

Magic Quadrant for Data Quality Tools

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Digital business and disruptive technologies continue to fuel solid growth in the data quality tools market, alongside traditional cost reduction and process optimization efforts. This Magic Quadrant will help CIOs, chief data officers and information leaders find the best vendor for their needs.

Market Definition/Description

Data quality assurance is a discipline that focuses on ensuring data is fit for use in business processes. These processes range from those used in core operations to those required by analytics and for decision making, regulatory compliance, and engagement and interaction with external entities.

As a discipline, data quality assurance covers much more than technology. It also includes roles and organizational structures; processes for monitoring, measuring, reporting and remediating data quality issues; and links to broader information governance activities via data-quality-specific policies.

Given the scale and complexity of the data landscape, across organizations of all sizes and in all industries, tools to help automate key elements of this discipline continue to attract more interest and to grow in value. Consequently, the data quality tools market continues to show substantial growth, while also exhibiting innovation and change.

This market includes vendors that offer stand-alone software products to address the core functional requirements of the data quality assurance discipline, which are:

- **Data profiling and data quality measurement:** The analysis of data to capture statistics (metadata) that provide insight into the quality of data and help to identify data quality issues.
- **Parsing and standardization:** The decomposition of text fields into component parts and the formatting of values into consistent layouts, based on industry standards, local standards (for example, postal authority standards for address data), user-defined business rules, and knowledge bases of values and patterns.
- **Generalized "cleansing":** The modification of data values to meet domain restrictions, integrity constraints or other business rules that define when the quality of data is sufficient for an organization.

- **Matching:** The identifying, linking or merging of related entries within or across sets of data.
- **Monitoring:** The deployment of controls to ensure that data continues to conform to business rules that define data quality for an organization.
- **Issue resolution and workflow:** The identification, quarantining, escalation and resolution of data quality issues through processes and interfaces that enable collaboration with key roles, such as data steward.
- **Enrichment:** The enhancement of the value of internally held data by appending related attributes from external sources (for example, consumer demographic attributes and geographic descriptors).

In addition, data quality tools provide a range of related functional abilities that are not unique to this market but that are required to execute many of the core functions of data quality assurance, or for specific data quality applications:

- **Connectivity/adapters** confer the ability to interact with a range of different data structure types.
- **Subject-area-specific support** provides standardization capabilities for specific data subject areas.
- **International support** provides the ability to offer relevant data quality operations on a global basis (such as handling data in multiple languages and writing systems).
- **Metadata management** enables the ability to capture, reconcile and interoperate metadata relating to the data quality process.
- **Configuration environment** abilities enable the creation, management and deployment of data quality rules.
- **Operations and administration facilities** support the monitoring, managing, auditing and control of data quality processes.
- **Service enablement** provides service-oriented characteristics and support for service-oriented architecture (SOA) deployments.
- **Alternative deployment options** offer abilities to implement some or all data quality functions and/or services beyond on-premises deployments (for example, via the cloud).

The tools provided by vendors in this market are generally used by organizations for internal deployment in their IT infrastructure. They use them to directly support various scenarios that require better data quality for business operations (such as transactional processing, master data management [MDM], big data, business intelligence [BI] and analytics) and to enable staff in data-quality-oriented roles, such as data stewards, to carry out data quality improvement work. Off-premises solutions, in the form of hosted data quality offerings, SaaS delivery models and cloud services, continue to evolve and grow in popularity.

Magic Quadrant

Figure 1. Magic Quadrant for Data Quality Tools



Source: Gartner (November 2015)

Vendor Strengths and Cautions

Ataccama

[Ataccama](#) has headquarters in Stamford, Connecticut, U.S., and Prague, Czech Republic. Its data quality products are DQ Analyzer, Data Quality Center (DQC), DQ Issue Tracker and DQ Dashboard. We estimate that Ataccama has 227 customers for these products.

Strengths

- **Customer experience:** Ataccama's customers reported positive experiences both with its data quality products and with the company. In particular, reference customers identified its professional services, support and documentation as contributing to a high level of satisfaction.
- **Value model and licensing approach:** Ataccama's approach to licensing its products, and the value of its tools relative to cost and expectations, remain attractive. Free trial licenses that offer data profiling capabilities result in a high level of commercial uptake.
- **Data profiling and visualization functionality for key roles:** Reference customers continue to rate Ataccama's data profiling and visualization technology highly. In combination with Ataccama's workflow functionality, this technology offers the holders of key job roles, such as information steward and data scientist, comprehensive capabilities with which to identify and resolve data quality issues.

Cautions

- **Market presence:** Although Ataccama has robust data quality capabilities, market awareness of this vendor remains low. This contributes to its infrequent appearances in competitive evaluations outside EMEA.
- **Availability of skills:** The relatively small size of Ataccama and its customer base limits the availability of relevant skills, which may act as a barrier to adoption. Ataccama is partnering with more system integrators in an attempt to address this issue.
- **Alternative deployment models:** Ataccama's customers have yet to see its data quality tools delivered through SaaS. However, Ataccama has been working on a SaaS version of its entire platform, with the first step being the release of Reference Data Manager (RDM) on Demand.

BackOffice Associates

[BackOffice Associates](#) has headquarters in South Harwich, Massachusetts, U.S. Its data quality products are the Data Stewardship Platform, dspMigrate, dspMonitor, dspCompose and dspCloud. We estimate that BackOffice Associates has 188 customers for these products.

Strengths

- **Depth in product data:** BackOffice Associates demonstrates depth in the product data domain, due to its historical focus on the manufacturing, chemicals, aerospace, pharmaceutical

and defense industries. This makes it an attractive technology provider for organizations in those sectors.

- **Support for SAP implementations:** In addition to a cross-vendor solution, BackOffice Associates provides tools and processes specifically for SAP implementations. Customers benefit from its close partnership with SAP.
- **Data quality methodology and documentation:** Surveyed reference customers consistently complimented BackOffice Associates' data quality methodology and level of documentation.

Cautions

- **Pricing model:** Reference customers highlighted challenges with BackOffice Associates' pricing structure and the high cost of its tools, relative to expectations.
- **Narrow data domain focus:** Although its technology can support a broad range of data domains, BackOffice Associates' strong focus on product data may be viewed as a limitation by organizations looking for expertise and experience in other domains.
- **Predominant focus on data migration and system consolidation:** Although BackOffice Associates has a good track record in data migration and system consolidation, it is not often seen in other scenarios, such as BI and analytics.

DataMentors

DataMentors has headquarters in Wesley Chapel, Florida, U.S. Its data quality products are DataFuse, ValiData and NetEffect. We estimate that DataMentors has 113 customers for these products. DataMentors announced a merger with Relevate in August 2015.

