([www.stonebond.com](http://www.stonebond.com)) — Supports both federated/virtualized data integration and physical data movement via the Enterprise Enabler technology set.

- **Sypherlink**, Dublin, Ohio ([www.sypherlink.com](http://www.sypherlink.com)) — A subsidiary of Saama Technology, the vendor provides metadata discovery and mapping via Harvester, and access to data sources for the creation of integrated views via Exploratory Warehouse.

- **Vision Solutions**, Irvine, California ([www.visionsolutions.com](http://www.visionsolutions.com)) — Real-time database replication functionality is provided by the Double-Take Share product.

- **WhereScape**, Portland, Oregon ([www.wherescape.com](http://www.wherescape.com)) — WhereScape Red enables the rapid creation and maintenance of data warehouses, including ETL functionality.
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 impact 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 tool 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.** This refers to the magnitude of the vendor’s financial resources, and the continuity of its people and technology. We place a High weighting on this criterion, which affects the practical success of the business unit or organization in generating business results.

- **Sales Execution/Pricing.** This refers to the effectiveness of the vendor’s pricing model, and the effectiveness of its direct and indirect sales channels. This criterion is weighted High due to the sustained scrutiny on cost issues and the highly competitive nature of this market.

- **Market Responsiveness and Track Record.** This is the degree to which the vendor has demonstrated the ability to respond successfully to market demand for data integration capabilities over an extended period, and how well the vendor acted on the vision of prior years.

- **Marketing Execution.** This is the overall effectiveness of the vendor’s marketing efforts, which impacts its mind share, market share and account penetration. It also refers to the ability of the vendor to adapt to changing demands in the market by aligning its product message with new trends and end-user interests.

- **Customer Experience.** This refers to the level of satisfaction expressed by customers with the vendor’s product support and professional services; their overall relationship with the vendor; and their perceptions of the value of the vendor's data integration tools relative to costs and expectations. In this iteration of the Magic Quadrant, we have retained a weighting of High for this criterion, to reflect buyer's continued scrutiny of these considerations as a result of economic conditions and budgetary pressures. Analysis and rating of vendors against this criterion is driven directly by responses from customers who participated in the reference customer survey that Gartner conducted as part of the process of developing this Magic Quadrant.
### Table 1. Ability to Execute Evaluation Criteria

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weighting</th>
</tr>
</thead>
<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>
</tr>
<tr>
<td>Market Responsiveness and Track Record</td>
<td>Standard</td>
</tr>
<tr>
<td>Marketing Execution</td>
<td>Standard</td>
</tr>
<tr>
<td>Customer Experience</td>
<td>High</td>
</tr>
<tr>
<td>Operations</td>
<td>No rating</td>
</tr>
</tbody>
</table>

Source: Gartner (October 2012)

### Completeness 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 Gartner’s 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.** This is the degree to which the vendor leads the market in recognizing opportunities represented by trends and new directions (technology, product, services or otherwise), and its ability to adapt to significant market inertia and disruptions. Given the dynamic nature of this market, this criterion receives a weighting of High.

- **Marketing Strategy.** This refers to 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.** This refers to the alignment of the vendor’s sales model with the ways in which customers’ preferred buying approaches will evolve over time.

- **Offering (Product) Strategy.** This is the degree to which the vendor’s product road map reflects demand trends in the market, fills current gaps or weaknesses, and includes developments that 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 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 receives a weighting of High.

- **Business Model.** This refers to the overall approach the vendor takes to execute its strategy for the data integration tool market.

- **Vertical/Industry Strategy.** This refers to the degree of emphasis the vendor places on vertical solutions, and the vendor’s depth of vertical market expertise.

- **Innovation.** This refers to the degree to which the vendor demonstrates creative energy in the form of enhancing its practices and product capabilities, as well as introducing thought-leading and differentiating ideas and product plans that have the potential to significantly extend or reshape the market in a way that adds real value for customers. Given the pace of expansion of data integration requirements and the highly competitive nature of the market, this criterion receives a weighting of High.

- **Geographic Strategy.** This refers to the vendor’s strategy for expanding its reach into markets beyond its home region/country, and its approach to achieving global presence (for example, its direct local presence and use of resellers and distributors).

