

## Magic Quadrant for Master Data Management of Product Data

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Several changes have occurred in the Magic Quadrant for Master Data Management of Product Data. IBM and Oracle both entered the Leaders quadrant, SAP is in the Challengers quadrant, while best-of-breed vendors continue to differentiate on vision, industry, domain or use-case vectors.

## WHAT YOU NEED TO KNOW

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Gartner's Magic Quadrant for Master Data Management (MDM) of Product Data provides insight into the portion of the evolving packaged MDM solution market that focuses on managing product data. It positions 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. Numerous changes have occurred in the market:

- Enterprises that struggle to ensure a "single view" of product and associated product data across the enterprise in heterogeneous environments are increasing their spending on MDM (see Note 1) initiatives, and MDM tools are seen as a primary enabler of such practices. MDM of product data (see Note 2) is helping users meet their requirements for cost optimization, as well as acting as part of a platform to enable longer-term business growth strategies. Prior to 2008, this market was known as product information management (PIM; see Note 3).
- The market for MDM of product data solutions has grown in size and complexity since the previous year.
- Key focus areas (some of which are adding to market complexity) of the MDM of product data vendors include MDM for multicommerce (all necessary master data for all selling channels), complex/engineered products (product-oriented/customer-centric enterprises), service-oriented (virtual products or services) industries, asset-oriented MDM, heterogeneous ERP and procurement MDM.
- Vendor capability and focus differ by industry, use case (design/construction MDM, operational MDM and analytical MDM), as well as by implementation style (see Note 4). Be wary of vendor hype for enterprisewide MDM, and look carefully at what vendors' references are doing in terms of authoring product master data versus referencing it elsewhere.
- 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.

## STRATEGIC PLANNING ASSUMPTION(S)

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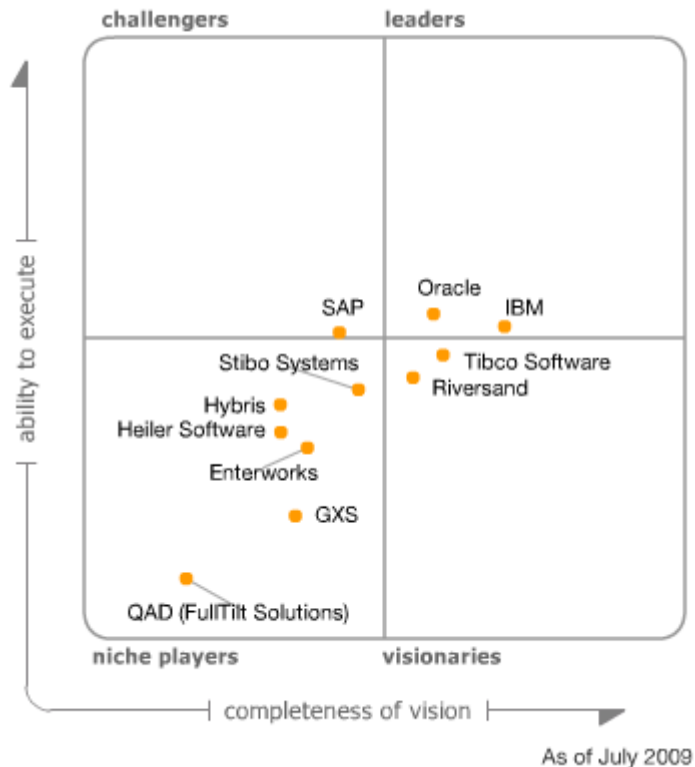
Through 2012, the MDM of product data market will see strong growth, achieving software revenue (license and maintenance) of more than \$1 billion.

Through 2012, the major application infrastructure vendors (IBM, Oracle and SAP) will command more than 50% of MDM of product data software license revenue.

By 2012, more than 65% of Global 2000 organizations will deploy two or more domain-specific, MDM-supporting technologies that start out as specific business requirements will become part of a larger MDM initiative.

## MAGIC QUADRANT

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



Source: Gartner (July 2009)

## Market Overview

Enterprises struggle to gain a consistent, complete and accurate single view of products or services across their enterprises. Achieving and maintaining a single, semantically consistent view of product master data is a critical enabler that supports many business drivers. Since 2008, we have seen broader and greater emphasis on scenarios such as:

- Cost optimization — few accounting and financial reconciliation losses; more-streamlined, simpler data integration in heterogeneous environments; more accurate and timely reporting; more-efficient business operations; and more-effective procurement leverage
- Improved decision making — better alignment of hierarchy data from operational systems to analytical and business intelligence (BI)-oriented systems
- Compliance — voluntary and regulatory requirements differ by industry
- Innovation and business agility — more-nimble business process orchestration and reorchestration

Other drivers for this market, which may increase in importance from 2009 to 2010 or when economic conditions improve, are:

- Increased revenue — improved customer support, upselling and cross-selling opportunity
- Better multichannel integration and faster new product introduction
- Increased supply chain visibility and a simplified environment for increased multienterprise collaboration

Most notably, there are three new market concepts.

**1. Adoption and use** of MDM of product data disciplines and/or technologies emerged in industry sectors that have services and/or virtual products, such as banking, insurance, financial services, telecommunications and utilities.

This leads to another source of complexity in the market. For example, in financial services, banking and insurance, users often describe what is essentially a product life cycle management (PLM) framework for the development of new services: Broad, less-defined service capabilities are whittled down (through a "funnel") to a specific service offering that is made public, and that may change, by order.

PLM software is overkill for this process; but MDM of product data technologies and their new product introduction capabilities, honed in the consumer goods/retail segments, have functionality that is helpful. Despite the name (PLM is implied in these industries), MDM of product data is shouldering the business application users. This signals that there will be increased complexity in the market, as the line between business applications and information infrastructures will overlap, again, for a time.

**2. Maturing implementations** of MDM that are challenging IT organizations to manage and relocate master data from product master files in ERP or legacy business applications, and to orchestrate mixed roles of "system of reference" and "system of record" for multiple systems where product master data resides.

This calls out a maturity that was observed in the many reference calls we made as part of the research for the Magic Quadrant for MDM of Product Data. We have already called out the likelihood that increasing numbers of enterprises will need two or more MDM technologies to meet their overall MDM vision; this is due mainly to the requirements being diverse and complex enough across domains and use cases that no single vendor or technology can meet all the requirements with one tool. Users are working on how to make these two or more systems work together. This is leading to some significant dialogue between business and IT organizations over which systems, processes and users own what data: Where does core product master data reside? When does master data stop being master data (if it does), and how do application-specific data and product master data compare? There are many product master files embedded inside business applications, and these data stores need to be part of the overall MDM discipline, even if the MDM technology does not replace them.

**3. Redrawing boundaries** around MDM when integrating two or more MDM technologies, perhaps for different data domains and/or use cases, to support a single MDM vision, became popular last year.

This highlights the one major technology weakness in the MDM market overall, not just the MDM of product data market, that vendors have not yet addressed. Governing master data across two or more MDM systems is a requirement, but the tools and technologies have not yet been composed, aligned or brought to market so that the offerings can be sold repeatedly, thus,

making a business for vendor(s), and creating a market for users to select workable solutions. Several MDM of product data vendors are working on this, but fast developments along this trajectory likely will not occur until the end of 2009 or during 2010.

Investment in MDM of product data has taken place across all vertical industries. Product- and service-centric industries are adopting MDM of product data at different rates. The most activity has been in consumer goods, retail, industrial, telecommunications and life sciences, because these industries had extreme business pressures to improve revenue and service, along with simultaneous cost cutting. The focus has shifted to cost optimization, in general, and MDM of product data is becoming more applicable to other industries.

## **Market Growth**

The overall MDM market will continue to grow for several years, albeit at a slower rate through year-end 2010. Gartner estimates that software spending (license plus maintenance) on MDM of product data in 2008 exceeded \$400 million. The overall MDM market was estimated to be close to \$1.2 billion.

IBM, Oracle and SAP accounted for almost 50% of this spending. This high percent does not represent market dominance. However, the addressable market is much larger than what is currently being spent, and it is common to hear of larger or more-complex enterprises with an Oracle MDM offering and/or an SAP MDM offering as part of a larger MDM strategy that includes a best-of-breed solution (even IBM) for a different domain and/or use case. SAP certainly is very strong in its installed base of business applications, and MDM of product data continues to be its largest market segment for its SAP NetWeaver MDM offering. Oracle also plays well in its installed base of business applications, but, unlike SAP, Oracle sells directly to companies that do not have Oracle business applications. This gives Oracle the look and feel of a stand-alone MDM of product data vendor. This sector of Oracle's customer base is growing, even at the expense of the SAP base as Oracle sells into it. IBM remains the largest MDM of product data vendor, with no intrinsic business application legacy. IBM appears in many projects that are self-described as heterogeneous, complex and large.