Strengths

- **Specialist in customer/party data:** DataMentors' knowledge and experience are greatest in the customer/party data domain and related use cases, although it can also support other data domain types. The merger with Relevate is intended to strengthen DataMentors' focus on developing data-as-a-service offerings.
- **Stable products and positive customer experiences:** Reference customers continued to report a high degree of satisfaction with product stability, services, support and their overall relationship with DataMentors.
- **Alternative deployment options:** DataMentors' clients often use its alternative deployment options, such as off-premises deployment and SaaS. We estimate that over one-third of its customers use such options.

Cautions

- **Limited market presence and mind share:** DataMentors' market recognition remains limited. It is rarely seen in competitive evaluations or at market events, and Gartner has received few

inquiries from clients about this company. Also, DataMentors lacks a dedicated focus outside North America.

- **Limited growth in customer base:** Despite fresh investment from Brook Venture Partners in 2014, the total of DataMentors customers has not grown significantly. However, the merger with Relevate may well change this.
- **Imbalance in data domain support:** DataMentors' focus on customer/party data and marketing use cases represents a limitation for organizations looking for data quality tools for other domains and business scenarios.

Experian

Experian has its corporate headquarters in Dublin, Ireland, and operational headquarters in Nottingham, U.K.; Costa Mesa, California, U.S.; and Sao Paulo, Brazil. Its data quality products include Experian Pandora, and the Capture, Clean and Enhance data quality tools. We estimate that Experian has 8,500 customers for these products.

Strengths

- **Depth in customer/party data domain:** Customers focusing on the customer/party data domain benefit from Experian's deep expertise in this area.
- **Marketing strategy and uptake:** The number of new Experian data quality customers has risen considerably over the past year in all industries, particularly in North America. This increase has been accompanied by strong revenue growth as Experian has capitalized on its relationship with Experian Marketing Services and captured more of the data quality tools market.
- **Data profiling in Pandora and ease of use:** Experian customers benefit from the strong data profiling functionality, ease of use and fast time to value that Pandora provides. The free trial license that Experian offers creates a gateway to the broader functionality available with a full license, which ultimately boosts the company's growth.

Cautions

- **Pricing model:** Reference customers expressed some dissatisfaction with Experian's pricing structure and license cost. Price and total cost of ownership were also identified as key reasons for ruling out Experian in competitive situations.
- **Narrow data domain focus:** Although Experian's data quality technology can be applied well to any data domain, its depth of experience outside the customer/party data domain is limited.
- **Software bugs in some versions:** Reference customers identified more bugs in some versions of Pandora than was the average for vendors in the survey.

IBM

IBM has headquarters in Armonk, New York, U.S. Its product is IBM InfoSphere Information Server for Data Quality. We estimate that IBM has 2,500 customers for this product.

Strengths

- **Depth and breadth of usage:** IBM's tool continues to be adopted as an enterprisewide standard, one applied to a wide variety of data domains and use cases.
- **Mind share and market presence:** IBM is frequently mentioned by users of Gartner's client inquiry service and in competitive evaluations by data quality tool users. Also, relevant skills are readily available.
- **Enhanced information governance functionality:** Continued innovation in information governance and stewardship (such as new capabilities for managing data from Hadoop distributions), based on IBM's robust metadata management foundations, enables business-level understanding of data quality and its impact on information policies.

Cautions

- **Cost model:** The cost of IBM's software and the perceived total cost of ownership were identified as inhibitors of adoption by IBM's reference customers. They were also identified as key reasons for ruling out IBM in competitive situations.
- **User experience:** Reference customers identified a need for IBM to further improve the user experience offered by some versions of its data quality tool.
- **Ease of product upgrade:** Although IBM continues to address product complexity and has made improvements, its reference customers highlighted continuing upgrade difficulties with some versions.

Informatica

[Informatica](#) has headquarters in Redwood City, California, U.S. Its data quality products are Informatica Data Quality, Data as a Service and Rev. We estimate that Informatica has 3,100 customers for these products. Earlier in 2015, Informatica was acquired by the Permira funds and the Canada Pension Plan Investment Board.

Strengths

- **Depth and breadth of capabilities and usage:** Informatica's customers continue to report high levels of satisfaction with both the coverage and the depth of its data quality capabilities. Implementations indicate a diverse mix of data domains and use cases, complex scenarios and multiproject deployment.
- **Business-facing interface and ease of use:** Informatica's reference customers consistently identify its data quality tools as being easier to use than those of competitors. They also point to their suitability for supporting both technical and nontechnical roles (such as information steward and business analyst) through workflow and auditing features.
- **Increasing market presence and strong growth:** Informatica continues to demonstrate strong growth in market share in all industries and geographies, which reflects its deep understanding

of the market and the alignment of its sales and marketing strategy with its execution. Informatica's acquisition has not had an adverse effect on its activity in the data quality market; on the contrary, we are seeing Informatica crop up in more competitive situations.

Cautions

- **Pricing:** Informatica's pricing remains a key issue. In competitive situations, prospective customers identify this as their main reason for choosing another vendor. Informatica began to address these concerns by introducing simpler packaging in 2014, and now offers subscription/term license options in its Version 10 release.
- **Unstructured data support:** Reference customers rated Informatica's support for unstructured data below the survey average, though its other functionality was almost universally rated well above the average.
- **Performance and scalability:** Reference customers highlighted performance and scalability as challenges with some versions of Informatica's software. Informatica has indicated that it will continue to invest in scaling and performance features, including for big data environments.

Information Builders

[Information Builders](#) has headquarters in New York, New York, U.S. It offers the iWay Data Quality Suite. We estimate that Information Builders has 180 customers for this product.

Strengths

- **Pricing model:** Customers report that the iWay Data Quality Suite is competitively priced and that the value they derive from its tools is high, relative to their cost.
- **Overall customer experience:** Customers of Information Builders indicate that they are very satisfied with both its data quality products and their engagement with the company.
- **Robust functionality supporting multiple domains and use cases:** The breadth and robustness of Information Builders' data quality capabilities are well-rated by its customers. Deployments indicate a diversity of usage scenarios and data domains, such as customer, product and location data.

Cautions

- **Limited market presence and mind share:** Information Builders has grown, but awareness of this vendor remains limited, due to a lack of visibility. Information Builders appears only infrequently in the competitive evaluations seen by Gartner.
- **Local support in some geographies:** Although Information Builders' product support has improved considerably, customers indicate that issues reported to its product support team take longer to resolve outside North America. Information Builders is creating a multilingual virtual team to provide global support with greater consistency.

