

Magic Quadrant for Master Data Management of Customer Data

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Demand for MDM of customer data solutions continues to grow, and organizations can leverage increasingly mature capabilities. But there is still more to do, and the vendor picture continues to change, due to acquisitions, plans for new products and changes in positioning.

WHAT YOU NEED TO KNOW

Leading organizations that want to create a persistent, shareable, trusted version of customer master data (often simplistically referred to as the “single customer view”) in a heterogeneous environment now see master data management (MDM; see Note 1) as a key initiative. During the past six years, the demand for packaged MDM solutions to manage customer master data has grown rapidly. Gartner’s Magic Quadrant for MDM of Customer Data provides relative positioning of these packaged MDM products and vendors, based on a comprehensive set of criteria.

Use this Magic Quadrant to understand the MDM of customer data solutions market segment, and how Gartner rates the leading vendors and their offerings in that market. Draw on this research to evaluate vendors based on a set of objective criteria that you can adapt to your particular situation. Gartner advises organizations against simply selecting vendors in the Leaders quadrant. All selections are buyer-specific, and vendors from the Challengers, Niche Players or Visionaries quadrants could be better matches for your requirements.

Although important, selecting an MDM for customer data systems is only part of the challenge. To succeed, you should put together a balanced MDM program that creates a shared vision and strategy, addresses governance and organizational issues, leverages the appropriate technology and architecture, and creates the necessary processes and metrics for your customer data system.

MAGIC QUADRANT

Gartner’s Magic Quadrant for MDM of Customer Data provides insight into the portion of the evolving packaged MDM systems market that focuses on managing customer data to support CRM and other customer-related initiatives. It positions relevant technology providers on the basis of their completeness of vision relative to the market, and their ability to execute on that vision.

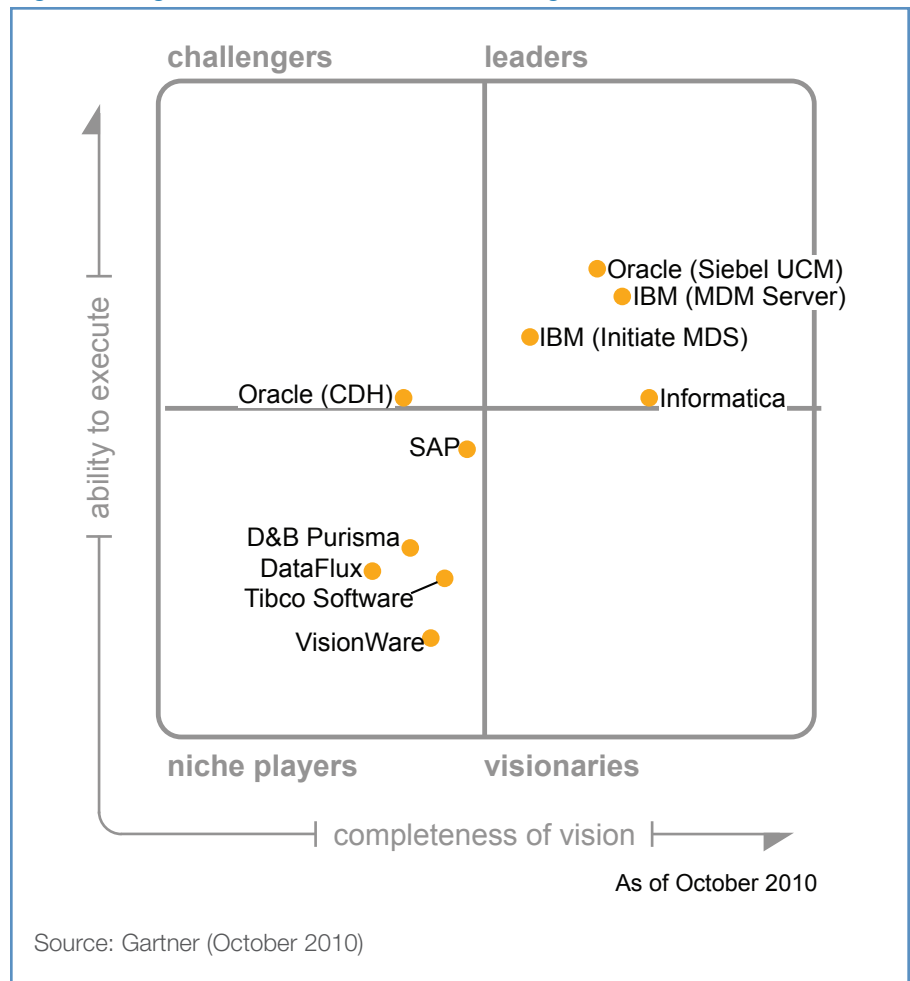
As part of the Magic Quadrant process, we sought the views of vendors' reference customers via an online survey. The survey included requests for feedback on vendor maturity (for example, understanding industry verticals, provision of innovation, responsiveness to new requests, total cost of ownership [TCO] and pricing) and product capabilities (for example, flexibility in data modeling, support for data quality, user interface [UI] support for data stewardship, internal workflow and support for multiple architectural styles). More than 100 organizations were contacted. Not surprisingly, the references 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 issues may be historic, as not all organizations are on the latest product versions.

Market Overview

The ability to create, maintain and leverage a single, trusted, shareable version of customer master data is seen as an essential requirement in commercial and noncommercial organizations to support business processes and business intelligence (BI). However, most large enterprises have heterogeneous application and information management portfolios, with fragments of often inaccurate, incomplete and inconsistent data residing in various application silos. No comprehensive system contains the single view or is designed to manage the complete life cycle of the master data. The focus of this single view may be customers (including consumers, business customers and channel partners), products, suppliers, locations, assets, financial charts of account or other core entities of the enterprise. MDM is a technology-enabled discipline in which business and the IT organization work together to ensure the uniformity, accuracy, stewardship, semantic consistency and accountability of the enterprise's official, shared master data assets.

When creating and managing customer master data, many organizations and vendors originally thought that CRM, ERP or vertical industry systems would solve the problem of inconsistent master data spread across multiple systems; however, CRM, ERP and vertical industry systems weren't designed for that task, and often there are multiple CRM or ERP systems. During the past five years, leading organizations have invested in creating a new central system to master the customer data. This new system can be bought or built, but the majority of organizations are buying packaged MDM of customer data systems.

Figure 1. Magic Quadrant for Master Data Management of Customer Data



Gartner started tracking the MDM of customer data market (then known as the customer data integration [CDI] hub market) in 2004, and has followed it as it has become part of a larger emerging multidomain and multi-use-case MDM market. We are routinely asked whether we have an overall MDM Magic Quadrant, but, while we continue to monitor the aggregate MDM market, we still believe that it is premature, because MDM needs are very diverse, leading to different market segments and the majority of the buying activity still focused on initiatives for specific master data domains. In addition, although many MDM solutions are marketed as multidomain MDM, we find that they don't provide similar depth of capability in every data domain.

MDM of customer data technology is now classified as being in early mainstream status. It has progressed along the Gartner Hype Cycle, and is now more than halfway beyond the Peak of Inflated Expectations and on its way to the Trough of Disillusionment. That

Note 1. MDM Definition

Master data is the consistent and uniform set of identifiers and extended attributes that describe the core entities of the enterprise, and are used across multiple business processes. Examples of core entities are parties (for example, customers, prospects, people, citizens, employees, vendors, suppliers and trading partners); places (including locations, offices, regional alignments and geographies) and things (such as accounts, assets, policies, products and services). Groupings of master data include organizational hierarchies, sales territories, product roll-ups, pricing lists, customer segmentations and preferred suppliers.

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

may sound negative, but it is the normal pathway for technologies, as they continue to mature. MDM of customer data products are now suitable for Type B (mainstream adopters of new technologies) organizations, as well as for Type A (aggressive, early adopters of new technologies) enterprises. However, there are still risks, because vendors' products vary in capabilities and sweet spots, and the vendors have varying levels of capabilities in different vertical markets and geographies.

The business drivers for MDM of customer data include:

- Compliance and risk management drivers. These tend to be the hardest benefits and are essential to have.
- Cost optimization and efficiency drivers. These have tangible benefits and are a good fit for organizations' needs during a down economy.
- Growth in revenue and profitability drivers. These can be more difficult to measure, but are a major focus when the economy is going well.

Investment in MDM of customer data systems continues to occur across all vertical industries and government. Product-oriented industries tend to be interested in a wide set of data domains (such as product, supplier and customer), whereas the service industries (such as financial services) and government tend to focus mainly on the customer data domain. There is global interest and investment in MDM of customer data technology, although best-of-breed vendors tend to have geographical limitations. So far, large enterprises have been the primary investors in MDM of customer data systems.

The worldwide recession depressed software markets in 2009, with some sectors decreasing in revenues. However, according to preliminary estimates, the market for MDM of customer data

systems weathered the recession well and grew by 11%, up from \$374 million in 2008 to \$416 million in 2009. Although this is healthy growth, it represents a reduction, compared with the previous year's 23% growth. As many major countries have moved back to positive (but probably continuing low) GDP growth, we expect growth in the MDM of customer data market to pick up to 14% in 2010. MDM software vendors are fortunate that MDM's business drivers are relevant in good and bad economic times.

The first quarter of 2010 was a time of great change in the MDM of customer data market, with the two leading best-of-breed vendors, Initiate Systems and Siperian, being acquired by IBM and Informatica, respectively. We also saw Microsoft entering the market in the second quarter of 2010. According to our preliminary estimates, IBM, Oracle (based on a combination of its Oracle Customer Data Hub [CDH] and Siebel Universal Customer Master [UCM] products) and SAP accounted for more than 50% of the MDM of customer data market share in 2009, and this lock on market share by the megavendors was further emphasized by IBM's acquisition of Initiate Systems. Along with this consolidation, we see new vendors, such as Ataccama, Information Builders, Microsoft and Talend, entering the market, but their revenues are still too small to warrant inclusion in the Magic Quadrant.

During the past year, there has been particular emphasis on adding or improving data stewardship and governance facilities, including data profiling, workflow, data visualization and manipulation, dashboards, and reporting. Better user interfaces and workflows for business users and MDM applets, which allow existing applications to leverage MDM-hub-based data, have been introduced, and the leading vendors are talking about future support for cloud computing and social networks.

In this year's Magic Quadrant, the Leaders quadrant becomes busier, including IBM's InfoSphere MDM Server, IBM Initiate Master Data Service (MDS) and Oracle's Siebel UCM – and also Informatica MDM for the first time. IBM's MDM Server continues to have a strong position in financial services, retail, and organizations attracted by IBM's long-term viability and range of offerings. During the past year, IBM introduced MDM Server v.9.0 with improved data stewardship and governance, and the ability to model and generate new data domains. IBM also acquired Initiate Systems, and it positions Initiate MDS primarily for healthcare and government and for registry-style "virtual" MDM requirements in other verticals, whereas MDM Server is positioned for situations requiring a "physical golden record." Oracle has strong sales momentum with Siebel UCM across a range of industries, but particularly within the Siebel CRM installed base, and has put a lot of effort into filling functionality gaps, such as data governance, in UCM v.8.2. We believe that Oracle plans to introduce Fusion MDM v.1.0 in the fourth quarter of 2010, but it will take several years to fully mature. In acquiring Siperian early in 2010, Informatica gained a good base for its MDM plans, but it needs to do more to prove itself in terms of global execution.

We have no Visionaries in this year's Magic Quadrant, but there are a number of vendors in the Niche Players quadrant. Oracle's CDH product continues to have a loyal user base, although the pace of new technology introduction has slowed. Oracle CDH is mainly positioned for established E-Business Suite (EBS) customers

in product-oriented industries, often as part of a single-instance multidomain solution with the other Oracle Hubs. SAP's NetWeaver MDM system has improved and SAP is successfully leveraging the BusinessObjects technologies. However, SAP is still behind the best in class in several functional areas, and is still chosen primarily by B2B customers in SAP's business application user base. D&B Purisma has dropped back in completeness of vision, as it is now clearly positioned for line-of-business MDM initiatives, as opposed to enterprise MDM programs, and it is purely focused on B2B situations. DataFlux has a useful package MDM product in qMDM, but it still seems more comfortable selling its data quality tools to help build MDM solutions. We are waiting to see DataFlux strongly marketing and selling qMDM. Tibco Software is becoming more active in the MDM of customer data market and has filled gaps in its functionality, but it needs to prove its ability, through a combination of benchmarks and customer references, to cope with the transaction-oriented, centralized style of MDM that it is pitching for. Finally, despite Microsoft's entry into the MDM market, VisionWare continues to face little competition in the Microsoft .NET segment of the market, and continues to have success in the public sector and healthcare industries and is now expanding into financial services.

Market Definition/Description

Markets are sets of actual or potential customers for a given set of products or services that have common sets of needs or wants, and that reference each other when making a decision. Market segments are portions of the generic market that are qualified by more-exact criteria that group potential buyers more tightly. Segmentation takes two forms:

- A generic market can be divided into a recognizable entity in which the rules for defining a market pertain.
- An individual vendor may segment the market to target its products more precisely and to differentiate itself from (or avoid competing with) other players that address the same overall market. However, the targeted buyers may not know they're part of the same market segment. Such segmentation will not be reflected explicitly in a Magic Quadrant, although it may be reflected implicitly (for example, via placement of a vendor in the Niche Players quadrant).

