

Critical Capabilities for Master Data Management Solutions

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Master data management solutions serve a range of use cases. This assessment of their critical capabilities will help data and analytics leaders take a use-case-based approach to weighing solutions' relative strengths.

Overview

Key Findings

- A desire for operational efficiencies remains by far the most common reason for purchasing a master data management (MDM) solution, according to a Gartner survey of vendors' reference customers (80% of respondents identified this as a reason). The next most common reasons were the need to drive innovation and fuel revenue growth, but these trailed significantly – a reflection of customers' continued focus on optimization rather than transformation.
- Overall satisfaction with MDM products' capabilities improved in 2019, judging by the notably higher aggregate scores awarded by surveyed customers across the vendors. Their responses identified product functionality and performance as the primary consideration when selecting a vendor, followed by product roadmap and future vision and cost. Preexisting relationships came second from bottom – a finding that should warn vendors against complacency.
- The survey highlighted a latent but notable shift toward the cloud. More than half the respondents had deployed a cloud MDM solution, up from only one-quarter the previous year.

Recommendations

Data and analytics leaders selecting MDM solutions for data management strategies should:

- Use the interactive version of this report to identify the use cases that correspond most closely to their business requirements. It's also important to review and tailor the weightings of capabilities that Gartner deems critical to an MDM solution.
- Shortlist vendors partly by their experience in the relevant industry and domain. We also advise focusing on prime use cases and accelerated time to business value. It helps to conduct a "best fit" evaluation, as no one MDM solution can fully satisfy all current and future use cases.
- Prioritize use cases to build an MDM roadmap.

- Evaluate cloud-centric or hybrid capabilities with an eye to the future.

What You Need to Know

The complex nature of master data, the demanding requirements of MDM and the diversity of organizations mean there is no standardized or “one size fits all” MDM solution. Moreover, due to the inherent complexity of MDM as a practice and a discipline, there is no “silver bullet” or “best” solution for all or most use cases.

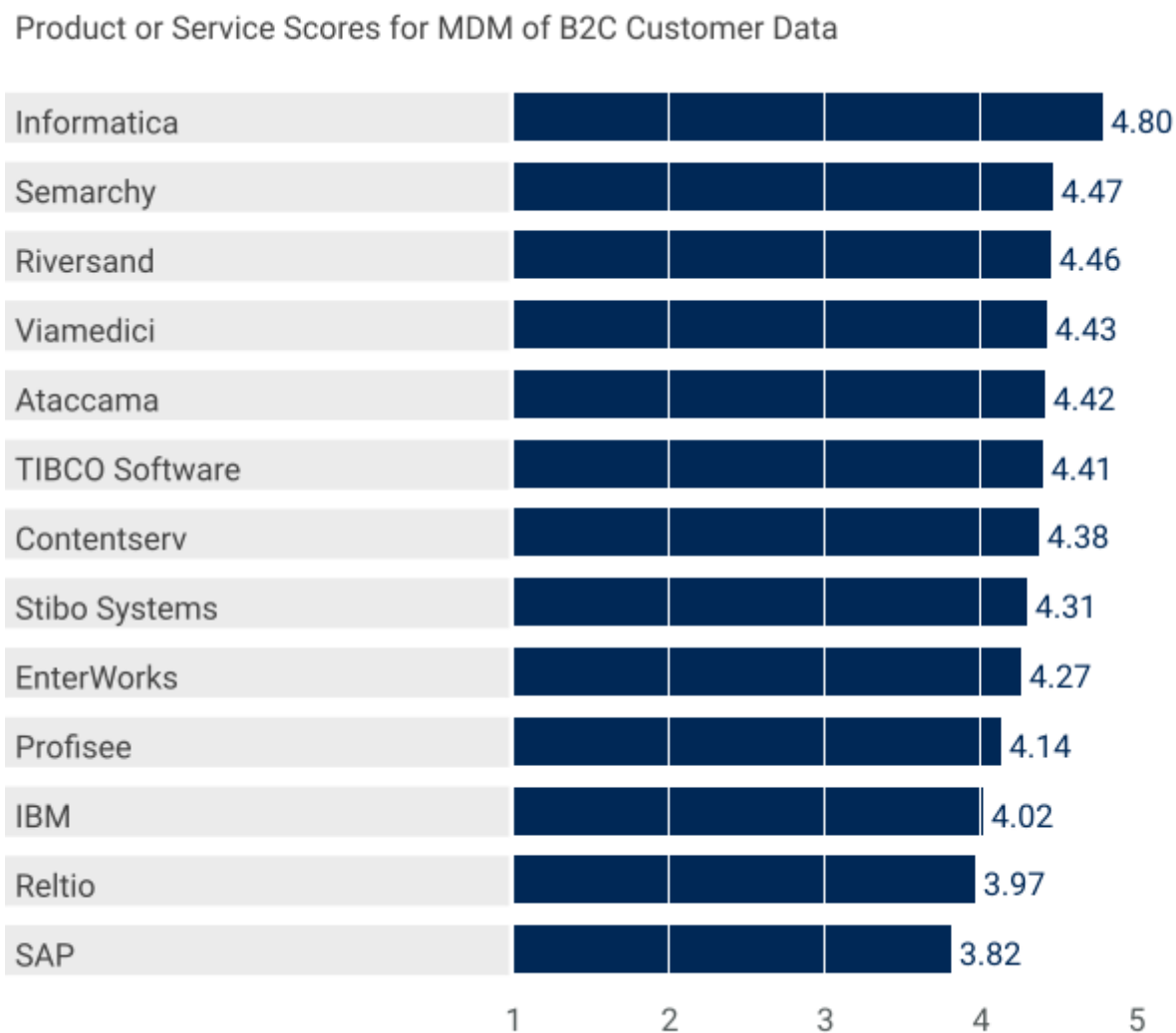
Fulfillment of business requirements therefore demands a “best fit to business priorities” approach – a search for optimal alignment across multiple, often competing priorities. Business priorities dictate data requirements, which include keeping master data separate from application data. And data requirements, in turn, inform requirements for enabling technology. For master data, which should, by definition, be enterprisewide and widely shared, data and analytics leaders must select enabling technology that can fulfill demanding requirements.

For a definition of MDM, see Note 1.