- **Product documentation:** Reference customers highlighted a need for improvement in Information Builders' documentation for the iWay Data Quality Suite.

Innovative Systems

[Innovative Systems, Inc.](#) (ISI) has headquarters in Pittsburgh, Pennsylvania, U.S. Its data quality products are the i/Lytics Enterprise Data Quality Suite, FinScan, Enlighten and i/Lytics PostLocate. We estimate that ISI has 900 customers for these products.

Strengths

- **Pricing model and value:** Customers continue to report that the pricing model for ISI's products and services is very favorable. The cost of tools is low in relation to clients' expectations and budgets and the value received by customers.
- **Positive customer experience:** The overall level of satisfaction of ISI's customers remains among the highest for the vendors in this Magic Quadrant. Reference customers commended its software's ease of use, core functionality and reliability. A very large number of its customers reported no problems with the tools.
- **Product support and professional services:** Reference customers commended the strong levels of product support and the professional services they receive from ISI.

Cautions

- **Limited mind share and market presence:** Although ISI continues to grow its customer base, it still has a relatively limited market presence. It is rarely seen by Gartner in competitive situations, and we rarely hear ISI mentioned by users of our client inquiry service.
- **Narrow data domain focus:** Gartner sees relatively limited use of ISI's products outside the customer/party data domain. ISI's focus on this domain is advantageous in scenarios where a concentration on customer and financial services data is required, but in others it represents a shortcoming.
- **Predominantly on-premises adoption:** We continue to see ISI's customers deploy its products mainly on-premises. Their prevalent use in the financial services sector is the key reason for this, rather than an inherent issue with the technology. It does mean, however, that ISI has less experience in supporting alternative deployment options.

MIOsoft

[MIOsoft](#) has headquarters in Madison, Wisconsin, U.S. Its data quality product is MIOvantage. We estimate that it has 210 customers for this product.

Strengths

- **Contextual data quality for big data and Internet of Things (IoT) scenarios:** MIOsoft provides contextual data quality technology using graph analytics and machine learning to address data quality issues in big data and IoT use cases.
- **Strong growth in the data quality market:** MIOsoft's growth in the data quality market has contributed well to its revenue. This has enabled it to invest in growing its organization in order to meet customers' expectations and position itself for future growth.
- **Robust and high-performance functionality:** Well over 90% of MIOsoft's reference customers reported no problems with its software. They also rated highly both its data quality functionality and the overall customer experience.

Cautions

- **Limited mind share and market presence:** MIOsoft is a relatively new entrant to the data quality market, and although it is growing well, Gartner does not often see it in competitive situations.
- **Narrow data quality market strategy:** MIOsoft's product is mostly used for big data and BI and analytics scenarios. It appears to be used less frequently for key use cases such as information governance, ongoing operation of business applications and MDM.
- **Underuse of some functions:** Two-thirds of MIOsoft's reference customers indicated that they made "no or limited use" of its address standardization and validation functions. MIOsoft must ensure that its customers are fully aware of its technology's capabilities and able to use them.

Neopost

Neopost has headquarters near Paris, France. Its data quality products include DataCleaner, DataCleaner Cloud, DataEntry and DataHub. We estimate that Neopost has approximately 800 customers for these products.

Strengths

- **Deep experience of customer/party data domain:** Neopost's continuing strategic focus on marketing scenarios and the customer/party data domain makes it a very attractive proposition in that niche.
- **Adoption of alternative delivery models:** SaaS and cloud-based deployments continue to be adopted by Neopost reference customers. The DataCleaner Cloud offering has seen rapid adoption over the past year.
- **Stable product:** Over 85% of Neopost's reference customers reported that they encountered no problems with the software and stated that the software they use is stable.

Cautions

- **Limited support beyond customer/party data domains:** Neopost continues to pursue a strategy centered on marketing use cases and the customer/party data domain. Although this is attractive to organizations with those niche requirements, others may be served less well.
- **Limited data quality market presence:** Neopost is mentioned infrequently by Gartner clients during their inquiry calls, though its presence in competitive evaluations is beginning to improve.
- **Complex product messaging:** Until recently, Neopost had nine products listed in the data quality space, and its current product messaging is difficult to understand. It recently simplified its portfolio to address this issue.

Oracle

Oracle has headquarters in Redwood Shores, California, U.S. Its product is Oracle Enterprise Data Quality (EDQ), for which there is the optional Oracle EDQ Product Data Extension. Oracle states that it has approximately 360 customers for this product.

Strengths

- **Broadening cloud data quality services:** Oracle has extended its cloud-based data quality offerings in Address Verification and Oracle Sales Cloud. It plans further expansion of its data quality service offering via cloud delivery, to offer customers greater flexibility.
- **Support for diverse use cases and multiple data domains:** We continue to see Oracle's EDQ technology applied to a wide range of use cases and data domains across all industries and geographies.
- **Continuing strong growth with EDQ:** Oracle's data quality proposition is entirely based on EDQ, now that it has successfully managed its OEM products into obsolescence. Strong marketing and sales execution is delivering growth in both revenue and customer numbers.

Cautions

- **Pricing model:** Oracle's reference customers continue to identify its pricing model as an area of concern. Additionally, our survey of reference customers found that 57% of those that considered Oracle did not proceed due to concerns about its pricing model.
- **Installation, migration and upgrade concerns:** Oracle's reference customers identified product installation, migration and upgrade as areas needing improvement.
- **Data quality workflow support:** Oracle's reference customers scored its level of support for data quality issue resolution poorly, in terms of workflow and tracking, compared with the survey average. Oracle is in the process of enhancing the level of support it provides in this area, and expects to deliver improvements in the next release.

Pitney Bowes

Pitney Bowes has headquarters in Stamford, Connecticut, U.S. Its flagship data quality product is the Spectrum Technology Platform. Other, "legacy" products in its portfolio include Code-1 Plus, Finalist and VeriMove. We estimate that Pitney Bowes has 2,620 customers for these products.

Strengths

- **Broad suite of data quality functionality:** Pitney Bowes continues to invest in and expand its comprehensive, business-facing set of data quality functions. Its introduction of Web-based data visualization and stewardship capabilities in a recent release of the Spectrum Technology Platform is an example of this.
- **Depth in customer/party and location data:** Pitney Bowes' historical focus on customer data and its support for geographic and location intelligence are key strengths.
- **North American customer base and market share:** Pitney Bowes has a large customer base and is among the market share leaders in the U.S. It is expanding its sales and marketing activity into EMEA and Asia/Pacific.