Best-of-breed or niche vendors (such as Tibco Software and Riversand) continue to differentiate themselves in terms of their capabilities and their strengths in key vertical industries. These vendors also have strategies that target the wider MDM market. Some other niche vendors in this market focus on sectors within it, such as those that support efficiency and effectiveness for business processes on the buy-side of the enterprise, or the sell-side of the enterprise.

## **Trends and Vendors in the MDM of Product Data Market**

In this Magic Quadrant, we continue to see significant changes in vendors' positions:

- For the first time in this market, there are leaders — Oracle and IBM. Oracle has remained steadfast in its strategy, which has evolved over the years, and it has executed well against that strategy. IBM's sales momentum has helped the vendor increase its reach and reference base, and it has strong product capability, but IBM has lost some vision due to lowering the visibility of MDM in its broader corporate messaging related to information governance, and information on demand; it has only just achieved "leaders" status.
- SAP has inched over the line from the Niche Players quadrant into "challenger" status. SAP remains focused on its core SAP ERP installed base (which is good), but it is losing vision due to increased focus on executing its BusinessObjects assimilation, and a more complex product strategy, at least for the short term.

- Tibco Software remains in the Visionaries quadrant. Because its vision for the market in 2008 was well-rounded, it has not developed this vision ahead of the market trends in 2009; therefore, it has fallen slightly, vis-a-vis the overall market.
- Riversand remains in the Visionaries quadrant, although it has improved in Ability to Execute, which has resulted in a slight reduction in Completeness of Vision for this market, vis-a-vis the market as a whole. The vendor continues to build a strategy around several vertical industries (oil and gas, energy, consumer goods and retail), with excellent references, even alongside some of the larger MDM products (for example, SAP applications).
- GXS remains focused on consumer goods and retail, its primary industry niche. The vendor reports that it is steadily increasing its customer base. In 2009, it has increased prospecting activity through its newly formed Product MDM (PMDM) group, although Gartner has not seen a consummate rise in inquiry levels.
- Heiler Software has, with respect to the whole market, improved its ability to execute and remains a niche vendor. Heiler is focused on complex needs for managing product data across multiple selling channels (MDM for multicommerce), and continues to experience faster-than-market trend growth in Europe, the Middle East and Africa (EMEA).
- Hybris has also improved its position with respect to the overall market, although it may appear that there is little change year on year. Hybris is selling effectively, but mostly in Europe. The vendor competes well in MDM for multicommerce-driven projects, and has experience with integrating with PLM applications. In June 2009, Hybris signed a joint resellers agreement with Endeca, a search engine, that could signal a change in fortunes for Hybris (positively) and cause some concern for other MDM of product data vendors that implement alongside search engines.
- Stibo Systems, renamed in 2009, was Stibo Catalog. This is an important signal to the marketplace that highlights the vendor's desire to be recognized for its product strength: managing product-oriented master data, not just in catalog-oriented environments. The vendor plays well in MDM for multicommerce and, increasingly, in enterprise-oriented MDM of product data implementations.
- Enterworks continues to build its business as a stand-alone vendor; it was an OEM for its offerings until 2006. References continue to emphasize the vendor's flexibility and strong workflow capability. Enterworks participates in MDM for multicommerce environments, but seems to be more prominent in environments where there are numerous and different consumer systems.
- QAD acquired FullTilt Solutions in April 2008. Deep analysis of this vendor and its strategy was incomplete for this research, although ongoing dialogue with prospects and customers shows that the solution continues to be in deals. QAD has to define, and articulate, its strategy in the next six months to realize significant value from its acquisition.

In terms of other market and market-related trends, there has been particular emphasis on:

- Adding business-oriented workflow, via being the OEM for tools or additional organic development
- Improving or adding custom analytics and performance management, albeit centered on granular-oriented data metrics

- Ongoing weakness with stewardship and governance facilities, or lack thereof
- Complexity related to rules (such as business rules and product configuration rules), and where these rules should be mastered
- No serious impact of open-source software at a market level, but merely at a component level used by vendors to short circuit R&D efforts
- Slow, gradual emergence of MDM and MDM services outside the enterprise firewall for various B2B and multienterprise business processes

## Market Definition/Description

Markets are sets of potential buyers that view a product as solving a common, identified need, and then referencing 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 submarkets, 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 the Magic Quadrant, although it may be reflected implicitly (for example, via placement of a vendor in the Niche Players quadrant).

The MDM of product data market, formerly the PIM market, is populated by several groupings of customers with common sets of requirements, although all have broader, enterprisewide goals related to a single view of the product. The groups of customers with similar requirements are congregating into several segments:

- Complex, often-engineered products that coincide with the use of business applications, which are known as PLM
- Heterogeneous and multidivisional ERP, with large amounts of legacy business applications
- Multichannel commerce across e-commerce, print/catalog, multichannel integration and data synchronization with customers for sell-side (retail or manufacturing)
- Procurement, buy-side, distribution-intensive-type enterprises
- Services (nonphysical products); often financial services, banking and insurance enterprises with complex customer/event/order-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?), implementation style (Where does the master and related nonmaster 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, 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 multicommerce selling channel 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. They are, however, valuable in their own right and are complementary to traditional on-premises MDM technologies.

MDM systems of product data are software products that:

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

An MDM of product data implementation does not mean that only product data is stored or managed from the MDM solution. An MDM of product data implementation generally implies that product data is mastered or validated by MDM. 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; however, even that data may be mastered and validated from a different (even MDM) source.

MDM architectural styles vary in terms of:

- Instantiation of the product master data — varying from the maintenance of a physical product definition to a more virtual, metadata-based, indexing structure
- The use of the product master data — varying from supporting business design, operational and analytical requirements
- The latency of the product master data maintenance — varying from real-time, synchronous, reading and writing of the master data in a transactional context to batch, asynchronous harmonization of the master data across systems

Organizations use MDM of product data technology as part of an overall MDM strategy, which is part of a wider enterprise information management (EIM) strategy. An 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 managing the domain relating to product data, whereas MDM of customer data technology focuses on the domain relating to customer data.

## **Inclusion and Exclusion Criteria**

### **Inclusion Criteria**

The MDM of product data market continues to mature. To reflect this, we have raised the bar for inclusion criteria relative to the updated Magic Quadrant. We include specialist vendors, as well as large enterprise software vendors, with a product in the market, along with additional vendors that Gartner views as having a unique vision or position in the market, even if they do not fully meet all the inclusion criteria:

- Market traction and momentum — The vendor should have:
  - At least 12 live customer references for MDM of product data product functionality



- At least eight new customers for MDM of product data products during the past four quarters
- Generated at least \$8 million in total revenue (licenses and maintenance) related to MDM of product data product software during the past four quarters
- Near-term viability — The vendor should have:
  - Sufficient professional services to fulfill customer demand during the next six months
  - Enough cash to fund a year of operations on current burn rate — that is, companies spend their cash reserves if the year of operations is cash-flow-negative

### **Exclusion Criteria**

This Magic Quadrant excludes:

- Vendors focused on a single vertical industry market or single geographical region
- Vendors that focus solely on analytical (downstream) MDM requirements
- Vendors reselling another vendor's MDM of product data product, unless they exceed the revenue minimum for inclusion (see above)
- Hosted services, marketing service providers or data providers that provide product master data external to the enterprise or some such service, but don't provide an MDM of product data (formerly known as PIM) product that can be implemented behind an organization's firewall

### **Added**

No vendors were added to the analysis this year.

### **Dropped**

No vendors were removed from the analysis this year.

## **Evaluation Criteria**

### **Ability to Execute**

#### **Product/Service**

These are the vendor's software products that compete in/serve the MDM of product data market. This includes product capabilities, quality, feature sets and skills, and whether offered natively or through OEM agreements/partnerships, as defined in the market definition and detailed in the subcriteria.

Vendors will be measured on the ability of the product release to support the following MDM of 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 among the internal application sources in the organization, and 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, buy-side and sell-side catalogs, e-commerce, syndication and synchronization requirements, etc.
- Be configurable, customizable and extensible, but also upgradable.
- Support industry-specific requirements such as GS1 Global Data Dictionary, and The United Nations Standard Products and Services Code, 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, even servicing external Web services requests (trading partners, e-commerce applications).
- Be expressed using commonly accepted logical data model conventions with associated metadata.