### Table 2. Completeness of Vision Evaluation Criteria

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Understanding</td>
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<tr>
<td>Marketing Strategy</td>
<td>Standard</td>
</tr>
<tr>
<td>Sales Strategy</td>
<td>Standard</td>
</tr>
<tr>
<td>Offering (Product) Strategy</td>
<td>High</td>
</tr>
<tr>
<td>Business Model</td>
<td>Standard</td>
</tr>
<tr>
<td>Vertical/Industry Strategy</td>
<td>Low</td>
</tr>
<tr>
<td>Innovation</td>
<td>High</td>
</tr>
<tr>
<td>Geographic Strategy</td>
<td>Standard</td>
</tr>
</tbody>
</table>

Source: Gartner (October 2012)

### Quadrant Descriptions

#### Leaders

Leaders in the data integration tool market are frontrunners 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 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 to which data integration tools can bring significant value. Examples of deployments that span multiple projects and types of use cases are common among Leaders' customers.

Challengers

Challengers are well-positioned in light of the key trends in the data integration tool market, such as the need to support multiple styles of data delivery. However, they may not provide a comprehensive breadth of functionality, or 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 tool 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 generally have substantial customer bases, although 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 have a solid understanding of emerging technology and business trends, or a position that is well-aligned with current demand, but they lack market awareness or credibility beyond their customer base or a single-application domain. Visionaries may also fail to provide a comprehensive set of product capabilities. They may be new entrants lacking the installed base and global presence of larger vendors, although they could also be large, established players in related markets that have only recently placed an emphasis on data integration tools. The growing emphasis on aligning data integration tools with the market's demand for interoperability of delivery styles, convergence of related offerings (such as data integration and data quality tools), metadata modeling and support for emerging analytics environments, among other things, is creating fresh challenges for which vendors must demonstrate vision.

Niche Players

Niche Players have gaps in both their Completeness of Vision and Ability to Execute, often lacking key aspects of product functionality and/or exhibiting a narrow focus on their own architectures and installed bases. 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.
Context

Data integration capabilities are at the heart of powering the frictionless sharing of data across all organizational and system boundaries. Pressures grow in this market as vendors are challenged to address demand trends for innovation on two perspectives — the ability to enhance traditional practices and to introduce new models and practices.

Demand trends in 2012 are requiring vendors to increase flexibility in approaching comprehensive data integration needs and demonstrating alignment to expectations on time to deployment, range of data integration patterns, sentiment for cost and delivery models, and synergy with a broad set of data management initiatives. Business imperatives to confront new information challenges are driving the need for a realignment of technology vision in this market. Meanwhile, IT leaders continue to emphasize requirements for high-quality customer service and support, and for extending implementations beyond analytics-related uses to support operational data consistency, data migration, cloud-related integration and data services in SOA initiatives.

Many of the vendors in this market exhibit offerings that are competing at higher levels of maturity; however, at the same time, buyers are becoming more ambitious about realigning and revisiting their data integration focus, in addition to obtaining core functions, as requirements for better alignment and interoperability between capabilities grow. The competitive landscape reflects vendors’ pursuit of a more comprehensive offering strategy to support a broad range of use cases and to capitalize on new demand. IT leaders are demanding synergy between functions, performance and scalability in data integration tools, so that they operate well with the same vendor’s technology stack and, increasingly, interoperate with data management initiatives in areas such as data quality, MDM and metadata management, as well as cope with the big data explosion in the extreme level of information challenges.

As buyers seek to address data integration as a critical aspect of a coherent information management capability, the need to integrate disparate data sources and new data types into a cohesive and usable set of information will continue to grow, with data integration capabilities becoming a critical part of an information capabilities framework. While the demand of enterprise-class usage is the mainstay of the data integration tool market, limited-scope offerings for specialized or project-oriented capabilities are seeing resurging interest in organizations pursuing dedicated data delivery styles or those in the early stages of implementing their data integration strategy.

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.

Data integration capabilities are at the heart of the information capabilities framework (see "The Information Capabilities Framework: An Aligned Vision for Information Infrastructure") and will power the frictionless sharing of data across all organizational and system boundaries. 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. As such, data integration is a critical component of an overall enterprise information management (EIM) strategy and information infrastructure (see "Gartner’s Enterprise Information Management Framework Evolves to Meet Today’s Business Demands" and "Information Management in the 21st Century") that can address these data-oriented issues.

Gartner estimates that the data integration tool market was $1.9 billion at the end of 2011, an increase of 15.3% from 2010. While the forecast growth in 2012 is expected to slow considerably as the uncertain macroeconomic environment drives increased caution in organizations, data integration is considered a strategic priority by many organizations and the market is seeing some of the highest growth rates of all the enterprise software markets. A projected five-year compound annual growth rate of nearly 9.0% will bring the total to more than $2.8 billion by 2016 (see "Forecast: Enterprise Software Markets, Worldwide, 2011-2016, 3Q12 Update").