Cautions

- **Pricing and licensing model:** Reference customers in the survey rated Pitney Bowes' pricing and licensing approach lower than the survey average. In certain competitive situations, pricing was mentioned as a key reason for not choosing Pitney Bowes.
- **Limited market execution and mind share outside North America:** Pitney Bowes has sharpened its focus on markets outside North America, but this has yet to result in improved execution there. According to the survey conducted for this Magic Quadrant, Pitney Bowes is a contender in only a small number of competitive situations outside North America.
- **Customer experience:** Reference customers reported a need for improvement in Pitney Bowes' technical support and professional services. Additionally, they scored it below the survey average for ease of migration and upgrade, and time to deployment of data quality tools.

RedPoint

RedPoint has headquarters in Wellesley Hills, Massachusetts, U.S. Its data quality product is RedPoint Data Management. We estimate that RedPoint has approximately 200 customers for this product.

Strengths

- **Broad and stable data quality functionality:** RedPoint's Data Management technology provides a broad set of data quality functions. Its reference customers rate its data quality functionality favorably.
- **Performance and support for data lakes:** RedPoint's customers continue to appreciate the product's performance, scalability and throughput in the face of large data volumes.

- **Customer experience:** Customers reported overall positive experiences with RedPoint's time to value, technical support, professional services and overall capabilities, with respect to their requirements. They consider that they receive considerable value for money from RedPoint.

Cautions

- **Limited mind share and market presence:** Although RedPoint continues to grow and its data quality technology delivers value to customers, the company remains relatively unknown in the data quality market. Given its relatively small installed base, skilled resources are difficult to find.
- **Technical positioning and roadmap:** Although RedPoint's product is technically innovative, its positioning and roadmap focus on a technical audience. RedPoint needs to do more to communicate the business value it can offer customers.
- **Integration with MDM:** RedPoint's reference customers rated its level of support for MDM use cases below the survey average. RedPoint is investing in this area and intends to include more functionality to support MDM in a subsequent release.

SAP

SAP has headquarters in Walldorf, Germany. Its data quality products are Data Quality Management, Information Steward and Data Services. We estimate that it has 6,100 customers for these products.

Strengths

- **Market presence and growth:** The SAP brand is strong, and we see SAP consistently shortlisted in competitive situations. SAP has achieved solid growth in customer numbers for its data quality tools, and it has a strong organization in place to enable it to keep doing so.
- **Depth and breadth of usage:** SAP offers comprehensive coverage and depth of functionality for data quality assurance. Its products continue to be adopted as enterprisewide standards, applied to a wide variety of business scenarios and data domains.
- **Level of integration with SAP applications and other technologies:** SAP customers value the tight integration between its data quality tools and its other applications and information-related products. Customers using or moving to Hana are well-placed to adopt data quality as a service, which should reduce some complexity and improve support for information stewards.

Cautions

- **Software bugs in some versions:** Reference customers in this survey highlighted software issues with Information Steward versions 4.1 and 4.2.
- **Product support and professional services:** SAP's reference customers highlighted a need for improvements in its technical support and professional services. SAP is addressing these concerns through its communications and education program.

- **Pricing model:** Reference customers continued to identify SAP's pricing and cost, relative to their expectations and budgets, as areas needing improvement. Pricing was also the main reason cited for eliminating SAP in competitive evaluations.

SAS

SAS has headquarters in Cary, North Carolina, U.S. Its data quality products are Data Quality, Data Management and Data Quality Desktop. We estimate that SAS has 2,570 customers for these products.

Strengths

- **Ease of use and breadth of applicability:** Customers identify SAS's very good usability and multidomain capabilities as key strengths. SAS provides a solid set of data quality functions that integrate well with other SAS technologies.
- **Business-facing functionality and information stewardship support:** SAS supports key business roles, such as information steward, by providing strong capabilities for data profiling, monitoring and process orchestration. SaaS and cloud-based deployment are also gaining traction with SAS customers.
- **Market presence and visibility:** SAS is very often shortlisted in competitive situations, due to its strong market presence and mind share.

Cautions

- **Pricing model and price points:** Existing and prospective customers continue to identify SAS's high prices and licensing models as key challenges to adoption.
- **Technical support and professional services:** Reference customers rated SAS's technical support and professional services below the survey average. SAS has initiated a communications and multichannel training program to improve in these areas.
- **Focus on analytic use cases:** Although SAS's data quality technology can be applied to diverse scenarios and project requirements, it is mainly adopted for analytic cases. SAS should do more to exploit the wider market opportunities.

Talend

Talend has headquarters in Redwood City, California, U.S. Its data quality products are Talend Open Studio for Data Quality and Talend Data Management Platform. Talend states that it has approximately 550 customers for these products.

Strengths

- **Low cost-of-entry model:** The free open-source data profiling and modest subscription pricing for fully featured software are attractive to customers. Talend's continuing growth over the past few years is evidence of this.

- **Support for diverse use cases and data domains:** Talend's data quality tools are used in multiple data domains across integration use cases including real-time integration, native Hadoop integration and the cloud.
- **Broad data quality functionality embedded throughout Talend Open Studio:** Talend customers benefit from a comprehensive set of data quality functions embedded within Talend Open Studio and connected with third-party data and development platforms by its Metadata Bridge.

Cautions

- **Product reliability, performance and support:** Customers continue to report challenges with the stability and performance of new releases, and to express frustration with the quality of Talend's product support.
- **Depth of product functionality:** Reference customers and inquiries from Gartner clients indicate that Talend must do more to deepen its functionality in some areas (such as data profiling) and deliver better value for money.
- **Technical positioning and capabilities:** Talend's functionality and messaging are generally oriented toward developers, with less emphasis on the business-oriented roles and processes required for data quality improvement. Talend aims to release a data preparation capability in early 2016 to address this business need.

Trillium Software

Trillium Software has headquarters in Burlington, Massachusetts, U.S. Its data quality products are the Trillium Software System, Trillium Cloud, Trillium Big Data, Trillium Global Locator, Trillium for SAP (CRM, ERP and Master Data Governance), Trillium for Microsoft Dynamics CRM and Trillium for Salesforce. We estimate Trillium has 1,050 customers for these products.

Strengths

- **Strong growth, market presence and track record:** Trillium has delivered strong growth in market share across all industries and geographies, and is achieving significant growth in its SaaS business. Trillium has strong mind share and a very long and solid track record of delivering data quality solutions.
- **Expanding portfolio of offerings:** Trillium has moved beyond an exclusive focus on data quality by broadening its portfolio to include information governance and data preparation for analytics. This gives Trillium the opportunity to exploit growth in these adjacent markets.
- **Strength and stability of core data quality functionality:** Trillium offers strong profiling, parsing, standardization and matching, international support, unstructured data and real-time functionality, along with deep functionality and experience in the customer/party data domain.