**Information quality management capabilities** — A good data model is of little value unless it contains accurate, up-to-date data for a product. The MDM of product data product should:

- Have strong facilities, in batch and real-time mode, for 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 the MDM of product data vendors or by offering tight integration with products from specialist data quality partners.
- Support a "data steward" role, enabling it to manage product data throughout its life cycle, even across multiple MDM-based and externalized data stores, and provide data governance, including the ability to:
  - Set rules to determine where to source data and under which circumstances, including the ability to give preference to the most-dependable source
  - Configure rules for comparing and reconciling semantics across data sources, matching and linking the data, manage the merging or demerging of product records, uphold privacy access rights and configure the views for different user roles
  - Support for full auditability, survivability and data lineage
  - Ensure that business rules and associated metadata related to data cleansing are sufficiently visible to satisfy compliance requirements

**Loading, integration and synchronization capabilities** — The MDM of product data product 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 the MDM of product data vendor or by offering tight integration with products from data and application integration partners. The MDM of product data product should support, as necessary, the MDM implementation styles that each uses for loading, integration and synchronization, by being able to:

- Leverage middleware technologies to manage data sources, including legacy data sources, and expose industry-standard interfaces
- Support integration with different latency characteristics and styles (for example, real time and batch)
- Support integration with downstream BI and analytical requirements

**Business services and workflow functionality** — Many leading organizations will use the new product master database as the basis for new business 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 exposing Web services interfaces.

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

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

**Manageability and security capabilities** — Facilities should be available for the management and controlled access of the MDM of product data system, such as facilities for reporting on activity in the MDM of product data system. Also, they should be able to integrate the MDM of product data system with common system management and security tools.

On the security and data privacy management front, the products should have the ability to:

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

**Measurement capability** — The MDM of product data tools should support a range of analytics, from the performance of the technology to the MDM-enabled business processes, as well as the accuracy of the master data. The MDM of product data needs to enable users to flexibly define data quality based on usage and use case, and to use these definitions in real time to report up-to-date information on the performance of the MDM processes. This may be achieved by tight integration with a BI solution that embeds the analytics in the MDM of product data system, or by inherent analytical capability. The analytics need to extend across:

- Overall performance of the MDM of product data technology in terms of system availability, workflow and process monitoring and performance, and data throughput.
- Analytics relating to MDM-enabled business processes and service execution — Are the business processes being executed in a timely fashion to targets set by the business? Are anomalies and queries related to product master data being handled effectively?
- Quality — What is the overall master data quality of the business, and how is it changing?

**Technology and architecture considerations** — MDM of product data products should be based on up-to-date, mainstream technologies, and be capable of flexible and effective integration with a wide range of other application and infrastructure platform components (whether or not from the same vendor) in end-user organizations. They should be capable of being configured in a range of architectural styles in terms of instantiation, latency and use of customer master data to enable it to satisfy different use cases, such as the consolidation, registry, coexistence and centralized scenarios. The 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, Organization)**

Viability includes an assessment of the MDM of product data vendor's financial health, the financial and practical success of the business unit or organization in generating business results in the MDM of product data market globally, and the likelihood of the organization or individual business unit to continue to invest in product development, offer the product and advance the state of the art in the organization's portfolio of products.

#### **Sales Execution/Pricing**

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

#### **Market Responsiveness and Track Record**

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

#### **Marketing Execution**

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

#### **Customer Experience**

We look at how relationships, products and services/programs enable clients to be successful, on a global basis, with the products evaluated. This includes customer satisfaction, implementation, support, and the ways that customers receive technical and account support. It also measures clients' success in implementing MDM of product data products — customer references and total cost of ownership (TCO).

#### **Operations**

We evaluate the organization's ability to meet its goals and commitments. Factors are 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.

**Table 1. Ability to Execute Evaluation Criteria**

<b>Evaluation Criteria</b>	<b>Weighting</b>
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 (July 2009)

## **Completeness of Vision**

### **Market Understanding**

This refers to 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 to 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 of 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. Also valuable to customers taking the strategic view are an understanding of the wider implications and position of MDM of product data within an organization's multidomain or multiuse case MDM program, as well as buy-side MDM of product data and sell-side MDM of product data, and the impact relationship to information management strategies, such as EIM, as well as BI platform and business process platform strategies (BPP).

### **Marketing Strategy**

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

### **Sales Strategy**

The focus is on the vendor's strategy 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 set as they map to current and future requirements. The vendor's published "statement of direction" (or Gartner's understanding of it) for the next two product releases needs to keep pace with or surpass Gartner's vision of the MDM of 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 integration
- Workflow or business process modeling functionality and/or integration to such engines
- Performance, scalability and availability capabilities
- Manageability and security capabilities
- Analytics and performance management of the MDM program
- Technology and architectural considerations

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

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

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

### **Business Model**

The soundness and logic of an MDM of product data vendor's underlying business proposition is analyzed. Vendors should have a well-articulated strategy for revenue growth and sustained profitability. Key elements of a strategy include the sales and distribution plan, internal investment priority and timing, and partner alliances, such as with external service providers (ESPs).

### **Vertical/Industry Strategy**

This refers to the vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments. Included are reviews of the vendor's strategy for meeting the needs 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. Here, "innovation" implies that the vendor has a strategy for MDM of product data business issues for today and the future. We look for the vendor's understanding of and support for the most complex and broadest set of MDM of product data environments and MDM, in general.

### **Geographic Strategy**

Also important is the vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, directly or through partners,

channels and subsidiaries, as appropriate for that geography and market. This includes sales, marketing and support for complex global companies.

**Table 2. Completeness of Vision Evaluation Criteria**

<b>Evaluation Criteria</b>	<b>Weighting</b>
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 (July 2009)**

## 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

**Licensing:** Enterworks charges a flat rate for its application, which is not complicated with other considerations, such as number of users or number of records being mastered. Maintenance is charged at 18% of the license fee.

### Strengths

- **Business model:** Enterworks is a small vendor offering an MDM of product data solution as part of an overall suite. The vendor is focused on multicommerce use cases, such as e-commerce, print/catalog, Web/direct and multichannel integration. The vendor has built up its business over the last three years after moving away from a strategy focused on selling indirectly.
- **Customer base:** Gartner estimates that, as of year-end 2008, Enterworks has approximately 120 customers for its product, Enterworks Enable (currently shipping version 5.6). This equates to approximately \$10 million in software revenue. This customer base includes companies using MDM of product data, e-commerce and print/media publishing. A best-of-breed MDM of product data vendor, Enterworks is a strong fit for companies with multicommerce-led projects and that need media management. Enterworks was very effective in providing the additional references requested for this research.
- **Sales strategy:** Enterworks sells to midsize and larger enterprises, as well as to smaller businesses, and has a lower average sales price than many other vendors. Its fixed, base pricing has been well-received by users for its simplicity, even if, in some cases, it is forgoing some revenue. The vendor targets hardlines, medical devices, and food industry wholesale and distribution segments, all with operational MDM requirements.
- **Product functionality:** Its product is built on Java Platform, Enterprise Edition, and functionally supports an XML-based data model and business services for new product introductions. Its internally developed workflow engine supports, and is compliant with, Business Process Execution Language (BPEL), which is becoming increasingly valuable to users. The product is sold to organizations with sell-side product data management and publication requirements. The product supports Unicode, and user preferences in the browser will execute runtime presentation of the system in preferred languages. References highlight the strong, embedded workflow capability in Enterworks.

### Cautions

- **Marketing, size and viability:** Enterworks is a small vendor that lacks visibility (although visibility continues to improve). Nonmulticommerce-centric users and larger enterprises sometimes view the vendor as a risk (due to its size, rather than any inherent weakness in financials). Marketing efforts remain below average, although better than last year's marketing, and a few clients report being aware of Enterworks.
- **Primarily product-centric MDM focus:** Enterworks does not appear to have any broad MDM vision outside its product data domain. It seems wedded to the multicommerce application market, although its strategy is expanding in 2009, and includes a foray into asset-oriented MDM. Unless multicommerce is key to your reason for using MDM, this vendor may not be a good fit.

- **Data quality and analytics/metrics:** The vendor does not partner for any product data quality tools or capability, but has developed its own capability. For some implementations (less-complex product data), this will be acceptable; for others, the vendor will not be capable of meeting more-complex needs, and users will need additional functionality.
- **Global scope:** Enterworks is primarily focused on selling in North America, and is slowly building its direct business. It will take time to develop international sales, support and product development capabilities.

## GXS

**Licensing:** GXS offers two versions of MDM of product data: Sold as PIM, as well as "PMDM," they are licensed as GXS PIM for Retail Edition and GXS PIM for Supplier Edition. The price is based on the revenue of the business. Maintenance is charged at 18% of the original license fee. There is an additional license charge for additional sites.

