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Magic Quadrant for Master Data Management of Product Data Solutions

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The master data management of product data solutions market continues to grow in size and importance as users seek to meet growth, compliance and efficiency efforts. New trends emerged in 2011 as vendors started to address social data, "big data," cloud and the slow shift to multidomain MDM.

What You Need to Know

Gartner's Magic Quadrant for Master Data Management (MDM) of Product Data provides insight into the segment of the evolving packaged MDM solutions market (see Note 1) that focuses on how organizations master and share a "single version of the truth" of product data with multiple views of it across the organization.

Achieving a single version of master data is a key initiative for many organizations. "Product" data here includes parts, assets and tools for example, as well as services. This analysis positions the MDM of product data technology providers on the basis of their completeness of vision, relative to the market and their ability to execute on that vision.

Four trends have become clear as we engaged with the market via our inquiries and interactions:

- Many organizations of all sizes, across public and private sectors, continue to struggle to ensure a single version of the truth for product and associated data across the organization in heterogeneous IT environments.
- Industries that are very active with the MDM of product data include retail, financial services, healthcare, pharmaceutical and various public sector organizations. There are also differences in activity based on geographical differences.
- Drivers for MDM in general and for MDM of product data (see Note 2) specifically, have shifted beyond traditional business intelligence (BI) and decision making, toward improved business outcomes (specifically, business process integrity and decision action). These action-oriented business processes are often tied to customer and consumer-facing efforts that seek to increase revenue or service, through better customer relationships and responses and a singular view of what the customer has acquired (or could acquire) from the organization. Newer drivers include a growing interest in the use of social data and "big" data for analytics.

- The slow but gradual shift from single-domain MDM to multidomain MDM (see Note 3) continues, but its evolution is complex.

Gartner estimates that the total software revenue for MDM systems was nearly $1.4 billion in 2010, an increase of 10% from 2009. Within these overall figures we estimate that the market for MDM of product data systems was $490 million in 2010, representing a growth rate of approximately 10% over 2009. We project a five-year compound annual growth rate (CAGR) of nearly 20% for the overall MDM software market and 18% for MDM of the product data software market specifically, through 2015 (see Note 4 and "Forecast: Master Data Management, Worldwide, 2010-2015").

As the demands in the market become greater, more complex and diverse, vendors continue to respond with different strategies. Some niche vendors seek to emphasize their differentiation by developing deeper functionality related to product data across the various channels through which an organization interacts with its customers, partners and/or suppliers.

Other vendors extend new strategies related to social networks where an organization's product and brand data is discussed daily in open and closed communities. Some are looking at how to link product data with analysis coming from big data; or how to coexist with multidomain or application-specific data management tools. This leads to the need for a more comprehensive analysis of market needs and the vendors addressing them.

Vendors are making progress in 2011. Some are (finally) simplifying and rationalizing their licensing models with other data domains (such as customer), while others are establishing discrete solutions to help with data stewardship across data stores and MDM hubs or continuing to develop better data quality or workflow capabilities. Some vendors are exploring how to link to product and brand sentiment found in social networks or looking to exploit cloud computing, perhaps for the sourcing of data integration or data quality services. Others are looking to ride the hype associated with "big data."

Vendors are starting to integrate social data (such as brand sentiment) to product master data, integrating cloud-based services (such as data quality), expanding toward multiple domain support and increasing the focus on how MDM provides a starting point for information governance. All in all, 2011 is a very exciting year and 2012 looks even better.

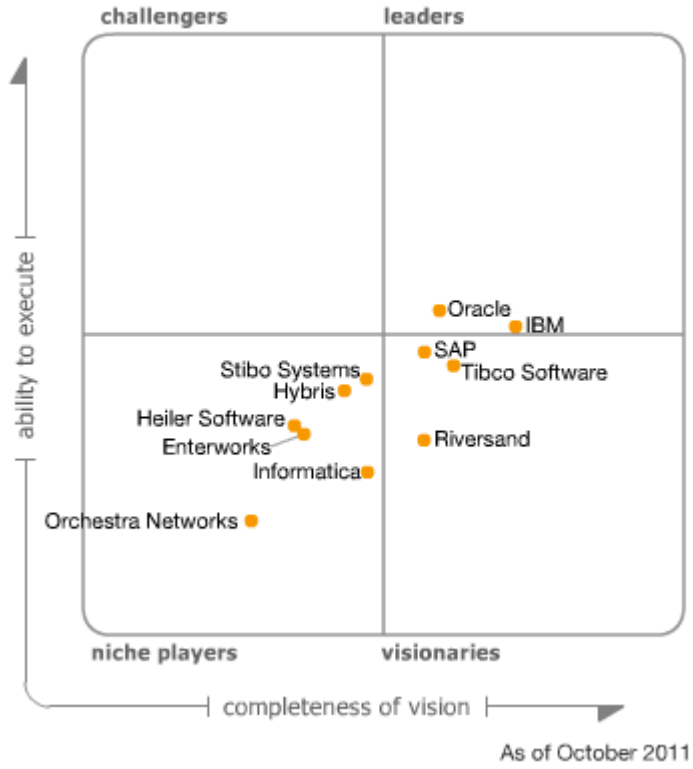
Gartner advises organizations against simply selecting vendors in the Leaders quadrant. All selections are buyer specific and vendors from the Challengers, Niche Players or Visionaries quadrants could be better matches for your current and future requirements (see "Magic Quadrants and MarketScopes: How Gartner Evaluates Vendors Within a Market").

To succeed, you will need to 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 (see "The Seven Building Blocks of MDM: A Framework for Success").

Magic Quadrant

Gartner's Magic Quadrant for Master Data Management of Product Data provides insight into the share of the constantly-evolving packaged MDM systems market that focuses on managing product data to support enterprise resource planning (ERP) supply chain management (SCM) and other product-related strategies. 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.

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



Source: Gartner (October 2011)

As part of the Magic Quadrant research process, we sought the views of vendors' customers, references via an online survey and also took reference calls from users or planned users of vendor solutions. 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 support for data stewardship, workflow and support for multiple implementation styles). These criteria are central to a MDM strategy (see "The Five Vectors of Complexity That Define Your MDM Strategy").

Nearly 140 organizations were contacted and unsurprisingly, most of those referenced were generally pleased with their vendors and products, but they gave mixed opinions 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 Need for a Single View of the Product

Many organizations of all sizes across many industries struggle to maintain a consistent, shareable and accurate single version of product or service data across their enterprises. Achieving and maintaining a single, semantically-consistent version of product master data is a critical capability for any customer-centric organization.

There are many factors affecting this market, including:

- The global economic climate is in a state of flux and some regions and/or industries are showing growth and/or large profits, while others are showing few signs of this.
- IT innovation continues apace in areas where organizational master data needs to relate, integrate or govern alongside the rapid growth and increased complexity observed outside the organization, including social data and big data (see "'Big Data' Is Only the Beginning of Extreme Information Management").
- The application legacy that is the bulwark of many organizations' core business processes is finally showing signs of "giving up" its hegemony over operational data that links such systems and business processes together. Information governance is really beginning to stand-out alongside, but independent from, business applications and BI silos.
- These dynamics impress more urgency on the business drivers for why organizations continue to seek real solutions to help sustain a single version of the truth for product data. These drivers span a predictable range:
  - Increased revenue from additional sales efforts (up selling and cross selling), once a better view of customers' products and services are established.
  - Reducing time to market and new product/service introduction.
  - Better multichannel integration and improved customer service (pre-or post sales).
  - Increased supply chain visibility and a simplified environment for increased multienterprise collaboration.

For those few organizations that are beyond short-term growth cycles, additional drivers include:

- Innovation and business agility and a more agile business process orchestration and re-orchestration.

Market Growth

The software spending for MDM of product data in 2010 increased 10% over 2009, to approximately $490 million (an increase in the rate of growth, compared to 2009, which was 6%).

Additional domains are estimated separately, although MDM of product data technologies may be used to manage such data. Asset data spending was $77 million in 2010, location data $35 million and financial data was $25 million.

In contrast, software spending for all master data domains for 2010 was approaching $1.4 billion, a 10% increase over 2009 (see "Forecast: Master Data Management, Worldwide, 2010-2015").

IBM, Oracle and SAP account for approximately 36% of the total MDM of product data software market spend for 2010. This percentage signals the important roles of these vendors in the market, but the remaining market is very fragmented and is a much larger proportion of what is currently being addressed. It is common for larger or more complex enterprises to offer multiple MDM solutions, spanning application domain orientation (selling systems and buying systems), ERP, large packaged application implementation, migration, or regional/global differences.

Industry specialists and data domain/niche vendors that focus on one data domain, one use case or one implementation style, continue to do business in this market, despite the ongoing attention of larger vendors.

Organizations' Master Product Data

The market for MDM of product data has reached a "chasm," which is explained by several sets of vendors and technologies. The first generation of specialists (some still in the market today) that characterized this market segments' emergence is now reasonably mature with many examples of successful implementations behind them. These were the early pioneers of MDM in their respective domains and industries and they represent the majority of the implementations in this market segment.

They were focused on stewarding product data in the MDM of the product data market. However, the rise in interest in multidomain MDM (see "A View of Master Data Management Vendors' Experience In Handling Multiple Master Data Domains") is highlighting the slow but real emergence of later generations of vendors and technologies that clearly show where the market is heading.

This second generation of vendors and technologies is characterized by their capability to use one vendor and technology to master several master data domains (mostly from the same province [or party]). This is analogous to a user organization initially mastering product data and then later using the same solution to master part, location, asset or account, for example.

These master data entities are said to be from the same province (specifically, they share similar sources of complexities that differ from customer, supplier, partner or citizen, which are also from a different province). This was a relatively easy shift for vendors, but it did not take into account what some users had started to ask for since 2010 and more so in 2011. This second generation of vendors and technologies was just beginning to emerge in 2009.

First and second-generation technology solutions might both be deployed by an organization, each focused on a specific domain or province. Thus, "multiple domain MDM" was achieved, but with more than one technology solution.

A third generation of vendors and technologies emerged in 2010 and is characterized by a single technology solution that is used to model multiple domains from any province. "Multidomain MDM" has one solution, spanning products/things, customers/parties and hierarchies and reference data. This is the newest generation that is gaining traction from a very small base. Those few, early implementations of such solutions do not really support the complex aspects of both product and customer domains. Mostly, a vendor solution was stronger in domain and was adapted to cater to some of the less complex requirements of the other province.

Long term, the trend is clear. Over time, end users are looking to meet complex requirements with best-of-breed capability, but are beginning to trade this off against "good enough" capability for solutions that can master multiple domains, even considering multiple MDM solutions.

The most pressing business needs are summarized as follows:

- **Customer-focused business processes and applications.** The demand on vendors in this area continues in 2011. Some users' of master product data (including those in specific industries like retail), try to use one solution (MDM of product data) to master product and customer data, which we refer to as multicommerce MDM (see Note 5). Long term, this type of MDM solution will get subsumed into the future multidomain MDM market. This shift will take many years to achieve.
- **Supplier-focused business processes.** This is a far less mature segment than the sell side, which means that many organizations remain focused on embedding parts and product data within their procurement applications.
- **Enterprise-out focused business process.** This is a complex segment comprising at least two sets of business needs. One focuses on requirements for users seeking to master product hierarchy data in support of a data warehouse supporting analytics, reporting and decision making. The earlier reference to second- and third-generation MDM technology that supports MDM of product data and additional domains and provinces is the second set of requirements, also forming in this segment.

  These two sets of business needs are multidomain by design, but serve the needs for different MDM use cases. Some vendors are positioning themselves as multidomain MDM vendors for operational MDM (for example, IBM, Informatica, Oracle, Riversand, and SAP) and clearly indicating to users that they can meet the needs of enterprise (specifically, any or multiple) customer- and supplier-facing processes.

A new segment emerged in 2011 for application-specific data stewardship applications. This is not a separate segment to the three mentioned earlier, but one segment that operates as a cross channel underpinning all three, but very much focused on a limited set of business applications operating within the organization.

SAP is highlighted as the first vendor (see "Hype Cycle for Master Data Management, 2011") to market an application that helps users manage all the data in operational business systems like ERP, within which is a copy of the master data with other application-specific data. These are not MDM tools as such, because they do not seek to master data for use in any or all applications

across the organization. However, MDM solutions need to interoperate with this emerging segment, which is adding noise to the overall MDM market, as well as another layer of complexity.

A future trend that is yet to play out, relates to how organizations will seek to steward their product data within their organizations in the context of how they manage their application landscapes. In 2010, Gartner introduced a new approach to managing application portfolios by looking at applications in three layers, where each layer evolves at a different rate: systems of record, systems of differentiation and systems of innovation (see "How to Use Pace Layering to Develop a Modern Application Strategy").

This framework should be used by IT leaders to identify and allocate resources across application and information systems to support the requirements of the business in terms of core systems (those that provide differentiation and those that provide unique, one off innovations).

In "Connecting Technology for a Pace-Layered Application Strategy" Gartner identifies the three fundamental disciplines of application architecture, business process management (BPM) and enterprise information management (EIM), the critical capabilities that ensure applications can integrate and evolve between pace layers. MDM is an EIM program (for example, information sharing) and so MDM of product data will become even more important for those organizations trying to govern product data across their application environment, even reaching out to social networks and other sources of data outside the firewall.

Implementation Styles

Gartner has identified four implementation styles for MDM (see Note 6):

- Consolidation
- Registry
- Centralized
- Coexistence

These styles describe the degree to which the authority model for master data, at the attribute level, is instantiated physically (as in systems of record) and consumed (as in systems of reference). Consolidation is more like a data warehouse in support of BI and so often equates to analytical MDM. Centralized and registry are very often very specific. Centralized means that most of the data is physically stored (and/or created or authored) in a central repository or hub. Registry implies no actual master data is centralized, with only a "key" to "look up" where the remote data is stored. However, coexistence sounds simple (a mix of all the other three styles), but in reality this style is much more complex.