Cautions

- **Time to value:** Reference customers took longer to reach the production deployment stage with Trillium's data quality tools than with those of other vendors in this Magic Quadrant.
- **Pricing model and price points:** Reference customers highlighted the price of Trillium's software and services and the price of its data quality tools, relative to their expectations and budgets, as barriers to broader adoption. These are also adverse factors in competitive situations.
- **Ease of installation, upgrade and migration:** Trillium's customers highlighted a need for improvements in terms of the ease of installation, upgrade and migration of some versions of its software. Users of Gartner's client inquiry service confirm this need.

Uniserv

Uniserv has headquarters in Pforzheim, Germany. Its data quality products are Data Analyzer, Data Cleansing, Data Protection and Data Governance. We estimate that it has 1,037 customers for these products.

Strengths

- **Broad and stable data quality functionality:** Over 80% of Uniserv's surveyed reference customers reported no issues with its data quality software. Functionality covers all key areas of data quality, in support of a wide range of use cases.
- **Focus on customer/party data in EMEA:** Customers focused on customer/party data use cases that are mainly in EMEA benefit from Uniserv's capabilities and deep experience in the customer/party data domain, which are supported by its multicountry and multilingual functionality.
- **Customer experience:** Uniserv's reference customers reported high levels of satisfaction with its products, support and services, as well as their overall relationship with the vendor.

Cautions

- **Limited operations outside EMEA:** Uniserv has shown limited success in obtaining new customers outside EMEA. Uniserv has yet to establish operations outside EMEA and consequently has limited opportunity to sustain growth in other regions.
- **Limited support for noncustomer data domains:** Uniserv has limited experience with noncustomer/party data applications, compared with most competitors. Its acquisition of Dutch software company Grecco suggests a positive move to widen its information management offerings, but still not beyond the customer/party data domain.
- **Below-average growth and limited market presence:** Despite a broad and stable data quality offering, Uniserv is not often seen by Gartner in competitive situations and has achieved below-average growth in this market. Continuing underperformance in terms of sales and marketing is

the cause of this, rather than product-related issues. Uniserv must focus on combining growth in direct sales with greater expectations of — and improved delivery by — its channel partners.

Vendors Added and 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's appearance 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. It may be a reflection of a change in the market and, therefore, changed evaluation criteria, or of a change of focus by that vendor.

Added

- BackOffice Associates

Dropped

- X88 Software (acquired by Experian in October 2014)

Inclusion and Exclusion Criteria

To be included in this Magic Quadrant, vendors had to meet the following criteria:

- They must offer stand-alone packaged software tools or cloud-based services (not only embedded in, or dependent on, other products and services) that are positioned, marketed and sold specifically for general-purpose data quality use.
- They must deliver functionality that addresses, at minimum, profiling, parsing, standardization/cleansing, matching and monitoring. Vendors that offer narrow functionality (for example, those that support only address cleansing and validation, or that deal only with matching) are excluded because they do not provide complete suites of data quality tools. Specifically, vendors must offer all of the following:
 - *Profiling and visualization* — They must provide packaged functionality for attribute-based analysis (for example, minimum, maximum and frequency distribution) and dependency analysis (cross-table and cross-dataset analysis). Profiling results must be exposed in either a tabular or a graphical user interface delivered as part of the vendor's offering. Profiling results must be able to be stored and analyzed across time boundaries (trending).
 - *Parsing* — They must provide packaged routines for identifying and extracting components of textual strings, such as names, mailing addresses and other contact-related information. Parsing algorithms and rules must be applicable to a wide range of data types and domains, and must be configurable and extensible by the customer.

- *Matching* — They must provide configurable matching rules or algorithms that enable users to customize their matching scenarios, audit the results, and tune the matching scenarios over time. The matching functionality must not be limited to specific data types and domains, nor limited in the number of attributes that can be considered in a matching scenario.
- *Standardization and cleansing* — They must provide both packaged and extensible rules for handling syntactic (formatting) and semantic (values) transformation of data to ensure conformance with business rules.
- *Monitoring* — They must support the ability to deploy business rules for proactive, continuous monitoring of common and user-defined data conditions.
- They must support this functionality with packaged capabilities for data in more than one language and for more than one country.
- They must support this functionality both in scheduled (batch) and interactive (real-time) modes.
- They must support large-scale deployment via server-based runtime architectures that can support concurrent users and applications.
- They must maintain an installed base of at least 100 production, maintenance/subscription-paying customers for the data quality product(s) meeting the above functional criteria. The production customer base must include customers in more than one region (North America, Latin America, EMEA and Asia/Pacific).
- They must be able to provide reference customers that demonstrate multidomain and/or multiproject use of the product(s) meeting the above functional criteria.

Vendors meeting the above criteria but limited to deployments in a single or specific application environment, industry or data domain are excluded from this Magic Quadrant.

There are many vendors of data quality tools, but most do not meet the above criteria and are therefore not included in this Magic Quadrant. Many vendors provide products that deal with one very specific data quality problem, such as address cleansing and validation, but that cannot support other types of application, or that lack the full breadth of functionality expected of today's data quality solutions. Others provide a range of functions, but operate only in a single country or support only narrow, departmental implementations. Others may meet all the functional, deployment and geographic requirements but be at a very early stage in their "life span" and, therefore, have few, if any, production customers.

Below is a list of some vendors that do not appear in the Magic Quadrant but that may be considered when deployment needs match their capabilities. Some are new entrants to the market that are beginning to gain visibility, but that lack a significant customer base. This list is meant to be representative of the other vendors in this market. It is not comprehensive — Gartner is continually identifying additional vendors, which makes it impossible to keep this list current. Also, the list may not describe all the capabilities available from these vendors; rather, it gives a general description of what they offer.