Analysis

Critical Capabilities Use-Case Graphics

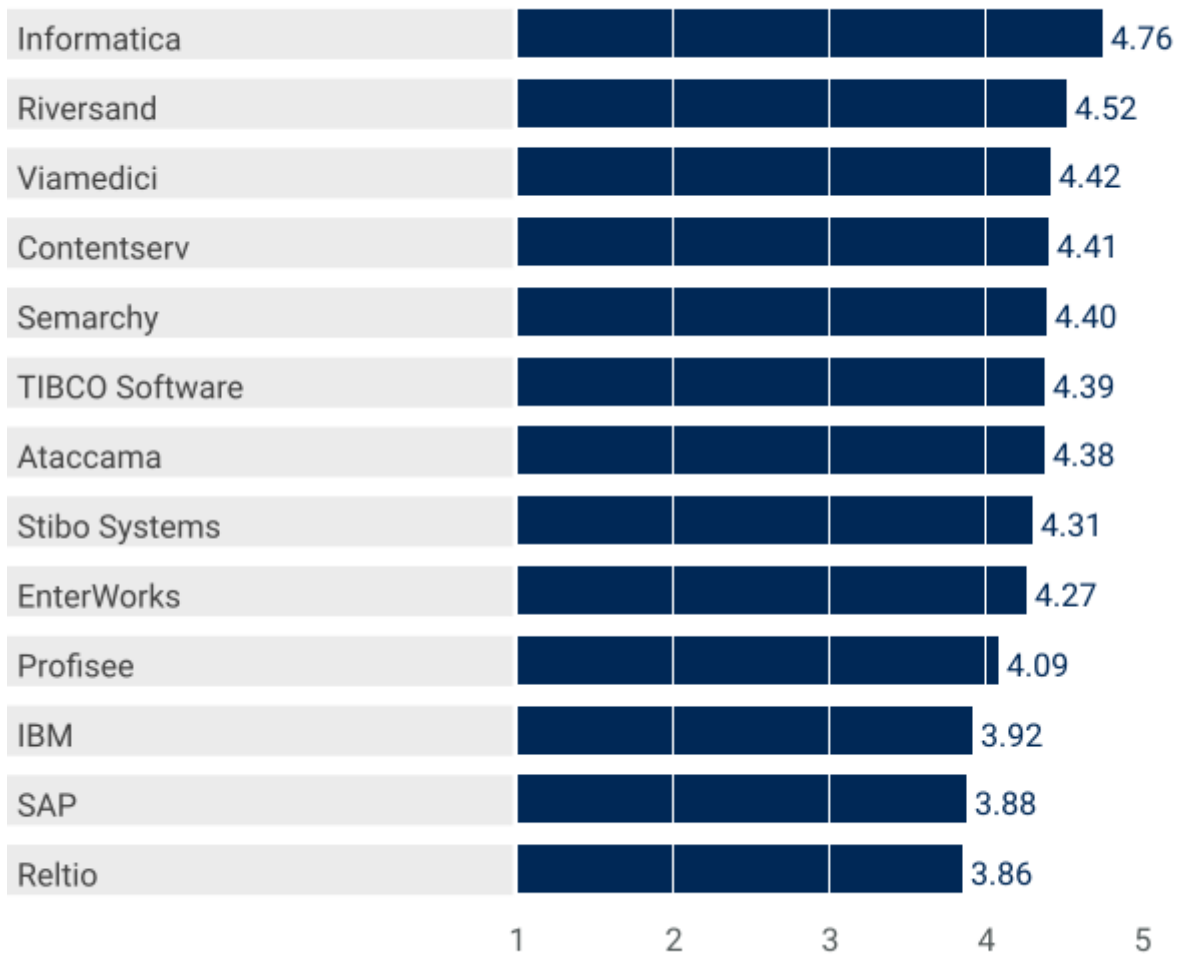
Figure 1. Vendors’ Product Scores for the MDM of B2C Customer Data Use Case



Source: Gartner (January 2020)

Figure 2. Vendors' Product Scores for the MDM of B2B Customer Data Use Case

Product or Service Scores for MDM of B2B Customer Data



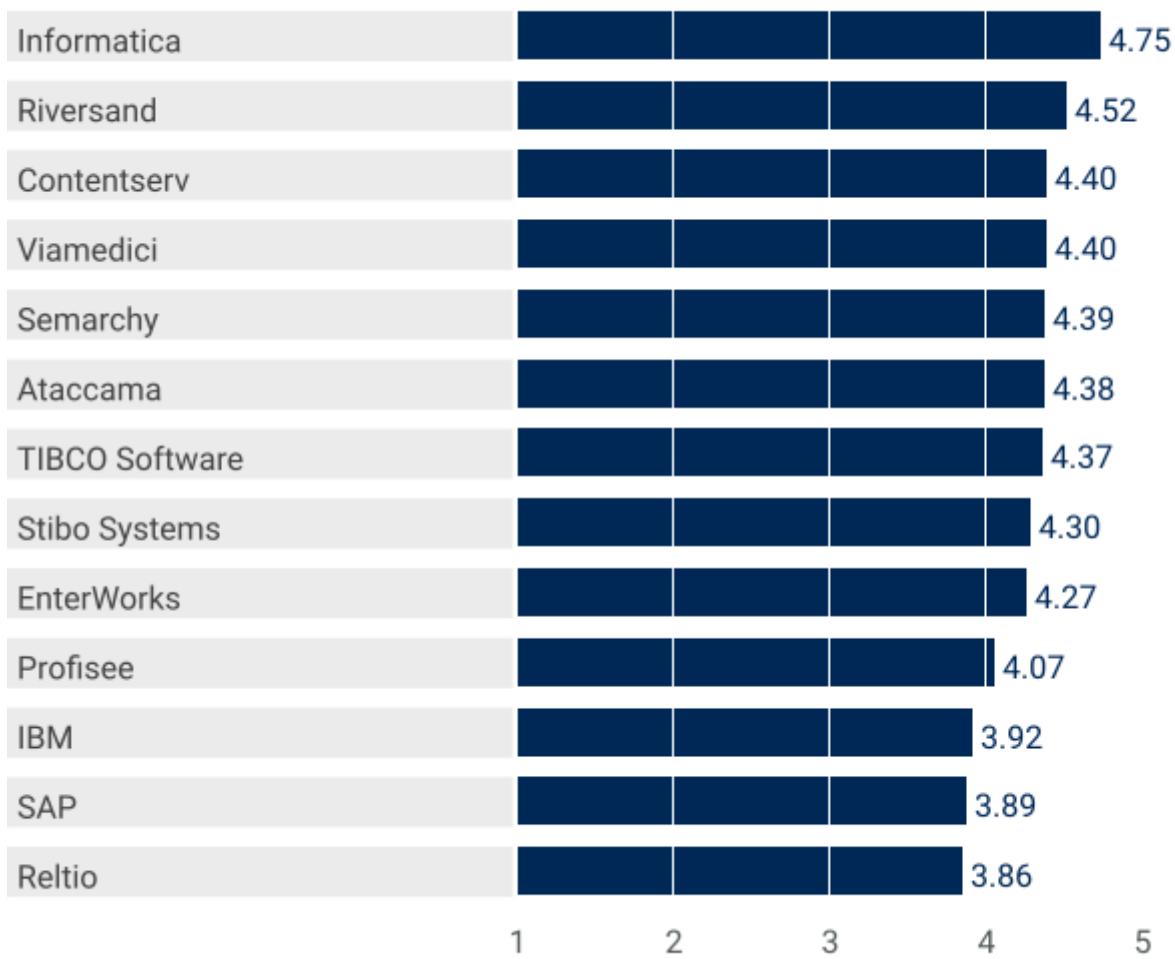
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Source: Gartner (January 2020)