In looking at hundreds of implementation styles called "coexistence" it appears that the only common ground for the wide variation for what actually takes place is that the authority model is determined at the individual attribute level. Therefore, for one data domain (for example, product data), each attribute of "product" has its own explicit authority model. Some attributes are "consolidated," some are governed via a central hub, while others are governed in a distributed

way. Additionally, specific requests or queries for data may also follow very different patterns, which means that coexistence is not one pattern, but a broader term for many other nuanced implementation styles.

Two new trends became clear in 2011 that describe how organizations are implementing the hub component of their MDM of product data solutions. Firstly, what might seem obvious turns out to be much less so. Product MDM hubs have to physically coexist with many business applications that store a copy of the same product master data. Just because such hubs have to exist alongside other data stores, this is not what Gartner means by a coexistence implementation style.

The essence of the coexistence implementation style is that the MDM hub is able to support a governance model that operates at the attribute level, where rules that exist in the MDM hub and any number of business application data stores can be stewarded in a coordinated fashion. This reality means that there are many implementations of MDM of product data that physically coexist with ERP and other application data stores, but very few, if any, actually govern data at the attribute level across all hubs in a coordinated way.

This issue became clear in 2011 as more and more users begin to wrestle control for governing master data from legacy ERP and other large-scale packaged applications (see "Should Organizations Using ERP 'Do' Master Data Management" and "MDM for ERP: Governance and Data Stewardship").

The second new trend emerging in 2011 formalizes what was previously observed at the individual program level, but now seems clear at the market level. In the MDM of product data market segment, it is quite common to see organizations seek to centralize the authorship of product data and to centralize the process by which validation of such data is achieved. This means that a user of a remote application may need to search the centralized product data hub when looking to find if a "new" product is really new and not already in existence.

This is not as common in MDM of customer data. It is far more common to see MDM hubs used to create a consolidated view of customer data from remote applications, to create a unified, single version of customer data. In both cases, data quality tools and techniques need to be used, but since the implementation styles are so different, this goes some way to explain the differences in capabilities needed for the data quality market.

For product data, there is sometimes a need to distill a semantic model from the parsing of complex (specifically, engineering) text strings, but more widely, the largest set of requirements is focused on the full range of data quality tools needed to help assure the consistency and integrity of the complex business process for the creation (specifically, authoring) of product data.

In a services industry, this authoring business processes is often far less complex, but this is made up for by an increased reliability placed on the integrity and consistency of business rules used to define permissible combinations of services.

Vendors' Key Highlights

Enterworks continues to focus on distribution-intensive product data environments. It is growing slowly and is niche oriented.

Heiler remains focused on e-commerce, exploring the role of social data, and revenue growth has returned in 2010 and 2011.

Hybris has achieved a good level of growth and has modest marketing practices, but there is a pending shift in business focus toward more e-commerce and less MDM, due to acquisition of iCongo in 2H11.

IBM has implemented an important update (specifically, simplification) for product strategy.

Informatica has achieved rapid growth in this segment, but is not yet tackling the more complex problems.

Oracle has achieved solid growth with a stable product, but challenges remain with multidomain MDM and support for data stewardship.

Orchestra Networks has achieved a good level of growth with the emphasis is on multidomain over best-of-breed MDM of product data, but is making progress nonetheless.

Riversand has achieved a stable year of growth, including staff numbers. It remains customer focused with flexibility of solutions.

SAP has achieved solid growth and continues to build momentum in the overall MDM market, but remains primarily focused on the needs of its installed base.

Stibo Systems' growth has slowed this year to market averages, but its vision and strategy remains good. Sells well to business, but less so to IT.

Tibco has growing sales and interest from customers and a new focus on "trusted information" in support of corporate strategies that are driving renewed interest in MDM.

There are other vendors in the market and some others that add value to MDM of product data implementations. Those too small, too narrowly focused by region or industry, or periphery involved, include: Amdocs, Ataccama, DataFlux, jCatalog, Kalido, Lansa, Liaison Technologies, Microsoft, Pindar, Poet, Requisite Software, Software AG, Talend, Teradata, Tribold, and Zycus.

Separate research will provide further background information on these vendors and their involvement in supporting MDM of product data programs.

Market Definition/Description

Markets are sets of potential buyers that view a product as solving a common, identified need and that reference each other. Market segments are portions of that generic market that are qualified by more exact criteria, thus grouping potential buyers more tightly.

Segmentation may take two forms:

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

The MDM of the product data market is populated by several groupings of end-user organizations with common sets of requirements, although all have broader, enterprise-wide goals related to a single view of the product.

The groups of customers with similar requirements congregate into several segments:

- Complex, often engineered products that coincide with the use of business applications, known as ERP and when product design is complex, product life cycle management (PLM).
- Heterogeneous and multi-divisional organizations, often centered on SAP or Oracle business application strategies and many with large numbers of legacy business applications.
- Multiple channels of interaction with customers across e-commerce, print and catalog, Web, direct and partners, with a range of different integration and data synchronization requirements, which are very common in retail and manufacturing, but also emerging in many other industries.
- Procurement, or the buy side, distribution-intensive types of enterprise (some with close integration with the sell side).
- Services (non-physical products), often financial services, banking and insurance enterprises with complex customer and event, order and bundling configurations or rules.

The requirements differ widely across industries and governance (who does it, what does it do and what is the result?), metrics (what is measured, who defines accuracy and who determines the impact of the analysis?) and implementation style (where does the master and related non-master data reside?), as well as in the tools used to help manage the data.

There is also a growing use of hosted or software-as-a-service-delivered MDM of product data (most common in complex networks of communities for which hosted data is a more efficient model), master data (quality and processing) services and marketing service providers or data providers of tools and services to support a range of project needs (such as cleaning product data for use behind firewall implementations or to complement sell-side multichannel integration).

These tools, services and offerings are not included in the formal market definition, because these systems are not used for the most part to manage the enterprise system of record for products. However, they are valuable in their own right and are complementary to traditional on-premises MDM technologies.

MDM of product data solutions (see Note 2) are packaged software products that:

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

MDM of product data implementation does not mean that product data is only stored or managed from the MDM solution, it generally implies that product data is mastered or governed by MDM of product data solution. Along with product master data, lots of other data and data types will be stored and referenced, depending on the use case. Any such implementation is likely to refer to customer and location data, but even that data may be mastered and validated from a different (even MDM) source.

MDM implementations and their requirements vary in terms of:

- Instantiation of the product master data hub, varying from the maintenance of a physical "golden record" to a more virtual, "indexing" structure.
- The usage and focus of the product master data, ranging across use cases for design (information architecture), construction ("building a business), operations ("running a business") and analytics ("reporting the business").
- Different organizational structures spanning small, centralized teams, through to global, distributed organizations.
- The latency and accessibility of the product master data, 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 product data technology as part of an overall MDM strategy, which is part of a wider EIM strategy. A MDM program potentially encompasses the management of customer, product, asset, person or party, supplier and financial masters. As the name suggests, MDM of product data focuses on the management of the domain relating to product and other "things" data, whereas MDM of customer data technology focuses on the domain relating to customer and party data.

Some vendors have evolved with a deep focus on a single domain, such as MDM of product data or MDM of customer data and some of these remain as focused, yet other vendors have expanded their focus toward a multidomain product. If a vendor offers such capability, along with support for MDM of product data, in one-technology solution, we call this multdomain MDM. If a vendor offers such capability, but with specific technology solutions (specifically, so multiple) we call this multiple domain MDM.

We have introduced this terminology to make the vendor perspective clear to users. However, users that find both vendor approaches attractive use the same term (for example, multidomain MDM) when they describe their requirements.

Inclusion And Exclusion Criteria

Inclusion Criteria

The MDM of the product data market continues to mature. In the recent economic cycle, the drivers for MDM have changed and the technology and approach to MDM have also changed from one driven by growth and revenue to one focused on efficiency and cost optimization.

In 2010, growth had slowed, but in 2011 there is a return to increasing rates of growth. The larger vendors seem to grow well (they are often seen as safe partners due to their size),whereas some smaller vendors have struggled to keep up with market growth rates. To reflect this we have had to reduce the criteria for inclusion this year in terms of revenue, although all other criteria remains unchanged.

Vendors for market traction and momentum should have:

- At least 12 production customers for MDM of product data product functionality.
- At least eight new customers for MDM of product data products in the past four quarters.
- Generated at least $4 million (down from $8 million in 2010) in total software revenue (licenses and maintenance) related to MDM of product data in the past four quarters.

Vendors for near-term viability 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 (specifically, companies spending their cash reserves if the year of operations is cash-flow-negative).

Exclusion Criteria

This Magic Quadrant analysis excludes:

- Vendors focused on a single vertical-industry market, or a single geographical region.
- Vendors focused solely on analytical (downstream) MDM requirements.
- Hosted services, marketing service providers or data providers that provide product master data external to the enterprise, (or similar services), but don't provide MDM for product data products that can be implemented behind an organization's firewall.

Forthcoming research will review the list of "other vendors" not included in this detailed analysis, participating in this market or provide important supporting capabilities. These vendors are either too small for inclusion here, or lack sufficient differentiation in their solutions to qualify for inclusion. Additionally, there are other vendors that are in closely-related segments or markets.

Added

No new vendors were added to Magic Quadrant for Master Data Management of Product Data Solutions this year.

Dropped

GXS was removed from the analysis. The vendor left the market and no longer sells MDM of product data solution.

Evaluation Criteria

Ability to Execute

Gartner analysts evaluate technology providers on the quality and efficacy of the processes, systems, methods and 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

This refers to software products offered by the vendor that compete in and serve the MDM of the product data market. This includes product capabilities, quality, feature sets and skills, for example, whether offered natively or through OEM agreements and 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 product data system 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 product information requirements of the entire organization across item masters, the buy side and the sell side catalogs, e-commerce, syndication and synchronization requirements, for example.
  - Be configurable, customizable and extensible, but also upgradable.
  - Support industry-specific requirements such as GS1 Global Data Dictionary, United Nations Standard Products and Services Code (UNSPSC), as well as multiple hierarchical and aggregated views associated with product and catalog structures related to channels,

customers, partners, suppliers and other consumer systems. This is particularly important across operational and analytical MDM requirements.

- Provide a base for the required workload mix and level of performance.
- Support complex parametric search capabilities servicing, even external Web service requests (trading partners, e-commerce applications).
- Express clearly by using commonly accepted logical data model conventions with associated metadata.

A good data model for **information quality management capabilities** is of little value unless it contains accurate, up-to-date data for a product.

MDM of product data product should:

- Have strong facilities, in batch and real-time mode, for profiling, cleansing, matching, linking, identifying and semantically reconciling to a single view of product master data in different data sources to create and maintain that "golden record." These facilities may be provided by vendors for MDM of product data or by offering tight integration with products from specialist data quality partners.
- Support full auditability, survivability and data lineage.
- Ensure that business rules and associated metadata related to data cleansing are sufficiently visible to satisfy compliance requirements.

MDM of product data product for **loading, integration and synchronization capabilities** 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 product data between the central repository and the spoke systems, whether they are copies or subsets of the repository, or remote applications (coexistence style).

These facilities may be provided by a vendor for MDM of product data or by offering tight integration with products from specialist middleware partners.

The MDM of product 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 exposing industry-standard interfaces.
- Support integration with different latency characteristics and styles (for example, real time and batch).
- Support integration with downstream business intelligence and analytical requirements.

Many leading organizations will plan to use the new product master database as the basis for **business services and workflow functionality**, 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 product data business services through Web services standard interfaces. The MDM of product data product 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 to expose Web services interfaces.

Additionally, many implementations of MDM focus not only on how systems interact (specifically, transaction scenarios), but more on how business users collaborate in the authoring and management of master data. As such, the MDM of product 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.

If the MDM of product data product supports **performance, scalability and availability capabilities** for operational and analytical applications and is tightly integrated with established systems and new applications, serious demands are likely to be made on its performance, scalability and availability.

The MDM of product 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.

The availability of facilities for manageability and security capabilities, such as management and controlled access of MDM for the product data system, which include facilities for reporting on MDM activity for the product data system. Facilities should also include the ability to integrate the MDM of the product data system with common system management and security tools.

Security and data privacy management should include:

- Management of the policies and rules associated with potentially complex privacy access rights.
- Configuration and management of different rules of visibility, providing different views for different roles.

The MDM of product data solutions needs to include **stewardship support and services** for 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 user interface (UI), whereby these services are provided.

These services will include, but 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 and 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 and meta models to help identify the specific master data that users, roles, applications and systems are responsible for.
- Workflow services to interrogate and provide revisions to current MDM workflows.
- Business rules services to interrogate which rules are used by MDM and to provide suggested enhancements to such business rules that are used to determine under which circumstances source preference is revised to give preference to the most-dependable source.

MDM of product data products should include **technology and architecture considerations** that are based on up to date, mainstream technologies that are 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 it to satisfy different use case scenarios, such as consolidation, registry, coexistence and centralized scenarios. A vendor will also be measured on the ability of its architecture to support global rollouts and localized international installations.

Overall Viability (Business Unit, Financial, Strategy and Organization)

Viability includes an assessment of the MDM of product data vendor's financial health. This will include the financial and practical success of the business unit or organization in generating business results in the MDM of product 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, continue offering the product and advancing the state of the art within the organization's portfolio of products.