MDM of customer data systems are software products that:

- Support the global identification, linking and synchronization of customer information across heterogeneous data sources through semantic reconciliation of master data.
- Create and manage a central, database-based system or index of record for master data.
- Enable the delivery of a single customer view (for all stakeholders)
- Support ongoing master data stewardship and governance requirements through monitoring and corrective action techniques.

MDM of customer data implementations and their requirements vary in terms of:

- Instantiation of the customer master data, varying from the maintenance of a physical golden record to a more virtual, metadata-based, indexing structure
- The usage and focus of the customer master data, ranging across use cases for operations (running a business) and analytics (reporting on the business)
- Different organizations structures, spanning small, centralized teams to global, distributed organizations
- The latency of the customer master data maintenance, varying from real-time, synchronous reading and writing of the master data in a transactional scenario between systems to a message-based, workflow-oriented scenario of distributed tasks across the organization

Organizations use MDM of customer data technology as part of an overall MDM program, and MDM, in turn, has shared goals with enterprise information architecture (EIA) and enterprise information management (EIM). An MDM program potentially encompasses the management of customer, product, asset, person or party, supplier, and financial master data. As the name suggests, MDM of customer data focuses on the management of the domain relating to customer data, whereas MDM of product data technology focuses on the domain relating to product data.

Inclusion and Exclusion Criteria

The MDM of customer data market continues to mature. In the recent economic cycle, the drivers for MDM changed, and the technology and approach to MDM changed, from one driven by growth and revenue to one focused on efficiency and cost optimization. In 2010, we are seeing a slow return to growth drivers. Overall MDM market growth slowed, but it is now showing signs of returning to faster growth in 2010. To reflect this temporary slowdown in the market, we have decided to keep the inclusion criteria "as is" for 2010 over 2009.

We include specialist vendors, as well as large enterprise software vendors, with a product in the market, along with additional vendors that Gartner views as having a unique vision or position in the market worthy of inclusion, even if they do not fully meet all the inclusion criteria.

For inclusion based on market traction and momentum, vendors should have:

- At least 12 live customer references for MDM of customer data product functionality
- At least eight new customers for MDM of customer data products in the past four quarters

- Generated at least \$8 million in total software revenue (licenses and maintenance) related to MDM of customer data systems in the past four quarters

For inclusion based on near-term viability, vendors should have:

- Sufficient professional services to fulfill customer demand during the next six months
- Enough cash to fund a year of operations at the current burn rate (that is, if the year of operations is cash-flow-negative, then companies spend their cash reserves)

This Magic Quadrant excludes:

- Vendors focused on a single vertical industry market or single geographical region

- Vendors that solely focus on analytical (downstream) MDM requirements

- Vendors reselling another vendor's MDM of customer data product, unless they exceed the revenue minimum for inclusion (see above)

- Hosted services, marketing service providers or data providers that provide trusted reference customer data external to the enterprise, but don't provide an MDM for customer data product that specifically meets the definition

For MDM software vendors and marketing service providers that have been excluded for these reasons, see Note 2.

Note 2. Other Vendors and Service Providers

In addition to the providers that have been rated in this Magic Quadrant, many software vendors and data and marketing service providers are on the periphery of the MDM of customer data market.

Vendors whose MDM of customer data revenue is too small, or that focus on a limited geographical region, include:

- **Ataccama:** Ataccama is small vendor with an MDM product called Master Data Center (MDC) v.6.0, generally available from November 2009, and a data quality tool product called Data Quality Center (DQC). The vendor has a total of 65 customers, including 11 customers using the MDC product. The MDC product is mostly used for managing customer data, and most of the customers are in central and eastern Europe, and Canada. Ataccama is part of the Adastra Group and was founded in the Czech Republic. It plans to expand in the German and U.S. markets. Ataccama also has an OEM relationship with Information Builders, which resells MDC and DQC.
- **Data Foundations:** This is a small U.S. vendor whose OneData product is an MDM framework, with a fully configurable and extendible data model that manages multiple domains of master data, reference data, hierarchies and metadata, and analytical and operational MDM use cases. Early OneData implementations focused on managing product and supplier data, but now there are also implementations managing customer and counterparty data. A Customer MDM product, built on the multidomain MDM framework, was announced in September 2010.
- **Information Builders:** Information Builders' iWay product division resells Ataccama's MDC MDM product and its DQC data quality product under its own brand name. Information Builders is making good progress in selling into its base and to new customers, and has a value proposition based on a combination of its iWay integration technologies, which includes an extensive adapter portfolio, MDC, DQC, WebFocus, BI and reporting. Information Builders can also leverage its extensive global presence.
- **Kalido:** Historically, Kalido focused on the BI world, and its MDM customers typically used it for multi-subject-area analytical MDM use cases, such as dimension and hierarchy management. Now, Kalido MDM is increasingly applicable to both analytical- and workflow-oriented operational MDM requirements. However, Kalido's main focus going forward is enabling data governance, and Kalido Data Governance Director will be available in December 2010. It is designed to operationalize data governance programs through data policy management, and will be complementary to MDM products
- **Microsoft:** SQL Server 2008 R2, generally available in May 2010, includes an MDS facility that comes bundled with SQL Server Enterprise and Data Center Editions. MDS is based on technology from Stratature, a small analytical MDM vendor with a product called Enterprise Dimension Manager (+EDM), which Microsoft acquired in 2007. MDS has good hierarchy management and version control, but lacks best-in class matching capabilities and any merge capability. It will improve in future releases, but at the moment, it serves organizations willing to build a custom solution, and is a platform for third parties and integrators to build on.

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Note 2. Other Vendors and Service Providers

- **Orchestra Networks:** This small French MDM vendor's EBX.Platform provides flexible, multidomain data-modeling facilities, based on XML schemas, including the ability to create and manage complex hierarchies. It has a strong and growing blue-chip client list in France, and is building a presence in North America. Its MDM business is mainly based on managing product and employee data, but there are some customers managing customer master data, typically in a workflow-oriented operational MDM use case with central authoring.
- **Talend:** This open-source vendor, best known for its data integration products, acquired the rights to Amalto Technologies' Xtentis MDM product in 2009 and launched Talend MDM in early 2010. It is based on a native XML database and leverages open-source technology, including Talend's own data integration and data quality products. It is employed mainly in operational use cases and can provide flexible, multidomain data-modeling facilities, based on XML schemas.
- **Teradata:** Teradata sees MDM as an integral part of data warehouse solutions, and views data mart consolidation as an ideal opportunity to achieve data synchronization with analytical MDM; however, it also supports workflow-oriented operational MDM use cases with central authoring. Teradata MDM v.3.0 which became generally available in December 2009, includes a packaged solution for MDM of customer data. Teradata MDM has increasing momentum in the market, but progress has been slow so far. Teradata MDM has the most experience in managing product and supplier data, not customer data.

Vendors that focus solely on a single vertical-industry market include:

- **Amdocs:** Amdocs is a telecommunications industry specialist selling a broad portfolio of services and software applications. It was going to market with an OEM version of IBM's MDM Server, under the banner of Enterprise Customer Hub (ECH), but we are not aware of any sales. For Amdocs customers wanting enterprise-level MDM, the vendor works with customers and partners on a per-project basis. For integration of customer data within the Amdocs application portfolio, it offers the Customer Information Hub (CIH), which is an abstraction layer of the underlying customer data.
- **Cegedim Dendrite:** This company has an MDM product called Nucleus 360 (formerly Nucleus Pharma), which is offered to life sciences companies looking to build a single view of healthcare professionals, organizations and related hierarchies. Nucleus 360 is provided in multiple deployment options: service, hosted and on-premises. The service option (Nucleus as a Service) is increasingly popular, and is increasingly sold in combination with OneKey, Cegedim Dendrite's healthcare professional reference database, and Nucleus Aggregate Spend360, a spend compliance reporting solution. The combination is aimed at providing an end-to-end approach to master data governance.
- **GoldenSource:** This company focuses on financial services companies and business lines, including investment banking, asset management and wealth management. GoldenSource provides a framework, including a centralized repository, for auditing, controlling and managing customer data, plus securities, counterparties, positions and transaction data in a financial services context. In the customer data management space, GoldenSource offers two products — GoldenSource Customers manages customer data, GoldenSource Counterparties manages counterparty data.
- **NextGate:** This company focuses on the healthcare provider market and has a product line called MatchMetrix, which provides MDM, EMPI provider index and terminology index suites that support single view and health information exchange (HIE) initiatives. NextGate's senior personnel have years of experience in the master index space at SeeBeyond and Sun Microsystems, where they implemented master index products and solutions.

Vendors that focus mainly on analytical (downstream) MDM requirements include:

- **IBM's Cognos (Software Business Unit):** IBM Cognos 8 Business Viewpoint, which is part of the Cognos 8 suite, enables business users to collaboratively create, maintain, govern and share dimensions and hierarchies for use across BI and performance management applications. It is data-domain-neutral.
- **Oracle (Hyperion DRM):** Oracle offers a product called Oracle Hyperion DRM. It is a data-model-neutral solution that focuses on managing change in hierarchical structures and building consistency in the relationships among information assets, such as general ledger accounts, cost centers and related entities. DRM is typically used for analytical MDM; however, because it is data-model-agnostic and contains the capabilities to author new data and write it back, it can be used in an operational MDM context, and not just with financial data.

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Note 2. Other Vendors and Service Providers

External reference database suppliers develop and maintain a set of data on data domains such as customers, suppliers and vehicles. They are seen as complementary to MDM solutions, as they provide a trusted, current external reference point for identifying customers, grouping them into households or legal-entity hierarchies, receiving updates on changes of address, and enriching the master data with additional information, such as demographic data. External reference database suppliers can also assist with prospecting as they contain trusted data on customers beyond the current customer base.

Marketing service providers or data providers that provide an external customer data reference database service that can complement a MDM of customer data solution include:

- **Acxiom:** This company (see Note 4) provides a range of customer-information-related solutions, including a SaaS data quality offering (PanOptic-X OnDemand), recognition management solutions (such as AbiliTec and PanOptic-X Recognition Manager) and data assets (such as InfoBase-X). Acxiom's real-time SaaS data quality offering and its Recognition Manager product can be combined to provide an external MDM of customer data solution.
- **D&B:** Providing information and insight on business customers, D&B is generally regarded as the leading supplier in the B2B area, with the most worldwide coverage (over 168 million businesses). Its hosted data service (D&B Optimizer) can be used to bring structure to business data by persistently identifying legal entities via D&B D-U-N-S Numbers and providing an understanding of legal entity hierarchies. D&B also provides the Purisma Data Hub MDM solution as a customer data management solution.
- **Epsilon:** The Epsilon division of Alliance Data Systems has an MDM of customer data capability called Agility. It enables customer data integration, hygiene, customer identification, and linking and persistent keying across customer and prospect marketing systems. Also, in July 2010, Epsilon acquired the consumer-oriented marketing and data services operations of Equifax, and will license the Connexus facility, which provides persistent keys for customers and addresses to support installed client relationships.
- **Equifax:** In addition to its credit-related offerings, Equifax (see Note 5) provides customer information services. The acquisition of Austin-Tetra in 2006 forms the basis of its commercial data offerings, including the ability to bring structure to business data by persistently identifying legal entities with an EFX number, as well as their global corporate hierarchy relationships. Its offerings on the consumer data side were sold to Alliance Data Systems' Epsilon division in June 2010.
- **Experian:** Experian provides data and analytical services to help companies target and engage customers more effectively. Its Customer Data Integration (CDI) offering, which incorporates its Truvue linkage technology, addresses this by delivering data quality processing combined with a variety of decisioning attributes, including lifestyle, attitudes, demographics, life events and custom models to customer-facing systems. Truvue ensures persistent identification in marketing databases or data warehouses.

Both IBM and Oracle have promote two separate products in the MDM of customer data market – namely, IBM InfoSphere MDM Server and Initiate MDS from IBM, and Oracle CDH and Siebel UCM from Oracle. These products have different technology bases and are positioned differently by the respective vendors; therefore, we continue to rate the individual products in the Magic Quadrant, as opposed to rating the vendors' overall MDM strategies.

Lastly, we continue to include D&B Purisma in this year's Magic Quadrant because we believe that the product is relevant to the market. However, the vendor declined to take part in the Magic Quadrant process this year, stating that it is focusing on specific departmental initiatives, enabled by MDM, as opposed to enterprise MDM opportunities. As a result, this year's rating for D&B Purisma is based on previously supplied information, plus publicly available information and dialogue with users and prospects.

Added

No new vendors have been added to this year's Magic Quadrant. However, we did consider Ataccama, Data Foundations, Information Builders, Kalido and Orchestra Networks, but none of them could demonstrate sufficient revenue related to MDM of customer data. Acxiom (see Note 4) has a wide range of data quality and CDI capabilities, but has not, so far, gone to market with a packaged solution specifically focused on MDM. We did not include Microsoft or Talend, as they only entered the market in the first half of 2010 and it is premature to rate them.

Dropped

We dropped Sun Microsystems because, following its acquisition by Oracle, the Sun MDM Suite has been positioned solely for the healthcare industry.

Note 4. Acxiom

Acxiom is a portfolio company of ValueAct Capital Management, a private investment firm that also owns a substantial, publicly disclosed interest in Gartner, Inc., and has one seat on Gartner's 11-member Board of Directors. Gartner research is produced independently by the Company's analysts, without the influence, review or approval of our investors, shareholders or directors. (For further information on the independence and integrity of Gartner research, see "Guiding Principles on Independence and Objectivity" on our website, http://www.gartner.com/it/about/omb_guide.jsp.)