Figure 3. Vendors' Product Scores for the MDM of Buy-Side Product Data Use Case

Product or Service Scores for MDM of Buy-Side Product Data



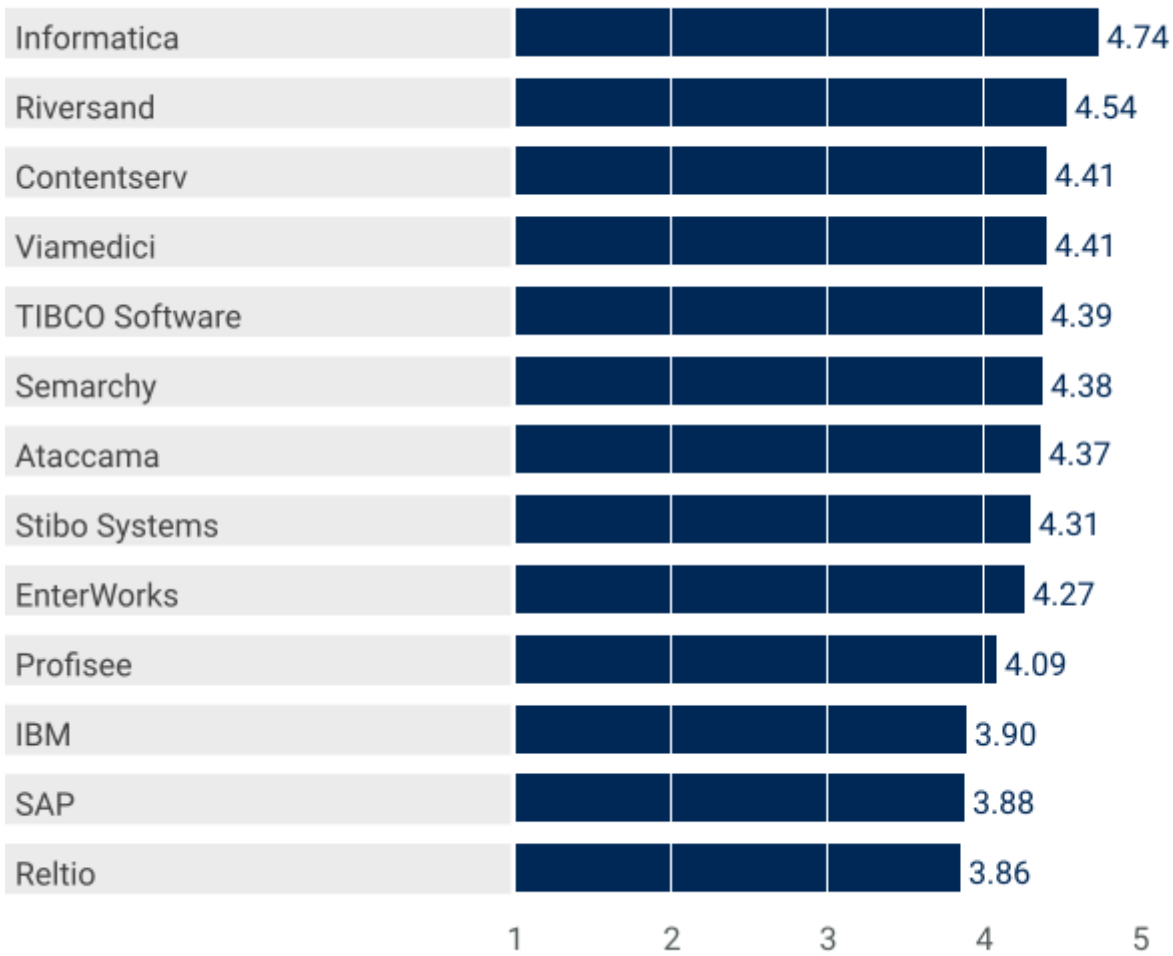
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Figure 4. Vendors' Product Scores for the MDM of Sell-Side Product Data Use Case

Product or Service Scores for MDM of Sell-Side Product Data



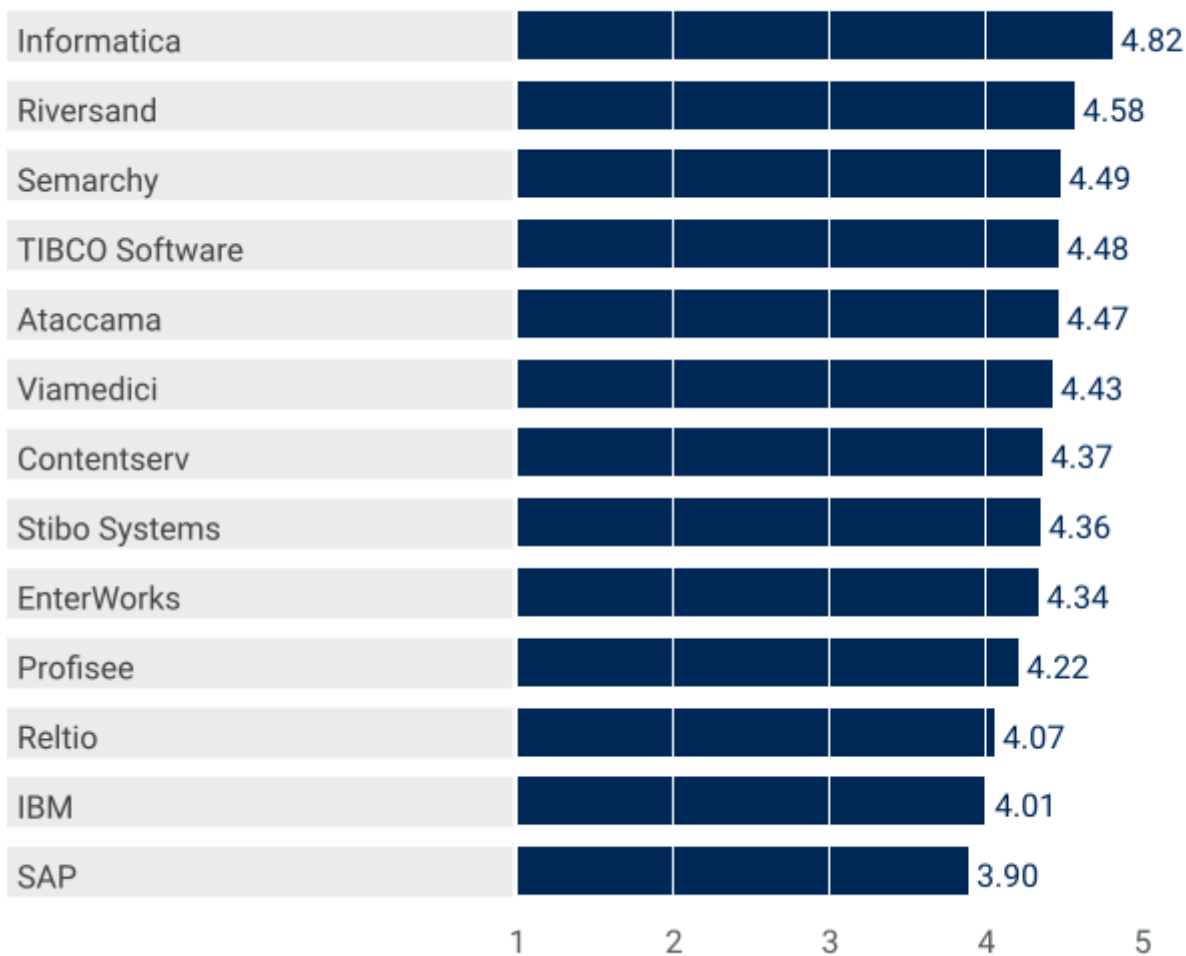
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Figure 5. Vendors' Product Scores for the Multidomain MDM Use Case