Sales Execution/Pricing

The vendor's capabilities in all MDM of product data-related pre-sales activities, on a global basis 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

The ability to respond, change direction, show flexibility and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change within the MDM of product data market. This criterion also considers the vendor's history of responsiveness.

Marketing Execution

The clarity, quality, creativity and efficacy of programs designed to deliver the vendor's message, on a global basis, to influence the MDM of product 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

Relationships, products and services and 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 product data products, such as customer references and total cost of ownership. With the increasing hype around multidomain MDM, we also look for demonstrated proof (via proof of concepts, customer evaluations or live implementations) of multidomain and multi-province capability.

Operations

The ability of an organization to meet its goals and commitments. Factors include the quality of the organizational structure, such as 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 with the Viability and Sales and Marketing Execution criteria.

Table 1. Ability to Execute Evaluation Criteria

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	low

Source: Gartner (October 2011)

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

The ability of the vendor to understand buyers' needs and translate these needs into products and services. Vendors that show the highest degree of vision listen and understand buyers' wants and needs and can shape or enhance those wants with their added vision.

Vendors should demonstrate a strategic understanding of MDM for product 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 and other kinds of master data within an organization's multidomain, multi-use-case and multi-implementation style program, as well as the buy side MDM for product data and the sell side MDM for product data. The relationship to enterprise information architecture and EIM initiatives are valuable to customers taking the strategic view.

Marketing Strategy

A clear, differentiated set of MDM of product data messages consistently communicated throughout the organization and externalized globally through website, advertising, customer programs and positioning statements. Intersection with MDM of customer data and wider MDM and industry challenges, as expressed by Gartner clients, is important.

Sales Strategy

Vendor strategies for selling the MDM of product data product that uses the appropriate global network of direct and indirect sales, marketing, service and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy

A vendor's approach to product development and delivery should emphasize differentiation, functionality, methodology and feature sets 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 the product 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.

A vendor needs to offer MDM of product data product that can be configured into a range of architectural styles, in terms of instantiation, latency, search and usage of product 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.

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

A vendor must also understand major technology and 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, rather than a proprietary stack and have an evolutionary path toward service-oriented architecture.

Business Model

A MDM of product data vendor's underlying business proposition is based on its soundness and logic. Vendors should have 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 external service providers.

Vertical/Industry Strategy

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

Innovation

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 product data issues now and in the future. There is also a requirement for vendors to understand and support the most complex and broadest set of MDM of product data environments and the growing requirements of multidomain and multi-use-case MDM in general.

Geographic Strategy

A 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. Includes sales, marketing and support for complex global companies.

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 2011)

Leaders

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

Leaders have mature offerings and a track record 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 are not necessarily the best choice in all cases.

Challengers

Challengers demonstrate a clear understanding of today's MDM of product data market, but they have not demonstrated a clear understanding of the market's direction, or are not well positioned to capitalize on emerging trends. They often have a strong market presence in other application areas.

Visionaries

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

Niche Players

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

Vendor Strengths and Cautions

Enterworks

Enterworks' product, Enterworks Enable, is currently in version 5.4.5, which was made generally available in April 2010. Enterworks charges a flat rate for its application, which is not complicated with other considerations, such as the number of users or the number of records being mastered. Maintenance is charged at 18% of the license fee.

Headquarters: Sterling, Virginia, U.S.A.

Website: www.enterworks.com

Strengths

- **Good marketing strategy.** Enterworks Enable is positioned to master and unify product data for multichannel marketing, often to support e-commerce and other selling processes, for distributors and wholesalers. The vendor is not targeting MDM of customer data (as a system of record), but does have customers storing customer data (as a system of reference). This means that (although not explicitly) the vendor is tending toward a multicommerce MDM strategy.

Enterworks' product has evolving multidomain MDM functionality although it does not equate to best-of-breed for all domains. For a number of clients, Enterworks has been deployed as an application-neutral and centralized MDM hub for product data. Enterworks sells to midsize enterprises (its sweet spot), but also to some larger enterprises. Our data suggests this vendor competes at a lower price point (for the MDM part of its offerings). It sports a fixed-base pricing model that has been well-received by users for its simplicity, even if (in some cases) it might be forgoing some revenue.

Enterworks is a good fit for companies that need to centralize product master data specifically for multichannel marketing. The vendor targets hardlines, office products, medical devices and food industry wholesale and distribution segments, all with operational MDM requirements.

- **Good product functionality.** Enterworks Enable is built on Java (Java EE), and functionally supports an XML-based data model and business services for new product introductions. The primary UI is Web based, along with the administrative tool. Its internally-developed workflow engine (Enterworks Process Exchange) supports and is Business Process Execution Language (BPEL) compliant, which is increasingly valuable to users for improved integration. The vendor is known for acting as a central repository (centralized implementation style) and for integration mechanisms for harmonizing distributed product data.

  The vendor exposes the functionality of Enterworks Enable through the Enterworks Portal Framework, which delivers portals for suppliers, dealers and sales and marketing organizations of distributors. It also offers additional tools to help manage content (digital asset management), although it is not, as yet, focusing on governance of content or master content management. The move to offer access via mobile devices is supported through the portal framework. Enterworks sports some large volume customers — ranging upward to 1 million items or more. The product supports Unicode and user preferences in the browser will execute runtime presentation of the system in preferred languages. Enterworks Enable sports a prepackaged data model that can be extended by the user.

- **Data quality suite.** Enterworks has some of its own limited data quality capabilities in its application, but this is added to with an OEM agreement with Datatactics, under which Enterworks sells the complete data quality suite. This has proved helpful with a few customers already seeking a closer relationship between their MDM and data quality providers included in MDM sales cycles. This is a reasonable approach for immediate customer needs, but customers are getting more mature in their understanding of data quality and not just with product master data, so partnering for data quality is becoming critical to MDM vendors. Enterworks may need to work on something stronger in this area in the long term.

Cautions

- **Marketing momentum slipping.** Gartner estimates that Enterworks had approximately 135 customers for MDM of product data as of 1Q11 (vs. 124 customers in 2009). We estimate $12 million MDM software revenue for the same period (vs. $11.9 million in 2009). The vendor seems to be losing momentum and this is further reinforced by very low levels of inquiry with Gartner clients and a general lack of visibility we see in the press and the market overall.

- **Limited global and industry strategy.** The vendor does understand product data in a multichannel environment, but it is not showing commensurate vision around how to adapt and exploit market conditions. Enterworks is primarily focused on selling in North America and is not targeting customers outside of the U.S. at this time. Some larger prospect organizations view the vendor as a risk, primarily due to its size. In 2010, the vendor decided to move into medical supply distribution, although this has not paid off with many new customers to date.
- **Multidomain MDM product strategy.** This vendor specializes on product master and related data for use in the sell-side multichannel environments. As such, Enterworks runs the long-term risk that this market gets marginalized as Multidomain MDM technologies "takes over" and specialists like Enterworks struggle to command profitable margins. This is not critical in 2011, but as more users develop a liking for a multidomain strategy, vendors like Enterworks will have to either develop an expanded strategy focused on other data domains, or figure out how to participate well with other MDM vendors.

  Some customers do use Enterworks to master their data and publish to other systems and many more use it just for sell-side multichannel systems and processes. Enterworks is showing no signs of addressing what happens when its known market segment is addressed by multidomain MDM vendors. It is developing a cloud/software as a service (SaaS) strategy so this will be new for 2011. If you seek to master product data in support of multichannel marketing, then this vendor may be a good fit — but will require supplementation if your MDM needs go beyond this segment.
- **Weak support for data stewardship.** The product does support a user's "to-do" list concept and there are signs of some good data analysis taking shape with the vendor's "monitor" capability. However, Enterworks has yet to bring all the right functional capabilities together in one user solution to support the "day in the life of a product data steward." Additional capabilities are required to aggregate analytics from data loading, data exporting, data management and workflow processes, as well as snapshots of current data quality and consistency. Management tools are focused on IT management of the application and not on chief data stewards monitoring users. This capability may emerge as the vendor matures in this market and gets a better understanding of what business users need, or will need in the future.
- **References.** Enterworks provided the required references but suffered from a lower than average response rate. The online survey did not get the required five responses, so the feedback is limited. We included this data with additional research from other interactions we have with users and/or prospects of Enterworks. The few data points we gathered suggested good things (for example, vendor functionality was slightly above average and its pre-sales cycle was liked), but data being so sparse is not overly reliable. Some customers are about to go live with high volume data; something to monitor in 2012.

Heiler Software

Heiler Software is currently shipping Heiler Enterprise product information management (PIM) Suite v 5.3, which was generally available from May 2011. The vendor licenses the product suite based on a named user and server base. There is a base fee, to which are added "packs" for additional named user bands, as well as server packs for each additional language.

Global headquarters: Stuttgart, Germany

Website: www.heiler.com

Strengths

- **Business strategy.** Heiler Software is a public German vendor that focuses on helping retailers, distributors and manufacturers to manage complex product data (structured, as well as unstructured) through complex supply chains, from suppliers through to multiple selling and interaction channels with customers. Heiler targets and generally does better, when client requirements are centered on a strong need to manage such data to support e-commerce requirements with a business desire to focus on customer service and improve conversion rates.

  Helier's business is more balanced internationally, with approximately 50% of revenue from EMEA and approximately 40% from North America. This narrow focus leads to market recognition, but can also lead to limitations on where and how a vendor can adapt. Heiler is not, for example, moving to the embryonic multidomain MDM market segment. The vendor has less experience (fewer customers) in managing product master data for direct materials or finished goods for resale, although its experience continues to grow.

- **Partnering.** Heiler does not partner with many global external service providers (ESPs), but has built up a network of small, local partners that bring specific skills and tools on an "as needed" basis. Most of these partners operate in EMEA, but some are also developing in North American. Other partnerships remain important, such as those for technology and integration, like IBM, ATG (Oracle), Intershop and DemandWare. IBM Global Services is a frequent partner of Heiler Software, specifically in Europe. Heiler partners with technology complementary solutions (for example, ATG and IBM, for additional e-commerce capability).

- **Strong product capability.** Heiler Enterprise PIM is able to master product-oriented master and related data in a rich, workflow-centric (graphical presentation, not navigation) UI with a flexible pre-configured, but extensible data model. The product can be sold as part of an integrated suite, with other modules focused on digital asset management, catalog or publication and contains capabilities spanning supplier onboarding, media portal, eCatalog and multichannel adapters.

  Customers focused on multichannel commerce, sell-side requirements looking for an integrated offering for centralized implementation styles, would do well to include Heiler Software in their search. There is basic data quality capability in the application to help ensure that good, clean consistent product data is managed in the application. References explain how Heiler Software data hubs can work well with other (specifically, a different vendor) application-neutral MDM hubs as part of a larger MDM implementation.

- **Industry specificity.** Helier's strategy is to build out a "product platform" for sales and distribution organizations, commonly retail and consumer goods distribution. This starts with a strong capability in MDM of product data, but expands out to rich media and content and also into the realm of social networking as a source for marketing data related to products in the

field. This strategy seems to play well, at least in the short term, with its targeted industries and seems to define a credible defensive target for the vendor.

Cautions

- **Market Presence.** Heiler Software focuses on Fortune 2000 enterprises in industry segments across retail, distribution and manufacturing that have large numbers of products, with notable segments in after market/maintenance repair operations (MRO), and consumer goods.

  Gartner estimates that Heiler had approximately 125 MDM of product data customers as at 1Q11 (vs. 110 in 2009). We estimate $7.6 million MDM software revenue for the same period (vs. $5.9 million in 2009). This is a return to growth in 2010 since 2009 represented a contraction over 2008.

  The vendor seems to have increased substantially its customer base, for modest revenue improvement. If the small (and falling) number of inquiries we did in the last year concerning Heiler in the MDM of product data market segment are taken into account, it would suggest that the vendor is lacking marketing visibility and possibly trying to combat this with a competitive or low average selling price (ASP) to defend share and/or selling to smaller organizations

- **Long-term business strategy.** The target market for this vendor requires deep functionality for MDM of product data on the sell-side and the buy-side multichannel, e-commerce environments and this is what Heiler focuses on. It has avoided the temptation (or legacy) of acquiring or developing deep and large business applications that consume the data it is governing. However, at the same time, other MDM vendors with stronger information management credentials are starting to "move out from the center" (meaning core IT) and starting to integrate to the same business applications that Heiler would have "owned." The question is does the broader set of tools focus on product data (and only product data) and insulate the vendor from multidomain MDM solutions and best-of-breed solutions for specific areas such as digital asset management?

  Inquiries show that some users will still spend money on solutions like Heiler, but long term this market is changing and so far, Heiler has not adjusted its strategy to tackle the question of multidomain MDM. This makes Heiler a possible acquisition target for a vendor that wants to deepen its capability in the (structured and unstructured) product data domain.

- **References and customer service.** Heiler provided more than the required number of references. Some users noticed the implied impact of a vendor supporting a business application business (not related to managing the data) and a MDM business because investments allocation has to be split. As such, some users report perceived gaps in support or capability, sometimes on the application side, sometimes on the MDM side.

  This is not so clear cut, since Heiler does not have a significant business application business and most of its offerings, beyond core data management, are related to "better and more kinds of data management." Either way, Heiler is struggling to communicate the difference or similarities between application and data management. Heiler's functional scores have

improved over the last year and in 2011 it scores average when compared to all vendors in the survey. Some references reported "effective" integrating to ERP systems and some an increased need for "custom" work. Some signs of improvement here, but Heiler needs to do more if it wants to turn its customer base into strength.

- **Product functionality.** They key for this vendor is its breadth of tools to manage many kinds of product data. It is not the most comprehensive solution for mastering the most complex structured data enterprisewide. As such, in the short term, it needs to address specific areas that support managing product data, as well as supporting the data stewards role. The vendor's workflow capability works well and supports a graphical editor, but it is not BPEL compliant, so users cannot expose its services to a third-party business process management suite (BPMS) application.