## Strengths

- **Product functionality:** GXS's MDM of product data offerings are GXS Product Information Manager version 8.4, which shipped in December 2008, and GXS GDSN Data Synchronization Management and GXS Product Data Quality. These offerings suit medium to complex product data and workflow requirements primarily across consumer goods manufacturing (food, hardlines, office suppliers, apparel, health and beauty, and consumer electronics) and retail, as well as some chemical and pharmaceutical industry segments. The vendor's solution has an extendable data model that is capable of supporting Global Data Synchronization Network and GS1 data extensions (common in consumer goods and retail), business services, data quality services (via its acquisition of UDEX in 2006) and semistructured data, which is common in many manufacturing sell-side multicommerce projects.
- **Complex requirements in retail and consumer goods:** Given its focus on consumer goods and retail, GXS has remained effective at meeting some requirements for complex, business-oriented workflows related to price and promotion data management, and synchronization within and among manufacturers and their retail customers. GXS has extended its offering in the multicommerce arena to handle more-complex, semistructured digital assets related to product master data. GXS is a particularly attractive prospect if an enterprise has already invested in GXS for B2B integration, although this is not a prerequisite. Evaluate GXS for stand-alone MDM of product data, especially in consumer goods industries, to enable multicommerce and global data synchronization, and as a foundation for multichannel integration.
- **Customer base:** GXS has a referenceable customer base with, according to Gartner estimates, approximately 74 MDM of product data customers, and an additional 20 or so customers for its GXS Product Data Quality solutions, which represents approximately 10% growth over 2007. Approximately 60% of these are supplier sell-side MDM of product data, and 40% are buy-side-facing customers. GXS was effective in providing the increased number of references for this research. GXS has good coverage for sales and support for global organizations.

## Cautions

- **Noncore business:** The majority of GXS revenue (estimated to decline in 2008 to approximately \$370 million) comes from B2B integration; MDM (estimated between \$10 million and \$15 million software revenue, only slightly up from 2007) represents a

strategic long-term investment as a means to defend and grow GXS's core business. The vendor must overcome challenges to penetrate other industries. The penalty for being focused and strong in some industries (consumer-oriented) means running the risk of being less attractive to others. Noncore businesses are often candidates for removal if not performing, and prospects often ask if GXS is committed to this noncore business market. Gartner believes that unless GXS shows significant improvements by 2010, this business may be subject to divestiture or in need of significant investment.

- **Product scope and stability:** Some customers report that they unite GXS MDM of product data functionality with corporate MDM tools (in some cases), and other customers report challenges when using newer releases. Most references are positive about GXS; but some clients reported needing additional effort to meet expectations of having to lower expectations. Gartner does not see any major flaw in this area, and believes the feedback we have received is based on customers using GXS in new parts of their businesses, or using business processes with which GXS is not that familiar.
- **Longer-term MDM strategy:** The strategy in 2009 has expanded beyond the vendor's historic comfort zone (i.e., MDM of product data) toward a multidomain MDM product strategy that makes GXS somewhat unique, compared with most of the other MDM of product data specialists covered in this research. The vendor claims to have customers that use its technology for sourcing of master data in data warehouses supporting BI, which Gartner calls "analytical MDM"; but references have not confirmed this to date. Given the slow growth this vendor has achieved with MDM, and given its limited industry focus, it remains unclear how the vendor will realize this expanded vision and how it will justify the additional resources required for delivery to the market. Gartner client briefings show some support for this growing requirement; therefore, references may soon follow.
- **Limited industry focus:** The vendor has successfully implemented its MDM technology to manage product master data in consumer goods and retail industry segments. Prospects outside these industries could include GXS in their evaluations, but should recognize that they will need to help GXS adapt its data model and business services to support their unique requirements.

## Heiler Software

**Licensing:** Heiler Software prices Heiler Product Manager based on a named user/server base. There is a base fee to which is added "packs" for additional named user bands, as well as server packs for each additional language.

## Strengths

- **Product functionality:** Heiler Software is an MDM of product data vendor that focuses on managing structured and semistructured product data for buy-side and sell-side multicommerce, although the bulk of its business (approximately 70%) is oriented toward the sell-side. Its latest shipping product is Heiler Product Manager version 5.0, and was made generally available in April 2009. The corporate headquarters is in Germany, and the North American headquarters is in Detroit. The vendor is growing its business in the U.S. — one-sixth of its head count (less than 20) is based in the U.S. The European growth in this market, overall, has been faster than Gartner expected through 2008, mostly due to cultural and language barriers associated with a fragmented, dynamic market. Heiler is capitalizing on this dynamic in EMEA as it focuses on the U.S. market in 2009.

- **Customer base:** Heiler focuses on Fortune 2000 enterprises in industry segments across distribution and manufacturing that have large numbers of products, with notable segments in aftermarket/maintenance repair operations (MRO), consumer goods and life sciences. Gartner estimates that Heiler had approximately 100 customers for Heiler Product Manager at the end of 2008. Approximately 30% of the vendor's business is in North America. Software revenue estimates are around \$10 million.
- **Emerging MDM for multicommerce:** Heiler Product Manager is able to master product-oriented master and related data in a rich workflow-oriented user interface (UI) with a flexible data model. The product can be sold as part of an integrated suite with other modules, such as Heiler Media Manager, Heiler Catalog Manager, Heiler Print Manager and Heiler Business Catalog. Customers focused on multichannel commerce, sell-side requirements looking for an integrated offering would do well to include Heiler in their search. This broad multichannel support for MDM is what Gartner calls "MDM for multicommerce."
- **Management of digital assets:** Some customers have asked Heiler to host product data, an emerging trend for traditional behind-the-firewall MDM technologies. With its multichannel commerce roots, the vendor is deepening its technology to better handle the semistructured, and even unstructured, data (images and objects) that larger content management technologies handle.

## Cautions

- **Functionality target:** The target is deep functionality for MDM of product data, not multidomain MDM. Heiler is an MDM of product data vendor with a particular focus on multichannel commerce. This means that for more-general MDM of product data requirements, Heiler may not be as good a fit, and its focus may be a detriment to that type of project. The vendor sells at the corporate level, although some customers report that solutions such as Heiler's are best applied to the complex areas of managing product data at the business unit level or department level, integrated with some other, more-general MDM tools that fit better at the less-complex corporate level for managing product master data.
- **Long-term strategic direction:** Heiler is at a crossroads, although it remains firmly focused on the more-complex MDM of product data needs. The choice is to shift to managing more types of master data and jettison its business applications to support multicommerce. It cannot spend enough money in the long term to do both equally well. If Heiler focuses on the business application side of the equation, then it will see its MDM technology undermined by the adoption of generic MDM tools during the long term (three to five years). If it shifts its focus on the generic MDM space, then it might give up a shorter-term lucrative market for a higher-risk, but perhaps longer-term, market. The vendor can be successful "as is" for a few more years, but the time is coming when it has to pick a single strategic direction.
- **Small vendor, which affects visibility and viability:** Although references are good, Heiler is a small vendor that partners with a number of technology complementary solutions (for example, ATG for e-commerce), and ESPs, largely on an opportunistic basis. Between 5% and 10% of the vendor's business, according to Gartner estimates, is via an ESP partnership. As a result, Heiler may lack some depth in terms of the "whole product," but this is complemented with a large network of partners. Heiler has less experience (fewer customers) in managing product master data for direct materials or finished goods for resale, although its experience is growing.

- **Global references:** The majority of Heiler's references are in Europe, but newer customers are coming online in North America. Heiler was very effective in providing the additional references requested of vendors for this research.

## Hybris

**Licensing:** Hybris licenses by application and offers two versions: enterprise and standard. Which version is appropriate is dictated by the number of CPUs on which the application will operate.

## Strengths

- **Customer base:** Hybris, a German-based MDM vendor focused on the product domain, sells mostly to enterprises with requirements related to multicommerce (e-commerce, catalog, print/media and multichannel integration). The vendor continues to grow, particularly in Europe; Gartner estimates that at the end of 2008, Hybris had 60 MDM customers for product data, equating to approximately \$20 million in software revenue. Gartner estimates that 80% of the client base uses Hybris for sell-side multicommerce integration.
- **Product scope and depth:** Hybris sells to retail, consumer goods, manufacturing, telecommunications and automotive industry segments. It targets large and small enterprises with multicommerce requirements — a need to synchronize and manage product and other product-oriented data across multiple channels that communicate with customers. Although historically European-focused, it is active in North America, struggling to expand this market against competition from established vendors. Consider this vendor when multicommerce-driven business drivers need MDM of product data, possibly as a complement to a generic MDM technology for other domains.
- **Size and market traction:** Hybris qualified for inclusion in this year's Magic Quadrant according to standard requirements. Hybris sells its products directly, and is known to be on the low side of pricing, compared with many of the other vendors in this analysis. The vendor also sells via a large indirect network or partners, operating mostly in Germany, Austria, the Netherlands and the U.K. This results in notable market spending that is only partially accounted for in Hybris's numbers, which Gartner includes in the analysis.

## Cautions

- **Size and viability:** Hybris is a relatively small vendor with emerging visibility in North America. It is sometimes perceived as a risky investment (due primarily to its size) by non-European and multicommerce-centric companies. It sports an indirect channel, which separates its primary customers from the vendor. Non-European prospects should take extra care when evaluating support services.
- **Product-centric MDM focus only:** Hybris does not appear to have any broad MDM vision outside the product data domain; therefore, users should view this vendor as a best-of-breed MDM of product data vendor. The vendor reports that several of its clients use its MDM technology to master customer data, but this has not been a focus for the vendor, and so it does not actively promote this capability. Hybris seems wedded to the multicommerce application market; if multicommerce is not key to your reason for MDM, then this vendor is not likely to be a good fit. Because its product remains multicommerce-driven MDM, it lacks the tools and features that focus on enterprisewide product master data, such as data quality, analytics and reporting, that other vendors are adding to their portfolios.