Evaluation Criteria

Ability to Execute

Gartner analysts evaluate technology providers on the quality and efficacy of the processes, systems, methods or procedures that enable IT provider performance to be competitive, efficient and effective, and to have a positive effect on revenue, retention and reputation. Ultimately, technology providers are judged on their ability and success in capitalizing on their visions.

Vendors are rated on the basis of the following criteria (and weightings).

Product/Service (High)

This refers to software products offered by the vendor that compete in/serve the MDM of customer data solutions market. This includes product capabilities, quality, feature sets and skills, etc., whether offered natively or through OEM agreements/partnerships, as defined in the market definition and detailed in the subcriteria.

Vendors will be measured on the ability of the product release to support the following MDM of customer data solution subcriteria:

- Data-modeling capabilities – The applicability of the data model to your organization is a fundamental requirement. It must:
 - Model the complex relationships between the internal application sources inside the organization, its business and consumer customers, as well as intermediaries and other parties, with the ability to handle complex hierarchies
 - Map to the master customer information requirements of the entire organization
 - Be configurable, customizable and extensible, but also upgradable
 - Support industry-specific requirements. This is particularly important across operational and analytical MDM requirements.
- Provide a base for the required workload mix and level of performance
- Be expressed using commonly accepted logical data model conventions with associated metadata
- Information quality management capabilities – A good data model has little value if it lacks accurate, up-to-date customer data. The MDM of customer data product should:
 - Have strong facilities, in batch and real-time mode, for profiling, cleansing, matching, linking, identifying and semantically reconciling customer master data in different data sources to create and maintain a golden record. These facilities may be provided by the MDM of customer data vendor or by offering tight integration with products from specialist data quality partners.
 - Configure rules for comparing and reconciling semantics across data sources, matching and linking the data, and managing the merging and unmerging of customer records with full auditability and survivability.
 - Ensure that business rules and associated metadata related to data cleansing are sufficiently visible to satisfy compliance requirements.
- Loading, integration and synchronization capabilities – The MDM of customer data solution needs to provide facilities for loading the product data in a fast, efficient and accurate manner. There will also be a need for integration middleware, including publish and subscribe mechanisms, to provide a communication backbone for the bidirectional flow of customer data between the central repository and the spoke systems, be they copies or subsets of the repository, or remote applications (coexistence style). These facilities may be provided by the MDM of customer data solution vendor or by offering tight integration with products from specialist middleware partners. The MDM of customer data product should support, as necessary, the MDM implementation styles that each use loading, integration and synchronization in different ways, by being able to:
 - Leverage a range of middleware products to data sources, including legacy data sources, and expose industry-standard interfaces
 - Support integration with different latency characteristics and styles (for example, real time and batch)
 - Support integration with downstream BI and analytical requirements
- Business services and workflow functionality – Many leading organizations will plan to use the new customer master database as the basis for new operational (both transaction-

and workflow-oriented) and analytical applications. In the new service-oriented architecture (SOA) world of enterprise architecture, service-oriented composite business applications may consume MDM of customer data business services through Web services standard interfaces. The MDM of customer data solution should protect and complement the data layer with a layer of business services for accessing and manipulating the product data that is built for an SOA environment, and exposing Web services interfaces. Additionally, many implementations of MDM focus on not only how systems interact (i.e., transaction scenarios), but also more on how business users collaborate in the authoring and management of master data. As such, the MDM of customer data solution needs to support flexible and comprehensive workflow-based capability to model data services, as well as user interaction across applications and data stores where master data is stored and used.

- Performance, scalability and availability capabilities – If the MDM of customer data solution supports operational and analytical applications, and is tightly integrated with established systems and new applications, then serious demands are likely to be made on its performance, scalability and availability. The MDM of customer data product should have:

- Proof points, preferably through live references, of different aspects of performance and scalability that match your current and future requirements
- Appropriate availability characteristics regarding planned and unplanned downtime

- Manageability and security capabilities – This refers to the availability of facilities for management and controlled access of the MDM of customer data solution, such as facilities for reporting on activity inside it. It also includes the ability to integrate the MDM of customer data solution with common system management and security tools. On the security and data privacy management front, this refers to the ability to:

- Manage the policies and rules associated with potentially complex privacy access rights.
- Configure and manage different rules of visibility, providing different views for different roles.

- Stewardship support and services – The MDM of customer data solution needs to support a range of capabilities for the day-to-day operation and management of MDM. The resulting focus of this will be the role of the (business-led) data steward. Among the different user roles that interact with MDM, the data steward requires a suitable UI whereby these services are provided. These services will include, but are not be limited to:

- Analytics and performance measures related to a range of processes and activities taking place within MDM, from the running of batch data loads to the execution of workflows against benchmarks to the data quality of active master data to the business value provided by MDM
- Status and management tools for the chief steward to monitor to-do lists of users to ensure effective action takes place across MDM
- Systemwide master/meta models to help identify what users, roles, applications and systems are responsible for which master data
- Workflow services for remediation of quality issues in master data
- Business rules services to interrogate which rules are used by MDM and to provide suggested enhancements to such business rules; also used to determine under which circumstances source preference is revised to give preference to the most-dependable source
- Technology and architecture considerations – MDM of customer data products should be based on up-to-date, mainstream technologies, and capable of flexible and effective integration with a wide range of other application and infrastructure platform components (whether from the same vendor or not) within end-user organizations. They should be capable of flexible configuration into a range of architectural styles in terms of instantiation, latency and use of customer master data to enable the product to satisfy different use case scenarios, such as the consolidation, registry, coexistence and centralized scenarios (see Note 3). The vendor will also be measured on the ability of its architecture to support global rollouts and localized international installations.

Overall Viability (High)

Viability includes an assessment of the MDM of customer data solution vendor's financial health, the financial and practical success of the business unit or organization in generating business results in the MDM of customer data market (on a global basis), and the likelihood of the organization or individual business unit to continue to invest in development of the product, and to continue offering the product and advancing the state of the art within the organization's portfolio of products.

Sales Execution/Pricing (High)

This refers to the vendor's capabilities in all MDM-of-customer-data-related presales activities, on a global basis, and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

Note 3. Architectural Styles of MDM Systems

There are different implementation styles for MDM systems. They provide different capabilities, require different levels of architectural and governance commitment, and are applicable to different situations.

- The **consolidation** style achieves a single version of master data mainly for lookup or BI purposes. Master data is authored in the source systems, then copied to the central “hub” where it undergoes a match-and-merge process to create a golden copy. There is no explicit goal to clean up the source master data when errors are found in the process of consolidation. There is no publishing or use for the data in any operational systems, only in BI environments. A complication emerges once such a data source is used as a source for new applications that create new data as a result; this implies a different focus for governance of the master data. Therefore, the style shifts from consolidation to one of the other styles where there is an explicit desire to fix source data.
- The **registry** style matches and links master data from source systems to create and maintain a central index into the master data. Different versions of the truth are held in the index and, at runtime, the system assembles a point-in-time composite view. This style is a relatively noninvasive, virtual approach and requires less governance agreement relative to the styles that maintain a physical golden record.
- The **centralized** style supports a centralized repository of all the master data for authorship, storage and validation, and is the most invasive style, due to the change in application and information architecture. This is commonly desired when there is a high demand for automated integration between source systems and MDM infrastructure. It handles two main scenarios: where access to the “hub” by “spoke” applications is transactional and could be very demanding, and where authoring and access to the “hub” is via collaborative workflow.
- The **coexistence** style recognizes that master data may be authored and stored in different systems across a heterogeneous and distributed environment. It creates greater consistency and data quality across systems, and rapid access to a single version (publishing that view to subscribing systems). This style is much more complex than the other styles because it is not really one style. Some instantiations represent “simple” publish/subscribe models (ERP pushes data out to a best-of-breed application), while others, newly emerging, mix and match where individual attributes persist that, combined at runtime (i.e., transaction request), represent the master data.

Market Responsiveness and Track Record (Standard)

This is the ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve, and market dynamics change within the MDM of customer data market. This criterion also considers the vendor’s history of responsiveness.

Marketing Execution (Standard)

This refers to the clarity, quality, creativity and efficacy of programs designed to deliver the vendor’s message, on a global basis, to influence the MDM of customer data market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This mind share can be driven by a combination of publicity, promotional, thought leadership, word-of-mouth and sales activities.

Customer Experience (High)

This refers to the relationships, products and services/programs that enable clients to be successful, on a global basis, with the products evaluated. This includes implementation and support, and the way customers receive technical and account support. It also includes a measure of clients’ success in implementing MDM for customer data products – customer references and TCO.

- **Implementation and support.** This service and support area includes:

- Professional services – provide internal professional service resources or partner with external service providers (ESPs) with vertical industry expertise, MDM of customer data domain knowledge, global and localized country coverage, and a broad skill set (including project management and system configuration) to support a complete project life cycle
- Customer support – provide satisfactory, prompt service to its customers worldwide with ranges of SLAs to meet different requirements
- User groups – provide support to active user groups

- **Customer references.** Vendors need to produce a sufficient number of production-level references, on a global basis, with varying levels of scenario complexity and workload to demonstrate the viability of their MDM of customer data solutions in the marketplace.

- **TCO.** The TCO for the MDM of customer data solution – including purchase of software licenses, implementation, and ongoing maintenance and administration – should, during a three- to five-year span, provide a good balance between cost and the value obtained. This was gauged by means of the online survey of references.

Operations (No Rating)

This refers to 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. This criterion was not explicitly rated, but was rolled in the Viability and Sales and Marketing Execution criteria (see Table 1).

Evaluation Criteria	Weighting
Product/Service	high
Overall Viability (Business Unit, Financial, Strategy, Organization)	high
Sales Execution/Pricing	high
Market Responsiveness and Track Record	standard
Marketing Execution	standard
Customer Experience	high
Operations	no rating
Source: Gartner (October 2010)	

Completeness of Vision

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

Technology providers are rated on the basis of the following criteria (and weightings).

Market Understanding (High)

This is defined as the vendor's ability to understand buyers' needs, and to translate these needs 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 them with their added vision. Vendors should demonstrate a strategic understanding of MDM for customer data opportunities (for example, new application functionality or customer segments) and ongoing vendor market dynamics (for example, consolidation trends), on a global basis, and translate these needs into

products and services. Additionally, an understanding of the wider implications and position of MDM for customer data within an organization's multidomain, multi-use-case and multi-implementation style program is increasingly important; also, the relationship to EIA and EIM initiatives is valuable to customers taking the strategic view.

Marketing Strategy (High)

A vendor's marketing strategy is evaluated based on the need for a clear, differentiated set of MDM of customer data messages consistently communicated throughout the organization and externalized globally through the website, advertising, customer programs and positioning statements. Intersection with MDM of product data and wider MDM and industry challenges, as expressed by Gartner clients, is important.

Sales Strategy (Standard)

A vendor's strategy for selling the MDM of customer data systems should use an appropriate global network of direct and indirect sales, marketing, service, and communication affiliates that extends the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy (High)

A vendor's approach to product development and delivery should emphasize differentiation, functionality, methodology and feature set as they map to current and future requirements. The vendor's published "statement of direction" (or Gartner's understanding of it) for the next two product releases needs to keep pace with or surpass Gartner's vision of the MDM of customer data market. Gartner's main product-oriented criteria focus on:

- Data-modeling capabilities
- Information quality management capabilities
- Loading, integration and synchronization capabilities
- Business services and workflow functionality
- Performance, scalability and availability capabilities
- Manageability and security capabilities
- Stewardship support and services
- Technology and architectural considerations

The vendor needs to offer a MDM of customer data product that can be configured into a range of architectural styles, in terms of instantiation, latency, search and usage of customer master data, to allow it to satisfy different use case scenarios, such as the consolidation, registry and centralized style scenarios, leading up to hybrid models such as coexistence style.

The vendor needs to show how an MDM of customer data supports the wide range of user cases from business operations (operational MDM) and BI (analytical MDM). Most vendors focus on one use case, so they need to demonstrate how they intend to support the growing convergence in requirements across these use cases.

The vendor must also understand major technology/architecture shifts in the market and communicate a plan to leverage them, including migration issues that may affect customers on current releases. Specifically, the vendor should have a vision to support mainstream software infrastructure technology, as opposed to a proprietary stack, and have an evolutionary path toward SOA.

Business Model (Standard)

The soundness and logic of a vendor of MDM of customer data systems underlying business proposition should be incorporated into a well-articulated strategy for revenue growth and sustained profitability. Key elements of strategy include the sales and distribution plan, internal investment priority and timing, and partner alliances, such as with ESPs.

Vertical/Industry Strategy (High)

This involves the vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical industries. Included in the assessment are reviews of the vendor strategy for meeting the needs of such vertical industries as banking, manufacturing, communications and government.

Innovation (High)

Vendors need to be able to lead this market and, in so doing, provide customers with an innovative solution and approach to service customer needs in a complex, heterogeneous environment. Innovation here implies leading the way with MDM of customer data issues, today and in the future. Understanding of and support for the most complex and broadest set of MDM of customer data environments and growing requirements of multidomain and multi-use-case MDM, in general, is looked for.

Geographic Strategy (Standard)

This refers to a vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, directly or through partners, channels and subsidiaries, as appropriate for that geography and market. It includes sales, marketing and support for complex global companies (see Table 2).