  Heiler is working on plans to make the management of its workflows more intuitive with a graphical front end. Analytics and key performance indicators (KPIs) related to how master data quality and master data processes are working are not prepackaged, so this is a challenge for data stewards. Again, Heiler is working on packaging this for later in 2011. The vendor has many of the right pieces needed if it wants to address MDM and master content management (the information governance period) for product data in its target market, but the vendor's vision is elsewhere right now.

Hybris

Hybris is currently shipping Hybris PCM version 4.5, which was generally available as of July 2011. Hybris licenses its MDM of product data application (Hybris PCM) based on the number of CPUs on which the application will operate. Additionally, Hybris offers an option to license the product based on the number of items (stock-keeping units) managed in the application or as a subscription.

Global Headquarters: Munich, Germany

Website: www.hybris.com

Strengths

- **Business strategy.** Hybris is a German-based software vendor focused on managing product data across multiple channels in support of e-commerce, it sells mostly to enterprises with requirements related to e-commerce, catalog, print and media and multichannel integration. The vendor continued to grow through 2011 and seems to be increasing its North American business quickly, led chiefly through a re-selling partnership with Endeca, a U.S.-based search engine vendor. However, this partnership ended when Oracle announced in October, its intention to acquire Endeca.

  Gartner estimates that Hybris has approximately 130 MDM customers as of 1Q11 (vs. 85 in 2009), all of which are master product data customers and we estimate $9.7 million MDM software revenue for the same period. Approximately 80% of company revenue comes from European-based customers, although this percentage is falling as the percentage of the customer base located in North and South America continues to grow.

Hybris sells its products in the U.S. through its North American office, based on its recent acquisition of iCongo, an e-commerce vendor. The vendor sells into retail, manufacturing and wholesale segments, which represent approximately 80% of its business. Positive growth is being reported in the Americas, the U.K. and the Nordic region and anecdotally, we have seen an increase in inquiries related to Hybris. The vendor also sells via a large indirect network of partners, operating mostly in Germany, Austria, the Netherlands and the U.K. This results in notable market spend that is only partially accounted for directly in Hybris numbers, which Gartner includes in the analysis.

- **Good product capability.** Hybris' PCM offering helps it sell its e-commerce applications, but one in five customers of Hybris licenses the PCM product as stand-alone. The product is written in Java and is developed to support Oracle as well as SQL Server databases. New developments focus on "tagging" which promises to give users a much easier way to access data and build custom views of the data for various uses, such as exporting or mass data updates.

  The functionality focuses well on providing the tools necessary for managing complex product data (and associated digital and content assets) for consumption in a multichannel environment. A small number of users also use Hybris PCM to integrate with suppliers in an enterprise format, where the solution becomes the source of truth for product data. Hybris focuses exclusively on centralized implementation styles for mastering product data in operational MDM use cases and supports workflow and transactional usage patterns. Consider this vendor when business drivers include the need to implement master data across multiple systems driven by multiple channels.

- **Reference.** Hybris provided more references than were required, which is interesting for a vendor focused so much on product data. Nearly 30% of references suggested it did complete a proof of concept by using Hybris to master something other than product data. Hybris scored well on product functionality scope and depth, reportedly above average on many dimensions. Its one challenge is its lack of depth with product data quality capabilities.

  Some users reported that the company's joint application and MDM strategy meets their requirements well (of having MDM and applications from the same vendor), but some do not like this and identified the implied issues with a two-front product strategy. Other users explained that Hybris is more of a platform player, so the implementation partner selected needs to know Hybris very well to support time-to-implementation requirements.

Cautions

- **Change in business strategy.** Hybris does not appear to have any broad MDM vision outside the product data domain, although some users store customer and location data as a system of reference in the Hybris PCM solution. Its MDM business strategy may be about to change, as it was recently announced that Hybris has acquired iCongo based in Montreal, Canada, with the assistance of a financial backer that takes a sizable ownership of the resulting company.

  On paper, the products seem to complement each other, certainly geographical coverage is a nice fit, as each can act as a channel for the other. However, this major acquisition will change

the strategy of Hybris and it is too early to determine firmly how it will change. To make the deal pay, a lot of business application software (that would sell through the iCongo business), needs to be sold, so this suggests that there will be more focus on e-commerce applications and quite likely a lowering of focus on MDM. This is despite the good levels of growth for the Hybris MDM strategy in the last two years. The company strategy will become clear later in 4Q11.

- **Size, viability and global support.** Hybris remains a small vendor in the Americas, with its center of gravity in Europe. Some users, especially prospects in North America, perceive Hybris as a European vendor, although it continues to build up a substantial, U.S. presence, coupled with its recent acquisition of iCongo that provides services such as sales and marketing, professional services and U.S.-based product support.

  Gartner estimates that Hybris had fewer than 10 direct head counts in the U.S. and almost 150 in Europe, before the acquisition of iCongo. North American prospects sometimes perceive Hybris as a risky investment due to its sizeable physical presence, and center of gravity. Hybris currently has an indirect channel, which separates its primary customers from the vendor. Non-European prospects should take care when evaluating support services due to the distance and differences in time zones.

- **Evolving product strategy.** Hybris added a new reporting capability in 2010 to its product but this remains very "traditional" since the analytics and KPIs are not embedded into standard stewardship processes used to enforce data governance. The new reports are welcome, but Hybris is not yet really addressing the needs of product data stewards. Workflow remains workable, although it is table based and not graphical, as well as non-interoperable with a corporate BPMS strategy that might, for example, require a BPEL-compliant interface.

  Hybris signed a OEM agreement with Datanomic in 2010 (Datanomic was acquired by Oracle in 2011), so that it could, when needed, sell a stronger, purpose-built data quality solution to help with managing more complex data quality issues. With the acquisition by Oracle, this partnership becomes less of a strategic investment and more of a risky option. The vendor has to address data quality issues in every implementation. As the requirements for data stewardship, data quality and strong workflow continue to increase (as MDM programs grow in size and importance), these gaps may continue to cause Hybris difficultly in the next year or so. The one saving grace is that its competitors are not too far ahead in both areas.

IBM

IBM has recently repositioned and repackaged its business and is working to integrate its MDM products. In October 2011, IBM announced version 10 of IBM InfoSphere Master Data Management that is set for licensing in four versions:

- Enterprise edition (includes all former MDM products).
- Advanced edition (previously InfoSphere MDM Server and Initiate Master Data Service).
- Collaborative edition (previously InfoSphere MDM Server for PIM).
- Standard edition Initiate Master Data Service (MDS).

The original product, IBM InfoSphere MDM Server for PIM, has been renamed IBM InfoSphere MDM Collaboration Server Edition. IBM InfoSphere Master Information Hub (used for custom domains) is licensed within the Enterprise and Advanced (not collaborative) editions. All editions are sold with standard IBM software subscription and support at 20% of the license price of the software.

IBM is currently shipping IBM InfoSphere MDM Collaborative Edition, version 9.1, which was made generally available in March 2011. Licensing is based on the number of unique records being mastered.

Global headquarters: Armonk, New York, U.S.

Website: www.ibm.com

Strengths

- **Broad focus on information management.** IBM has a significant information management portfolio that includes BI, performance management, information integration, warehousing and management, content management, and data management. It also has a broad multidomain MDM strategy, predicated on the strengths of its ability to master product, as well as customer, data. The primary solution for this market is called IBM InfoSphere MDM Enterprise Edition and Collaborative Edition, which is sold as stand-alone (the Collaborative Edition) for more traditional scenarios, but if there are requirements for more real-time message based integration, then the Enterprise Edition will be required.

  Additionally, some users will also license the Advanced Edition when their product data requirements are less complex in terms of workflow or product data model. Over the next three years, IBM will continue to increase the amount of "shared services" between products, taking a "top down" approach by focusing on (in order of priority), UI services, data quality/matching services, application and integration services and later, business rules services. There remains no intent to merge the data models of the three core MDM products, although IBM assures tight functional integration is supported if more than the Collaborative Edition is required.

- **Product packaging and marketing.** In October 2011, IBM substantially revised the packaging of its core MDM offerings and in so doing, should make it easier to communicate with prospects and for users to understand what is being sold to them by IBM. The new packaging finally wraps all three offerings into a simpler enterprise offering, whereby customers can license all solutions with component versions if desired.

  This marketing and product packaging does not change, but enhances IBM's stated strategy to increase the integration of MDM products over time. What has been a caution for IBM for several years should be become one of its strengths during the next few years and IBM sales reps and customers should finally get a better grasp of what is being sold and bought.

- **Very capable MDM capability.** IBM's lead product to master complex workflow and data models common with product data is InfoSphere MDM Collaborative Edition. This product, originally an acquisition, remains a best-of-breed MDM for product data solution. This is

primarily due to the broad and deep set of functionality that IBM has maintained and developed for the product, which provides a pre-configured data model that can be deployed to respect company-specific data models (extensible data models) or use industry-specific data models, some of which IBM also offers.

Workflow capability is also very strong and some customers master their product data, where the data model is less complex or there is less need for comprehensive workflow, using InfoSphere MDM Server, although this remains a very small, but growing part of the overall customer base. IBM's recent product developments include a common UI framework for InfoSphere MDM that allows users of the Collaborative Edition to add custom UIs to their already comprehensive set of UIs.

Additional improvements have taken place with more formal messaging (specifically services based) integration for the Collaborative Edition. Advancement has been the advanced catalog management capability that has been added to WebSphere Commerce Integration. This embeds a version of the Collaborative Edition that enables very similar product data authoring in a commerce environment, when the need for more comprehensive data management (provided by InfoSphere MDM) is not needed.

Overall, IBM has a number of other tools that are needed to support MDM of product data, including the InfoSphere Discovery tool to locate and map master data, IBM InfoSphere Business Glossary and IBM ILOG Business Rules. This means that IBM can meet many complex requirements (via a very large set of offerings).

- **Global/industry coverage.** Few software vendors can meet IBM toe-to-toe when it comes to global reach and sheer size. IBM has been leveraging this to the hilt, by closing business in areas where it does not need to compete as hard (such as Africa and Eastern Europe) and the company continues to deepen its coverage across industries. Already well represented in many areas, recent activity has seen IBM busy in retail, telecommunications and banking. These industries are where IBM is bringing to market, industry-oriented templates and solutions related to either data models, content, process models or pre-configured integration solutions.
- **References.** IBM provided the required number of references and this year's online survey response rate was much higher than last year. An increasing number of customers report a multiple domain implementation using its Collaborative Edition. Overall feedback from the online survey was that IBM was "capable" but overly complex, requiring lots of IT involvement. The UI, although described as "powerful" in past years, was reportedly "cumbersome" and not as flexible as before. IBM's references are also global, which helps in reference selling.

Cautions

- **Slowing momentum in the market.** Gartner estimates that IBM had approximately 650 MDM customers as of 1Q11, of which 180 are for MDM of product data (vs. 160 in 2009). We estimate $272 million in MDM software revenue for the same period (vs. $163 million in 2009) and its 2010 MDM revenue for product and data was $54 million (vs. $50 million in 2009). IBM's market share was 11.2% in 2010, with a growth rate of 9% according to our estimates (see "Forecast: Master Data Management, Worldwide, 2010-2015").

IBM's estimated growth for 2011 is only at a "market" level, since IBM's efforts remain focused on other markets such as healthcare that can leverage the investment IBM has made in its Initiate product line. The average growth rate (in an increasingly faster growing market) and the restatement of its customer base downward, explains why this is a caution this year.

- **"Just enough" MDM product strategy.** Being one of the early pioneers in this market it can sometimes be hard to explain the inconsistency in "value realization" from IBM's host of innovations. In 2011, IBM again talks about tighter integration between the business rule engine from its ILOG business and its MDM offerings. For product data, with its requirements spanning product configurations, features and options, permissive and alternatives, as well as the high degree of product data that is part or poorly managed by PLM and ERP systems, this has always been a long-term need in the market. IBM is also slow to build on the idea pioneered partly by Initiate that being MDM applets (or "MDM powered applications," in IBM terminology) promising to reinvigorate many users tired of old ERP and other packaged applications and business processes. IBM's answer is "UI widgets" which are great for building UIs on the MDM product (IBM's Provider Direct is an end user application for healthcare).

  Instead of bringing to market prepackaged MDM applets that could offer up real time access to product search and validation for every user for any number of non-IBM business application users, the company seems more interested in building toolkits for partners to develop. IBM is now looking to exploit the hype around social data (the IBM Cognos Consumer Integration product) with its "product factory" concept that promises to integrate business rules from ILOG to its MDM offerings for more tactical uses.

  There is work going on in relation to integrating "big data" with "small data" (what is inside the organization), although it seems more wedded to customer data, even though one primary value proposition is related to product and sentiment analysis from social networks. IBM has remained strong in this area, compared to the competition, but is not stretching itself in anticipation of customer requirements. Hopefully, IBM will tackle some of the thornier problems and opportunities in the MDM market soon.

- **Lower focus on MDM of product data.** Given the size of IBM, it might be hard to think of its marketing presence as a caution. However, IBM was the first Leader in this market segment, but it has not dominated the market in terms of a singular vision. Anecdotally, IBM does not seem to be increasing its share of inbound inquiries we receive where IBM is involved.

  Given that IBM's market share is flat or declining, it suggests that the company has reached a plateau. In other words, IBM does not seem to be improving its position relative to other vendors. Perhaps IBM is more focused on other data domains more consistent with its last significant acquisition in the MDM market, or a reflection of the changes in MDM leadership over the last couple of years. Alternatively, it could be that IBM's overall MDM vision, to date, has just been "too big, too complex, or not complete enough." With the new product packaging announced, its market presence may pick up in 2012.