Product or Service Scores for Multidomain MDM



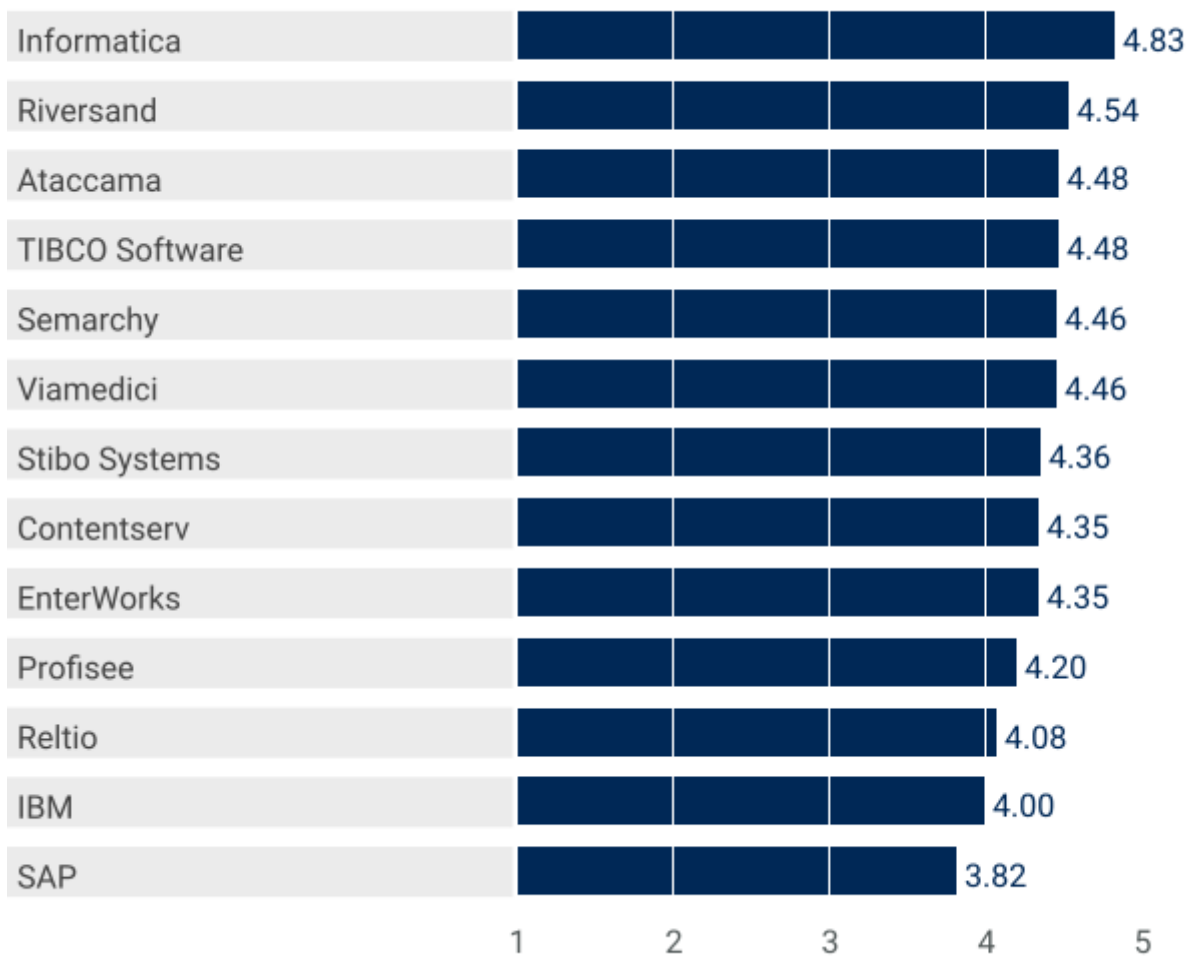
As of 30 August 2019

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Figure 6. Vendors' Product Scores for the Multivector MDM Use Case

Product or Service Scores for Multivector MDM



As of 30 August 2019

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Source: Gartner (January 2020)

Vendors

Ataccama

[Ataccama](#) offers three products in support of MDM, including Ataccama ONE. In aggregate, this vendor received above-average scores for MDM critical capabilities. It received above-average reference scores for multiple usage scenarios, product suite internal integration, information quality/semantics and data stewardship. For other critical capabilities, Ataccama ONE scored average, or slightly above average, with one exception – data modeling – for which its score was below average.

Not all of this vendor's reference customers were running the latest version of its software, with some running Ataccama Master Data Center (MDC), some Ataccama Reference Data Manager (RDM) and some Ataccama ONE.

Contentserv

[Contentserv](#) received average or above-average scores from its surveyed reference customers, for most of its solution's critical capabilities. It received some of the highest scores of the

qualifying vendors for data modeling, hierarchy management and data stewardship, making it one of the top-three vendors in terms of aggregate MDM capability score.

All of Contentserv's surveyed reference customers had implemented a buy-side or sell-side product domain, which is where this solution stands out. Consequently, Contentserv received below-average scores for multiple domain and multidomain, and slightly below-average scores for information quality/semantics, and perform/scale/availability/security.

Not all of this vendor's reference customers were running the latest version of its software. References were submitted for product versions 16.4 through 18.

EnterWorks

Note: on 14 February 2019, EnterWorks was acquired by STG and merged with Winshuttle. This acquisition is not factored into the analysis in this Critical Capabilities report.

EnterWorks offers EnterWorks Enable, which received average and above-average scores from surveyed reference customers across many critical capabilities. It received above-average scores for hierarchy management, product suite internal integration and loading/sync/business services, as well as one of the highest scores for data governance. Most of this vendor's surveyed reference customers had implemented a buy-side or sell-side product domain.