Leaders

Vendors in the Leaders quadrant have strong results and delivery capabilities, and will continue to have them. They typically possess a large, satisfied customer base (relative to the size of the market) and enjoy high visibility in the market. The size and financial strength of the Leaders enable them to remain viable in a challenging economy. Leaders have mature offerings and track

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	high
Marketing Strategy	high
Sales Strategy	standard
Offering (Product) Strategy	high
Business Model	standard
Vertical/Industry Strategy	high
Innovation	high
Geographic Strategy	standard
Source: Gartner (October 2010)	

records of successful deployments, even in the most-challenging environments, across all geographies and in many vertical industries. Leaders have the strategic vision to address evolving client requirements; however, they're not always the best choice.

Challengers

Challengers demonstrate a clear understanding of today's MDM of customer data market, but they have not demonstrated a clear understanding of the market direction or are not well-positioned to capitalize on emerging trends. They often have a strong market presence in other application areas. This version of the Magic Quadrant for MDM of Customer Data does not include any Challengers.

Visionaries

Visionaries display healthy innovation and a strong potential to influence the direction of the MDM of customer data market, but they are limited in execution or demonstrated track records. Typically, their products and market presence are not yet complete or established enough to reach Leaders status.

Niche Players

Niche Players do well in specific segments of the MDM of customer data market, or have limited ability to be innovative or outperform other vendors in the market. They may be focused on a specific functionality, domain or industry, or have gaps relative to broader functionality requirements. Niche Players may have limited implementation and support services, or have not achieved the necessary scale to solidify their market positions.

Vendor Strengths and Cautions

D&B Purisma

D&B's Purisma Data Hub v.4.5 became generally available in June 2010. Pricing for on-premises implementations depends on the configuration, number of data stewards, number of records and number of entity types. Historically, the majority of deals have been perpetual licenses, although the Complete Customer offering is subscription-based. Annual maintenance fees for perpetual licenses are 18% of the license fee.

Strengths

- **Strong parent company focused on business data:** D&B's ambition is to be the world's most trusted source of commercial insight. It is the world's leading provider of business information related to companies, and has a dominant position in the U.S. market for business customer reference data services and a substantial worldwide presence. In 2009, D&B had revenue of nearly \$1.7 billion, a 2% decline from 2008. Approximately 65% of its revenue comes from risk management solutions and approximately 35% from sales and marketing solutions. Within the Sales and Marketing Solutions portfolio are multiple products for customer data management, including D&B Purisma. Purisma was originally a small best-of-breed MDM of customer data company that D&B acquired in 2007.
- **Leveraging D&B's reach and business model:** D&B Purisma was an early innovator in the management of B2B customer data, and this remains its focus, providing a good match with the D&B company focus. Purisma is able to leverage D&B's extensive sales force and sell Purisma Data Hub into its large customer base, concentrating on the U.S. market first, but with the potential to expand globally later. Since the release of the on-demand, subscription-based Complete Customer solution in November 2009, Purisma is also increasingly positioned in line with D&B's mainstream business model (i.e., the provisioning of hosted or on-demand solutions to line-of-business executives to provide departmental data management). In the case of Complete Customer, it is positioned to help sales and marketing executives improve prospecting and lead management, and it stresses trusted data; faster time to value; lower cost; reduced need for IT support; and secure, reliable and flexible integration.
- **Tight integration with D&B information assets:** There is deep and real-time, Web-services-based integration between D&B's externally hosted reference data services (D&B Optimizer) and Purisma Data Hub, whether it is on-demand or on-premises. This has the potential to provide more-timely, accurate, insightful and proactive information on customer and prospect B2B organizations and personnel than competitive MDM products.
- **Capable product for B2B customer data:** Purisma Data Hub v.4.5 shipped in June 2010, and has a flexible data model with good probabilistic matching (based on Informatica's technology), hierarchy management, data visualization and data stewardship capabilities, including workflows, task queues, data profiling and dashboarding facilities. Purisma is particularly good for operationally managing B2B information, and is often used in an analytical context. Purisma Data Hub is attractive to organizations that want fast time to value, based on an initial registry-style implementation, potentially followed by an evolution to a more-physical, coexistence-style data model. In addition to using Purisma to create a high-quality customer database, organizations are increasingly using it to host prospect universes that have been downloaded from D&B Optimizer. D&B has plans to offer packaged analytical solutions on top of the Purisma Data Hub.

Cautions

- **Niche focus on business customer data and line-of-business MDM only:** Since the D&B acquisition, Purisma has steadily moved toward alignment with D&B's mainstream business model, which is focused on business customers, selling to the line of business with hosted, on-demand solutions. D&B has no plans to develop broad MDM capabilities across all master data domains and use cases to meet broad cross-enterprise MDM requirements. In the customer data area, the vendor is now focused purely on managing business customer or commercial data, not consumer data. It has no plans to support product data, but it does offer support for supplier data to tie in with D&B's services for supplier management and spend analysis. D&B claims that it will provide support for adjacent data domains that enhance and extend the value of customer data, including contact data. It will also continue its work with customers to add other domains as needed. Overall, D&B Purisma has progressively moved away from what it terms "enterprise MDM" to focusing on line-of-business (particularly sales and marketing) initiatives, and it is also likely that the single-tenancy software-as-a-service (SaaS) version will become the favored deployment option going forward. In summary, it has a niche focus on specific segments of the MDM of customer data market.
- **Not hearing about Purisma in the market:** In conversations with clients, we are hearing little mention of Purisma being under evaluation. During the past few years, there have been peaks and troughs of interest in Purisma. As a small, best-of-breed company, it was difficult to gain mind share; then, following Purisma's acquisition by D&B, there was a major expansion in Purisma's sales, because it could leverage the D&B sales force. However, this was then followed by customer dissatisfaction due to a shortfall in experienced service personnel. Purisma has rectified that issue, but D&B is doing little general marketing of Purisma, and it lacks presence in the market. Some of this lack of mention of Purisma by Gartner clients is probably due to D&B's focus on selling to the departmental business executive, typically within the D&B customer base, whereas Gartner's core audience is IT. However, it is typical that the IT "gatekeeper" gets involved at some stage of an evaluation. We believe that there is a need to ramp up the external marketing again, even if D&B wants to maintain its focus on MDM-enabled sales and marketing initiatives. We estimate that there are now a total of 50 Purisma customers, including six for the on-demand Complete Customer solution, but we also estimate that 2009 revenue was below our minimum criteria.
- **Limited partnerships and geographies:** Purisma sales have been opportunistic across industries, and there are no particular industry strongholds. Competitors are increasingly offering industry-specific solutions based on MDM, which have often been built in association with ESP partners. Purisma is behind the best in class in offering these industry solutions and having a range of ESP relationships. Also, on the geographical front, D&B is still only offering Purisma in the U.S. market, although D&B has global subsidiaries and partnerships.

- **Functionality and proof point gaps:** D&B's Purisma Data Hub product has some gaps in its applicability and functionality. The data modeling provides a large degree of data model flexibility, but it does not provide any industry-specific data model support. Also, it could do with more integration with third-party data quality and data integration tools. Purisma is behind the best in class in workflow for life cycle management of master data, does not provide out-of-the box integration with external BPM tools and lacks MDM applets to provide out-of-the box integration with existing applications. Purisma isn't typically used in a centralized implementation style of MDM supporting transactions, and lacks proof points for high-volume business-to-consumer (B2C) scenarios (but is only positioned for B2B scenarios). Lastly, if D&B wants to go further toward a SaaS model, and leverage cloud-computing economics, then it will need to develop a multitenancy version of Purisma.
- **Feedback from references:** D&B Purisma chose not to provide references for this year's Magic Quadrant process, so we are unable to judge the level of satisfaction in the customer base.

DataFlux

DataFlux's qMDM v.3.0 become generally available in September 2010. DataFlux operates a subscription software licensing model. For qMDM implementations, customers can purchase the full qMDM solution or start with a more modular approach, using components of the DataFlux Data Management Platform and the DataFlux Accelerators. Pricing varies according to the number of integrated systems and number of data stewards. Annual maintenance fees are 22% of the license cost.

Strengths

- **Strong parent company:** Wholly owned by SAS, DataFlux had estimated revenue of nearly \$50 million in 2009, and has healthy growth and strong viability. It is able to leverage SAS's development, sales and marketing resources worldwide; however, DataFlux maintains its own brand and has a great deal of autonomy. DataFlux has more than 2,300 customers, mostly for data quality tools.
- **Single architecture for data quality, data integration and MDM:** qMDM is based on DataFlux's Data Management Platform. This became available in the second quarter of 2010, and provides an integrated set of data quality and data integration technology, and is the fruit of a joint development with SAS called Project Unity. The overall Data Management Framework is designed to support both operational and analytical requirements, and the idea of an integrated platform covering data quality, data integration and MDM will be an attractive proposition to many organizations. DataFlux is a leader in the data quality tool market, and is a well-placed visionary in the data integration tools market; however, DataFlux has yet to achieve such success in the MDM market.
- **Graduated approach to MDM and build or buy options:** DataFlux offers organizations a graduated approach to MDM, providing data quality and integration technology, prepackaged accelerators or the packaged qMDM solution, depending on the organization's maturity in data management and its proactiveness in wanting to govern the master data. This enables an organization to start relatively small, with a focus on leveraging data quality tools, and to evolve toward addressing more-challenging MDM needs. The data quality and data integration tools can form part of a "build" solution for MDM, or, alternatively, the qMDM solution (the focus of this Magic Quadrant) provides a "buy" solution.
- **Continuing investment and steadily improving product:** DataFlux's qMDM product continues to improve in many areas, with continuing strong investment, and is an increasingly capable product for MDM of customer data. It has a flexible entity-based data model that can potentially be leveraged to model multiple data domains, but DataFlux has the most experience with customer data. The qMDM product had excellent data quality and data-profiling facilities, and includes a business rule engine. It has good dashboarding, monitoring and reporting facilities. The data stewardship tool, Master Repository Manager, provides good visualization and manipulation of master data, and its upgraded workflow capability supports collaborative central authoring. Also, there are now multiple levels of business service and support for interfacing to external business process management (BPM) tools.

Cautions

- **More comfortable in the data quality tools market:** DataFlux's vision is to take a consultative and agnostic, in terms of build versus buy, approach to MDM, and it has good methodologies. However, the result is that it underachieves in the packaged MDM solutions (i.e., the buy) market, because it seems more comfortable selling its data quality tools and accelerators, and helping organizations build MDM of customer data solutions. DataFlux had a total of 47 qMDM customers at the end of the first quarter of 2010, including 28 using it for MDM of customer data. Considering that it entered the MDM of customer data market in 2006, this is slow progress for a company with the resources of DataFlux, and we estimated that DataFlux's 2009 revenue for qMDM in the MDM of customer data market missed the minimum inclusion criteria. From a business viewpoint, DataFlux is growing its overall revenue very successfully, but we continue to wait for the vendor to have a major impact on the packaged MDM of customer data market, which is the focus of this Magic Quadrant.
- **Needs stronger and more-numerous MDM references:** The company is demonstrating better references for qMDM, but it needs to go much further and demonstrate references across a range of implementation styles, use case scenarios and vertical industries to compete with the strongest players in the market. We find it difficult to assess how good qMDM's functionality is in the field because of the small number of references. We

believe that DataFlux's qMDM solution is most appropriate for consolidation and coexistence scenarios, or workflow-oriented central authoring; however, DataFlux also needs to provide proof points for registry or high-volume transactional implementations with centralized authoring.

- **Needs to demonstrate global execution and stronger partnerships:** DataFlux's international revenue is steadily rising, and it has subsidiaries in most major European countries and in Australia, plus it can leverage SAS's global organizational strength. However, the qMDM sales success has mostly been North-America-oriented and DataFlux still needs to demonstrate its ability to execute as a global player in the MDM of customer data market. We don't hear of qMDM on many shortlists and ESPs don't talk of having projects with qMDM, nor is DataFlux investing in building industry- or initiative-specific assets on top of qMDM.
- **Some functionality gaps, and needs to prove transactional capability:** Relative to best in class, DataFlux needs to provide greater life cycle management around the data model, and, although qMDM's business services and hierarchy management have improved, it needs to go further. There is a need for integration with third-party reference data providers like D&B, and a need for greater out-of-the-box integration with third-party data quality tools, and middleware and data integration tools. Also, qMDM needs to demonstrate transactional performance and scalability. In other areas, qMDM lacks MDM applets that can provide existing applications with application components based on the MDM hub, and it doesn't provide any out-of-the-box support for key industries and specific MDM-enabled initiatives. Lastly, given that SAS is the parent company, it seems strange that DataFlux doesn't do more to innovate by leveraging SAS's analytics capabilities.
- **Feedback from references:** DataFlux was not able to supply sufficient references for implementation of the qMDM product (i.e., its buy approach to MDM). However, those that responded to the survey were generally happy with the product and company. Relative to competitors, it scored particularly well for data quality facilities, and the ability to monitor and measure data quality. It scored low on the ability to support different architectural styles, but high on the ability to support different use cases. It scored well on the sales process, but low for local presence. There were comments about the lack of stewardship workflows.

IBM (Initiate MDS)

IBM's Initiate MDS v.9.5, the first IBM-branded version, is due to become generally available in October 2010. The MDS software license is based on the number of records, the number of source and consuming systems, and the data domain. Annual maintenance fees are 18% of the license price for basic support and 24% for premium support.