- **Incomplete data stewardship support.** Another area where users may think IBM has strength in is in support of the "day in the life of a product data steward." IBM has a very strong

consulting service focused on change management and information governance, but it has not yet brought a packed offering supporting this critical role to the market.

IBM's tools can yield a lot of data analysis, profiling, metadata management, business rules, workflow and insight, but the results are not standardized, nor presented in a packaged and uniform, single environment for the product data steward, in a form that works alongside the other MDM-related tasks that stewards follow. IBM is working on this capability, but there remains a gap. It is shipping IBM BPM Express 7.5 with Enterprise, Advanced and Standard Editions, but this BPM technology will not be packaged or integrated with the process-centric focus of Collaborative Edition, until 2013 (our estimate).

The legacy Initiate MDS Composer (the original UI for Initiate) is packaged as an MDM application toolkit to help users build custom applications and fill this need.

Informatica

Informatica, the "data integration company," entered the MDM market by acquiring Siperian, which is a MDM product for customer data vendor, in January 2010. It positions its MDM product as universal MDM, claiming the ability to handle all multidomain, multistyle, multideployment and multiuse requirements. Informatica's MDM, together with its data integration and data quality tools products make up the Informatica 9 platform. Informatica MDM v.9.1 became generally available in March 2011 (it is a Leader in both markets, see "Magic Quadrant for Data Quality Tools" and "Magic Quadrant for Data Integration Tools").

Pricing is by data domain, then the number of records per data domain. Informatica Data Director and Data Controls cost extra and are 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.

Global headquarters: Redwood City, California, U.S.

Website: www.informatica.com

Strengths

- **Business strategy.** Informatica's tag line is that it is the "data integration" company. With its MDM strategy that seems (in recently financial quarters) to be driving its current sales success, it could be argued that Informatica is shifting toward being a "data governance" company. Informatica is described by its customers as a tools vendor, as it sells a range of data integration, quality and management tools to IT and is well known for this. It is also easy to see why Informatica staff are so excited when they talk about MDM, as the product is strong (in some segments) and is one of the simplest marketing and product strategy messages (a single technology solution for "universal MDM") among the larger competitors.

  The vendor is not seeking to address the entire market requirements immediately, but is prioritizing and selecting segments, building on its implementations focused on product distribution and slowly moving into more complex problems normally associated with

manufacturing. Informatica is investing heavily in its MDM business unit and results are imminent.

- **Core MDM foundation.** Informatica's Data Director was developed by Siperian when it was focused primarily on MDM of the customer data market. The solution also has immediate applicability in the MDM of product data market. In MDM of product data, there is a much greater need to support business process interaction and collaboration for the authoring of complex data objects over an extended time frame. Informatica has been developing Data Director to support the basic UI needs for product data.

  Due to its history, the MDM application is also well-known for its data-modeling flexibility, as well as for its flexible, service-based integration approach and its strong data quality integration approach (via plug-ins to customer and product data quality engines, with the product data skill set coming from a previous acquisition, Similarity Systems). As such, Informatica's Data Director also has great potential in that it could be developed as a separate information stewardship application.

- **Momentum building.** The sales growth rate for Informatica shows an impressive percentage, but this is relatively easy from such a small starting base. The vendor is also gaining more traction in terms of attracting interest, as evidenced by more inquiries this year than last, related to this market. The increasing marketing efforts at a tactical level, as well as the overall marketing strategy, suggest that Informatica will eventually be a force to be reckoned with in this market.

- **Industry strategy.** Before its acquisition, Siperian had already established a capable track record in meeting MDM requirements (centered on customer and party data) for specific industries, including life sciences and financial services. Informatica has also demonstrated an understanding of what it takes to focus at an industry level and put together a program of innovations and efforts to build out and support an industry strategy.

  Informatica has shown signs of understanding this differentiation and continues to invest in the MDM business unit at the level needed in the long term to bring strong, industry differentiated MDM solutions to the market.

Cautions

- **Product strategy.** Informatica is growing its installed base of customers storing product master and related data. However, not every customer is mastering (specifically, authoring) that data in Informatica's MDM offering, as the data is sometimes stored more as a system of reference.

  Informatica really needs to focus on the mastering and authoring side of this market segment, since that is where the real battle for ownership of the master data exists. This does not mean that Informatica needs a PLM tool, it needs to support complex product objects, together with complex interaction (workflow) between multiple business applications with varying levels of approvals and business rules, in a pre-configured manner, with a broader view on how to steward this data across the organization. This is a high priority for Informatica MDM, as it requires detailed knowledge of business processes and how they deliver desired business

outcomes in industries that Informatica is not familiar with. It can be done, but it is not easy. No vendor can guess the requirements, they have to ask and learn.

- **Narrow or broad focus?** It is clear that Informatica is investing heavily in its MDM asset to develop support for this market, but it has other opportunities that may yet derail its current focus. Firstly, it has to remain competitive in its larger market segment that being MDM of customer data. Secondly, there are other initiatives that promise some interesting differentiation in MDM that it has yet to exploit, although that exploitation may strengthen, or weaken, its focus on MDM of product data. Part of its business is focused on B2B.

  There is an opportunity to align MDM, normally associated with semantic consistency, with its B2B offering, that happens to focus on semantics between enterprises. Secondly its "data controls," small applet type offerings, are not being exploited to the fullest. By having a lead in this area, the vendor could invest heavily here to create a truly innovative offering and strategy, but that would be more money and focus that may not be available to the MDM of product data focus. Lastly, the vendor could go after a packaged offering to support the emerging role of (product) data steward more formally. This is less about authoring product data and more to do with diagnosis when product data issues arise in operational business processes. The bottom line is that this vendor has many options to consider, but it can't do everything.

- **Industry/business experience/depth.** Informatica sells well historically to IT and not to business, so has less industry orientation or focus. This is not where MDM fits in, since to be successful with MDM you need to understand intimately how business processes and their outcomes are required to operate. The vendor does have some resources that understand how to sell to the business (largely the Siperian talent from the acquisition), but companywide, it does not have a deep bench (yet) of people resource that knows how to sell to business or to industries, since such knowledge is not needed when selling horizontal technologies like data integration.

  It has been selling its MDM solution in 2011 to many industries (including its base of life sciences and financial services), so its base is quite spread out and not yet deep enough. It now has customers in energy and electronics, so its knowledgebase is growing but (again) at a slow rate. Additionally, the need for revenue to satisfy a high growth engine like MDM could lead to the vendor being spread too thinly.

- **Slow but steady progress.** The vendor has shied away from acquiring a specialist in the MDM of the product data market and has so far decided to build its own solution. This is clearly the slower path to acquiring market share, although it does help keep its simpler "single technology solution" message clean (which IT is more interested in than business users), compared to many of its competitors. Even industry best-of-breed or niche/domain solutions have specific capabilities for industry or domain requirements. Therefore, Informatica has to do a lot to meet the needs of the most complex product or thing MDM set of requirements.

  Informatica may still succeed with the slower approach, since long-term trends to multidomain MDM play into the single technology solution strategy. However, a patient management team will be required as results will be slow to arrive.

- **Customer base.** Informatica sees MDM as key to its growth strategy and is strongly promoting successful growth in its MDM business. We estimate that Informatica's 2010 MDM revenue was

$60 million and its 2010 MDM of product data-related revenue was $8 million, which implies a low ASP, commensurate with a vendor trying to buy its way into a new market. We also estimate that at the end of 2Q11, Informatica had a total of 150 licensed MDM customers (vs. 80 a year earlier) with approximately 25 organizations implementing MDM for product data. Informatica claims 50 or so customer licenses for product data.

- **References.** Informatica provided the necessary references. Of those that responded to the online survey (five), none were reported live yet, so analysis of functional capability is based on face-to-face and phone interactions. Of those users that responded, 40% suggested that a proof of concept was used to evaluate a second or other data domain. Overall functional capability is lagging the competition in this market. Most references are for implementations that are distribution oriented, not the more complex implementations often found in manufacturing. Those that implemented early on are not yet reporting a successful ROI, but they remain hopeful, as "going live" is mostly in the future. Some reports of "high cost of ownership" reinforce the lack of maturity in what is a new product/market focus for Informatica.

Oracle

Oracle is currently shipping several product offerings, Oracle Product Hub, Oracle Product Hub for Retail and Oracle Product Hub for Communications. All are at version 12.1.3 and were generally available from August 2011. There is a minimum of product records specific to each base product price. Oracle Fusion Product Hub was made generally available in October 2011. Oracle Product Hub is licensed based on the number of records that are mastered and stored in the system, along with user-based pricing for product data stewards. Oracle Enterprise Data Quality for Product Data is licensed based on the number of processors ($150,000 per processor, with a minimum of four).

Global headquarters: Redwood Shores, California, U.S.

Website: www.oracle.com

Strengths

- **Overall MDM product strategy.** Oracle has assembled a large and impressive portfolio of products to address an organization's MDM needs. Oracle supports a number of solutions that are designed and managed as best-of-breed, stand-alone MDM applications, such as Oracle Product Hub. Since it has several such best-of-breed products and the promise of a single, generalized solution for multidomain MDM with Oracle Fusion MDM, its portfolio is built for both single domain MDM specialization and multidomain MDM. This has some strength, such as being able to address a wide range of needs that otherwise might need products from different vendors.

  This has led to the formation of a notable customer base in MDM, but also the momentum associated with users that want more and better solutions. Oracle's primary offering for organizations focused on product data is Oracle Product Hub, along with several industry-targeted versions, such as Oracle Product Hub for Retail and Oracle Product Hub for Communications.

Oracle acquired ATG in 2010 and this provides another offering, now in the Web content management space. As a stand-alone product, this can help in some MDM of product data programs. Long term, Oracle may decide to unify data stewardship efforts across structured and unstructured (specifically, content), but this remains to be seen.

Oracle has also developed a new MDM product with Oracle Fusion MDM that is targeted at multidomain MDM with one technology solution. This new product release 11gR1 (as of October 2011), is being positioned as the lead MDM of product data product, unless the implementation is operating with one instance of Oracle E-Business Suite (EBS), or is the communications industry, in which case, the legacy Oracle Product Hub will be positioned.

Long term, Oracle Fusion MDM will be a foundation for the Oracle Fusion Applications suite. Oracle plans to progressively converge its MDM products onto a common MDM platform foundation by leveraging Oracle Fusion Middleware during the next few years. Gartner believes this won't happen before 2013.

- **Deep functionality for product data.** Oracle's capability to help organizations master product data is broad and deep and goes beyond the core Oracle Product Hub solution. Oracle provides a Global Data Synchronization connector (via a partner [Lansa]) that is often required by consumer goods and retail organizations. To help with assuring product data quality, Oracle also offers Oracle Enterprise Data Quality for Product Data (from the acquisition of Silver Creek Systems in 2009).

  This data quality solution generates a number of metrics and analytics from its match, merge and data standardization routines that can be used by a product data steward (Oracle's Product Data Governance Studio product).

  Oracle Product Hub and Oracle Enterprise Data Quality for Product Data solution together represent a compelling offering. Additionally, Oracle's Enterprise Data Quality for Product Data tool will also be sold alongside the Oracle Fusion MDM product, although the data quality tool is not built on Oracle Fusion Middleware.

- **Coexisting with business applications.** Oracle has a large customer installed base of business application users that store product master data along with lots of other application-specific data, and this provides Oracle with great insight into the fundamental issues facing such users.

  Oracle Product Hub (and some of its other "hub" cousins) are designed to share a data model from Oracle EBS and so the actual instance of Oracle Product Hub can be deployed "inside" its own ERP offering, or alongside it (as a separate instance), as if it were needed in a heterogeneous environment. For larger customers with more complex application landscapes, this is a boon.

  This design goal has been extended with Oracle Fusion MDM and Oracle Fusion Applications. Oracle does sell its MDM offerings to non-Oracle application customers as well, which differentiates it from SAP, for example, although this is a small segment of its customer base.

- **Marketing/momentum.** As a large vendor, it is no surprise that when Oracle focuses its marketing energies on a task, it can do well. It has a sizable market share (11.1%) and rapid

growth rate (36.5%) according to Gartner estimates (see "Forecast: Master Data Management, Worldwide, 2010-2015"). This bodes well for the short term and is probably related to the vendor's willingness to market to non-Oracle business application users.

- **Good references.** Oracle provided the necessary references and received a very high response rate. Of the vendors surveyed online, Oracle scored a notable "win" in that it attracted the largest number of customer responses, suggesting Oracle supports an enterprisewide view (specifically, single) of product data. Oracle did well in pre-sales and post-sales cycle support. Functional scope and depth were slightly below the competition, but most had the odd anomaly, rather than sustained weakness.

  Overall, case studies seem to be getting stronger, perhaps due to increasing maturity in the installed base and a strong legacy focus on ERP and PLM users that are very competent at defining how they want to master product data, although UI and ease of use did not score as well this year. Oracle is hoping the new UI on Oracle Fusion MDM will be reported positively in future references.

- **Industry focus.** Oracle outlined an industry strategy three years ago, which has resulted in assembled industry-specific solutions for retail, telecommunications and consumer goods. In 2010, Oracle partnered with Lansa, a small service provider, that offers a Global Data Synchronization Network "onboarding" solutions, which then freed Oracle up to develop such a niche "add on." These offerings, along with the Oracle Site Hub, provide combinations of data model adaptations and process models or scenarios specific to an industry, which help reduce time to implement.