EnterWorks received slightly below-average scores for data modeling and information quality/semantics.

Not all of this vendor's reference customers were running the latest version of its software. References were submitted for product versions 7 through 10, with the majority of reference customers running version 8.

IBM

IBM offers InfoSphere Master Data Management, which received above-average scores from reference customers for perform/scale/availability/security capabilities. Most of IBM's reference customers were using IBM Master Data Management Standard Edition or Advanced Edition in support of MDM of B2C customer data and B2B customer data use cases.

IBM received average or below-average scores from its reference customers for the remaining critical capabilities. Its lowest scores were for data modeling, workflow/BPM, data stewardship and data governance.

Not all of this vendor's reference customers were running the latest version of its software.

Informatica

Informatica offers multiple products in support of MDM – Multidomain MDM, Product 360, Customer 360, Supplier 360 and Reference 360, among others – all underpinned by Informatica MDM (both on-premises and cloud variants).

In aggregate, the vendor received above-average scores for its MDM critical capabilities – and several scores well above the average. Out of all the qualifying vendors, it received the top scores for multiple usage scenarios, multiple implementation styles, product suite internal integration, information quality/semantics, perform/scale/availability/security, data stewardship, loading/sync/business services and data governance.

Informatica's lowest score was for workflow/BPM, which was nevertheless well above average.

Profisee

[Profisee's](#) Profisee Platform received average or above-average scores from surveyed reference customers for multiple domain and multidomain, data modeling, multiple usage scenarios and data stewardship.

Profisee scored slightly below average, in comparison to other vendors evaluated, for multiple implementation styles, product suite internal integration, information quality/semantics, workflow/BPM, perform/scale/availability/security and data governance. Profisee's lowest scores were for loading/sync/business services and hierarchy management.

Not all of this vendor's reference customers were running the latest version of its software. References were submitted for versions 6 and 7.

Reltio

[Reltio](#) offers Reltio Cloud, the only cloud-native solution among the offerings of qualifying vendors. It received slightly below-average scores, in aggregate, from reference customers across all critical capabilities except data stewardship, for which it scored slightly above average.

Reltio received the lowest scores of any vendor evaluated in this Critical Capabilities report for information quality/semantics, workflow/BPM and perform/scale/availability/security.

Reference customers predominantly reported mastering a B2C or B2B customer domain.

Riversand

[Riversand's](#) MDMCenter received, in aggregate, well above-average scores for the critical capabilities. Reference customers scored Riversand highest of all the qualifying vendors for workflow/BPM and joint highest for multiple domain and multidomain, data modeling and hierarchy management. Above-average scores were received for multiple implementation styles, product suite internal integration, perform/scale/availability/security and loading/sync/business services.

Riversand MDMCenter received slightly below-average scores for data stewardship, data governance and multiple usage scenarios.

Reference customers predominantly reported using MDMCenter in support of MDM of buy-side product data and sell-side product data.

Not all of this vendor's reference customers were running the latest version of its software.

SAP

SAP's primary MDM offering is SAP Master Data Governance. It received its highest score from reference customers for workflow/BPM. It scored below average for all other critical capabilities, and received the lowest scores of any vendor for hierarchy management, multiple implementation styles, product suite internal integration and data stewardship.

Reference customers reported mastering the domains of B2B customer, buy-side product, sell-side product and supplier. Most reported mastering multiple domains.

Not all of this vendor's reference customers were running the latest version of its software.

Semarchy

Semarchy's xDM received its highest scores for multiple domain and multidomain, multiple usage scenarios and data modeling – scores that place this solution among the leaders for these critical capabilities. The majority of Semarchy's surveyed reference customers had implemented multiple domains, representative of a cross-section of domains and industries.

For all other capabilities evaluated in the survey of reference customers, Semarchy xDM established average or above-average scores, with only one exception – workflow/BPM was scored slightly below average.

Not all of this vendor's reference customers were running the latest version of its software.

Stibo Systems

Stibo Systems' MDM solution received above-average scores from surveyed reference customers for hierarchy management, multiple implementation styles and product suite internal integration. For other capabilities evaluated in the survey, Stibo's solution received average scores, with two exceptions – it received slightly below-average scores for multiple usage scenarios and perform/scale/availability/security.

Many of the customers surveyed had implemented a buy-side or sell-side product domain, which is where Stibo's solution stands out.

Not all of this vendor's reference customers were running the latest version of its software.

TIBCO Software

Note: TIBCO Software announced the acquisition of Orchestra Networks on 4 December 2018. This acquisition is factored into the analysis in this Critical Capabilities report.

TIBCO Software's TIBCO EBX (formerly Orchestra Networks' EBX) received its highest scores for multiple domain and multidomain, multiple usage scenarios and multiple implementation styles – a reflection of the breadth of its reference customers' domains and industries. The solution received average or above-average scores for all other critical capabilities. It received average scores for data modeling, information quality/semantics, perform/scale/availability/security and loading/sync/business services.

Viamedici

Viamedici's Enterprise Product Information Management (EPIM) solution received scores from reference customers that were mostly above average, in aggregate, across the critical capabilities. Its highest scores were for data modeling, hierarchy management and product suite internal integration.

Reference customers reported using EPIM in support of sell-side product, location and B2B customer master data domain use cases. A number of reference customers were managing multiple domains, but Viamedici scored below average for multiple domain and multidomain support.

For a product domain specialist, Viamedici received respectable scores for the customer domain, multidomain and multivector MDM use cases.

Context

This Critical Capabilities report should not be used in isolation, but rather in combination with [“Magic Quadrant for Master Data Management Solutions,”](#) by those looking for guidance on the market positions of MDM solution vendors. Magic Quadrant and Critical Capabilities complement each other in terms of focus. The Magic Quadrant's analysis covers 15 dimensions across two axes: Ability to Execute and Completeness of Vision. Its objective is to help clients shortlist suitable vendors. The Critical Capabilities focuses on a single dimension — a vendor's product or service — on the Ability to Execute axis. It equates to a “double-click” drill-down, with a focus (in this instance) on the 12 functional capabilities that, in Gartner's view, are critical for supporting the major MDM use cases.

The selection process should be completed by performing a thorough RFP and proof of concept to ensure that any prospective solution meets the requirements, practices, and variety of roles and skills across the customer's organization.

Product/Service Class Definition

The MDM solution market is characterized by packaged software products that focus on generating and sustaining “golden records.” These are semantically consistent representations across an organization for select data domains identified as “master” — such as customer (B2C and B2B), patient, provider, product, “thing,” asset or location — and assessed to be critical to business or mission requirements (see Note 1). The functional capabilities that Gartner assesses to be critical in support of MDM requirements are listed in the Critical Capabilities Definition section below.