Strengths

- **Now owned by IBM and part of IBM's MDM portfolio:** Initiate Systems was acquired by IBM in February 2010, with transfer of trade in October 2010. Previously, Initiate Systems had been the largest of the best-of-breed MDM specialists, reaching over \$80 million in revenue in 2009, including nearly \$50 million of MDM-of-customer-data-related revenue – a 10% growth over the previous year. The acquisition by IBM provides greater long-term vendor viability, and means that much greater resources can be put behind developing, marketing, selling and servicing the Initiate MDS product around the world. This has led to a major acceleration in Initiate MDS sales in the first half of 2010. IBM now has multiple MDM assets (InfoSphere MDM Server, InfoSphere MDM Server for PIM and Initiate MDS) giving relatively broad and deep coverage of MDM needs. These MDM assets are positioned as Adaptive MDM (i.e., able to meet and adapt to evolving MDM needs).
- **Well-respected product, and doing well in multiple market segments:** IBM bought Initiate Systems for two main reasons: (1) greater penetration of key verticals, such as healthcare and government; and (2) the ability to offer a strong registry implementation style across industries. Initiate Systems is the market leader in the healthcare provider enterprise master patient index (EMPI), MDM and information exchange markets. It has also done well in government, at national and local levels, particularly in meeting entity resolution requirements. Finally, Initiate Systems has been doing well in winning high-volume, high-performance MDM of customer data business, often with a registry style, in a range of commercial industries, with particular success in insurance. We estimate that Initiate MDS had a customer base of over 250 customers, with more than 140 live at the end of the first half of 2010. Historically, one of Initiate Systems' **strengths** was its people, and most key people remained following the IBM acquisition.
- **Architectural flexibility and agility:** Initiate MDS focuses on party data, such as customer, patient, citizen or organization, and offers multiple architectural approaches to MDM, enabling organizations to combine them into hybrids, as required. Most of the installed base uses registry style, in a form that stores the original source records in the hub and generates virtual golden records on the fly. This has the advantage of needing less governance agreement within the organization, being more suitable for multiorganizational data sharing and more easily enabling different composite views. Approximately 25% of the installed base uses a centrally authored transactional style, with a physical golden record. Initiate MDS has strong references across a range of architectural styles, with proof points for very high volumes of B2C data, with subsecond latency and high transaction rates. It is also demonstrating increasing experience in the B2B area, and a new B2B data management application called Initiate Data Trust is due in v.9.5.

- **Strong, flexible product for operational MDM:** The core MDM product, Initiate MDS, leverages data model and Web services flexibility, strong probabilistic matching, the architectural flexibility to deliver fast time to value (Initiate Systems claims that most implementations take less than six months), and a relatively low service-to-software cost ratio. Initiate Inspector provides a good UI and workflow for data stewards to visualize and manage consumer and organizational data. Initiate MDS provides integration with a range of data quality tools, and the measurement and monitoring facilities are good. Initiate Composer provides a graphical integrated development environment (IDE) for building composite applications, and is the basis for innovative out-of-the-box MDM applets that can be embedded in existing applications, such as salesforce.com.

Cautions

- **Overlapping products within the IBM MDM portfolio:** IBM now has three products in the overall MDM market: InfoSphere MDM Server, InfoSphere MDM Server for PIM and Initiate MDS. The products are strong in their own right in particular segments of the MDM market, but having multiple products causes complexity and some confusion with prospects and customers, particularly as InfoSphere MDM Server and Initiate MDS are both primarily targeted at the MDM of customer data market. IBM is giving InfoSphere MDM Server and Initiate MDS equal billing, but is positioning them as complementary. Initiate MDS is positioned as a master registry, suitable for more virtual MDM requirements, where an organization requires a match-and-link, registry-style approach. InfoSphere MDM Server is positioned for more physical MDM situations, where a physical golden record is created either by matching and merging or by centralized authoring. While it makes sense to differentiate the products in this way, this is likely to lead to some confusion in the market and it reduces the addressable market for Initiate MDS, whereas previously, Initiate Systems aspired to meet the needs of a much wider range of requirements. Also, although IBM has increased the resources focused on Initiate MDS, over time, vendors with multiple products in the same market tend to favor one product over the others, in terms of marketing and development resources.
- **What happens if your implementation evolves?** Initiate MDS is attractive to organizations that want the more virtual registry-style approach to MDM; however, if the organization's vision is to evolve its MDM capabilities over time to provide a more physical golden record approach, it may not be as straightforward as it would have been when Initiate Systems was independent. Although the vendor was well-known for its registry style, it was steadily improving facilities for customers to build up a data model and implement a more physical form of MDM. Not surprisingly, IBM does not appear to want to invest in Initiate MDS in a way that duplicates what InfoSphere MDM Server does, and the vision in its road map is more about integrating with or providing an upgrade to InfoSphere MDM Server. For customers that want to evolve their implementation, the road map provides two options: (1) to "extend" Initiate MDS by complementing it with InfoSphere MDM Server, and having Initiate MDS act as an identity hub that communicates the links with InfoSphere MDM Server, which then stores the physical golden record; or (2) to "upgrade" to a future version of InfoSphere MDM Server that includes Initiate MDS identity-resolution capabilities and physically stores the generated composite views. For Initiate MDS customers hoping to leverage a single MDM product, and to have a seamless evolution, the future has now become more complex.
- **Multidomain capabilities are limited, and functionality is lightweight in some areas:** Initiate MDS's core competency is with party data, including customer data. It can potentially model other domains, but, so far, has only done it opportunistically, typically in the context of specific industry requirements. IBM needs to invest if it wants Initiate MDS to provide in-depth support across all MDM data domains and use cases. Also, Initiate MDS is targeted mainly at operational use cases and doesn't tend to be seen in analytical MDM use cases. It lacks collaborative workflow capabilities for centralized authoring, although the new DataTrust facility starts to address this, and it does not include integration with a business rule engine. Initiate MDS provides only generic, relatively lightweight data model templates (which can be a differentiator in many situations) and majors on data model flexibility. Similarly, it does not have a comprehensive business services library, and instead relies on generated Web services and an SOA Toolkit for creating more-coarse-grained services. Historically, Initiate MDS had to depend on integration with partners' software for data profiling, dashboarding and reporting of master data quality. The emphasis is now likely to be on IBM's own complementary products.
- **Yet to see global execution, and still heavily concentrated in healthcare:** Initiate System's global reach outside North America was limited. It had a good presence in the U.K. (although it has not had the success it hoped for in local government and healthcare) and Australia, but it missed opportunities in other geographies. Under IBM ownership, we are starting to see the fruits of IBM's global presence, but there is more to do before we see global success. Initiate Systems had good relationships with ESPs in North America, the U.K. and Australia. Most of those relationships remain, but some are concerned that IBM Global Services will take much of the business, and are looking for other partners. Well over 50% of its user base is concentrated in the healthcare and government sectors, and this has been accentuated since the acquisition. Initiate Systems was selling increasingly into the commercial world, particularly insurance, but it didn't have equal strength across industries.
- **More work to do on creating an integrated MDM suite:** IBM's MDM portfolio originated from three different acquisitions. Not surprisingly, there are differences in the products. IBM is achieving relatively broad and deep multidomain, multi-use-case and multiscenario coverage, but with the downside of having a fragmented product set. To overcome this and provide a

consistent user experience with seamless integration behind the scenes, IBM plans to provide a common UI and workflow environment at the front end, and interoperability and common facilities, such as Information Server, at the back end, with specific MDM engines in the middle. This will provide welcome consistency for organizations, and will make the product more attractive to organizations with major investments in IBM's information management portfolio. However, the work will consume development resources that otherwise could be dedicated to innovation.

- **Feedback from references:** IBM provided a good set of references for Initiate MDS and they were generally very positive, although some of them had concerns regarding the changes that might result from IBM's acquisition of Initiate Systems, and are closely watching the road map. Initiate Systems scored well for its understanding of the business application of its technology, understanding of the industry vertical and providing a stream of new technology innovation, but it scored low in its sharing of its future road map and responsiveness to requests for new features. It also scored low in its data modeling, business services facilities and local presence.

IBM (MDM Server)

IBM's InfoSphere MDM Server v.9.0 became generally available in December 2009. It comes in two packaging forms. Foundation Hub provides the core functionality needed for initial deployments, whereas Transaction Hub provides capabilities needed for complex enterprise deployments. Price points vary by industry, data domain and the number of managed records per data domain type. Customers can license data domains when they are needed, and can also upgrade from Foundation Hub to Transaction Hub, if and when appropriate. Annual maintenance is 25% of the license price.

Strengths

- **Broad information management strategy and MDM capabilities:** InfoSphere MDM Server is part of IBM's Information Management portfolio that includes BI, performance management, information integration, warehousing and management, content management, and data management. This is an attractive proposition for organizations looking for a wide range of information functionality from a single, highly viable vendor. IBM leverages InfoSphere MDM Server in Information Agenda engagements and it also plays a key role in IBM's Information Governance initiative. IBM now has multiple MDM assets (InfoSphere MDM Server, InfoSphere MDM Server for Product Information Management [PIM] and Initiate MDS) giving relatively broad and deep coverage of MDM needs. These MDM assets are positioned as Adaptive MDM (i.e., able to meet and adapt to evolving MDM needs).
- **Very capable MDM product:** InfoSphere MDM Server is a strong MDM solution for high-end, transaction-driven, centralized implementation-style requirements in SOA environments. It has a comprehensive data model for parties, such as consumer and business customers, and also supports

simply defined product data and account data. The Master Information Hub (MIH) facility supports the creation of custom data domains. InfoSphere MDM Server has good support for hierarchy management and has rich prebuilt functionality in a multilevel business service library. It is tightly integrated with IBM's InfoSphere Information Server, which includes the QualityStage and DataStage products, which support data quality and data integration capabilities. These products are leaders in the data quality tool market and the data integration tools market, respectively.

- **Strong in financial services and retail:** InfoSphere MDM Server continues to be the leading MDM of customer data product in retail banking and is also strong in insurance, but it lost several insurance industry registry-style deals to Initiate Systems in 2009. It has also done well in retail and distribution, and communications, and has made progress in large government deals and healthcare insurance (but, again, faced strong competition from Initiate Systems). InfoSphere MDM Server has implementations across many other industries and there are projects in an increasing number of countries. InfoSphere MDM Server has strong references, including high-workload, transactional environments, and numerous strategic, multiphase and multidomain rollouts are under way.
- **Continuing momentum, but slower growth:** IBM's MDM customer base continues to grow, benefiting from the vendor's large sales and marketing organizations, and its large customer base. We estimate that the number of InfoSphere MDM Server customers was 190 at the end of the first half of 2010, and that IBM's MDM-of-customer-data-related revenue for InfoSphere MDM Server in 2009 was approximately \$92 million, a 2% decline from the previous year. We believe that the first half of 2010 has been healthier, relative to the first half of 2009, but not outstanding.
- **Improving data stewardship UI, flexibility and content integration:** With InfoSphere MDM Server v. 9.0, IBM continued to improve the product's facilities for data stewardship with new role-based UIs that have capabilities such as graphical data visualization and hierarchy management. Customers can leverage the UI Generator to extend the existing UIs and to generate new ones. IBM can also leverage the InfoSphere Discovery tool, based on the Exeros acquisition, to locate and map master data in heterogeneous systems. As part of the v 9.0 release IBM also introduced MIH. This tackles the need for greater data model flexibility, by providing a means for organizations to model additional data domains, as required. Also, with v 9.0, IBM introduced Master Content for InfoSphere MDM Server, which provides an out-of-the-box ability to manage linkages between MDM records and unstructured content, such as documents and images.

Cautions

- **Overlapping products within the IBM MDM portfolio:** IBM now has three products in the overall MDM market: Initiate MDS, InfoSphere MDM Server and InfoSphere MDM Server

for PIM. The products are strong in their own right in particular segments of the MDM market, but having multiple products causes complexity and some confusion with prospects and customers. The first two products are both targeted at the MDM of customer data market and IBM is giving them equal billing, but is positioning them as complementary. It positions Initiate MDS as suitable for more “virtual” MDM requirements, where an organization requires a match-and-link, registry-style approach. InfoSphere MDM Server is positioned for more “physical” MDM situations, where a physical golden record is created either by matching and merging or by centralized authoring. While it makes sense to differentiate the products in this way, the multiple products are likely to cause confusion with prospects and reduce the addressable market for InfoSphere MDM Server. IBM has shared a road map with its customers to detail how and when it will integrate InfoSphere MDM Server and Initiate MDS, starting in 2011.