- **Global scope:** Historically, Hybris has focused on Germany, Austria, Switzerland, the U.K., Benelux, Denmark and Sweden. Recently, it has grown its customer base in the U.S.; its business strategy in the U.S. remains its primary challenge. The North American business is assisted by a relationship with Sapient, and there are several customers that have come from this growing partnership.

## IBM

**Licensing:** IBM approaches the MDM of product data market based on the two predominate use cases for product master data: (1) workflow-intensive use cases (supported by MDM Server for PIM) and (2) operational (or real-time, transactional-oriented) use (supported by MDM Server). Both MDM Server for PIM and MDM Server are licensed based on the number of products managed. For clients ready to tackle end-to-end product master data use cases, the products may be licensed together. Both products are sold with standard IBM Software Subscription and Support at 20% of the license price of the software. Principally, IBM moved from the Visionaries quadrant to the Leaders quadrant due to sales momentum and strong product functionality.

## Strengths

- **Long-term product strategy:** IBM's product strategy is to support multidomain MDM and multiuse-case MDM with a solution comprising two core MDM engines: IBM InfoSphere MDM Server (formerly WebSphere Customer Center) as the operational SOA-based layer, coupled with InfoSphere MDM Server for Product Information Management (formerly IBM WebSphere Product Center), for complex, workflow-oriented data management (what IBM calls "collaborative authoring"). Short term, IBM is selling both products in the MDM of product data market, which tends to confuse users; long term, however, this is likely to be a strength because it provides the best of both worlds in an integrated SOA-centric framework, coupled with strong data quality and data integration tools from IBM Information Server. IBM positions MDM discretely in its Information On Demand messaging, but does less so when related to the broader Smarter Planet vision and has different messages when comparing analytical MDM to operational MDM.
- **Installed base:** IBM MDM Server for PIM (most recent shipping version 6.0, released August 2008) has a strong customer base across a wide range of industry deployments, including retail, consumer goods, electronics, manufacturing, telecommunications, automotive and financial services. IBM has a small and growing number of clients in this market using IBM MDM Server (most recent shipping version 8.5, released December 2008). InfoSphere MDM Server for PIM continues to compete well and meet the more complex user requirements for MDM of product data; InfoSphere MDM Server meets less-complex needs in this area, with a simpler user-generated UI in transactional-intensive, SOA-based environments. IBM has a large installed base of Information Server's DataStage and QualityStage. IBM started its integration work of Information Server's Quality Stage with MDM Server for PIM version 6, but must do more in this area. By the end of 2008, according to Gartner estimates, IBM had signed approximately 220 customers in this market, across both products: more than 90% of the clients are using InfoSphere MDM Server for PIM. Gartner's estimates for software revenue are in the range of \$60 million.
- **Depth of functionality:** IBM references continue to report IBM's strong capability in meeting most complex requirements when it comes to MDM of product data. Users like the ability to view, interact with and model various aspects of product master data model, and build workflows supporting larger, more-complex business environments. At the same time, it is common to hear customers express concerns that much of the

flexibility that MDM Server for PIM provides is not business-level functionality and requires strong IT support. IBM has been aware of this issue and has been working on improving this. Thus, MDM Server for PIM remains a strong and competitive offering in the MDM of product data market, but users need to gauge the additional effort the IT organization will have to provide to configure the application to meet their business requirements. IBM has such a strong product due to the timing of its original investment in the acquired product four years ago, when most other vendors were not investing as much in their MDM products; IBM is exploiting that earlier investment, so that others have had to play "catch up."

- **Positioning and pricing:** IBM introduced a revised, simplified pricing and packaging structure in its release of InfoSphere MDM for PIM version 6. IBM had been known for being higher priced than most of its competition, but this has changed somewhat. Customers are reporting better, more-reasonable pricing for MDM, albeit augmented by additional offerings (and hence additional costs) that IBM might bring to a project (such as QualityStage). MDM Server is packaged for two types of deployment options: Foundation and Transaction Hub. Foundation provides core functionality needed for initial deployments (i.e., registry style). Transaction Hub provides capabilities needed for complex enterprise system-of-record deployments, which Gartner calls "centralized implementation" style. Price points vary by industry, data domain and the number of managed records per data domain type, thus reflecting the value delivered to the customer. Subscription and support are a flat percentage of the license price. Customers can license data domains when they are needed, and can also upgrade from Foundation to Transaction Hub when appropriate.

## Cautions

- **Complex sales approach:** The biggest challenge IBM faces in 2009 and 2010 is that some customers are confused about what IBM is actually selling. IBM is effectively offering three deployment options, comprising two separate products, each by themselves or together:
  - If the customer requirements are focused on the centralization of product data in a highly heterogeneous environment with a need for high volume and/or real-time transactional (i.e., SOA-based) support, less-complex requirements with data structure or data quality, and less of a requirement for comprehensive workflow, then the implementation may only require InfoSphere MDM Server.
  - If the customer requirements are focused on workflow-oriented product data authoring, and more-complex data models, data quality and management, then InfoSphere MDM for PIM will be required.
  - If a customer needs support for complex requirements and SOA implementations (increasingly, MDM of product data does), then both systems are required.
- This leads to potential confusion in the IBM sales organization, as well as potential complications during the implementation. Users would be better served to drop the implied positioning of the named products, and just think of IBM as offering three "flavors" that can model varying degrees of MDM capability. IBM is aware of this confusion and is trying to fine-tune its sales and support organizations to help, but IBM might eventually follow the advice of simplifying the positioning.
- **References:** IBM has been one of the functionally stronger MDM vendors in the MDM of product data market; its position in the market during the last two years demonstrates this. However, IBM has not yet secured or established as strong a position across all



segments, industries, use cases and implementation styles. Consequently, references are not consistent in their praise for IBM due to the mix maturity and capability across all user requirements. Given the large global focus and broad MDM strategy, it is notable that some references report challenges in scaling down to their size/level/complexity, not understanding the business problems, and scalability concerns for more-transactional environments. Despite these challenges, IBM has a large number of good references, and is often perceived by users to be the natural competitor to any megavendor offering (Oracle and SAP), or any other best-of-breed vendor.

- **MDM product strategy:** Overall, IBM's vision for MDM has lost ground in 2009 in that MDM is no longer as important in corporate messages related to Information On Demand. This lower emphasis has not significantly affected the improvements to the business in context with MDM of product data, but may have an impact in the next year or so as users look to vendors like IBM for more visionary support. For the MDM of product data market, IBM is addressing users' current needs; but as IBM sees the realization of its stated expectation, that of multidomain MDM, then its product strategy may be found wanting. IBM Cognos Business Viewpoint is designed to meet the needs of analytical MDM, although targeted to only Cognos users, not the wider BI or performance management markets. IBM Cognos Business Viewpoint does more than help users manage and master hierarchy data (which overlaps with IBM MDM Server for PIM functionality); the product also supports business user "what if" requirements for evaluating changes of dimensional data on analytics and reports. Visionary users are asking to align these functional overlaps, and IBM has yet to articulate a vision in this area, let alone to reconcile the technologies.
- **Limited experience on implementation styles and use cases:** IBM InfoSphere MDM Server for PIM is mostly deployed in a centralized style, and mostly without high-volume or real-time transactional support. Increasing numbers of IBM MDM Server for PIM implementations support partial coexistence styles, but IBM's experience remains patchy. The majority of IBM MDM Server for PIM implementations are sell-side, multicommence-centric or heterogeneous-ERP-centric. A smaller and growing base of buy-side IBM MDM Server for PIM and PLM-centric implementations are under way (IBM is, therefore, less experienced here).
- **Governance:** IBM is slow to market with specialized technology supporting governance of master data, especially across multiple domains. Because IBM has growing experiences of multidomain MDM across more than one complex object (such as mastering complex product and complex customer master data), it is surprising that IBM has no strong offering here, yet. Since our clients are talking about this emerging area, we expect IBM to improve in this area rapidly in 2010.

## Oracle

**Licensing:** Oracle Product Hub (Oracle PH) is licensed based on the number of records that are mastered/stored in the system, along with user-based pricing for product data stewards. There is a minimum of 20,000 records for its base product price. Oracle moved from being on the line between the Niche Players quadrant and the Visionaries quadrant last year, to the Leaders' quadrant this year. The move was primarily due to its incrementally evolving vision, as well as its incremental sales approach that is establishing a strong base outside the Oracle application installed base.