Cautions

- **Smaller customer base within Oracle's MDM portfolio.** We estimate $119 million and $165 million in MDM software revenue for 2009 and 2010, respectively, with Oracle's MDM of product data-related revenue at $39 million and $54 million, respectively, for the same years. Gartner estimates that Oracle had approximately 1,200 MDM customers as at end 2010, of which 330 are for MDM of product data (vs. 280 in 2009).

  Oracle's Fusion MDM solution is generally available and is being positioned as the lead MDM product for product data. The Oracle Product Hub is still being positioned for single-instance Oracle EBS users and those in the communication industry. This seems a clear position, but it does add a level of complexity both to user choice and vendor strategy. From a user perspective, there is the question of implementing a legacy MDM hub product (or being a current customer of the same) and the possibility of migrating or implementing the new Oracle Fusion MDM product. From Oracle's perspective, this is yet another product line that needs constant R&D to develop and achieve competitive positioning in the market.

  That being said, where do Oracle Product Hub and Oracle Fusion MDM end up? Most likely in late 2012, with a second or third release of Oracle Fusion MDM, Gartner expects Oracle Fusion Product Hub to be at parity with or have stronger functional capability than Oracle Product Hub, although Oracle claims parity or stronger capability already with its first version.

Gartner expects that most current Oracle Product Hub customers are unlikely to want to migrate to Oracle Fusion Product Hub until at least 2013, when the Oracle Fusion MDM offering will offer superior functionality or capability. Prospects and customers should mitigate the disruption by utilizing the new "Fusion harmonized" business services and Oracle Application Integration Architecture (AIA) and keep a clear view of Oracle's publicly communicated R&D plans for MDM.

- **Multiple domain MDM vs. multidomain MDM.** If an organization wants to use Oracle for its end-to-end, enterprisewide multiple domain, multi-use-case implementation in 2011, then it can. However, there will be a large number of applications and solutions implemented because Oracle offers a portfolio of tools to support MDM, rather than one integrated offering. Oracle can do this with a shared data model for the majority of its MDM solutions, but not all. Of note is the fact that Oracle can be deployed with a common data model across those Oracle MDM hubs, based on the Oracle EBS data model, but this excludes Siebel MDM offerings and Oracle Hyperion DRM (hierarchy master data and financial master data).

  For users that focus on managing product data, this is not a major concern, as such a focused implementation can often cope with the "piecemeal" approach. However, for users tackling product data as part of a broader multidomain MDM who are looking for one unified suite, this will be a source of increased complexity until Oracle addresses a unified approach to mastering information using just the Oracle Fusion MDM offering.

- **Lacking support for data stewardship.** Oracle has a good understanding of the process of data stewardship and its technologies provide a number of sources of data for use in supporting the role of product data steward. However, these capabilities are not packaged as a single solution. Increasing maturity in MDM of product data in the market is pushing vendors in this direction and given Oracle's size and the more important role of information governance, it is surprising that Oracle has not led this part of the market. It continues to offer new capabilities — including new tools with Oracle Fusion MDM. One reason why Oracle may not easily bring such a packaged offering to the market is that, with such a large portfolio of MDM products, it has to replicate functional capability in many places.

- **References good, but more work to do.** Oracle's references remain among the best surveyed for this analysis. However, there were a few "wrinkles" in 2010 that warrant further analysis. Users were asked if their vendors really understood their industry requirements. Despite the investment Oracle has made in this area, it only scored average results. Oracle scored well in the post sales environment, but it scored only average in the presales environment.

  Oracle also makes a strong case for helping clients with the overall TCO of their programs, but the references did not completely agree. In some cases, Oracle again scored only average. Oracle is making progress with a large and growing customer base and a few wrinkles here and there suggest that it needs to remain vigilant in this important area. This might make reference selling a little harder in the coming year, until Oracle improves its situation.

Orchestra Networks

Orchestra Networks is currently shipping Orchestra Networks EBX.Platform version 5.0, which was generally available in 2Q11. The company licenses its EBX.Platform by instance or, in some cases, by project or program. Maintenance is charged at 20% of the original license fee.

Global headquarters: Paris, France.

Website: www.orchestranetworks.com

Strengths

- **Business focus.** Orchestra Networks is an MDM vendor based in France that targets multidomain implementations. With its EBX.Platform, the vendor has concentrated mostly on France, meeting the needs centralized MDM users focused on application-independent MDM for both operational and analytical use cases. It has not focused on the more complex needs of customer-facing or supplier-facing application-oriented MDM.

  Orchestra Networks did not qualify for inclusion in this year's analysis, due to insufficient revenue, but the quantity of inbound inquiries and references, the unique capabilities of the core MDM product and a credible MDM strategy, meant that we have now included it. Orchestra Networks has also set up in the U.K. and in 2010 added its first sales resources in the U.S. It had been selling via partners in the U.S. since 2009.

- **Core MDM functionality.** The product provides a flexible, multidomain semantic data-modeling engine based on an XML schema that includes the ability to create and manage complex hierarchies quickly and easily. While data models benefit from a semantic approach, data is stored in a relational database management system. The vendor has a strong and growing blue-chip client list in France and Canada that uses its products for managing a range of master data domains. EBX.Platform does not include any best-of-breed data quality software, so it will often partner with others to meet more complex requirements.

  The solution has a strong workflow capability (graphical view only), with some support for data stewardship, SOA-based integration and good version/lineage capability. In 2011, Orchestra Networks released a cloud-based version of its EBX platform, targeted at the small to midsize organization and those organizations that want to evaluate a MDM implementation in preparation for an enterprise-ready implementation behind the firewall.

- **Momentum building.** Gartner estimates that Orchestra Networks has approximately 60 MDM customers, which equates to $9 million in 2010 (vs. $7 million in 2009). We estimate that of the 60 users, 35 are mastering product data, which approximates to $4 million. Given its healthy multidomain credentials (approximately 50% of its customers are mastering no product/thing related data), this vendor seems to be growing ahead of average market trends. Several customers report that this offering operates well in a centralized, application-independent environment, often in support of reporting or analytical scenarios. The vendor's focus on a dynamic XML data modeling environment seems to play into its reported appeal with users.

Cautions

- **Industry specificity.** Orchestra Networks' strength is that its data model and general approach are generalized and can be client driven; its weakness is that it is not pre-configured or focused on any one industry. As such, the gap between a generic template and a specific, targeted solution has to be filled and this takes time to implement. Being small makes this hard for Orchestra Networks to achieve and ESPs could help fill this gap if the company was larger and more noticeable.

  Users would have to develop the implementation program themselves to make it specific to their business. For application-independent MDM, this is not a fatal flaw, but it remains a huge challenge when users want to extend application-independent MDM to the edges of the application domain (such as with multicommerce MDM). It can also be seen as a competitive weakness when industry knowledge is thought to be an advantage by the prospect.

- **Product strategy.** This vendor seems very well placed to exploit the growing interest in multidomain MDM for operational use cases. However, it is not large enough yet to think about where this emerging trend may evolve. There is a cloud strategy that plays to the market hype, but does not address concrete business problems. The wider need for better tools to manage application information governance and stewardship generally is missing from this vendor's road map.

  It is messaging to multidomain MDM, as well as analytical (BI) and operational MDM, and now cloud and not so much to MDM of product data, so it is missing opportunities, but also needs to develop its product. Orchestra Networks seems widely spread for such a small vendor. Additionally, it is not innovating too much at the edge of its product footprint as some other vendors are doing. Short term, the vendor looks well placed, but long term, it needs to think more broadly about where it wants to be in approximately three years.

- **Lacking partner network.** Orchestra Networks has focused very heavily on its French roots in terms of market and few customers exist outside of France, even though this is where its greatest chance for growth lays. It has tried several times to partner, most recently with Software AG, but no partnership has survived a couple of difficult sales deals. The vendor will struggle if it is not able to figure out an effective partnering strategy, either as a sales channel or as an implementation partner. It will need to do this if it is to succeed outside of Western Europe (for example, in North America).

- **Viability.** Orchestra Networks is in an interesting position. It is one of the few vendors that really only do MDM and has a unique offering in this market. It is also small enough (with an approximate head count of 30) to be acquired at some point. Therefore, although the product is competitive, prospects are nervous about its short-term future. The more successful the vendor is, the more likely it will be acquired. Users will need to take all the necessary precautions to protect themselves against this vendor being acquired, but also consider Orchestra Networks when a generalized, XML-based data model is the desired approach.

- **References.** Orchestra Networks provided more references than required, but suffered from a lower than average response rate. We did not receive five online survey responses, so product capability ratings were not as trustworthy and had to be combined with phone interactions. On

the whole, the average user leans toward a less-complex (product) data model and so a less-complex multiple object model. Limited data suggests average or above functionality, but more data points are needed to qualify this analysis. Workflow, thought to be its strength, was identified as overly complicated, by a couple of users.

Riversand

Riversand is currently shipping MDMCenter 6.1, which was generally available in 1Q11. Riversand licenses a core MDM product (Riversand MDM Center) with optional modules. Pricing is based on which products and modules are licensed, as well as the number of concurrent users and the number of master data elements mastered and stored.

Global headquarters: Houston, Texas, U.S.

Website: www.riversand.com

Strengths

- **Business strategy.** Riversand's mission is to help organizations master their own information supply chain, with a specific focus on customer-centric industries needing product and asset master data. Riversand targets energy, oil and gas, consumer goods and retail, distribution and manufacturing industry segments. The company focused originally on PIM and in 2009, took a broader view with MDM. Now, its capabilities are more oriented to multidomain MDM with a specific positioning also supporting MDM of product data. Its key differentiators seem to be its flexible data modeling and embedded metadata management and its references.

  It relies heavily on references for sales assistance and seems to thrive on a small-vendor passion for working with its customers. Its level of business has not been consistent each year, although this is showing signs of growth again that might suggest a stable floor on which to build a strong growth plan in 2012.

- **Market growth/momentum.** Gartner estimates that Riversand had approximately 40 MDM customers as of 1Q11 (vs. 30 customers in 2009), all of which are mastering product data. We estimate $8 million MDM software revenue for the same period (vs. $4 million in 2009). Anecdotally, inquiry levels related to Riversand are notably on the increase and this suggests that its marketing efforts are beginning to work. Its financial performance in the last year shows positive growth, albeit that some deals were delayed from 2009 to 2010. The organization has been hiring in the last year and this seems set to continue.

- **Product functionality/technology.** In 2011, Riversand remains focused on "deep" functionality for MDM, but with strong capability in support of MDM of product data. Newer customers continue to push the vendor toward mastering content data, or integrating with digital asset management or other solutions systems. Workflow also remains a strong feature, as reported by users.

  The solution has an XML data modeling environment, which seems to be the source of its known flexibility and given its .NET heritage, it has a low TCO, compared to most other

offerings. Its metadata management tools are also well suited to multidomain MDM programs. Users in complex, heterogeneous application (with ERP) environments and those with complex product objects, should include Riversand in their evaluations.

Riversand supports a set of APIs to complement the rich UI and workflows that characterize MDM of product data applications. By supporting an API-based approach for integration, Riversand has delivered a less-intrusive offering that can adapt to more transaction and real-time use, as well as still supporting the more-workflow-oriented user requirements. In the short term, this means that Riversand can support requirements that seek its own UI to support complex workflows, as well as users who want a more message- or transaction-centric implementation of MDM of product data (or later, customer data).

Users also report that Riversand sells well to IT and technologists, perhaps more so than when selling to the business, although Riversand gets good scores on both sides. This is driven by its technology-oriented solution, as well as its engineering leadership.

- **Partnering strategy.** Small vendors often struggle to get lasting partnerships established, as most often they communicate "too low TCO," whereas large partnerships with broader horizons are not conducive to this message. Riversand's approach is its "Watershed Alliance" which seeks to be more of an established network of vendors covering technology, services and consulting, centered on a Riversand universe which is clearly smaller now. However, the fact that a number of vendors representing technology, services and consulting work with Riversand in this program suggests that it is focusing correctly and building a brand from a basic but sound strategy.
- **Emerging support for data stewards.** Riversand models metadata in its application, as well as master data, which is a prerequisite for companies wanting to develop from a domain-specific MDM strategy to a broader, multidomain strategy. The metadata model can be applied to the governance process across other MDM tools, something users are likely to describe as an advantage. The vendor has improved its business rules management capability with a rules table that brings all the rules users can work with into one place.

  There are lots of analytics that could be drawn from the data in the system and Riversand does a good job of putting some together, along with user "to dos" in the primary user interface. These are all capabilities that are important in any operational MDM implementation, but also for data stewards that seek to master data across multiple master data hubs and application data stores.

Cautions

- **References and the challenges building.** Riversand provided the necessary references, but suffered from a below average response rate. Of those that responded, 33% implied that they did complete a proof of concept with Riversand MDM for data other than product data. More interestingly for this vendor, functional capability and depth were below average, which is very different from previous survey responses suggesting average or above capability.

  However, the data does not show a wholesale shift, but that a small but growing set of customers are not experiencing the same success that earlier customers experienced. This is

support for the argument that Riversand is struggling to grow in a controlled manner. The size of company and the amount and quality of resources, were cited as issues that hampered implementation success for some users. This caution is perhaps the vendors most significant risk related to short term growth, since reference selling is so important.