- Some organizations want more flexibility and the registry style:** InfoSphere MDM Server provides a wealth of out-of-the-box functionality, as well as configuration and customization facilities; however, it has not always appealed to organizations that want the flexibility of starting with more of an MDM platform approach and building up capabilities, such as the data model and Web services, on a more flexible and selective basis. For example, this is what Initiate MDS provides. InfoSphere MDM Server’s MIH option is an attempt to meet this requirement, and we are aware of early customers in the financial services and communications industries; however, it is still early days in proving this new flexibility and the ability to evolve to the full-blown InfoSphere MDM Server. Another aspect of flexibility is implementation style. In 2009, IBM lost several deals to Initiate MDS because of Initiate Systems’ track record with the registry style. Now, it positions Initiate MDS for more virtual MDM scenarios, and reserves InfoSphere MDM Server for the more physical scenarios.
- Behind in some areas:** During the past couple of years, IBM has invested heavily in improving its InfoSphere MDM Server’s data stewardship tools and it is far more competitive now, although it needs to go further in providing facilities for life cycle governance. InfoSphere MDM Server particularly lacks workflow and task management for collaborative authorship, and it does not directly support analytical MDM scenarios. InfoSphere MDM Server needs to do more in offering out-of-the-box, integrated data-profiling, dashboarding and reporting facilities, although it is increasingly leveraging Cognos Reporting. Also, it does not offer MDM applets, components of MDM-based business logic that can be embedded in existing applications, potentially in their own UI format. Although IBM has made progress during the years with introducing accelerators, MIH and better UIs, we still hear feedback that achieving time to value with InfoSphere MDM Server is slower than with best-in-class products, but it is important to compare like with like in this area. Lastly, although InfoSphere MDM Server is behind the best in class in teaming with ESP partners on industry verticalization, it is making progress (for example, it has partnerships with Cognizant and Kingland Systems).
- More work to do on creating an integrated MDM suite:** IBM’s MDM portfolio originated from three different acquisitions. Not surprisingly, there are differences in the products. IBM is achieving relatively broad and deep multidomain, multi-use-case and multisenario coverage, but with the downside of having a fragmented product set. To overcome this and provide a consistent user experience with seamless integration behind the scenes, IBM plans to provide a common UI and workflow environment at the front end, and interoperability and common facilities at the back end, with specific MDM engines in the middle. This will provide welcome consistency for organizations, but will consume development resources that otherwise could be dedicated to innovation. IBM continues to add support for additional data domains to InfoSphere MDM Server; however, by itself, it is not going to support all requirements (for example, it lacks the collaborative workflow of InfoSphere MDM Server for PIM, it is not positioned for registry-style implementations now that IBM owns Initiate Systems and it is not suitable for analytical MDM, leaving that space to Cognos 8 Business Viewpoint).
- Feedback from references:** IBM provided a good set of references, but none were based on v.9.0. They were generally positive. They gave high marks for business service facilities and support for an information architect, but gave below-average marks for the UI and workflow facilities for data stewards, the internal workflow capabilities, the ability to predict future costs of usage, and user onboarding and training. There were also comments about the complexity of implementation and the need for deeper integration with QualityStage.

Informatica

Informatica MDM v.9.0.1 became generally available at the end of September 2010. It is the first Informatica-branded version of what was formerly Siperian MDM. Pricing is by data domain, then the number of records per data domain. MDM Data Director costs extra and is licensed on the basis of the number of users. Annual maintenance fees are 20% of license price for standard support and 25% for mission-critical support.

Strengths

- Informatica acquired a good base for its MDM plans:** Informatica entered the MDM market by acquiring Siperian in January 2010. Siperian was a well-regarded MDM vendor that offered strong innovation, a flexible multidomain MDM capability, a particular strength in the life sciences and some MDM-savvy people. The now-renamed Informatica MDM provides a good foundation for Informatica to leverage its existing data integration and data quality tools lines of business (it is a leader in both markets), and forms part of the Informatica 9 platform.
- Informatica provides vendor viability and reach:** We estimate that Siperian’s 2009 revenue was just under \$40 million. Although this was about 15% up on 2008, Siperian found it

difficult to grow quickly due to the vendor viability concerns that competitors often raised in evaluation situations. Although Siperian created good mind share and often won the technical decision in evaluations, it often found it tough to overcome these concerns. Whereas Informatica cannot be classed as a megavendor, with 2009 revenue of \$500 million and continuing healthy growth, it provides much greater vendor viability than Siperian was able to. Also, Informatica provides the global reach, in terms of numbers of salespeople and geographic presence, that Siperian never had. We can already see the result, with an acceleration in MDM-related revenue in the first half of 2010, relative to the first half of 2009. In addition, there is a new reseller deal with EMC, which will be leveraging Informatica MDM in a case management context.

- **Well-regarded, flexible product with good data stewardship**

UI: Informatica MDM offers a flexible, integrated, model-driven MDM platform. It supports multiple data domains, including party, product and location data, but its core strength is customer data. It has good proof points with B2C and B2B customers, and has several customers running very large volumes of records, indicating good performance and scalability. It is a good fit for organizations that want fast time to value, flexibility in terms of data model and strength in hierarchy management. In one product, it supports both the registry implementation style (i.e., match and link creating an index) and the implementation style that instantiate a physical golden record. MDM Data Director is a good UI for data stewards and business users to create, manage, monitor and consume master data, but it needs more workflow capabilities. Informatica leverages Lombardi or Intalio for complex MDM workflows, as well as integrating with other BPM tools in end-to-end business processes. Informatica continues to build on the Siperian track record of innovation with the introduction of the Business Data Components facility to provide MDM-based applets for embedding in existing applications, and Informatica's road map includes support for social networking and analysis, and the ability to create a best version of the truth across structured and unstructured data in a facility it calls Semantic Master.

- **Strong in life sciences, but also spreading across other industries:** Siperian had particular success in the life sciences industry, which accounted for over 50% of its business and where it was the clear MDM market share leader. But it also had increasing success in other industries, and we are likely to see that process accelerate under Informatica's ownership as it leverages its customer base. Informatica MDM has a presence in selected banking sectors, such as wealth management and capital markets, as well as in other industries, including media, manufacturing, insurance, communications, high tech, retail and automotive. We estimate that Informatica had a total of 80 MDM customers at the end of the first half of 2010. Siperian had strong customer loyalty, and was good at taking the product forward by responding to customers' needs.

Cautions

- **Informatica needs to continue Siperian's business-oriented approach to MDM:** Siperian had strong mind share in the MDM of customer data market and an excellent understanding of what it takes to succeed in MDM initiatives, particularly the fact that MDM needs to be business-oriented. Although Informatica has done well in retaining many of the key Siperian personnel, it needs to demonstrate this same capability on a global basis, and successfully leverage a field organization that historically has been comfortable with selling technology in the data integration market. It is still early days, but Informatica has taken some good early steps; however, it still calls itself "The Data Integration Company."
- **Needs to execute on a global basis:** Siperian had a good presence in North America, but only a small presence in Europe and no presence in the Asia/Pacific region. It had to reach markets outside North America via partners, which did not result in the level of mind share or sales as seen in North America. Informatica has a much stronger global presence, and is leveraging its global sales and service resources. However, it is still early days, and sales in the first half of 2010 still tended to be concentrated in North America. Organizations evaluating Informatica MDM outside North America should check on the availability of skills locally.
- **Needs more depth to its multidomain strategy:** Informatica, and Siperian before it, positions itself as multidomain and multi-use-case, and effectively claims that it can meet an organization's MDM needs entirely. This is a bold claim because, as we outline in "The Five Vectors of Complexity That Define Your MDM Strategy," MDM requirements are complex and differ between organizations and between industries. Megavendors like IBM, Oracle and SAP have found that they need multiple products to cover the ground, and still they have gaps. Informatica MDM does show promise in being able to meet such a wide set of needs, but its core competency is in managing customer data. If organizations are keen to buy into the multidomain story, then they should do a comparison with best-in-class solutions in those other drill-down MDM markets, such as the MDM of product data market. That will provide an objective view on the functionality typically required in those domains and how Informatica MDM compares. Finally, seeking to do everything will take many different specialist skilled resources to build, sell and support an MDM solution across so many different areas, and it will take significant investment by Informatica.
- **More of a platform, and it's not a megavendor:** Although the Informatica MDM platform provides a high degree of flexibility, it doesn't offer the same degree of out-of-the-box facilities in terms of data model and business services as a product, like IBM's InfoSphere MDM Server. This could mean that organizations using Informatica MDM would have to

build up the functionality (for example, by creating composite business services based on the data services generated from the data model). The alternative argument is that this approach provides a better fit and is less cluttered than what came out of the box. Also, because it is not a megavendor, Informatica cannot leverage the breadth of the megavendors' solution set. For example, it cannot leverage business applications and middleware suites in the way that Oracle and SAP can, and it cannot leverage a broad information management suite in the way that IBM has (for example, by providing out-of-the-box integration with Enterprise Content Management [ECM]).

- **Feedback from references:** Informatica provided a good set of references and they were generally positive. They gave above-average marks for data-modeling capability, hierarchy management, data quality, UI for a data steward, the ability to support multi-implementation styles and implementation support. The references gave below-average marks for workflow support for a data steward, and the monitoring, measurement and reporting of data quality, as well as performance and scalability. There were negative comments about the cost of Informatica MDM and concerns about changes to customer support following the Informatica acquisition.

Oracle (CDH)

Oracle's CDH Release 12.1.3 product was made generally available in August 2010. Pricing is available on Oracle's website, and is shown as Customer Hub for B2C and Customer Hub for B2B. For B2C, CDH is priced per person record, and for B2B, per organization record. When CDH is deployed as an add-on to an existing EBS deployment (i.e., the combined-instance deployment option), the per-record pricing is reduced by 50%. The annual maintenance fee is 22% of the net license price.

Strengths

- **Oracle has a strong MDM portfolio:** Oracle has a strong focus on MDM, and sees it as key to creating a cohesive application and infrastructure vision. It has built and acquired a wide range of MDM assets, and now has a wide multidomain and multi-use-case capability. In the MDM for customer data area, Oracle is continuing long-term development of Oracle CDH (and Siebel UCM) under the Applications Unlimited program. In parallel, Oracle has developed a multidomain and multi-use-case MDM product set with Fusion MDM. This will be a foundation for Fusion Applications, and we expect Fusion MDM v.1.0 to become generally available in the fourth quarter of 2010. Oracle plans to progressively converge all three products onto a common MDM platform foundation leveraging Oracle Fusion Middleware (OFM).
- **Appeals to EBS customers and part of a multidomain play:** CDH is a key foundation for Oracle's industry solution sets in manufacturing, high tech, retail and distribution. It appeals to organizations with investments in Oracle's EBS applications that want to leverage their skills, the EBS technologies and out-of-

the-box integrations. Also, it appeals to organizations wanting a multidomain capability based on the EBS technologies and data model, as CDH can be deployed with Oracle Product Hub, Supplier Hub and Site Hub in a single instance. Sales momentum remains relatively healthy, because of Oracle's global reach and extensive EBS customer base, although we seldom hear about CDH in open evaluations, and it is significantly outsold by Siebel UCM. Gartner estimates that Oracle had 300 CDH customers at the end of the first half of 2010.

- **Capable product, but not best in class:** Oracle CDH has a rich party data model, derived from EBS, a good data visualization interface in Oracle Customers Online, and integration with third-party data quality vendors and data providers. It is well-integrated with OFM components, although is not yet on the OFM 11G Application Server. At the heart is the Data Quality Manager (DQM) engine, not Oracle Data Quality (ODQ) Matching Server (the strategic product, based on an OEM version of Informatica's Data Quality technology). It can leverage ODQ Profiling for data profiling, monitoring and scorecarding, but ODS Matching Server and Cleansing Server are only available in a loosely coupled batch fashion. CDH can also leverage the Data Watch and Repair facility as an option, but lacks the strategic Oracle Data Governance Manager. CDH includes a layer of Web services that have been harmonized with Fusion MDM, allowing a greater degree of investment protection. It also comes with Application Integration Architecture (AIA) facilities for prepackaged process integration with ERP and industry vertical systems. This includes support for existing applications to access CDH-based master data.

Cautions

- **Not the lead product:** Oracle CDH is not Oracle's lead MDM for customer data product; Siebel UCM is. CDH takes second place to Siebel UCM, in terms of the pace of new functionality introductions and the level of marketing messaging, and we estimate that MDM-of-customer-data-related revenue for CDH in 2009 were \$25 million, less than one-third of the comparable Siebel UCM revenue. Because Oracle has two products in the same space, this makes the go-to-market strategy more complex than having a single product in the market. Clients sometimes have difficulty understanding which product Oracle is proposing. Oracle segments the market by offering the products to different industries: Oracle CDH in manufacturing, high tech, retail and distribution; and UCM in telecommunications, media, utilities, large-scale retail, financial services and government. Organizations should evaluate the lead products for their industries.
- **Fusion MDM is coming:** Oracle announced Fusion MDM in November 2009 and we believe that it will start delivering v.1 in the fourth quarter of 2010. It will then have three MDM of customer data products in the market (although Oracle CDH and Siebel UCM are bundled as a single item, Oracle Customer Hub is on the price list). It cannot treat them all equally, and will

need to be careful how it positions them relative to each other. Fusion MDM v.1 is likely to be targeted at new implementations, as opposed to upgrades; however, by 2013, Fusion MDM is likely to have become Oracle's premier MDM for customer data product. We believe that most CDH customers will not migrate to Fusion MDM until it has been available for at least two to three years, and investments will be protected under the Applications Unlimited and Lifetime Support programs. New and existing customers should mitigate the disruption of an eventual migration to Fusion MDM by utilizing CDH's "Fusion harmonized" business services, AIA and emerging facilities from the common MDM platform.