- **Anchor Software**, Plano, Texas, U.S. — provides data quality technologies for customer data, including data enrichment, identity resolution and address standardization, through multiple deployment options.
- **Datactics**, Belfast, U.K. — provides data quality and workflow integration for profiling, cleansing and matching data, as well as functionality for continuous data quality metrics.
- **Datiris**, Lakewood, Colorado, U.S. — provides various data-profiling techniques for a range of data sources.
- **Deyde**, Madrid, Spain — provides standardization of customer names and addresses, a single customer view through the deduplication process, and address geocoding, in European and Latin American countries.
- **GBG**, Chester, U.K. — provides global address capture, validation and identity enhancement.
- **Irion**, Turin, Italy — offers an auditable, rule-based enterprise data management platform for data integration, data governance, data quality and reporting.
- **ISO-Gruppe**, Nuremberg, Germany — provides data quality management technology focused on SAP solutions.
- **Ixsight**, Mumbai, India — offers products and services for data readiness, identity resolution, location analytics and address intelligence.
- **LexisNexis**, Los Angeles, California, U.S. — provides data enrichment, data quality services and products to all sectors, and has considerable experience in the risk sector.
- **Match2Lists**, Bracknell, U.K. — provides big data matching, merging, deduplication and Match2DnB functionalities in a SaaS deployment model.
- **Melissa Data**, Rancho Santa Margarita, California, U.S. — provides data quality solutions for data profiling, international name and address verification, identity resolution, cleansing and enrichment, deduplication/matching, and monitoring (via on-premises software and hosted cloud services).
- **Microsoft**, Redmond, Washington, U.S. — Microsoft Data Quality Services contains products installed as part of SQL Server 2014. It provides correction, enrichment, standardization and deduplication functionality.
- **QFire Software**, Sydney, New South Wales, Australia — provides data profiling, validation, standardization and monitoring functionality aimed at business users.
- **Service Objects**, Santa Barbara, California, U.S. — offers a range of Web services for validation and enrichment of postal addresses, email addresses, telephone numbers and customer demographic data.
- **Starcom**, Bangalore, India — provides cloud-based and on-premises data quality technologies for data profiling, cleansing, standardization and deduplication.

Gartner will continue to monitor the status of these and other vendors for possible inclusion in future editions of this Magic Quadrant.

Evaluation Criteria

Ability to Execute

Gartner analysts evaluate technology vendors on the quality and efficacy of the processes, systems, methods and procedures that enable their performance to be competitive, efficient and effective, and to positively affect their revenue, retention and reputation. Ultimately, technology vendors 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 quality tools market by using the following criteria:

- **Product or Service:** How well the vendor supports the range of data quality functionality required by the market, the manner (architecture) in which this functionality is delivered, and the overall usability of the tool(s). Product capabilities are crucial to the success of data quality tool deployments and, therefore, receive a high weighting.
- **Overall Viability:** The vendor's financial strength (as assessed by revenue growth, profitability and cash flow), and the strength and stability of its people and organizational structure. The medium weighting for this criterion reflects buyers' increased openness to considering newer, less-established and smaller providers with differentiated offerings.
- **Sales Execution/Pricing:** The effectiveness of the vendor's pricing model in light of current customer demand trends and spending patterns, and the effectiveness of its direct and indirect sales channels. Given buyers' strong focus on cost models and ROI, and the criticality of consistent sales execution for a vendor's growth and customer retention, this criterion receives a high weighting.
- **Market Responsiveness/Record:** The degree to which the vendor has demonstrated the ability to respond successfully to market demand for data quality capabilities over an extended period. As an important consideration for buyers in this market, but not an overriding one, this criterion receives a medium weighting.
- **Marketing Execution:** The overall effectiveness of the vendor's marketing efforts, the degree to which it has generated mind share, and the magnitude of the market share achieved as a result. Given the increasingly competitive nature of this market and the continued entry of new vendors, large and small, we retain a high weighting for this criterion.
- **Customer Experience:** The level of satisfaction expressed by customers with the vendor's product support and professional services and their overall relationship with the vendor, as well as their perceptions of the value of the vendor's data quality tools, relative to costs and expectations. We retain a high weighting for this criterion to reflect buyers' scrutiny of these considerations as they seek to derive optimal value from their investments. Analysis and ratings

of vendors against this criterion are driven directly by the results of a customer survey executed as part of the Magic Quadrant research process.

- **Operations:** This criterion is not rated in this Magic Quadrant because our interaction with the market indicates it to be a minor consideration during the selection of data quality tools.

Table 1 gives our weightings for the Ability to Execute evaluation criteria.

Table 1. Ability to Execute Evaluation Criteria

Evaluation Criteria	Weighting
Product or Service	High
Overall Viability	Medium
Sales Execution/Pricing	High
Market Responsiveness/Record	Medium
Marketing Execution	High
Customer Experience	High
Operations	Not Rated

Source: Gartner (November 2015)

Completeness of Vision

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

We assess vendors' Completeness of Vision for the data quality tools market by using the following criteria:

- **Market Understanding:** The degree to which the vendor leads the market in new directions (in terms of technologies, products, services or otherwise), and its ability to adapt to significant market changes and disruptions, such as requirements for data quality functionality for big datasets. In this criterion, we also consider the degree to which vendors are aligned with the significant trend of convergence with other data-management-related markets — specifically, the markets for data integration tools and MDM solutions. Given the dynamic nature of this market, this criterion receives a high weighting.

- **Marketing Strategy:** The degree to which the vendor's marketing approach aligns with and/or exploits emerging trends (such as interoperability with MDM and business process management technologies) and the overall direction of the market. This criterion retains a medium weighting.
- **Sales Strategy:** The alignment of the vendor's sales model with the ways in which customers' preferred buying approaches are likely to evolve over time. This criterion retains its medium weighting.
- **Offering (Product) Strategy:** The degree to which the vendor's product roadmap reflects demand trends, fills current gaps or remedies weaknesses, and includes developments that create competitive differentiation and increased value for customers. We also consider the breadth of the vendor's strategy with regard to a range of delivery models for products and services, from traditional on-premises deployment to SaaS and cloud-based models. Given the rapid evolution of both technology and deployment models in this market, we give this criterion a high weighting.
- **Business Model:** The overall approach that the vendor takes to executing its strategy for the data quality tools market, including the diversity of delivery models, packaging and pricing options, and partnership types (joint marketing, reselling, OEM, system integration/ implementation and so on). This criterion retains a low weighting.
- **Vertical/Industry Strategy:** The degree of emphasis that the vendor places on vertical-market solutions, and the vendor's depth of vertical-market expertise. Given the broad, cross-industry nature of the data quality discipline, vertical-market strategies are somewhat less important than in some other disciplines, so this criterion receives a low weighting.
- **Innovation:** The extent to which the vendor demonstrates creative energy in the form of thought-leading and differentiating ideas and product plans that have the potential to significantly extend or even reshape the market in a way that adds value for customers. Given buyers' desire to take substantial leaps forward in their information management competency, and the strong interest in extending data quality capabilities in support of broader information governance goals, this criterion receives a high weighting.
- **Geographic Strategy:** An assessment of the strength of the vendor's strategy for expanding its reach into markets beyond its home region or country, in the face of global demand for data quality capabilities and expertise. This criterion retains a medium weighting.