## Strengths

- **MDM positioning:** Oracle carved out a vision for MDM several years ago. Although Oracle has evolved this vision, even to the point of completing acquisitions, and executed against it slowly, the reward is beginning to pay off in market traction and reputation. MDM is positioned as a core capability in Oracle Fusion Middleware (OFM), Application Integration Architecture (AIA) and the non-Oracle business applications strategy. Oracle sports a portfolio of MDM tools and technologies, some internally developed (such as Oracle PIM Data Hub), and some acquired (for example, Universal Customer Master via Siebel). For product data, Oracle sells Oracle PH, comprised of Oracle PIM Data Hub (the core engine); Oracle Product Sales Catalog (aka Siebel UPM); and Oracle Product Data Synchronization. This, along with the other MDM products, is a complex portfolio, and would be a major impediment if its primary sales strategy was "one tool to do it all," but that is not the case. Oracle sells its portfolio as a set of stand-alone parts, even outside its installed base of Oracle business applications. This puts Oracle in a unique position. For customers with requirements today, even for SAP accounts, Oracle can offer specific point solutions that are appealing in a difficult economic climate.
- **Product functionality:** Oracle PH version 12 was the last general-availability release; version 12.1 has been on limited release since 2008. Oracle PH is a key foundation for Oracle's industry solution sets in manufacturing, high tech, retail and distribution. PH appeals to organizations not only with investments in Oracle E-Business Suite (EBS), but also in the previously mentioned industries that have made a wide strategic choice for Oracle applications and technology. Users of Oracle PLM, ERP and e-commerce applications, along with non-Oracle business applications, report that Oracle PH can help them achieve a "single view" of product across the enterprise. The product offers good data modeling capability, as well as integration to Oracle's Product Configurator, if required, to meet a growing need for enterprises with complex product sales strategies. Most recently, Oracle expanded its data quality capability with an OEM arrangement with Silver Creek Systems (see "Oracle Improves Its MDM Product Data Offering With Oracle Product Data Quality Cleansing and Matching Server").
- **Momentum:** Oracle is operating as if it were a megavendor (defending its "turf" by selling its MDM offerings to its applications installed base), but also as a stand-alone niche vendor (by selling its MDM offerings to non-Oracle business application users, even to SAP accounts). This strategy takes time to build, but early signs indicate it is paying off. Oracle references confirm some success outside the installed base. Selling into this heterogeneous environment is improving Oracle's reputation, which will lead to more customers.
- **Customer base:** Gartner estimates that Oracle had approximately 210 PH customers at the end of 2008, up by 18% over 2007, across a wide range of industries, such as consumer goods, industrial, high tech, media and telecommunications. This estimate equates to approximately \$55 million in software revenue. Oracle is enhancing its PH product and replicating functionality from the Siebel UPM product to meet the needs of service industries with one product, which leads to a simplified product strategy, and less complexity for customers. For enterprises based on an Oracle application portfolio across Oracle EBS, Oracle Retail, Siebel, Agile, PeopleSoft and JD Edwards, Oracle PH is a logical solution to consider in their evaluations. A growing number of users outside this installed base include Oracle PH in their evaluations. Oracle references were among the highest number of those that responded to Gartner for this research.

- **Industry focus:** Oracle is developing industry solutions for MDM, via its AIA Foundation Pack, which combines product and services across its data hub family, data quality and governance tools (such as Oracle Data Watch and Repair from its Oracle Warehouse Builder, and its new Oracle Product Data Quality Cleansing and Matching Server), and preconfigured workflows or Process Integration Packs. The result will be a shopping list of assembled solutions targeted at an industry. The set of MDM offerings, all based on EBS technology, includes a solution for retail, Oracle Product Hub for Retail, and its new Site Hub. A new Oracle Supplier Hub is slated for 2009, plus a new Product Hub for Communications and Services. The vision is good in that users are being presented with well-thought-out prepackaged MDM offerings that should simplify implementations (data load, data quality and data management). This packaged offering is relatively new, and growing from a small base. Some early users have reported difficulty with some solutions, but, on the whole, the signs are good.

## Cautions

- **Governance and stewardship:** Oracle has big plans for MDM. It does not plan to dominate just one part of MDM. Therefore, Oracle users are beginning to implement the second, even third, MDM offering in support of their overall MDM vision. Oracle is present in a number of these instances, and users report a lack of tools and capability needed to manage across the separate MDM tools. The missing functionality includes mastering the master metadata, describing what master data resides where; and managing workflow models across enterprisewide MDM systems (the vendor supports BPEL), unified data quality (Oracle has adopted a niche approach with several data quality tools targeted at specific areas) and unified analytics. As Oracle has more customers in this area (implementing, not just talking about, multidomain MDM), it will face increased pressure to fill this gap. For users that focus on managing product data, this is not much of a concern; for users that tackle product data as part of a broader MDM initiative, this is a growing area of concern.
- **Product strategy for analytical MDM:** Users of PH know that hierarchy data is part of the implementation. Hierarchy data describes relationships among products, locations, organizations and even entities. The data is used in operational business applications to access data and sort views of data, or when users access data directly. The same hierarchy data is also used in any BI environment, which is where analytical MDM takes place. Users are recognizing the duplication in management efforts (two MDM efforts) and asking vendors to rationalize the approaches. Oracle has a vision for aligning analytical and operational master data, and is working to simplify the integration of the two and give options to users for where and when they want to master such data in a more dynamic manner. This capability does not exist yet, and can only be implemented with a lot of manual intervention.
- **Implementation style experience:** Oracle is implementing Oracle PH to support all the known implementation styles (consolidation, registry, transactional and coexistence). However, it is not clear which style is adopted most frequently. References, so far, show a strong interest in a centralized and workflow-oriented implementation style. Larger enterprises, with more heterogeneous environments, may end up switching to a coexistence strategy. Not many users report a strong relationship to PH and SOA; some references, especially the more mature users, are working on this connection. Users should clearly state what is required, and should understand what references have been implemented.
- **References:** Oracle references were among the most responsive. Conversations with some references and our interaction with users highlighted several concerns:

Occasionally, the perception was that TCO was high. Reports on marketing execution were also somewhat mixed, meaning that Oracle was not always consistent and clear in how it approaches clients with simple/singular messages; several users reported difficulty in achieving necessary levels of data quality with Oracle technology. This last item should be addressed via the new OEM relationship Oracle has with Silver Creek Systems (OEM since April 2009).

- **Fusion applications:** By 2012, Fusion MDM likely will have become Oracle's premier MDM of product data solution. Oracle Fusion MDM will include a new data model, derived from Oracle's Trading Community Architecture and Item Model (both part of EBS), and extended by the intellectual property (IP) from Siebel and other acquisitions. They will become Oracle's premier MDM of product data product, replacing Oracle PH. Until then, Oracle likely will continue to provide some development for several years, under Applications Unlimited, with a Lifetime Support guarantee. Most PH customers are unlikely to migrate to Fusion MDM until at least one or two years after the release of Oracle Fusion MDM, even if Oracle addresses the complex need to help customers with the migration. Prospects and customers should mitigate the disruption by utilizing the new "Fusion harmonized" business services and AIA.

## QAD (FullTilt Solutions)

**Licensing:** The vendor's pricing is based on the number of records mastered/stored in the product, and includes a base price. Maintenance and support is at 20% of the original license fee.

### Strengths

- **Product and marketing strategy:** QAD, an ERP/manufacturing vendor, acquired FullTilt Solutions, a best-of-breed MDM of product data vendor, in April 2008. The strategy is to continue to operate FullTilt as a separate division of QAD, but to refocus on multicommerce-centric users of product data in more midsize businesses and divisions of large enterprises, which is the "sweet spot" of QAD. This focus should better fit FullTilt's capabilities. To date, Gartner has not seen QAD execute this strategy. The marketing, visibility and occurrences of the vendor in projects has fallen significantly since 2008. The vendor did not qualify for inclusion in this year's analysis (software revenue estimates for this product are close to \$2 million), but is included because it appears on customer shortlists, albeit at a reduced rate, and Gartner expects QAD to develop the strategy later in 2009.
- **Product:** The technology, Perfect Product Suite, is an in-depth, industry-specific offering (with data models, business workflows and user roles) in multicommerce, data syndication, catalogs and supply chain application environments handling complex product-attribute data. References have, for the most part, been happy with the technology.
- **Wide industry support:** FullTilt has experience in managing product master data, particularly in after-market/MRO environments (its legacy). QAD's focus complements and extends across life sciences, food and beverage, high tech, industrial, consumer goods and automotive industries.
- **Customer base:** FullTilt had, according to Gartner estimates, slightly more than 20 MDM of product data customers at the end of 2008.