- **Behind best in class, and investment level could be stronger:** CDH is a capable product for organizations wanting a rich data model, and there is still a steady stream of new functionality, but it is behind Siebel UCM in a number of areas, such as the data quality technology, data governance facilities, and support for hierarchy visualization and management. These have all been improved in Siebel UCM in the last two releases, but not to the same level in CDH. As Fusion MDM becomes more of a reality, Oracle will seek to reduce the cost of ongoing development and maintenance for its MDM suite. For this reason, the main thrust of Oracle's future development for CDH is likely to be to leverage common elements in the new MDM platform, and upgrading to the OFM 11G Application Server and Application Developer Framework (ADF). Leveraging the MDM platform does provide opportunities, but we await to see whether Oracle strongly commits to investing in this area. In other areas, CDH is behind the best in class in providing a collaborative workflow facility for centrally authoring data, and most of the implementations tend to be the consolidation or coexistence styles. We haven't seen CDH win business in large transactional, centralized-style or registry-style environments.
- **Limited across industries and not seeing third-party investment:** Because Oracle has multiple MDM of customer data products, CDH tends to be used in manufacturing, high tech and retail. There is not a great deal of experience with it in industries like financial services, communications, life sciences and government. As a result, we are not seeing strong investment by third-party ESPs in building vertical industry solutions on top of CDH. That investment tends to go on with Siebel UCM.
- **Feedback from references:** Oracle provided a good set of CDH references and they were generally positive. They gave above-average marks for performance and scalability, implementation, support, and local presence. However, there were below-average marks for understanding of the organization's vertical industry, hierarchy management, data quality capabilities, business services, and the ability to monitor, measure and report on data quality. There were negative comments about the UI, and contradictory comments and scores about the level of insight into the future road map.

Oracle (Siebel UCM)

Oracle's Siebel UCM v.8.2 product has been generally available since January 2010. Pricing is available on Oracle's website, and is shown as Customer Hub for B2C and Customer Hub for B2B. For B2C, UCM is priced per person record, and for B2B, per organization record. There are also a number of options with UCM. When UCM is deployed as an add-on to an existing Siebel CRM deployment (i.e., the combined-instance deployment option), the per-record pricing is reduced by 50%. The annual maintenance fee is 22% of the net license price.

Strengths

- **Oracle has a strong MDM portfolio:** Oracle has a strong focus on MDM, and sees it as key to creating a cohesive application and infrastructure vision. It has built and acquired a wide range of MDM assets, and now has a wide multidomain and multi-use-case capability. In the MDM for customer data area, Oracle is continuing the long-term development of Siebel UCM under the Applications Unlimited program. In parallel, Oracle has developed a multidomain and multi-use-case MDM product set with Fusion MDM. This will be a foundation for Fusion Applications, and we expect Fusion MDM v.1.0 to become generally available in the fourth quarter of 2010. Oracle plans to progressively move all three products onto a common MDM platform foundation leveraging Oracle Fusion Middleware.
- **Siebel UCM is the lead product:** UCM is Oracle's lead MDM of customer data solution and is the most important offering in Oracle's MDM portfolio. It tends to get more investment than Oracle CDH and new strategic functionality first. It is key to Oracle's industry solution product lines for telecommunications, media, utilities, large-scale retail, financial services and government. UCM appeals to organizations with investments in Siebel CRM, especially in heterogeneous environments, but also to organizations with long-term strategic commitments to Oracle applications and technology. It is increasingly sold with other Oracle MDM products, such as Product Hub, although they are on different technology bases.
- **Strong momentum, verticalization and support from third parties:** During 2009, Oracle was very successful in selling UCM, with estimated MDM-of-customer-data-related revenue of \$85 million. We estimate that Oracle had 250 UCM customers at the end of the first half of 2010. It has an impressive number of commitments from blue-chip names across geographies and industries, with particular strength in telecommunications and developing strength in financial services. Oracle's MDM customer advisory board plays a leading role in setting the development direction. Siebel UCM is also attracting investment from ESPs that are co-developing MDM industry/sector solutions. Examples are LumenData in higher education, Infosys in wealth management and TCS in tax agencies. Oracle also has plans to develop industry versions for banking and government.

- Comprehensive functionality as a result of strong investment:** Oracle has been investing heavily in UCM in the last couple of releases, and UCM v.8.2 (which has been shipping since January 2010) is a capable product with a comprehensive, out-of-the-box, verticalized and extensible data model. UCM v.8.2 leverages the Hyperion Data Relationship Management (DRM) technology to provide strong hierarchy visualization and management capabilities, and also has tight integration with the various new Oracle Data Quality Servers, including the Matching Server, which are based on Informatica's Data Quality technology. UCM has an embedded rule engine and privacy management. It includes "Fusion compliant" Web services and, via the AIA packaged integration packs for MDM, it has the ability to make existing applications MDM-aware. UCM v.8.2 saw the first introduction of Oracle's strategic Data Governance Manager, initially focusing on monitoring, and UCM leverages Oracle BI Enterprise Edition (EE) to provide dashboards and reports enabling data stewards to manage data quality in the hub. UCM has proven performance and scalability, and Oracle can provide a good number of references, including live transactional workloads managing more than 100 million consumers. Going forward, Oracle plans to release enhancement packs for Siebel UCM that provide less disruptive upgrades. Included in the road map are plans for leveraging social networks and cloud computing, although, unlike Fusion MDM, there are no plans to create a multitenant version.

Cautions

- Multiple products sometimes create confusion:** Oracle offers two products in the MDM for customer data market, Oracle CDH and Siebel UCM (although they are bundled as a single item, Oracle Customer Hub is on the price list). This makes the go-to-market strategy complex. Clients sometimes have difficulty in understanding which product Oracle is proposing. Oracle's go-to-market strategy is to segment the market and offer the products in different industries: Oracle CDH in manufacturing, high tech, retail and distribution; and UCM in telecommunications, media, utilities, large-scale retail, financial services and government. Organizations should evaluate the lead products for their industries.
 - Fusion MDM is coming:** Oracle announced Fusion MDM in November 2009, and we believe that it will start delivering v.1 in the fourth quarter of 2010. It will then have three MDM of customer data products in the market. It cannot treat them all equally, and will need to be careful how it positions them relative to each other. Fusion MDM v.1 is likely to be targeted at new implementations, as opposed to upgrades; however, by 2013, Fusion MDM is likely to have become Oracle's premier MDM for customer data product. We believe that most UCM customers will not migrate to Fusion MDM until it has been available for at least two to three years, and investments will be protected under the Applications Unlimited and Lifetime Support programs. New and existing customers should mitigate
- the disruption of an eventual migration to Fusion MDM by utilizing UCM's "Fusion harmonized" business services, AIA and facilities from the emerging common MDM platform. A large part of Oracle's future development for UCM is likely to be leveraging common elements in the new MDM platform and providing an upgrade path from Siebel Applications Server to OFM 11G Applications Server and to ADF-based UIs. This will provide more commonality of technology to users, and also will simplify the complexity of Oracle's ongoing development and maintenance of its MDM suite.
- Good product, but still more work to do and doesn't appeal to everyone:** Like other MDM vendors, Oracle still has more work to do in the area of data stewardship and data governance facilities. Data Governance Manager v.1 was a good first step in the monitoring area, but there is more to do in managing master data throughout the life cycle and UCM is behind the best in class in collaborative workflows for authoring data and for task management in managing data quality. The Data Quality functionality also improved in v.8.2, but it also deepened the dependence on Informatica, which is now a direct MDM rival. Also, Siebel UCM is one of the MDM products that comes with a rich data model and set of business services. For many organizations, that is a good fit for their requirements. However, other organizations want more of a flexible platform that they can build up from. UCM does have a degree of flexibility and can leverage Siebel Tools, but not as much as the best in class. Finally, although UCM supports a range of architectural styles, it lacks sufficient proof points for "virtual" registry-style implementations, where an index is created and managed. This is important if Oracle wants to do well in some healthcare and government use cases; however, Oracle is meeting some of these needs in healthcare by leveraging an alternative product, Oracle Healthcare Master Person Index, which is derived from the acquired Sun Microsystems MDM technology.
 - Feedback from references:** Oracle provided a good set of references for Siebel UCM. They were generally positive and gave above-average marks for understanding of the business application of MDM, responsiveness to new requests, providing a stream of new technology, data modeling, hierarchy management, integration and synchronization with other systems, business services, internal workflow, and high availability. There were below-average marks for the initial load capability, and the ability to monitor, measure and report on the status of master data quality. There were negative comments about the cost, and the fact that Siebel UCM only handles the customer data domain.

SAP

SAP's NetWeaver MDM v.7.1 SP5 product has been generally available since June 2010. Pricing metrics include data domain type, number of records and usage scenario. For example, pricing for the customer object domain is different from pricing for the supplier object domain. Annual maintenance for SAP Enterprise Support is 22% of the license fee.

Strengths

- Loyal user base:** SAP has a large and loyal user base, particularly in the manufacturing, consumer packaged goods (CPG), retail, high tech and energy industry verticals. Many of these organizations are looking for a single vendor to supply them with a set of core integrated applications built on an application infrastructure that includes MDM capabilities. SAP estimates that it has licensed NetWeaver MDM to over 1,100 customers (as of mid-2010), up from 900 at year-end 2008. SAP states that approximately 500 of those MDM customers are licensed to manage customer data, and that there are over 175 live implementations managing customer data. We estimate that SAP had MDM-of-customer-data-related revenue of \$40 million in 2009. This was a 7% growth over 2008, and it contributed approximately 30% of the total NetWeaver MDM revenue.
- Strategic component of SAP's Enterprise Information Management portfolio:** SAP has brought its NetWeaver and BusinessObjects information management assets together under the Enterprise Information Management banner, and sees NetWeaver MDM as a key part of that strategy. MDM is also one of the key Orchestration technologies that enable both the mainstream, on-premises Business Suite applications and the newer, on-demand applications, such as Business ByDesign.
- Increasing leverage of other SAP and BusinessObjects technologies:** Starting with NetWeaver MDM v.7.1 SP4, SAP can demonstrate the fruit of leveraging other SAP and BusinessObjects technologies and standards. For example, NetWeaver BPM, which includes the business rule engine, is leveraged to provide a sophisticated workflow capability for collaborative authoring and data stewardship. Also, NetWeaver MDM can now generate Web-based data stewardship UIs for business users, based on WebDynpro and not requiring the SAP Portal. Following the exposure of Web service interfaces, plus a set of low-level APIs in NetWeaver MDM, there is the tight integration with BusinessObjects' Data Services matching engine. Also, SAP is starting to leverage BusinessObjects' BI assets for dashboarding and reporting, and data quality.
- Multidomain capability:** NetWeaver MDM has a flexible, domain-neutral data model, and an increasing number of references are managing a combination of customer, product and supplier master data with NetWeaver MDM. For customer data, most of the experience is with managing B2B business partner data in workflow-oriented, centralized-authoring situations, or in consolidation and coexistence styles with distributed authoring. We are starting to see sites that are managing over one million B2C consumer records, but they are restricted by NetWeaver MDM's architecture to consolidation or coexistence styles, and the product is not currently capable of supporting transaction-oriented, centralized authoring or registry style.
- Better integration with Business Suite:** NetWeaver MDM v.7.1 provides consistency and integration with Business Suite and NetWeaver BPM at the Enterprise Services definition level. It is also able to support the strategic Business Partner data model, as found in Business Suite, and also supports the older Customer data model from SAP ERP. However, NetWeaver MDM is not designed to govern all attributes of these data models, as they are expressed in Business Suite and ERP.

Cautions

- Mainly appeals to SAP customers and restricted B2C support:** NetWeaver MDM mainly appeals to SAP-centric organizations that have bought into the company's application and application infrastructure vision. SAP makes few shortlists in non-SAP-centric heterogeneous environments, where, so far, it hasn't been seen as competitive. Also, NetWeaver MDM isn't suitable for supporting high-volume, transaction-oriented B2C use cases (with centralized authoring or registry style) in financial services, communications and government, because it is optimized for read (as opposed to write) operations, due to its A2i and product catalog origins. In the banking and insurance industries, SAP offers a different customer master product, Business Partner, if an organization wants to use SAP's banking applications.
- Multiproduct strategy is starting to create some confusion:** In addition to NetWeaver MDM, SAP is starting to offer a separate product called Master Data Governance (MDG). This is positioned as "embedded MDM," comprising out-of-the-box, domain-specific master data governance applications to centrally create, change and distribute master data, with a focus on SAP Business Suite. This is in contrast to NetWeaver MDM, which is now positioned for "enterprise MDM," providing a generic, multidomain infrastructure that complements MDG, and supporting all domains and use cases in the enterprise. MDG first appeared in late 2008 as MDG for Financials. MDG for Materials and MDG for Suppliers will enter ramp-up mode in the fourth quarter of 2010, and, within the next two years, SAP will introduce MDG for Customers. MDG will appeal to a significant section of the SAP customer base, although the majority will also need SAP NetWeaver MDM to integrate to non-SAP systems. SAP will need to ensure that the two development road maps are consistent and synergistic (for example, in development of shared MDM services). SAP also needs to reassure NetWeaver MDM customers that their investment remains strategic.
- Functionality is improving, but still not best in class:** Historically, NetWeaver MDM has been well-behind the competition. During the past two years, it has improved in a number of areas, but remains behind the best in class for B2C support, where it has long-term plans to leverage in-memory database technology. SAP also needs to continue to improve the facilities for data stewards to manage the life

cycle of master data, including visualization and manipulation of hierarchies, reporting, and dashboarding. However, the forthcoming Information Steward product will help here in 2011. SAP is also behind in offering MDM applets that organizations could use to embed MDM-based business logic in existing or new applications. SAP is starting to offer industry- and initiative-specific packaged QuickStart packages, such as for Physician Spend Analysis, but it doesn't more generally provide industry-oriented data models or templates. SAP is starting to work with partners to offer value-added industry or initiative packages based on MDM, but it is behind the competition in building this kind of ecosystem.