Critical Capabilities Definition

Workflow/BPM

The MDM solution should support a range of capabilities that include business process modeling, master data flow modeling and documentation, and analytics for key performance indicators and other benchmarking efforts in support of master data and MDM.

Loading/Sync/Business Services

The MDM solution should provide facilities for loading master data and integration middleware, including publish and subscribe mechanisms. It should also support, as necessary, the four MDM implementation styles, which each use loading, integration and synchronization in different ways.

Data Modeling

The MDM solution should effectively and flexibly support an organization's master data model requirements; model complex relationships between application sources inside an organization, and with intermediaries and other parties; and provide business-consumable metadata management capabilities.

Information Quality/Semantics

There must be facilities, in batch and real-time modes, for profiling, cleansing, matching, linking, identifying and semantically reconciling master data in different sources, to create and maintain a "golden record." They may be provided directly or via tight integration with data quality partners.

Perform/Scale/Availability/Security

The MDM solution should meet demands for performance, scalability, availability and security, and have suitable availability characteristics. It should be able to manage privacy policies and rules, and to configure and manage different visibility rules in order to provide views for different roles.

Hierarchy Management

The MDM solution should model and store multiple hierarchies within and across in-scope data domains, in order to comprehensively classify all instances of master data for various business requirements, as well as for broad-based functions such as searching and reporting.

Data Stewardship

The MDM solution should support a range of capabilities, from information policy evaluation to day-to-day operation and management of MDM. It should support the role of business-led information steward. It should equip this role with a suitable UI through which services are provided.

Data Governance

The MDM solution should provide or support information governance functions, such as governance policy collaboration and creation, policy change management and impact analysis, and react to changes made in an internal or external information governance layer.

Multiple Implementation Styles

The MDM solution should be capable of supporting all four of the MDM implementation styles recognized by Gartner, as well as hybrids of those styles, as required.

Multiple Usage Scenarios

The MDM solution should support both operational and analytical MDM requirements, and any required integration between them — that is, both the operational and analytical usage of the data being mastered within the solution.

Multiple Domain and Multidomain

The MDM solution should have multiple domain and multidomain MDM technology purpose-built to address the requirements of an MDM program that spans more than one data domain from a master data perspective.

Product Suite Internal Integration

The MDM solution should be able to provide both a default level of integration between in-scope data domains, whether they are persisted together or separately in terms of data store instance, and an ability to visualize and generate that integration.

Use Cases

MDM of B2C Customer Data

The mastering of individual customer data (and other party data, such as citizen and patient data) during the process of creating trusted master records.

Implementations enable the authoring of institutional customer master data in workflow-, batch- or transaction-oriented processes that conform to one or more MDM implementation styles (or a hybrid of those styles). It is common for B2C customer master data to be managed in a consolidation-style environment, where the entry points of the master data are not directly controllable by the MDM technology. More mature MDM of B2C customer and other party data programs may progress to a more workflow-oriented environment over time, as operational data and systems are rationalized with the support of MDM.

An example of a B2C customer data use case is the mastering of retail customer data in support of business requirements such as a single view of the customer, 360-degree customer insights and a high-quality customer experience.

MDM of B2B Customer Data

The mastering of institution data, often revealed as hierarchical, during the creation of trusted master records that support business processes centered on organizations.

Implementations enable the authoring of customer master data in workflow-, batch- or transaction-oriented processes that conform to one or more MDM implementation styles (or a hybrid of those styles). It is common for B2B customer master data to be managed in a workflow-oriented environment, where the entry points of the master data are controllable by the MDM technology.

An example of a B2B customer data use case is the mastering of organizational customer data in support of business requirements such as account definition and management, a single view of the customer, 360-degree customer insights, and sales territory management.

MDM of Buy-Side Product Data

The mastering of product or material data during the creation of trusted master records in support of business processes focused on supply chain management (SCM).

Implementations commonly serve as the point of capture for product data (including data from Internet of Things [IoT] “things”), as received from suppliers and mastered at an enterprise level in support of SCM and optimization. Often serving as a system of record in a centralized implementation style, this master product data is typically managed in a workflow-oriented environment.

An example of a buy-side product data use case is the onboarding of product data from upstream brand manufacturers. The business value lies in the reduction of effort within the receiving organization, and improved time to market.

MDM of Sell-Side Product Data

The mastering of product or material data during the creation of trusted master records in support of business processes focused on the provision of product data to customers.

These implementations commonly handle the enriched product data (including data from IoT “things”) needed to support customer requirements, including publication internally to the organization and syndication externally to customer-facing channels, e-commerce platforms and websites. Often serving as a primary system of reference in a centralized implementation style supporting product systems of record, such as product life cycle management or ERP systems, this master product data is typically managed within a workflow-oriented environment.

An example of a sell-side product data use case is the mastering of product data in support of market-facing business processes such as those that support omnichannel and e-commerce requirements. In this context, master product data is often both enriched and augmented to provide the prospect and customer product data required to support a purchase decision.

Some organizations refer to systems supporting this scenario as product information management (PIM) systems. Most MDM vendors with a focus on MDM of product data started as PIM vendors, and subsequently evolved into MDM of product data vendors; some have continued to evolve into multidomain MDM vendors. To that end, these vendors have retained capabilities that provide for enrichment and augmentation of core product master data.

Multidomain MDM

The mastering of critical data objects across multiple domains concurrently during the creation of trusted master records in support of business processes dependent on them.

A master data domain encompasses related data entities that are of critical importance to an organization, such that they need to be mastered at the enterprise (as opposed to application) level to provide for semantic consistency across the business. These entities will prove central to how the organization does what it does; the actual observations represented by master data will be of significant interest to business executives — even if they do not use the term “master data.”

Several patterns have emerged whereby “customer,” “party,” “product” or “thing” master data has become the highest priority for many organizations. The MDM solution should be capable of supporting all domains that are “in scope” for an MDM program, whether through client-driven or prepackaged data model styles, as defined by Gartner, or a combination of the two.

The more common master data domains include:

- Customer/consumer/patient/citizen
- Vendor/supplier
- Channel/partner
- Product/item
- Purchased part
- Asset
- Location
- General ledger account

Other data domains, such as IoT “things,” have been identified in MDM programs and span many industries.

An example of a multidomain use case is the mastering of multiple data domains in support of a complex business requirement, such as the mastering of customer, product and location data. Opportunities are based on a combination of a 360-degree view of the customer and recent product purchases made by that customer.

Multivector MDM

The mastering of data across all five vectors of MDM complexity concurrently in the process of creating trusted master records that support business or mission requirements.

Implementations provide an integrated set of facilities for ensuring the uniformity, accuracy, stewardship, semantic consistency and accountability of an enterprise’s official, shared master data assets. Multivector MDM solutions contain comprehensive facilities for data modeling, data quality, data stewardship, data governance, data services, and data integration in workflow and transactional usage scenarios. They also offer high levels of scalability, availability, manageability and security (see [“The Five Vectors of Complexity That Define Your MDM Strategy”](#)).