- **Microsoft strategy.** References for Microsoft MDS suggest that this is more of a toolkit of services than a finished product or solution, specifically as it is focused at the database level (Microsoft SQL Server), rather than at the business (application) solution level. Hence, Riversand is likely to still be the primary Microsoft/.NET offering for business application users. However, more sophisticated users that build their own MDM offerings on Microsoft MDS will, over time, increase in numbers and this will prove a challenge for Riversand. It could seek to build future Riversand MDM products on Microsoft MDS, but that will risk direct competition from Microsoft partners, such as Profisee (the ex-Stratature team).
- **Industry focus.** Riversand remains focused on a "platform" strategy, rather than specific industry solutions, so it suffers the trade-off of being flexible across many environments and master of none. This helps small, early vendors, but as vendors seek to build competitive boundaries, specialization needs increase. This continues to be a challenge for Riversand sales (such as in retail, food, healthcare, media, oil and gas and consumer electronics and more recently, apparel), but is a good point for prospects.
- **Marketing strategy.** Riversand has struggled to build visibility and credibility in the open market because of its opportunistic sales strategy. It has lacked marketing vision, which manifests itself as a "nervous twitch" that adopts every hot term the market develops in case it aligns with a prospects strategy. As such, Riversand risks translating its very strong engineered solution to a market-driven, capability-based solution.

  The vendor is badly in need of a unifying vision to communicate strength and singularity of purpose. Some prospects noted that Riversand does well when selling to IT since it is oriented, as a vendor, to technology and so lacks a more business-friendly message. This is a shame, since some prospects that become customers actually report that the UI and solution in general is very user friendly for business.
- **Size and viability.** Riversand is an ideal acquisition target, since its technology and understanding of the market are both good. However, as the economy conditions remain uncertain, this may not be the case until and if clear signs of growth are established. As such, Riversand is likely to be left to its own devices. It has opened its first European offices (in Germany) and has since added other resources in Switzerland. This is primarily for sales, with support to follow in 2012.

SAP

SAP is currently shipping SAP NetWeaver MDM 7.1 Service Pack 7, which was made generally available June 2011. SAP Master Data Governance (MDG) works with SAP ERP 6.0 EP 5 (made available in May 2011). SAP licenses SAP NetWeaver MDM based on the object domain type, number of de-duplicated records in the repository and usage scenario. For example, pricing for the product object domain is different from the supplier object domain.

SAP also licenses SAP MDG using the same pricing model, financials, material and vendor are currently supported, but customer data won't be supported in SAP MDG until 2012. SAP's annual maintenance fee for SAP Enterprise Support is 22%. There is also a version of SAP MDM embedded in the SAP Supplier Relationship Management (SRM) product that is used to create and manage cataloged items maintained in the SRM application suite.

Global headquarters: Walldorf, Germany.

Website: www.sap.com

Strengths

- **Information management strategy.** SAP's EIM strategy historically centered on BusinessObjects which has, until early 2011, really focused on managing information to support BI. During 2010 and more so in 2011, SAP has increased its focus on its information management strategy to support solutions "on demand," "on-premises" and "on device" and with a broader focus on MDM and managing information across and within its large business application footprint.

  In 2011, SAP expanded this with (primarily) the limited release of SAP BusinessObjects Information Steward. This tool finally and formally packages some of the already available capability that a product data steward, managing product data across ERP systems (and BI data warehouses) needs to make MDM work properly.

- **MDM product strategy.** SAP now has a product strategy aimed at meeting SAP ERP customers' needs. SAP has a large and loyal business application user base, particularly in the manufacturing, consumer packaged goods, 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.

  During the past two years, SAP has shifted to a broad, multi-pronged product strategy, including BusinessObjects solutions. SAP also positioned SAP NetWeaver MDM as the main solution to all its customer's MDM challenges at that time and now there are two or three products that would need to be implemented to support MDM, along with pre-integrated services.

  SAP NetWeaver MDM remains the legacy multidomain MDM product, originally targeted at SAP to non-SAP application data stewardship. SAP MDG for "embedded MDM" can manage all data, including master data used in SAP ERP applications. However, SAP MDG can also be used for SAP to non-SAP application stewardship. SAP MDG is an example of an application-specific data stewardship solution that would work alongside any MDM hub.

  SAP MDG shares the same data model as SAP ECC 6.0, so can be implemented "inside" (hence, the "embedded" moniker) the same ERP instance, or outside and independent of it, in case of highly heterogeneous environments. The newest product, SAP BusinessObjects Information Steward, is SAP's first product targeted at packaging up tools and services needed by the information steward of primarily SAP-related data, although the solution could also be used for non-SAP data.

Additionally, other data and quality services from Business Objects are embedded with packaging options for SAP NetWeaver MDM and SAP MDG. Going from one product to three increases complexity, but at the same time, this is a more rounded, comprehensive set of solutions that will likely be needed by the majority of SAP customers.

- **Good MDM product functionality.** SAP meets a wide range of MDM requirements for mastering product data in SAP NetWeaver MDM, which has a great deal of data model flexibility. The solution comprises client/server "admin" application (SAP NetWeaver MDM Data Manager), where data model creation and maintenance is targeted, with a SAP portal-based UI for regular MDM users and other customers also now use SAP NetWeaver BPM to orchestrate MDM processes across their businesses running on SAP applications.

  SAP has a good understanding of MDM of product data requirements in B2B scenarios, supporting global data synchronization (common in consumer goods and retail). SAP provides native integration with NetWeaver Process Integration and some of the BusinessObjects Data Services, to address cleansing and matching (although with less experience with product data than with customer data) and improves the integration with third-party data quality tools and reference data sources. Long term, the business rules, analytics and data model requirements of SAP MDG will have to be exposed and externally managed by a MDM solution of some kind.

  In the case of SAP, several users have already suggested that long term, SAP NetWeaver MDM will become less strategic to SAP and SAP MDG will increasingly become the most, if not only, MDM offering required. This won't even be a functional possibility until at least 2013 (Gartner estimate) and if SAP MDG can meet all the same functional requirement as SAP NetWeaver MDM.

- **Customer base and momentum.** Gartner estimates that SAP had approximately 1,450 MDM customers at end 2010 (vs. 1,150 in 2009), of which nearly 600 are for MDM of product data (vs. 520 in 2009). We estimate that approximately 60% of these licenses have a serious or planned intent to implement MDM, so the active customer base is nearer 360. We also estimate $158 million MDM software revenue for the same period (vs. $131 million in 2009) and its 2010 MDM of product data-related revenue was $66 million (vs. $65M in 2009). Overall interest in mastering product and other master data remains very high within the SAP customer base. SAP enjoys a market share of 13.6% (the leader) with a growth rate of 17.3% (see "Forecast: Master Data Management, Worldwide, 2010-2015").

  SAP also attracts a sizable number of client inquiries. It has a good position in its business application installed base and is attracting a long list of prospects. Coupled with significantly more interest from SAP users' American SAP User Group (ASUG), now has both MDM and data governance special interest groups and it is clear that mastering product data specifically and master data in general, is a big opportunity for SAP and its customers.

  SAP seems to be growing faster than the market average and this, coupled with new interest in SAP MDG to help with managing data in ERP systems, seems to suggest positive interest for SAP. However, SAP primarily targets its own installed base in terms of go-to-market for MDM and it targets net-new customers (with no SAP business applications or BI) opportunistically.

Cautions

- **Big decision on the way.** Early complexity cited by SAP customers since 2010 relates to the appearance of a new product to help with MDM of product data, which seems to be dissipating as interest in the new offering (SAP MDG) quickly increases. As it stands now, the vast majority of SAP users will end up identifying requirements that will span three products: SAP NetWeaver MDM SAP MDG and SAP BusinessObjects Information Steward. It would seem that SAP has finally crafted a pretty comprehensive suite, even if it has taken it some time to get to this point.

  However, a few SAP customers are already asking the obvious: If SAP needs to meet MDM requirements spanning SAP and non-SAP applications, why would it maintain (long term) two core MDM products? Additionally, the use of SAP NetWeaver MDM has spanned a wide range of information management uses. Some users have tried to use SAP NetWeaver MDM as a central hub for product and other master data, yet other users have tried to use SAP NetWeaver MDM as an application-specific data stewardship hub with a much larger data model than a smaller MDM hub.

  As such, SAP listened and now SAP MDG has emerged to tackle the latter set of requirements within an SAP application landscape more appropriately. The logical conclusion is that at some point in the future, SAP will slow investment in SAP NetWeaver MDM and make SAP MDG the primary MDM platform for all uses. SAP shows no sign of this yet and there does not seem to be anything on the road map like this. At this time, it seems SAP users will really need the capabilities of both products, since they focus on different parts of the overall problem of managing master and application data.

- **Support for product data stewards.** In 2011, SAP bundled a limited license of SAP BusinessObjects Information Steward with both MDM offerings. This new product was made generally available in September 2011 as a stand-alone product. The limited license (limited to working only with SAP master data) will bring together functionality and capability that already exists in SAP BusinessObjects and SAP NetWeaver MDM, which data stewards need to do their jobs every day, including analytics output from data quality services, metadata management and business glossaries.

  However, this is a new product and we think it is unlikely to meet the majority of requirements for at least 12 months (second or third release). It will be sold more easily by salespeople focusing more on BI than those that sell ERP and application solutions, since the product emerged from the BusinessObjects side of the organization.

- **Why isn't MDM standard with ERP?** We get many client inquiries from users who have gone live with their SAP ERP systems, some nine to 12 months previously and finally determine that they have "lost control of their data, although ERP was successful." The analysis shows that basic ERP road maps, promoted by SAP and its partners are not doing a good job of explaining the importance of the discipline of MDM. At best, MDM work streams would be an additional cost that ERP budgets won't stretch to, so MDM "never gets done" and product master data quality and consistency then erodes once the ERP implementation is complete. Worse, consulting companies are brought back in and charge more money to do what users assumed should have done in the first place.

This observation is very much centered on SAP more than any other ERP vendor, although the problem is consistent with ERP in general. SAP does understand this issue and can offer a separate MDM work stream, but it does not solely offer this as part of a standard ERP road map. Some SAP partners do help here specifically, but this remains marginal to ERP and not central to it. The advent of SAP MDG does not address this issue, but it will if SAP adjusts its standard SAP ERP blueprints to include an independent (but application supportive) information governance (specifically, MDM) work stream spanning pre-ERP, cross-ERP and post-ERP-related business processes.

- **Partnering strategy.** SAP's partnering strategy in relation to MDM continues to evolve. There are many ERP implementation, migration and consolidation projects taking place all the time. In each case, there are always problems with data — where is it, what is it, is it any good and how or where should it go (inside ERP). BackOffice Associates was a key partner for SAP data migration and emerging needs for product data governance, although in 2010, SAP opted for a new partnership with Utopia and Datum, coupled with other established partners including Deloitte, SITA and Capgemini.

  These smaller vendors handle niche areas spanning data migration, data governance and data stewardship. Initial feedback from users is positive, but these partnerships are new and the vendors small. On the MDM solution side, SAP partners with vendors such as NRX, to focus on the energy, oil and gas sectors. Some aspects of the partnering strategy are good and some are less so.

- **References.** SAP provided more references than required in 2011. The main highlight was that functional capability and depth scored below average this year, which might suggest that the product is starting to lag the requirements of the market and may also explain the shift in focus by SAP away from SAP NetWeaver MDM in favor of SAP MDG. Some resources identified gaps in the skills base due to the proprietary nature of the MDM offering that is not developed in core SAP NetWeaver technology.

Stibo Systems

Stibo Systems' most recent product offering, STEP MDM, is in version 5.2.1, which was generally available in July 2011. Stibo Systems offers a base price for the solution (with a limit on the number of records mastered and users and charges for additional users and records mastered). Maintenance is charged at 20% of software licenses and 25% on custom code for integration, for example.

Global headquarters: Arhus, Denmark.

Website: www.stibosystems.com

Strengths

- **Loyal customer base.** Stibo Systems (present in the U.S. since 1985) is a European division of Stibo Systems (founded in 1794 as Stibo A/S) that historically focused on catalog publishing tools and services, but is now focusing on MDM of product data. Stibo Systems retains its

other product and service offerings related to print and publishing, which references repeatedly report are strong products. Gartner estimates that Stibo had more than 150 MDM of product data customers as at 1Q11 (vs. closer to 140 in 2009).

We estimate $27 million MDM software revenue for the same period (vs. $24.5 million in 2009). There have been very strong references for Stibo and reference selling has been a key tactic for this vendor. Stibo provided the required 12 references for this analysis. Feedback this year emphasized vendor organization stability, although a lack of marketing flair and Stibo's pre-sales cycle was well regarded by several users. Its functional scores were somewhat mixed and rating as average.

- **Good market understanding.** Stibo understood three years ago that it needed to change if it wanted a chance to address this market. The vendor repositioned itself closer to MDM and away from its legacy print catalog business and sought a position in the MDM of product data market. It has competed effectively with niche vendors focused just on specific scenarios (for example, MDM of product data in sales and distribution), as well as against more enterprise-oriented MDM vendors where corporate IT plays a stronger role (over business) in data modeling and mastering.

  Stibo has an affinity with business users (over IT) and although the MDM of product data market is its strength, it has been working on a multidomain MDM strategy, tied to ongoing work in the MDM of customer data market. The overall vision for this market looks aligned with current and near-term requirements.

- **Strong product capability.** The functional capability that Stibo Systems has developed in its MDM offering has demonstrated its depth and scope many times with users, both those with large ERP and packaged application landscapes (common in manufacturing), as well as distribution and retail that need to synchronize with e-commerce and multichannels of customer interaction. The product has demonstrated good support for data modeling and cataloging, managing business data rules and functional workflow.

  New releases later in 2011 (5.2.2) will bring a new portal designer to provide a UI generator. With release 5.2.1 Stibo added an interesting data profiling capability that could prove very useful for its customers. Stibo remains more experienced in supporting business processes on the customer-facing side of the business, but also has a small and growing number of customers on the supplier-facing processes.

- **Appeals to business users.** References and customer interaction frequently report how Stibo's business users are very content with the solution and how it helps them do their day to day work with product data. Its workflow and UI have often been cited by users as being very good and although not universal with every user or every screen and function, the feedback from most users stands out above most other vendors.