## Cautions

- **Core to QAD:** QAD is an ERP vendor that sells manufacturing solutions to the midmarket and divisions of large enterprises. Prior to acquiring FullTilt Solutions, QAD had not published any MDM strategy. The strategy laid out by QAD for the acquisition made sense for about 12 to 24 months, as we said 18 months ago. QAD now needs to articulate its longer-term strategy. Will QAD remain focused on MDM of product data, or will it develop a broader MDM strategy for its customers? Both are good strategies, but the vendor needs to be clear about which is the primary strategy, because it will affect the product strategy and road map for FullTilt and QAD, and how customers will select the technology. It is possible that QAD will pull back from this strategy entirely, but this is the least likely alternative.
- **Loss of focus, sales, momentum:** FullTilt did not grow quickly in 2007. It lost time and deals selling to large enterprises where, often, politics and risks associated with smaller vendors outweigh form, fit and function. Senior management focused on getting its business acquired, which means less time selling for small vendors. With slow growth, the vendor lost out on learning how the MDM of product data market has been evolving. FullTilt did not qualify for inclusion on revenue in 2007, but was included because it appears in end-user evaluations, and has a credible product and reference base in this market.
- **Selling strategy:** Midsize enterprises should include QAD in their evaluations, but should pay particular attention to its long-term technology road map and business strategy as it relates to MDM. Larger enterprises with broad MDM strategies that are not familiar with QAD may decide to avoid the vendor until QAD has published its long-term road map for MDM.

## Riversand

**Licensing:** Riversand licenses a core MDM product, with optional modules. Pricing is based on what product and modules are licensed, as well as the number of concurrent users and the number of master data elements mastered/stored.

## Strengths

- **Customer base:** Riversand is a small MDM vendor that has focused on product- and asset-centric domains of master data. The vendor has produced good references in complex product- and asset-centric environments, and targets energy, oil and gas, consumer goods and retail, distribution, and manufacturing industry segments. According to Gartner estimates, Riversand had 20 to 25 customers at the end of 2008, equating to between \$5 million and \$10 million in software revenue. Riversand did not qualify to be included in the analysis (nor did it last year) due to revenue levels, but the vendor was rated (as it was last year) due to its competitive offering and unique position in the market. It is operating as an MDM vendor with best-of-breed capabilities when it comes to product and asset data, but also as a generalist for all types of master data. It makes this claim, with some credibility, based on its flexible metadata data modeling and references that highlight its ability to master more than product and asset data.
- **Microsoft partnership:** Riversand is the only .NET MDM product in the market focused on product master data — a positive influence for customers that prefer .NET or the lower TCO. However, Microsoft is entering the MDM space with its first product, SQL Server MDM Services, due to appear in 1H10. Initially, Microsoft is likely to focus on the analytical MDM area, which was the focus of Stratature, the company that Microsoft



acquired. Microsoft also plans to provide a platform MDM capability. It remains to be seen what form this takes, but there is a risk that Microsoft will end up competing with Riversand.

- **Integrated metadata model:** Riversand models metadata in its application, as well as master data, which is a prerequisite for companies that want 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 likely will describe as an advantage.
- **Technology strategy:** Riversand is bringing to market a set of application programming interfaces (APIs) to complement the rich UI and workflows that characterize MDM of product data applications. However, some vendors become affixed to these rich UIs that eventually overlap in functionality with installed business applications. By moving to an API-based approach for all MDM interactions, Riversand is providing a less intrusive offering that could adapt to more-transaction and real-time uses, as well as still support the more-workflow-oriented user requirements. Riversand will leverage this architecture to support more-scalable implementation styles, particularly leading to coexistence. In the short term, this means that Riversand can support requirements that seek its own UI to support complex workflows, as well as users that want a more message-centric implementation of MDM of product data.
- **Product functionality:** The latest product release for Riversand is MDM Suite, version 5.4, which was generally available in May 2009. During 2008 and 2009, the vendor has focused on building a workflow engine (based on Microsoft Windows Workflow Foundation) and product data quality capability; the workflow looks strong, although few references have yet reported as to how effective the tool is. Riversand does not claim to be a best-of-breed data quality vendor, but, according to references, Riversand is helping with many complexities in this area. Users in complex, heterogeneous environments, and those with complex product objects, should include Riversand in their evaluations. Companies that need MDM of product data or asset data, as well as more-general MDM requirements, may also consider Riversand.

## Cautions

- **Industry focus:** Riversand has not focused on one industry, but has suffered the penalty of being flexible across many; therefore, it has good references in multiple industries (such as retail, food, healthcare, distribution, oil and gas, and consumer electronics), but not enough in one to create significant momentum. This is a challenge for Riversand sales, but 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 is, however, growing and competing well. More than 85% of its business is in North America, but the vendor is expanding its international focus, primarily through new partnerships in 2009.
- **Product strategy:** The remainder of 2009 and 2010 will be key for Riversand. The vendor has known capability in the MDM of product data and asset data segments of the overall market. Due to some of its embedded technology/IP, it has the capability that meets many of the emerging requirements in broader or general MDM environments. The vendor will get pulled in both directions by its customers, and it will have to determine which of the two directions to pursue.

- **Size and viability:** Because of its size, Riversand is an ideal acquisition target, although competitors will want to wait until Riversand is more proven. Acquisition is not likely to be due to distressed conditions.

## SAP

**Licensing:** SAP licenses SAP NetWeaver MDM based on the object domain type, number of deduplicated records and usage scenario. For example, pricing for the product object domain is different from the supplier object domain. The SAP annual maintenance fee for SAP Enterprise Support is 22%. There is also a version of SAP MDM embedded within the SAP Supplier Relationship Management (SRM) product that is used to create cataloged items maintained in the SRM application suite. SAP moved from the Niche Players quadrant into the Challengers quadrant due to its strong support of SAP-oriented business application users that need an MDM of product data solution. However, SAP has not maintained its vision for this market, and so lacks the rating to convert its position into the Leaders quadrant.

## Strengths

- **Corporate strategy:** SAP has a large and loyal 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. The company has a strong vision for its Business Suite and NetWeaver, and is in the process of leveraging BusinessObjects technologies in its Business Suite, and combining and harmonizing its NetWeaver and BusinessObjects information management assets.
- **Product road map:** SAP sees MDM as a key part of NetWeaver and information management, and published a new three-year road map for MDM in late-2008. During the next three years, it plans to tightly integrate BusinessObjects Data Services XI technologies, such as matching and data profiling functionality (required to help identify sources of product data, and cleans and normalize the content into one single version), leverage NetWeaver 7.1 components, such as business process management (BPM), build a greater degree of process-specific integration between MDM and Business Suite, and provide more coarse-grained enterprise services.
- **Product functionality:** SAP meets a wide range of MDM requirements for product data in a single product, which has a great deal of data model flexibility. It has bypassed previous concerns with the client/server interface of SAP MDM Manager with its SAP Portal UI that most customers use. SAP has a reasonable understanding of MDM of product data requirements in B2B scenarios, across several operational environments, including MDM for multicommerce, as well as ERP migration, and some familiarity with supplier-facing business processes. NetWeaver MDM version 7.1 introduces the ability to hold multiple data domains in a single repository and improve hierarchy management. This functionality will help SAP broaden its vision to support analytical MDM and operational MDM with one product. It provides native integration with NetWeaver Process Integration and some of the BusinessObjects Data Services XI technology to address cleansing and matching (but only for customer data, not for product data, yet), and improves the integration with third-party data quality tools and reference data sources. Version 7.1 also introduces the SAP Signature UI to MDM.
- **Customer base:** SAP claims that it has licensed NetWeaver MDM to 900 customers (as of year-end 2008). Approximately 400 of those MDM customers are licensed to manage product data (as of year-end 2008), which equates to approximately \$60 million in



software revenue, up 10%, compared with 2007. Gartner estimates 50% of the license count is active or live, or has the explicit desire to implement the technology; therefore, Gartner estimates that approximately 200 users are live or implementing SAP NetWeaver MDM to manage product data. For enterprises centered on an SAP application portfolio, SAP MDM is a logical solution to consider in your evaluation of MDM of product data.