These solutions meet the needs of businesses across all five vectors of MDM complexity:

- **Industries** – for example, product-centric industries, service industries and government.
- **MDM data domains** – for example, customer, supplier, partner, location, product, item, material, “thing,” asset, ledger, account, person and employee.

- **MDM usage scenarios** – for example, design/construction, operational and analytical.
- **Organizational structures** – for example, centralized, federated and localized.
- **MDM implementation styles** – specifically registry, consolidation, coexistence and centralized.

An example of a multivector MDM use case is the mastering of multiple data domains simultaneously within a single MDM solution and the optimization of the master data in relation to the five vectors of MDM complexity.

A critical distinction from multidomain MDM is the ability of a multivector MDM solution to change any of the vectors through configuration, rather than reimplementing the solution.

Vendors Added and Dropped

Added

None.

Dropped

None.

Inclusion Criteria

For this Critical Capabilities report, we used the same criteria as for [“Magic Quadrant for Master Data Management Solutions.”](#)

In terms of market traction and momentum, to be included in this Critical Capabilities report vendors needed to have:

- Generated at least \$15 million in total software revenue (license and maintenance) relating to MDM solutions across all master data domains in 2018.
- Sales and support operations in at least two of the following regions: the Americas, EMEA and Asia/Pacific.
- Sales operations, support operations and customers in multiple industries.

Although not part of the formal inclusion criteria, we also collected and/or estimated additional data to ascertain the level of activity and stability of each vendor in the market. This included (but was not limited to):

- At least 20 “live” (in-production as of the date of submission) reference customers for packaged enterprise MDM solution functionality (see Note 2). Each vendor was asked to supply details of 20 reference customers that:
 - Represented the broadest and deepest fulfillment of the use cases and critical capabilities described in this document. We assumed that if a scenario was not represented (including

representation of each MDM solution within the vendor's MDM portfolio, if there are multiple MDM solutions), it had not been fulfilled since 1 January 2018. No consideration was given to reference customer survey data from any prior iteration of this Magic Quadrant.

- Included at least seven customers willing to participate in a telephone discussion of 30 minutes' duration. We did not necessarily call all reference customers who were willing to accept a phone call. We did send an online survey to any reference customers who we did not call, whether or not they stated that they would accept a phone call. We did not both phone *and* conduct the online survey for any reference customer, unless we specifically requested an exception from a reference customer due to an unusual situation (e.g., other reference customers failing to attend their scheduled phone calls).
- Included only customers running one of the latest two release levels of the solution(s).
- Included only customers who had gone live since 1 January 2018. An exception was if a customer had upgraded to one of the latest two release levels in the same period, specifically to gain access to features not implemented prior to those releases – any such customers were eligible for consideration. Upgrades performed simply to maintain product support were not considered. An additional exception was allowed in cases where multiple domains were involved. In those cases, the latest domain's go-live date had to be on or after 1 January 2017.
- At least 10 new customers for MDM solutions in the four quarters ending in March 2019.
- Sufficient professional services resources to fulfill customer commitments for the six months following the submissions for this research.
- Enough cash to fund a year of operations at the current "burn rate" – that is, if no revenue were achieved during a full year of normal operations.

Table 1: Weighting for Critical Capabilities in Use Cases

| Critical Capabilities ↓ | MDM of B2C Customer Data ↓ | MDM of B2B Customer Data ↓ | MDM of Buy-Side Product Data ↓ | MDM of Sell-Side Product Data ↓ |
|--------------------------------|----------------------------|----------------------------|--------------------------------|---------------------------------|
| Workflow/BPM | 5% | 20% | 20% | 22% |
| Loading/Sync/Business Services | 10% | 10% | 14% | 10% |
| Data Modeling | 10% | 10% | 10% | 10% |

| Critical Capabilities ↓ | MDM of B2C Customer Data ↓ | MDM of B2B Customer Data ↓ | MDM of Buy-Side Product Data ↓ | MDM of Sell-Side Product Data ↓ |
|--|----------------------------|----------------------------|--------------------------------|---------------------------------|
| Information Quality/Semantics | 15% | 10% | 10% | 7% |
| Perform/Scale/Availability/Security | 10% | 5% | 5% | 5% |
| Hierarchy Management | 10% | 15% | 15% | 15% |
| Data Stewardship | 10% | 15% | 15% | 15% |
| Data Governance | 5% | 5% | 5% | 5% |
| Multiple Implementation Styles | 15% | 5% | 3% | 8% |
| Multiple Usage Scenarios | 10% | 5% | 3% | 3% |
| Multiple Domain and Multidomain | 0% | 0% | 0% | 0% |
| Product Suite Internal Integration | 0% | 0% | 0% | 0% |
| Total | 100% | 100% | 100% | 100% |
| B2B = business-to-business; B2C = business-to-consumer; MDM = master data management | | | | |

Source: Gartner (January 2020)

This methodology requires analysts to identify the critical capabilities for a class of products/services. Each capability is then weighed in terms of its relative importance for specific product/service use cases.

Critical Capabilities Rating

Each of the products/services has been evaluated on the critical capabilities on a scale of 1 to 5; a score of 1 = Poor (most or all defined requirements are not achieved), while 5 = Outstanding (significantly exceeds requirements).

These scores combine the results of a Gartner survey of reference customers and Gartner analysts' discussions with clients. The critical capabilities assessed do not represent all capabilities for any vendor product. Specific uses and objectives may involve a broad variety of considerations relevant to selecting a product/service (see ["Toolkit: RFP Template for Master Data Management Solutions"](#)).

Table 2: Product/Service Rating on Critical Capabilities

| Critical Capabilities ↓ | Ataccama ↓ | Contentserv ↓ | EnterWorks ↓ | IBM ↓ |
|---|------------|---------------|--------------|-------|
| Workflow/BPM | 4.3 | 4.4 | 4.2 | 3.6 |
| Loading/Sync/Business Services | 4.4 | 4.2 | 4.3 | 4.2 |
| Data Modeling | 4.2 | 4.7 | 4.2 | 3.9 |
| Information Quality/Semantics | 4.6 | 4.2 | 4.1 | 4.0 |
| Perform/Scale/Availability/Security | 4.4 | 4.2 | 4.3 | 4.4 |
| Hierarchy Management | 4.4 | 4.6 | 4.5 | 4.1 |
| Data Stewardship | 4.4 | 4.4 | 4.2 | 3.7 |
| Data Governance | 4.2 | 4.3 | 4.4 | 3.7 |
| Multiple Implementation Styles | 4.4 | 4.4 | 4.3 | 4.0 |
| Multiple Usage Scenarios | 4.6 | 4.4 | 4.3 | 4.2 |
| Multiple Domain and Multidomain | 4.6 | 4.3 | 4.5 | 4.2 |
| Product Suite Internal Integration | 4.6 | 4.3 | 4.4 | 4.0 |
| BPM = business process management; MDM = master data management | | | | |

Source: Gartner (January 2020)

Table 3 shows the product/service scores for each use case. The scores, which are generated by multiplying the use-case weightings by the product/service ratings, summarize how well the critical capabilities are met for each use case.