Cautions

- **Shifting business strategy.** This has been Stibo's strength for the last three years, but it now seems that the company is at another crossroads. It has established a recognizable presence in the MDM of product data market segment with some users also mastering location, supplier

and price. It started an adaptation 18 months ago that will tackle the additional aspects of the embryonic multidomain MDM segment by adding some capability to support MDM of customer data.

In 2011, it started to elevate its message toward being "the strategic information management company." This last phase is a significant stretch from its MDM roots, even if the central DNA of MDM gets the vendor a "free pass" to start with. It seems that Stibo is either stretching its marketing beyond its execution; or it is only half preparing strategies before they get launched. The risk is that recent success is leading Stibo to overreach.

- **Momentum and market visibility.** Stibo only grew in line with market averages and seems to have lost its momentum. It has a market share of 5.6%, but its growth rate is close to market averages. The vendor reports good activity and even creativity in places (specifically, Australia), but the inquiry level and market presence does not support increased growth over market averages. It could be that its narrow industry focus has hampered short term growth in other segments, although IT spend has been stable or up, in retail and distribution, so this should not be the issue in 2011. Given the market is increasing its growth rate, if Stibo does not meet or exceed market averages in the next year, it will start to fall from its current position in the Magic Quadrant for Master Data Management of Product Data Solutions.
- **Relationships with ESPs.** Historically, Stibo has required its customers to work mostly with its own implementation and service resources. While this has helped users (Stibo has a good reputation for employee longevity), it has harmed its market visibility and conflicted with the desire of some customers that prefer to work with their own ESPs. This near-exclusive focus has been relaxed, but references this year suggest that it is very likely customers will work with Stibo resources rather than a third party.
- **Selling to IT vs. business.** A number of Stibo implementations are alongside a large packaged application like ERP, SCM or procurement, for example and as previously stated, Stibo gets better marks from business users than from IT. Stibo does not have some of the related specialist or best-of-breed products in data quality, data integration and ETL that some of its larger competitors have and so it often has to coexist with other vendors. This gives some IT departments the perception that Stibo is not as "important" as some other vendors that potentially offer additional solutions.

  Stibo does not present itself as a sophisticated technology vendor, but more friendly to business and this seems to play negatively for some IT organizations; even though its more business-oriented messages seem to play better with business users.
- **Weak global support:** Stibo Systems has its headquarters in Europe and continues to be perceived as European centric by some prospects, even though it is conducting business around the globe. The implementations of its STEP MDM product are more evenly spread around the world, approaching more than 50% in North America. Outside of North America and Europe it represents little more than 6% of revenue. Truly global organizations may find this focus a challenge.

Tibco Software

Tibco Software offers Tibco MDM and is currently shipping version 8.2, which was made generally available in July 2011. Tibco Software's licensing prices are based on the number of CPUs and named users. The application license covers the desire to model any type of master data object.

Global headquarters: Palo Alto, California, U.S.

Website: www.tibco.com

Strengths

- **Business strategy.** Tibco MDM is positioned as a multidomain MDM solution, although its roots are as a best-of-breed MDM for product data offering. Tibco sells Tibco MDM as stand-alone and with its BPMS (Tibco AMX BPM) and enterprise service bus product, as key parts of an organization's SOA-based infrastructure and business process platform infrastructure. The focus on the Tibco stack is adding support for the message-level integration that more MDM implementations require.

  In 2010 Tibco's interest in MDM had been decreasing, but with a re-focus of leadership, new hires and increased customer interest in MDM, Tibco has a renewed interest in governance and "trusted data" as a foundation for its "business optimization" corporate message. The vendor also sells MDM in conjunction with its complex-event processing application, Tibco BusinessEvents. The elevated success in 2011 with MDM and the new positioning related to information governance is promising, if new.

- **Broad multi-industry and multidomain MDM strategy.** Tibco Software's experience centers on managing product master data with Tibco MDM in consumer goods, retail-B2B, telecommunications, food service, manufacturing and distribution industries. Tibco continues to compete well in MDM of product data, but its focus has extended to mastering customer and other party-like objects. This led to an acquisition in 2009 of a data quality tools vendor Netrics for entity resolution (a key enabler of MDM of customer data).

  Based on a pre-configured but extensible data model Tibco MDM ships with various MDM accelerators that position the product more out of the box for specific industry solutions, including pre-configured data model, workflows and process maps and applications. These include Tibco ActiveCatalog, a MDM product that supports telecommunications.

- **Growing momentum.** Recent marketing efforts seem to be paying off, as our inquiry workload related to Tibco MDM is increasing and competitors report seeing Tibco products more in 2011 than in 2009. Revenue growth seems higher in the last year, slightly ahead of market averages. Nearly half of Tibco's revenue for Tibco MDM is not outside of data such as product and asset, so its party data sales are increasing well.

- **Product scope and flexibility.** Tibco MDM has a flexible approach to data modeling and can support multiple data domains, including the ability to model cross-domain relationships. It performs well as a centralized hub (the majority of implementations), but has also done well in coexistence deployments. Tibco's strength is managing data entities that need deep data

modeling and management (which is common with product data), but it has growing experience in the broader MDM market, which appeals to enterprises with a broader MDM strategy.

Tibco Software has a strong workflow and process-modeling capability in its Tibco MDM product, but it can also be called by an external BPM tool or event-driven architecture. It can manage logical partitions within a single instance for different business units and geographies. The embedding of a Spotfire run time into Tibco MDM provides for a unique UI that is intuitively well liked by business users. The idea being that dynamic analytics, exposing insight to business process and business performance related to data, is a great way for users to understand the link between data consistency and business performance.

One such analytics looks at data quality "half life" — the rate of change in useful (specifically, fit for function) data. Tibco seems alone in the market with this potential at present. It is learning how to sell this "visual MDM" and early signs are encouraging.

- **Customer base and references.** Gartner estimates that Tibco had approximately 170 MDM customers as of 1Q11 (vs. 120 customers in 2009), of which 120 are for MDM of product data (vs. 90 in 2009). We estimate this equates to $22 million MDM software revenue for the same period (vs. $19 million in 2009) and its 2010 MDM-of-product-data-related revenue was $13 million (vs. $11 million in 2009). International MDM revenue accounts for approximately 50% of revenue.

  Tibco provided more references than required and achieved a very high response rate. Tibco's product functionality scope and depth scored more "averages" than any other vendor, so it seems to set the bar by which other vendors are analyzed. While not demonstrating any number of "significant advantages" it seems to meet more requirements than most other vendors. The shift in UI strategy a few years ago is paying off as users are reporting improvements here.

  Some larger clients have Tibco and other vendor solutions for MDM and it is not always clear that Tibco will be the preferred long-term partner for MDM, as it needs to work on its overall corporate information governance message to gain the confidence of customers. More users this year reported multiple domains being managed and a stronger link to BPM.

Cautions

- **Support for data stewardship role.** Tibco MDM includes several capabilities that can help govern data mastered in its own hub. However, some of these tools and capabilities are not provided in a packaged format for multidomain use. The range of tools offered includes workflow, analytics and KPI, business rules, data quality, data profiling and metadata management, for example. Tibco has not packaged this in a formal way to support the "day in the life" of a (product) data steward. Given Tibco's range of products, it is quite surprising that it has not led this part of the market's evolution, yet. Evaluate Tibco Software's stewardship capability based on what you see in Tibco MDM.
- **Data quality.** Tibco currently offers an in-memory, real-time data matching and quality engine from its recent acquisition of Netrics. The Netrics product (now called Tibco Patterns) has capabilities to match and parse and process engineering/product data. Gartner understands

that several Tibco customers are using Tibco Patterns in context with Tibco MDM, although Gartner has not completed references with users regarding this solution so far.

The announced OEM partnership with Trillium Software (in 2010) has yet to make itself known in implementations and since that vendor has less experience with product data than with customer data, for example, this has yet to add additional value. Tibco Software's data quality solutions in this area have been a challenge, so far, but there are signs that they may become one of its strengths once Tibco has matured in the market.

- **Marketing.** Tibco MDM is one of the stronger MDM for product data solutions. However, marketing for Tibco MDM is not commensurate to its capabilities and not yet fully aligned to the newly emerging corporate messaging related to governance and "trusted information." With the recent growth and renewed interest in MDM from senior management and new hires, this lack of focus and effort may change but it remains to be seen. Therefore, the current rate of growth may be short lived unless a marketing strategy is defined more fully and more importantly, executed.
- **Sales performance.** Tibco Software looks poised to "break out" and capitalize on a solid product, good reference base and improving corporate message predicted on "trusted information." However, Tibco had the chance to "break out" some years ago and missed the chance. It remains to be seen in 2011 and 2012 if this vendor will deliver on its promise of better market execution.

Recommended Reading

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

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

"Forecast: Master Data Management, Worldwide, 2010-2015"

"Evaluation Criteria for MDM Vendor Data Model Styles"

"Connecting Technology for a Pace-Layered Application Strategy"

"How to Use Pace Layering to Develop a Modern Application Strategy"

"MDM 'Primer': How to Define Master Data and Related Data in Your Organization"

"The Five Vectors of Complexity That Define Your MDM Strategy"

"Ten Best Practices for MDM of Product Data"

"Should Organizations Using ERP 'Do' Master Data Management?"

"MDM for ERP: Governance and Data Stewardship"

"Mastering Master Data Management"

"The Supply Base Management Application Market and Vendor Landscape"

"The Relationship Between Master Data Management and Enterprise Information Architecture"

"Use the Gartner MDM Maturity Model to Create Your MDM Road Map"

"Magic Quadrant for Data Quality Tools"

"The Seven Building Blocks of MDM: A Framework for Success"

"How to Evaluate a Vendor's Master Data Management Solution"

Note 1 Definition of MDM

Master data is the consistent and uniform set of identifiers and extended attributes that describes the core entities of the enterprise and is used across multiple business processes. Core entities include 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 IT organizations work together to ensure the uniformity, accuracy, stewardship, semantic consistency and accountability of the enterprise's official, shared master data assets.

Note 2 Definition of MDM of Product Data

MDM of product data solutions are applications designed to create a single version of a product for an enterprise, across all operational and analytic uses, independent of any other repository of product data. MDM solutions store master data (or metadata, or both) related to products and other attributes of data pertaining to products. MDM systems can operate as a system of record (where product and additional data is initially created and subscribed to by remote-consuming systems via messaging infrastructure), as a system of reference (where systems subscribe to remote master data using the MDM solution as a look-up to locate and access the data) or as a mixed record or reference deployment.

Note 3 Definition of Multidomain MDM Technology

Multidomain MDM technology is a purpose-built solution targeted at addressing the multidomain technology requirements of an MDM program. It has the following characteristics:

- It can be implemented in a single instance.
- The data model is uniform or is interoperable and able to manage cross-domain intersections.
- The workflow and user interface elements are uniform or interoperable.

- It supports at least one use case, implementation style or organization/governance model, for specific industry scenarios.

Note 4 Restatement of Market Data

As part of the research process that underpins the MDM of Customer and Product Data Magic Quadrants, Gartner estimates each vendor's software revenue and selling patterns for products through surveys, inquiries and thousands of customer touchpoints. During 2011, data came to our attention that warranted a re-statement of historical software revenue for particular vendors. This new data was used in the analysis for Gartner's 2011 MDM Customer and Product Magic Quadrants. See "Forecast: Master Data Management, Worldwide, 2010-2015" for information on vendor software revenue.

Note 5 Multicommerce MDM

Multicommerce MDM represents a technology convergence of MDM of product data and MDM of customer data, with some other technology components. Enterprises interact with their customers via many channels (for example, print, Web, direct, kiosk, service, fulfillment and returns), electronically and customer service and business performance are maximized when important master data is unified across these channels. This is often addressed by individual technologies and solutions; MDM of customer data and MDM of product data may both have been deployed by distributor or manufacturing organizations, for example.

Often, additional tools are used for content management, but users in some industry segments are increasingly asking their initial vendor (whichever one they start with) to master the other important master data domain. Other master data is being included, such as location and hierarchy for reporting. As a result, users are looking for a convergence in the technology to simplify the information infrastructure. Multicommerce MDM is likely to be a medium-term convergence (emerging now and lasting five years) in MDM technologies, before MDM suites support all data domains (multidomain) and data types (including content).

Note 6 Implementation Styles of MDM

There are different architectural styles for MDM systems. All these systems are designed to match and link master reference data from multiple sources, maintain those links and assign a global identifier. The four styles provide different capabilities, require different levels of architectural commitment and are applicable to different situations:

- The **consolidation** style achieves a single view of master data via a layer of data (often a copy of master data that is then governed as if it were metadata), analogous to what is achieved in a classic BI initiative. 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 of or use for the data in any operational systems, only 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, as 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 (so the data copy in this style is replaced with a recognized master data source).

- The **registry** style maintains a central register of global identities, links to master data in source systems and holds transformation rules, in some combination of metadata and master data. At runtime, it accesses the source master data and assembles a point-in-time consolidated view. This style is a relatively noninvasive layer and tends to be used for identity management.
- The **centralized** style supports a centralized repository of all 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. This is sometimes described as "transactional," but the implication (which is false) is that this style is the only one designed to meet the needs of transactional interaction between applications and the MDM infrastructure. Numerous transactional systems will need access to MDM infrastructure, even under implementation styles.
- 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 view (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, which combined at runtime (specifically, transaction request), represent the master data.

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 changed evaluation criteria, or a change of focus by a vendor.

Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor that compete in/ serve the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, 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 presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

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

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message 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 and understand buyers' wants and needs, and can shape or enhance those with their added vision.

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

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

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

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

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

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

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

This research is part of a set of related research pieces. See Roundup of Master Data Management and Related Research, 4Q11 for an overview.

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