- **Still don't see a large number of live references:** Although more organizations are using MDM to manage customer data, there's still a major gap between the sales success that SAP has had (500 sites) and the number of live implementations (150). Many companies bought the rights to NetWeaver MDM in enterprise license deals in 2007 and 2008, and often had higher priorities, such as ERP instance consolidation. Or they waited for NetWeaver MDM to mature further, or implemented MDM for product or supplier data first. Now, the number of live implementations is growing healthily, but the list of NetWeaver MDM references managing customer data is not as full or impressive as would be expected.
- **Feedback from references:** SAP's ability to provide MDM of customer data references for NetWeaver MDM has improved, but is still not as good as the best in class. Those references we talked to said positive things about the support they had from SAP, but they were still on v.5.5 and looking forward to upgrading to v.7.1. In the online survey, references gave SAP and NetWeaver MDM below-average marks in a wide range of areas, which is probably a reflection that they were mainly on v.5.5. SAP received lower-than-average marks for understanding of the business application of MDM, understanding of the vertical industry, provision of a stream of new technology, responsiveness to requests for new features and pricing. NetWeaver MDM received low marks for data modeling; hierarchy management; data quality facilities; UI; workflow support for a data steward; integration and synchronization with other systems; performance and scalability; the ability to monitor, measure and report on the data quality; and architectural flexibility.

Tibco Software

Tibco Software's Collaborative Information Manager (CIM) v.8.0 product became generally available in January 2010. Pricing is both per CPU and per named user, and both project-based and enterprise licenses are available. A single license covers all data domains, unless specifically restricted within the contract. Annual maintenance cost is based on Tibco's standard Gold, Silver and Bronze levels.

Strengths

- **Tibco is increasingly realizing the importance of MDM:** Tibco Software's positioning is to enable real-time visibility, understanding and action. It is best-known for its SOA middleware, such as its enterprise service bus (ESB), and BPM. Its vision increasingly focuses on enabling interactions and business processes, and this means that foundational capabilities like MDM and analytics become essential. Tibco Software is increasingly realizing this, but MDM still does not have a high-enough profile within the company. In the MDM area, the vendor offers a product called Tibco CIM, which was originally developed as a PIM product by Velosel, a company that Tibco acquired in 2005. It positions Tibco CIM as a multidomain MDM system, suitable for collaborative workflow and real-time transactional environments, and is making significant investments in the product.
- **Leveraging the Tibco customer base:** We estimate that Tibco has over 3,000 customers in total, and it is able to leverage that base in the telecom, financial services, energy, distribution and automotive industries. It often sells Tibco CIM as part of an overall Tibco Software solution to organizations with existing Tibco investments, and there has been particular success in the telecom industry during the past year. It is also very active in financial services. We believe that the Tibco CIM customer base is now over 125, but historically, this has been very biased toward MDM of product data. However, the number of customers using Tibco CIM for MDM of customer data is growing quickly, to an estimated 30 customers. In addition to managing product and customer data, Tibco CIM is also being used to manage organization, counterparty and employee master data.
- **Flexible, with good workflow:** Tibco CIM has a flexible approach to data modeling in common with other former PIM products, and it can support multiple data domains, including the ability to model cross-domain relationships. Tibco CIM Studio is a graphical modeling tool based on Eclipse. Tibco CIM has strong workflow and process-modeling capabilities for collaborative authoring of data, and can also be called by external BPM tools, such as Tibco iProcess and Tibco ActiveMatrix BPM. Tibco CIM supports survivorship and versioning, and can construct a point-in-time view for analysis purposes. Tibco CIM can provide a multitenancy capability by managing logical partitions within a single instance for different business units and geographies.
- **The product continues to improve:** Tibco CIM v.8.0 included major improvements in the data quality area with the embedding of the Netrics matching engine, which it acquired in March 2010, and the integration of Trillium Software's data profiling, cleansing and standardization technologies. Tibco CIM v.8.0 also continued to improve the data stewardship

tools based on the Tibco General Interface (GI), and there were improvements to hierarchy management. Tibco Software provides a distributed cache platform (DCP) facility for further improving in-memory performance. In Tibco CIM v.8.0, this is based on Oracle Coherence, but in a future release, this will transition to Tibco ActiveSpaces Transactions, which is based on the Kabira technology acquired in April 2010.

Cautions

- **Needs more sites managing customer data:** An increasing number of Tibco Software's implementations are planned to be multidomain, but most of its experience is in managing product data. The number of organizations using Tibco CIM for managing customer data, and the level of client inquiries, has increased significantly during the past 12 to 18 months, but it needs to go further. The vendor also needs to provide better references for MDM of customer data. It was unable to supply the required number for the reference survey that formed part of this Magic Quadrant process, and we estimate that Tibco Software's MDM-of-customer-data-related software revenue was less than \$6 million in 2009.
- **Needs to clearly prove the transactional capabilities:** Tibco CIM was originally built for workflow-style, central-authoring use cases, and not a heavy transactional, environment; however, it can also work well in a coexistence implementation style. Tibco Software has clear ambitions to address demanding real-time operational environments with Tibco CIM, but it needs to clearly demonstrate in benchmarks and customer references that Tibco CIM is capable of handling hundreds of transactions a second on a base of millions of customer records. This would give the vendor the credibility to win business in these demanding environments. In common with some other PIM products, Tibco CIM was architected with an in-memory object model. This can provide richer data-modeling capabilities and fast searching, but it means that Tibco CIM cannot transparently benefit from relational database management system (RDBMS) features, such as locking and concurrency control, and transaction logging. These need to be done in the application (in this case, Tibco CIM), and the product needs to demonstrate that it can deliver capabilities in this area that are equivalent to those provided by a leading RDBMS.
- **Behind in some areas:** Tibco CIM v.8.0 does move Tibco Software forward, but it is still behind the best in class in a number of areas. The vendor has many of these topics on its road map, but is not there yet. For example, Tibco Software will need to keep investing in areas of data governance, such as workflows, profiling, dashboarding and out-the-box reporting. It has many of the pieces, such as its BPM product for workflow, and Spotfire for analysis and visualization; however, so far, integrated facilities are only available on a consulting project basis, and there needs to be more productization. Also, during the past 12 months, best-of-breed vendors have introduced the

concept of MDM applets to provide MDM-based business logic components for embedding in existing business application. Tibco Software has yet to make a move in this direction.

- **Behind in leveraging partner relationships:** Tibco Software is leveraging its worldwide presence and customer base in marketing Tibco CIM, with an increasing number of wins in EMEA, as well as in North America. But the vendor needs to go further in making its MDM of customer data presence felt internationally, and needs to continue building the availability of skills in sales, marketing and services. The vendor also needs to build stronger ESP relationships to generate business and create additional Tibco-CIM-based industry vertical templates and initiative-specific solutions.
- **Feedback from references:** Tibco Software's references for MDM of customer data are still weak, compared with its competitors. If it is positioning itself for demanding workloads, then it needs to demonstrate proof points for that positioning. Not enough Tibco CIM customers responded to the online survey to get a representative sample, but there was a comment about insufficient performance in initial data loads

VisionWare

VisionWare's MultiVue v.2.0 product was made generally available in the fourth quarter of 2009, and the MiDaS release, based on Microsoft's SQL Server 2008 R2 MDS, was released at the end of September 2010. MultiVue is priced according to the industry and the size of the organization, if it is in the public sector. The licensing is by the number of source applications, with no restriction on the number of users. Annual maintenance is charged at 20% of the list price.

Strengths

- **Attractive MDM solution for Microsoft users:** VisionWare's MultiVue is based solely on Microsoft technologies, such as .NET and SQL Server. The company has very competitive pricing, with a starting point below \$100,000, and its products are attractive for resource-constrained organizations that are Microsoft-centric. It is mainly used to manage information on individual parties and households, as opposed to businesses.
- **Strength in the government market and expanding geographical presence:** VisionWare has a strong domain knowledge of the local government market, and also has some customers in healthcare provision and law enforcement. In addition, the vendor is starting to move into financial services. VisionWare has 66 customers, mainly in the U.K., and also has a partner network in North America, with 15 customers at the state, county and city levels, and MDM applications focused on Medicaid, public health, human services, criminal justice and public safety. It has recently won its first deal in South Africa, via a partner, and hopes to expand into other geographies by virtue of a new relationship with HP.

- **Registry style is the sweet spot:** MultiVue's sweet spot is the registry implementation style. Data is authored in a distributed fashion, then brought to a central hub for matching, and a single view is created through linking the different versions to create a composite record. This virtual style is different to a matching and physical merging of different versions from a single, physical golden record. It can be attractive to organizations that favor a noninvasive form of MDM with lower governance requirements. Implementations are scaling to hold data on more than six million unique customer entities, and benchmarks on commodity hardware indicate scalability well beyond that. An Information Sharing Framework, released in the third quarter of 2009, provides facilities for cross-agency information sharing.
- **Good facilities and leverages Microsoft technologies:** VisionWare MultiVue has a flexible data model, allowing modeling of other data domains, in addition to customer data. It uses VisionWare's capable probabilistic matching and cleansing technology, and its data integration technologies. It also includes data profiling, analysis and internal workflow capabilities. Elsewhere, MultiVue leverages Microsoft technologies, such as .NET, SQL Server and BizTalk. The Prism facility, based on Silverlight, provides good visualization of parties and relationships. In addition to its existing stand-alone MultiVue product, VisionWare recently released the 64-bit MiDaS version that runs on top of Microsoft SQL Server 2008 R2 MDS product. This is the first value-added packaged solution on the MDS platform that we know of, and it means that MultiVue can leverage facilities in MDS, such as physical data modeling, hierarchy management, version control and Microsoft fuzzy matching technology for search.

Cautions

- **Small company, mainly focused on government:** VisionWare is a small U.K. company, with just over \$6 million in revenue in 2009 and a healthy 15% growth rate over the previous year. It is profitable and has not taken venture capital. At this size, VisionWare obviously doesn't have the vendor viability that larger players have, and it is likely to be an acquisition target as the MDM market continues to consolidate during the next few years. Also, VisionWare's business is concentrated in government, along with wins in healthcare or law enforcement, with only minor success so far in commercial organizations. Going forward, it needs a wider spread of business across verticals, particularly in view of the forthcoming government expenditure cutbacks in the U.K.
- **Limited geographical coverage:** The company has limited geographical coverage. It is strongest in the U.K., and has a growing presence in the U.S. and Canada, through partners. It also has a partner in South Africa, but VisionWare is not currently offering MultiVue in any other geographies. As a small company, it needs to further build its partner channel to achieve a higher volume of sales and provide local support and services for customers. The newly announced global partnership with HP shows promise in extending VisionWare's global reach.
- **Long-term risk of competition with Microsoft:** VisionWare has achieved great leverage from its Microsoft relationship; however, Microsoft itself is now an MDM player, with SQL Server 2008 R2 MDS. Having just entered the market, Microsoft is sensibly positioning itself as a "platform" MDM player,

Note 5. Equifax

Equifax is a portfolio company of ValueAct Capital Management, a private investment firm that also owns a substantial, publicly disclosed interest in Gartner, Inc., and has one seat on Gartner's 11-member Board of Directors. Gartner research is produced independently by the Company's analysts, without the influence, review or approval of our investors, shareholders or directors. (For further information on the independence and integrity of Gartner research, see "Guiding Principles on Independence and Objectivity" on our website, http://www.gartner.com/it/about/omb_guide.jsp.)

encouraging partners like VisionWare to offer MDS-based MDM solutions. However, long term, as Microsoft continues to improve MDS during the next few years, it will become more of an MDM solution and VisionWare will need to find ways to add value and differentiate itself. In the short term, VisionWare is safe, as v.1 of MDS lacks key facilities like competitive matching and any merge capability, and early customers are already voicing concerns that it needs to be augmented to create an MDM solution; however, longer term, it could become more difficult.

- **Restricted to Microsoft environments:** VisionWare MultiVue is restricted to running on Microsoft SQL Server and strongly leverages Microsoft .NET technologies. It would not be suitable for organizations with Java Platform, Enterprise Edition standards, or IBM or Oracle RDBMS mandates.
- **Limited implementation styles and gaps in functionality:** To be considered more widely, VisionWare needs to provide better support and proof points for central authoring of data (transactional and workflow use cases) to create and maintain a physical golden record. It also needs additional functionality, such as more comprehensive hierarchy management and integration with additional reference data suppliers (it already has a partnership with Experian), such as D&B, to be considered more for B2B use cases. MultiVue also lacks out-of-the box integration with third-party data integration and data

quality tools. Scalability data points continue to improve, but organizations with high-volume requirements should check references first and perform a proof of concept.

- **Feedback from references:** VisionWare can provide a good set of references, although there was a below-average response rate to the online survey. References were generally positive and gave above-average marks for understanding of vertical industry (mainly government), pricing, data quality capabilities, data stewardship UI, initial data load, performance and scalability, sales process, and postsales support. They gave below-average marks for internal workflow support for a data steward, the lack of ability to handle different architectural styles and the lack of presence in North America. Comments included the lack of local presence (in the U.S.) and having the resourcing problems of a small company.

Vendors Added or Dropped

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

Evaluation Criteria Definitions

Ability to Execute

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

Overall Viability (Business Unit, Financial, Strategy, Organization): Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood 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 pre-sales activities and the structure that supports them. This includes deal management, pricing and negotiation, pre-sales support and the overall effectiveness of the sales channel.

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

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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.

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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.