Table 3: Product Score in Use Cases

| Use Cases ↓ | Ataccama ↓ | Contentserv ↓ | EnterWorks ↓ | IBM ↓ | Informatica ↓ |
|---|------------|---------------|--------------|-------|---------------|
| MDM of B2C Customer Data | 4.42 | 4.38 | 4.27 | 4.02 | 4.80 |
| MDM of B2B Customer Data | 4.38 | 4.41 | 4.27 | 3.92 | 4.76 |
| MDM of Buy-Side Product Data | 4.38 | 4.40 | 4.27 | 3.92 | 4.75 |
| MDM of Sell-Side Product Data | 4.37 | 4.41 | 4.27 | 3.90 | 4.74 |
| Multidomain MDM | 4.47 | 4.37 | 4.34 | 4.01 | 4.82 |
| Multivector MDM | 4.48 | 4.35 | 4.35 | 4.00 | 4.83 |
| BPM = business process management; MDM = master data management | | | | | |

Source: Gartner (January 2020)

To determine an overall score for each product/service in the use cases, multiply the ratings in Table 2 by the weightings shown in Table 1.

Evidence

The analysis in this Critical Capabilities report 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 a “request for information” process engaging vendors in this market.
- Interactive briefings, during which vendors provided Gartner with updates on their strategies, market positioning, recent key developments and product roadmaps.
- A web-based survey of reference customers identified by each vendor. This captured data on usage patterns (for example, data domains and implementation styles), levels of satisfaction with major product functionality categories, various nontechnological vendor attributes (such as pricing, product support and overall service delivery) and more. In total, 263 organizations across all major 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. The number of these inquiries totaled more than 2,000 for the period March 2018 through March 2019, inclusive.
- 2018 market share and revenue growth estimates developed by Gartner, as of May 2019.
- Inquiry analysis and inquiry share estimates developed by Gartner, based on the volume of inquiries received from clients about this market (these estimates are not representative of the entire market). This data was captured as of the end of December 2018.
- Results from a survey of vendors’ reference customers.

Note 1

Definition of Master Data Management

Master data management (MDM) is a technology-enabled discipline in which business and IT work together to ensure the uniformity, accuracy, stewardship, semantic consistency and accountability of an enterprise’s official, shared master data assets.

Master data is the consistent and uniform set of identifiers and extended attributes that describe the core entities of an enterprise, such as existing customers, prospective customers, citizens, suppliers, sites, hierarchies and the chart of accounts.

MDM solutions are enterprise software products that:

- Support the global identification, linking and synchronization of master data across heterogeneous data sources through semantic reconciliation of master data.
- Create and manage a central, persisted system of record or index of record for master data.

- Support the four MDM hub implementation styles, as defined by Gartner.
- Enable generation and delivery of a trusted version of one or more subject areas (data domains) to all stakeholders, in support of various business initiatives.
- Support ongoing master data stewardship and governance requirements through workflow-based monitoring and corrective-action techniques.
- Are agnostic in relation to the business application landscape in which they reside; that is, they do not assume or depend on the presence of any particular business application(s) to function; in other words, they are “application-neutral.”
- Can be implemented by end-user organizations without the use of professional services. End-user organizations may, however, elect to use optional professional services, whether those of the vendor or a third-party service provider.

MDM implementations and their requirements vary according to:

- The instantiation of master data, ranging from maintenance of a physical “golden record” to a more virtual, metadata-based indexing structure.
- The usage and focus of master data, including use cases for design (information architecture), construction (building the business), operations (running the business) and analytics (reporting the business).
- Different organizations’ structures, ranging from small, centralized teams to global, distributed organizations.
- The latency and accessibility of master data. This may range from real-time, synchronous reading and writing of master data in transactional scenarios between systems and services, to message-based, workflow-oriented scenarios involving distributed tasks, and legacy-style batch interfaces for transfer of master data in bulk file format.
- The complexity of the business environment and, therefore, of the use cases they must satisfy. These require appropriate levels of governance, risk management and control.
- The physical or logical data structures of the hub or the source of the golden record, whether on-premises, in memory or in the cloud.

Note 2

Survey of Reference Customers

As part of our research process, we sought the views of vendors’ reference customers (20 per vendor) via a survey conducted online and via telephone. The survey included requests for feedback about:

- **Vendor maturity** – understanding of industries, provision of innovation, responsiveness to new requests, total cost of ownership and pricing.
- **Product capabilities** – flexibility in data modeling, support for data quality, UI support for data stewardship, internal workflow and support for multiple architectural styles.

In total, 263 organizations, representing all the featured vendors' reference customer bases, were contacted for this survey. The reference customers were generally pleased with their vendors and products, but they gave relatively low marks in some areas, which we have detailed in the analysis of each vendor. Some of the reported shortcomings may be historical, as not all organizations were on the latest product versions.

Critical Capabilities Methodology

This methodology requires analysts to identify the critical capabilities for a class of products or services. Each capability is then weighted in terms of its relative importance for specific product or service use cases. Next, products/services are rated in terms of how well they achieve each of the critical capabilities. A score that summarizes how well they meet the critical capabilities for each use case is then calculated for each product/service.

"Critical capabilities" are attributes that differentiate products/services in a class in terms of their quality and performance. Gartner recommends that users consider the set of critical capabilities as some of the most important criteria for acquisition decisions.

In defining the product/service category for evaluation, the analyst first identifies the leading uses for the products/services in this market. What needs are end-users looking to fulfill, when considering products/services in this market? Use cases should match common client deployment scenarios. These distinct client scenarios define the Use Cases.

The analyst then identifies the critical capabilities. These capabilities are generalized groups of features commonly required by this class of products/services. Each capability is assigned a level of importance in fulfilling that particular need; some sets of features are more important than others, depending on the use case being evaluated.

Each vendor's product or service is evaluated in terms of how well it delivers each capability, on a five-point scale. These ratings are displayed side-by-side for all vendors, allowing easy comparisons between the different sets of features.

Ratings and summary scores range from 1.0 to 5.0:

1 = Poor or Absent: most or all defined requirements for a capability are not achieved

2 = Fair: some requirements are not achieved

3 = Good: meets requirements

4 = Excellent: meets or exceeds some requirements

5 = Outstanding: significantly exceeds requirements

To determine an overall score for each product in the use cases, the product ratings are multiplied by the weightings to come up with the product score in use cases.

The critical capabilities Gartner has selected do not represent all capabilities for any product; therefore, may not represent those most important for a specific use situation or business objective. Clients should use a critical capabilities analysis as one of several sources of input about a product before making a product/service decision.

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