The market for data integration tools has been exhibiting substantial offerings of increasing maturity that are becoming capable of the comprehensive functionalities, high performance and scalability needed to support enterprise-scale data integration. Buyers in this market continue to expand their usage and seek vendor technologies to serve a range of data integration capabilities applicable to a variety of use cases. This competitive landscape reflects vendor pursuit of a more comprehensive set of product offerings that together form their data integration tool portfolio, for supporting a broad range of uses and capitalizing on new demand.

Changes in the positioning of vendors in this iteration of the Magic Quadrant are driven not only by vendors' activities in delivering new product capabilities, but also their degree of success in targeting contemporary demands.

**Momentum for Enterprise-Scale Data Integration Approaches Continues**

With the ongoing evolution of the data integration tool market, organizations that recognize the value of a comprehensive data integration strategy are demonstrating proficiencies for standardizing enterprise-scale tools and skills to address a diversity of data integration problem types using a range of architectural styles and patterns of data delivery. Such adoptions have reduced the number of tactical data integration tools with a chosen or enforced enterprise standard. Organizations in this category are delivering data in ways beyond conventional bulk/batch movement, to include nonbulk approaches for replication, federation and message-based integration. In moving away from having data integration requirements met via disparate interfaces and tools, forward-thinking enterprises are beginning to pursue the architectural concept of a data integration hub to address these needs (see "Data Integration Hubs: Drivers, Benefits and Challenges of an Increasingly Popular Implementation Approach"). Also gaining interest is the approach of service orientation to address needs for the consistent, yet flexible, delivery of data. Enterprises that are maturing in their adoption of data integration tools are emphasizing common design tooling, metadata and runtime architecture applicable across data integration efforts. Vendors with established track records and strong leadership exhibit support for comprehensive data integration patterns — a core requirement in this market segment — while providing high-quality service and support to their customers and having a perceived high value.
Project-Oriented Data Integration Approaches Regain Interest

While the demand for enterprise-class usage has supplanted former, special-purpose-built data integration tool submarkets, such as ETL, and limited-scope offerings for specialized capabilities, such as data synchronization and migration, a resurgence of demand in organizations pursuing dedicated data delivery styles is gathering momentum. A growing number of organizations without a standardized data integration approach are evaluating best-of-breed offerings, and have engaged in inquiries with Gartner during the past year regarding specialized vendors with tools for supporting specific data delivery capabilities. Some enterprises that have implemented an enterprise standard for their data integration tools are seeking to support new business requirements, such as a short-term marketing campaign or interacting with data in a cloud service, and desire to expand data integration functions via ways or technologies that accelerate time to deployment, with increased ease of use and at reduced implementation costs. The span across Challengers, Visionaries and relatively recent Leaders on the Magic Quadrant includes providers that are still building their brand strength in this market and are in the evolutionary stages of their technology toward a comprehensive, well-integrated data integration toolset. This group of vendors is well-positioned to capture the market demand of organizations that are growing their proficiency in data delivery and use cases, and are in need of a vendor that is expanding its toolset at a pace that matches their enterprise needs. Niche Players find applicability among and appeal to some enterprises in this buyer category, due to interest in the characteristics of specialized functionality (for example, ETL only) and the fact that buyers are not averse to tool brand recognition in the market. Buyers in this category are well-prepared to deploy and maintain data integration tools from multiple vendors.

Adoptions Seek to Benefit From Cost and Delivery Models

Approaches to the pricing and licensing of data integration tools, as well as the delivery models through which they are deployed, continue to evolve. In addition to the increasing interest in low-cost solutions (commercial or open source) due to budgetary constraints and the perception of high-cost models for solutions offered by some of the larger and incumbent competitors, an increasing number of organizations are seeking as-a-service delivery models for focused data integration capabilities, such as data integration PaaS, which operate on a cloud infrastructure and offer pay-per-use pricing, and are gaining early adoption (see "Data in the Cloud: Harness the Changing Nature of Data Integration"). Driven by diversifying business demands, providers of data integration technologies are adapting to make new delivery models available. Organizations continue to apply lessons learned from the economic challenges of recent years to scrutinize their investments and optimize their costs. Interest in low-cost, rapid-time-to-value and "good enough" data integration capabilities are spurring the emergence of alternative ways of pricing and delivering data integration technologies through open-source and cloud-based models.