Table 2 gives our weightings for the Completeness of Vision evaluation criteria.

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	High
Marketing Strategy	Medium
Sales Strategy	Medium
Offering (Product) Strategy	High
Business Model	Low
Vertical/Industry Strategy	Low
Innovation	High
Geographic Strategy	Medium

Source: Gartner (November 2015)

Quadrant Descriptions

Leaders

Leaders demonstrate strength across a full range of data quality functions, including profiling, parsing, standardization, matching, validation and enrichment. They exhibit a clear understanding and vision of where the market is headed, including recognition of multidomain data quality issues and delivery of enterprise-level data quality implementations. Leaders have an established market presence, significant size and a multinational presence (either directly or through a parent company).

Challengers

Challengers provide strong product capabilities and market presence, but may not have the same breadth of offering as Leaders. For example, they may lack several of the functional capabilities of a complete data quality solution. Challengers have an established presence, credibility and viability, but may demonstrate strength in only one domain (for example, customer name and address cleansing), and/or may not demonstrate a significant degree of thought leadership and innovation.

Visionaries

Visionaries demonstrate a strong understanding of current and future market trends and directions, such as the importance of alternative deployment options like SaaS, support for large datasets, the engagement of business subject matter experts and the delivery of data quality services. They exhibit capabilities aligned with these trends, but although they may deliver good customer

experiences, they may lack the market presence, brand recognition, customer base and resources of larger vendors.

Niche Players

Niche Players often have limited breadth in terms of functional capabilities, and they may lack strength in rapidly evolving functional areas such as data profiling and international support. In addition, they may focus solely on a specific market segment (such as midsize businesses), limited geographic areas or a single domain (such as customer data), rather than positioning themselves for broader use. Niche Players may have good functional breadth but an early-stage presence in the market, with a small customer base and limited resources. Niche Players that specialize in a particular geographic area or data domain may have very strong offerings for their chosen focus area and deliver substantial value for their customers in that area.

Context

The novelist and essayist William Gibson once reportedly observed: "The future has arrived — it's just not evenly distributed yet." In the field of technology, the truth of this statement is apparent from the observation that, at one extreme, some organizations make extensive use of developments in cloud computing, social media, mobile communications and IT to transform themselves and stand out from the crowd, whereas others still use technology primarily to automate existing business processes, deliver top-down, inside-out business models and reduce costs.

However, most organizations are not at either end of the spectrum of information- and technology-related innovation, but somewhere in the middle. With varying degrees of maturity, they understand, and can invest in, not only big data and cloud deployments, for example, but also improvements to existing operational processes and organizational structures that will deliver and sustain business value (see "Implications of the 2015 CIO Survey for Infrastructure and Operations Leaders"). But investing in core-system renovation, introducing agile governance and information stewardship, and developing post-Nexus digital leadership styles represent significant challenges, especially for global organizations with multiple lines of business.

It is in this context that data quality technologies and practices must be considered. CIOs, chief data officers (CDOs) and information leaders often have only a partial understanding of what is required to achieve their strategic objectives, which are typically revenue growth, operational cost reduction, adherence to regulations, and improved customer experience and retention. Our 2015 research shows that CEOs' top-three priorities are customer experience management, digital marketing and business analytics. To achieve these objectives, CIOs, CDOs and information leaders must ensure that the key information their enterprise holds about customers, products, suppliers and assets — and their interrelationships — is of sufficient quality (that is, fit for purpose and trusted) to enable profitable business operations. Otherwise, efforts to achieve these objectives will be impeded, which will result in less value for shareholders, reduced competitiveness, rising operational costs, loss of customers to competitors, and, potentially, fines for noncompliance with regulations.

The data quality tools market remains dynamic, owing to its growth in size and volatility on both the supply side and the demand side. We continue to see high demand for data quality tools, including from midsize organizations (which traditionally tended not to buy them). This demand is driven partly by activities in the fields of BI and analytics (analytical scenarios), MDM (operational scenarios) and digital business. Also contributing to demand are information governance programs, which are growing in number, and requirements to support ongoing operations, data migrations and interenterprise data sharing.

This market continues to interact with related markets for data integration tools and MDM products as demand shifts toward broader capabilities that span the disciplines of data management and information governance. As a result, most new entrants, and a growing number of established vendors, position themselves in all these markets. The percentage of vendors dedicated solely to data quality offerings continues to lessen.

We continue to see strong demand for data quality tools driven by digital transformation programs, big data projects and industry regulations. Some vendors of data quality tools have recognized these demand-side forces and are responding with enhanced capabilities and targeted industry solutions. Examples are SAP and Trillium Software.

When evaluating offerings in this market, information leaders must consider not only the breadth of functional capabilities they require (for example, data profiling, parsing, standardization, matching, monitoring and enrichment), but also the degree to which this functionality can be readily understood, managed and exploited by staff in business roles, not just IT staff. In keeping with significant trends in data management, business roles such as data steward will increasingly be responsible for managing the goals, rules, processes and metrics associated with data quality improvement initiatives. In addition, information leaders should consider how readily data quality technology can be embedded in business process workflows or other technology-enabled programs or initiatives, such as MDM and analytics, with the objective of achieving pervasive data quality controls. Other key considerations include the degree of integration of functional capabilities into a single architecture and product, and the available deployment options (traditional on-premises software deployment, hosted solutions, and SaaS or cloud-based). Finally, given the current economic and market conditions, CIOs and CDOs must deeply analyze nontechnological characteristics, such as pricing models, speed of deployment and total cost of ownership, as well as the availability of skills in the market and providers' support and service capabilities.

This Magic Quadrant should be used as an aid to understanding the data quality tools market and how Gartner assesses the main vendors and their packaged products. Use it as an aid to evaluating vendors based on a customized set of objective criteria. Gartner advises against simply selecting vendors in the Leaders quadrant. All selections should be buyer-specific — a vendor from the Challengers, Niche Players or Visionaries quadrant could be the best match for your requirements.

Market Overview

The data quality tools market continues to grow strongly. Gartner estimates that it reached \$1.4 billion in software revenue at the end of 2014. This translates into 11.6% growth in constant-dollar

terms over 2013, which had brought 11.9% growth over 2012. Gartner forecasts that this market's growth will accelerate during the next few years, to 14.4% by 2017, bringing the total to \$2.1 billion. This market is among the fastest-growing in the enterprise software sector.