Demand for Synergy Between Data Integration and the Broad Portfolio of Data Management Initiatives

A growing emphasis on aligning strategy and future direction in market understanding, offering strategy, and the degree of adaptability to capitalize on new challenges are driving a renewed vision and focus among buyers and providers. During the past three to five years, many providers have expanded their support for data integration offerings with more comprehensive data delivery styles,
tightened links to data quality tools and an extended focus toward a model-driven approach that leverages common metadata across their technology portfolio. In addition, overlaps in some areas of data integration and application integration represent opportunities — for IT leaders responsible for integration infrastructure — to pursue both disciplines in a synergistic way. Evolving patterns of how data is produced and consumed are creating new expectations in buyers. While offerings in this market are reaching a higher level of maturity, buyers are exhibiting renewed vigor and ambition — toward aligning and revisiting their data integration focus, in addition to obtaining core functions — as the need for better alignment and interoperability among capabilities grows. Enterprises are beginning to seek abilities to exploit big data for use in business decisions and processes. This involves integrating an extreme level of information from emerging sources (such as big data and unstructured data or content), and also combining disparate data sources and new data types into a usable, cohesive set. Growing activities among data integration technology providers are seen in tool enhancements, to address trends and market demand and to provide early offerings.

**Extending Data Integration Capabilities to a Wide Range of Use Cases**

Use cases for data integration tools are becoming more diversified as buyers procure tools with the intent to support a wide range of projects and initiatives. While the established deployment of data integration tools for BI, analytics and data warehousing initiatives remains most significant, the growing complexity in usage scenarios and requirements for diverse use cases are fueling demand. Uses of federated views of data to leverage distributed enterprise data in the logical data warehouse are gaining early interest to support ways to aggregate and provide data rapidly to the business. Data migrations in support of modernization and consolidation initiatives represent a fast-growing area of demand, with data integration capabilities (and the related technology area of data quality) providing critical infrastructure for such efforts. As MDM programs increase in number and scope, organizations also seek to apply investments in data integration technology to those initiatives, because movement, transformation and federation of master data is a fundamental component. Furthermore, the synchronization of data between operational applications and across enterprise boundaries (between trading partners or between on-premises and cloud-based applications) also represents an area of growth. Increasingly, end-user organizations are deploying data integration services beneath (and in support of) wider SOA initiatives.

Buyers are increasingly seeking to align their tool choices to resonate with a vendor's understanding of market leadership, to which the vendor recognizes opportunities and sets direction and positioning for market inertia to capitalize on trends and survive disruptions. In addressing demand trends for innovation, pressures grow in this market for vendors to enhance traditional practices, as well as introduce new models and practices. Emphasis on the usability of tools is intensifying as part of enterprises' propensity for vendor selection in favor of ease of use and flexibility to adapt to changes that enable both business and IT resources to work readily with the tools.

A growing focus among vendors on aligning their strategy with what they understand to be the direction of the market, on product strategy and on gaining the adaptability needed to capitalize on new demand have led to some vendors improving their vision. The vision of some vendors, however, has reduced in relative terms. While overall strengthening of vendors' offerings continues, buyers are becoming more ambitious about realigning and revisiting their data integration focus, in
addition to obtaining core functions, as requirements for better alignment and interoperability between capabilities grow.

Overall customer service and support and pricing approaches, as well as the perception of the customer base regarding value relative to cost models, caused some vendors to show an increased Ability to Execute, while others experienced a reduced ability in relative terms.

Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Magic Quadrants and MarketScopes: How Gartner Evaluates Vendors Within a Market"

"Toolkit: RFP Template for Data Integration Tools"

"Data Integration Hubs: Drivers, Benefits and Challenges of an Increasingly Popular Implementation Approach"

"Best Practices in Organizing for Data Integration Shared Services"

"Hype Cycle for Information Infrastructure, 2012"

"Magic Quadrant for Data Quality Tools"

"Data in the Cloud: Harness the Changing Nature of Data Integration"

Evidence

The analysis in this research is based on information from a number of sources, including, but not limited to:

- Extensive data on functional capabilities, customer base demographics, financial status, pricing and other quantitative attributes gained via an RFI process engaging vendors in this market.
- Interactive briefings in which the vendors provided Gartner with updates on their strategy, market positioning, recent key developments and product road map.
- A Web-based survey of reference customers provided by each vendor, which captured data on usage patterns, levels of satisfaction with major product functionality categories, various nontechnology vendor attributes (such as pricing, product support and overall service delivery) and more. In total, 392 organizations across all major world regions provided input on their experiences with vendors and tools in this manner.
- Feedback about tools and vendors captured during conversations with users of Gartner’s client inquiry service.
- Market share estimates developed by Gartner’s Technology and Service Provider research unit.
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.
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