We continue to see the number of data quality vendors grow, and activity in the market increase. The acquisition of Informatica by the Permira funds and the Canada Pension Plan Investment Board has been the most notable acquisition in the past year. We have also noticed a great deal of partnership activity, with data quality technology vendors creating more partnerships with system integrators. For data quality vendors, the main motivation is the need to extend their reach into industries and geographies that would otherwise be inaccessible within a reasonable time frame. Vendors that have formed such partnerships successfully are seeing solid growth in their revenue and customer base without having to increase substantially the head count of their own organizations. On the other hand, some vendors have been less successful with such partnerships, these relationships having yielded little benefit. Fundamentally, partnering agreements that deliver growth require good commercial judgment and leadership.

There is continuing demand for data quality cloud service providers, as shown by an increase in the number of inquiries Gartner has received about them and by the increased market share of these companies. Calls to Gartner's inquiry service indicate that a gradually increasing number of customers expect to have some of their data quality services delivered as SaaS and via the cloud. This expectation is recognized by the larger vendors, which, in some cases, have acquired providers of data quality cloud services or plan to do so. We are also receiving a growing number of inquiries about vendors that offer data as a service, and we expect this trend to continue.

Approximately 60% of the market is controlled by several large and well-established vendors, including Experian, Informatica, Pitney Bowes and SAP. The remaining 40% is divided between a very large number of providers, including other large vendors (such as IBM and Oracle) and smaller information management and technology vendors (such as Ataccama, DataMentors, Information Builders, Innovative Systems, Neopost, Talend, Trillium Software and Uniserv).

We continue to observe increased activity by, and improvements in the execution of, not only the smaller and less-well-established vendors in this Magic Quadrant, but also vendors that have yet to meet the criteria for inclusion. The main factor fueling this increased activity is customers' dissatisfaction with larger companies' typically high and less flexible pricing models, less attentive customer support and service, and longer deployment times. The larger vendors recognize this threat and are responding, albeit slowly, by offering alternative deployment and pricing options.

Gartner has observed other key trends and changes in the market during the past 12 to 15 months:

- Data quality initiatives address a wide variety of data domains. However, party data (that is, data about existing customers, prospective customers, citizens or patients) remains the top priority for most organizations: Almost nine in 10 (89%) of the reference customers surveyed for this Magic Quadrant consider it a priority, up from 86% in the previous year's survey. Transactional data is a priority for 59%, up from 54% last year. Financial/quantitative data domain is a priority for 58% — also a strong result, but slightly down on last year, which saw a sharp rise to 61%. The percentage of respondents prioritizing the product data domain has also dipped slightly, to 48%, from 50% last year.

- The usage scenarios identified as most important by this year's reference customers are ongoing operation of business applications, MDM, and BI and analytics. In addition, the perceived importance of information/data governance and big data usage scenarios is growing.
- From both our research and our interactions with clients, we detect that more organizations are working on more data quality initiatives in a wider range of data domains. However, only 8% of the end-user organizations we surveyed have formal internal metrics for data quality. Our survey also found that 24% use informal metrics, a practice that, although better than using no metrics at all, may prove unsustainable as a driver for changing an organization's information culture in the medium to long term. Alarming, the remaining 58% do not measure the impact of data quality at all. We have found no correlation between the position of vendors in the Magic Quadrant and the end-user organizations that measure data quality with formal metrics. This suggests that vendors have either been unable to influence the adoption of best practices for data quality by client organizations or have not tried to.
- In the past year, the number of inquiries Gartner has received from clients asking about data quality in the context of big data and the IoT has grown, but it remains low in comparison with inquiries about data quality in the context of MDM, BI and analytics. Furthermore, the survey data shows a small but clear rise in the number of actual big data use cases for data quality. Vendors that have developed capabilities in this area are therefore seeing the benefits of their investment. However, a small number of the vendors included in this Magic Quadrant said during briefings with Gartner that they have yet to develop functionality to support big data because they are not seeing much demand for it from their customers.
- The survey conducted in support of this Magic Quadrant found that the annual financial impact of poor data quality on organizations is \$8.8 million, on average. Although very significant, this figure is lower than in previous years, and we believe it underestimates the true cost.
- The basis of data quality deployment models remains overwhelmingly on-premises: 80% of the surveyed organizations use this form of deployment. SaaS and cloud-based deployment models each account for only 11% of the surveyed organizations, compared with 11% and 8%, respectively, in 2014.
- We continue to see an increasing number of data-quality-related roles on the business side of organizations. Key roles such as data steward, data quality champion, data quality analyst and data owner are more often either on the business side or a hybrid of business and IT roles. This indicates greater information maturity in the market and an increasing recognition that ensuring data quality requires organizational collaboration. The shift toward data quality roles in the business is likely to increase demand for self-service capabilities for data quality; in fact, we are already seeing some vendors include such capabilities on their product roadmaps.
- The survey indicates that the number of CDOs in organizations is increasing. We found that 20% of the surveyed companies has a CDO role, and that 50% of these are in the business and that a further 38% are hybrid business-IT roles.
- Despite greater collaboration on data quality issues, only 28% of the companies surveyed actually enforce data quality standards at an enterprise level. Typically, data quality standards, where they exist at all, are limited in scope and unenforced.

Gartner clients should take these trends into account in their strategies for selecting and deploying data quality tools in order to optimize their investments in this market.

Gartner Recommended Reading

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

"How Markets and Vendors Are Evaluated in Gartner Magic Quadrants"

"Toolkit: RFP Template for Data Quality Tools"

"Information Infrastructure Modernization Key Initiative Overview"

"Twelve Ways to Improve Your Data Quality"

"Measuring the Business Value of Data Quality"

"Agenda Overview for Information Innovation and Governance, 2015"

"Forecast: Enterprise Software Markets, Worldwide, 2012-2019, 3Q15 Update"

Evidence

The analysis in this document is based on information from a number of sources, including:

- Extensive data on functional capabilities, customer base demographics, financial status, pricing and other quantitative attributes gained via an RFI process that engaged vendors in this market.
- Interactive briefings in which vendors provided Gartner with updates on their strategy, market positioning, recent key developments and product roadmap.
- A Web-based survey of reference customers provided by each vendor. This captured data on usage patterns, levels of satisfaction with major product functionality categories, various nontechnology-related vendor attributes (such as pricing, product support and overall service delivery), and more. In total, 390 organizations across all major regions provided input on their experiences with vendors and their tools.
- Feedback about tools and vendors captured during conversations with users of Gartner's client inquiry service.
- Market share and revenue growth 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 for the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Overall Viability: Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

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

Market Responsiveness/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 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 initiatives, 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 and so on.

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 to 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 products 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 sets 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 vertical markets.

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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