## Cautions

- **Heterogeneous/non-SAP application environments:** SAP MDM mainly appeals to SAP-centric organizations that have bought into the SAP applications and application infrastructure vision, although a growing number of these customers integrate SAP MDM into SAP and non-SAP business applications. SAP does not target customers outside its ERP installed base, and Gartner only sees SAP very selectively in such projects. SAP has a large installed base that also has a lot of non-SAP business applications. Some larger enterprises or those with complex organizations are implementing a second, and even third, non-SAP MDM technology in support of the SAP MDM vision. Consequently, customers need to govern master data models across multiple MDM and non-MDM systems. A new BusinessObjects product, Information Control Center, is being developed that might be adapted to fit this governance need. Governance is a new requirement that SAP has not yet met, or anticipated. During 2010, Gartner expects to see a response from SAP to fill this emerging void. This should address some challenges and help improve MDM of product data and MDM, in general, for SAP users.
- **Product functional depth:** Many customers describe the SAP MDM offering as a capable tool to manage product data in SAP-oriented environments; but there are also customers using other MDM technologies to handle the more complex part of the product data, data quality or business workflows (across heterogeneous environments). SAP MDM's functionality is strongest in the product domain, but does not compete in all cases against best-of-breed vendors that have more product functionality, fewer technical pieces to the solution or more experience in heterogeneous environments.
- **Data quality:** SAP MDM is behind some of the competition in data quality, data profiling and associated reporting facilities, which are important in complex product data environments that are heterogeneous in nature. Many customers report having to refer to other tools in this area as part of their implementations. The acquisition of Business Objects enables SAP potentially to leverage some of the data services related to profiling and data quality, but even Business Objects' experience was generally associated with customer data and not product data (see "Magic Quadrant for Data Quality Tools").
- **Analytical MDM:** SAP will need to improve its hierarchy management capabilities to manage analytical MDM use cases, which will come in time with more integration with the BusinessObjects product and other BI platforms established in the SAP installed base. Gartner expects that Business Objects' tool Star Tree, which companies use to interact visually with hierarchies, will be embedded in SAP MDM with MDM 7.2, although SAP has not committed to this.
- **Product strategy:** SAP has introduced a new data management product, Master Data Governance for Financials (MDG-F). Developed in Germany, MDG-F is positioned to clients with several SAP ERP instances that need to reconcile and manage a chart of accounts and cost centers across the various SAP systems in a centralized (only) implementation style. Do not be misled by the name. This product is an MDM application

designed to manage financial data (itself a legitimate MDM data domain). MDG-F will overlap, in terms of usage, with analytical MDM, because much of the cost center and chart of accounts data is often used in reporting, as well as operational MDM (there needs to be a link between the "customer" record in order management to the "account" for that customer in the accounts receivable system). Despite the term "governance" in the product name, there is more implied governance in this new application than there is meant to be in SAP NetWeaver MDM. The potential is for SAP to bring to market specific add-on products for domain-oriented governance. The fact that SAP is addressing a growing need is good, but how the product strategy evolves is becoming more complex.

- **Cross-product integration:** SAP-centric customers are buying MDM because it's more integrated with SAP applications and infrastructure than competing products. Although MDM may have some advantages, a lot of work is needed for SAP to realize its vision. SAP started to simplify and automate the integration with NetWeaver 7.1, but more work must be done to simplify this further across the enterprise service repository, SAP BPM and business rule engine facilities, as well as to harmonize data types, business services and data models with the Business Suite and Business ByDesign applications.
- **References:** SAP decided not to provide as many references for its MDM product as other vendors, and, therefore, did not comply with our request. References that responded to the survey gave average marks for the data quality facilities and UI experience, as well as workflow support for a data steward across SAP MDM and other systems.

## Stibo Systems

**Licensing:** Stibo Systems offers a base price for the solution (limit on number of records mastered and users). There are additional prices for users and records mastered. Maintenance is charged at 20% of software licenses, and 25% on Custom Code for integration, etc.

### Strengths

- **Company name:** Stibo had a strong MDM of product data solution, but the vendor name, marketing and positioning was hampering its visibility in the market. The vendor renamed itself in early 2009 to Stibo Systems, away from its previous name, Stibo Catalog. This signals to the market a change in focus that was under way for more than two years. This rebranding will help with marketing and should help the vendor be more visible to prospects in this market.
- **Customer base:** Stibo Systems (based in the U.S. since 1985) is the division of a European-headquartered vendor (founded in 1976) that historically focused on catalog publishing tools and services, but today is focusing on MDM of product data. Stibo Systems retains its other product and service offerings related to print/publishing that references repeatedly report are strong offerings. Stibo Systems has, according to Gartner estimates, more than 120 customers for its MDM of product data offerings; however, of that group of customers, a significant number also use Stibo Systems catalog offerings. Stibo Systems added approximately 20 customers in 2008, on top of the approximately 20 added in 2007. Software revenue estimates for 2008 are in the range of \$25 million.
- **Hidden product qualities:** Stibo Systems' STEP (version 5.0.2 was generally available January 2009) is a best-of-breed MDM of product data solution. References report good data modeling, strong workflow capability and proven implementations integrating with

multiple inbound systems, as well as outbound or subscribing systems, which are common in multichannel commerce and sell-side MDM implementations.

- **Wide customer base experience:** Stibo targets the distribution, retail and manufacturing industries, as well as some minimal service segments. It also targets synchronization to an end user's external data pools or reference sources outside the firewall, which is common in consumer/retail segments.

## Cautions

- **Marketing and visibility:** This was a larger issue in 2007 and 2008, but now appears to be less of an issue. The vendor has grown its staff in North America and is slowly building up its visibility outside its historically stronger base in Europe. Stibo is particularly attractive to users with a multichannel commerce focus, but the MDM of product capability stands alone.
- **Relationships with ESPs:** Historically, the vendor has required its customers to work mostly with its own implementation and services resources. While this has helped users (this vendor has a good reputation for employee longevity), it has harmed its market visibility and the desires of some customers that prefer to work with their own ESPs. In 2009, this requirement has been relaxed, and we are seeing at least opportunistic projects between Stibo and ESPs.
- **Data domains:** It has deep functionality for MDM of product data, with designs on the wider MDM market. Customers have mastered more than product data in Stibo's MDM offering, including location, price and, in a few cases, customer data. Stibo Systems, in 2009, is beginning to address some other data domains; this will lead to a trade-off between a dedicated focus on MDM of product data versus a wider focus on other parts of the market with different requirements, users and competition. Stibo is growing, but the next 18 months is critical.
- **Global support:** Stibo is predominantly a European-centric vendor, but the implementations of its STEP product are more evenly spread around the world, approaching more than 40% in North America.

## Tibco Software

**Licensing:** Tibco Software 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.

## Strengths

- **Product functionality:** Tibco Software offers a multidomain MDM product, Tibco Collaborative Information Manager (CIM) 7.2, (made generally available February 2009). Tibco CIM has evolved from the acquisition in 2005 of Velosel, a best-of-breed MDM of product data vendor. Tibco positions MDM, together with its BPM (Tibco Process Designer) and enterprise service bus offerings, as key parts of an organization's SOA-based infrastructure and BPP infrastructure. The focus on the Tibco stack is adding support for message-level integration that more MDM implementations require. Tibco also sells MDM in conjunction with its Complex Event Processing (CEP) application, Tibco BusinessEvents.
- **Broad multi-industry and multidomain MDM strategy:** Tibco has the most experience in managing product master data with CIM in distribution, retail and manufacturing industries. It is steadily gaining experience in managing product/service

data, as well as customer, organization, counterparty and employee data across other industries, such as telecommunications, banking, energy, pharmaceutical, and travel and leisure.

- **Product scope and flexibility:** Tibco CIM has a flexible approach to data modeling and can support multiple data domains, including the ability to model cross-domain relationships. The vendor's strength is managing data entities that need deep data modeling and management (common with product data), but it has growing experience in the broader MDM market, which appeals to enterprises with a broader MDM strategy. Tibco has a strong workflow and process modeling capability within the CIM 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. Treat Tibco CIM as a best-of-breed MDM technology for the product data domain, with growing capability for other domains.
- **Customer base:** Tibco has an historical focus on and depth of industry experience in consumer goods, retail, and food and beverage, with some of the most-complex implementations of peer-to-peer MDM, an advanced form of the coexistence implementation style. Reference quality was a strength for Tibco, although its customer base for MDM of product data is smaller compared with larger competitors. Gartner estimates that there were less than 100 Tibco CIM customers total, and approximately 50 of these use Tibco CIM to master and manage product master data. According to our market data, these 50 or so customers account for upwards of \$10 million. This split in the domain licenses explains the shift in focus for Tibco toward addressing more domains for MDM. Tibco has a good reputation among its installed base (which includes important and fast-growing markets where reference selling is important) for support and flexibility.
- **New UI:** Tibco added a new graphical UI during the third quarter of 2008, and released it with Tibco CIM 7.1. This UI was developed as part of Tibco One, Tibco's unified UI strategy. The UI looks and feels better, and is more dynamic in that screens are built via metadata responding to changes in the data model, and all text is externalized, making translation easier. The strategy to enhance the UI is good, but the newness of the offering and the lack of references affirming that Tibco has improved one of its historical challenges make this a tentative strength. Next, we will see if references can affirm the improvement.

## Cautions

- **Implementation styles:** Tibco CIM is typically used in coexistence style (distributed authoring) or transactional style (workflow style, and/or workflow and business service/message level) use cases. The vendor has deployed at least one registry-based implementation, and it seems likely that more will be asked of the vendor — challenging areas for Tibco. The vendor reported that Tibco CIM 7.1 certified at 20 times performance capability of CIM 7.0.
- **Governance:** Tibco CIM includes functionality that can help govern data mastered in the product. However, some of these tools and capabilities are not best of breed or proven for the product domain. The internally offered data quality tool has not proven capable to meet the requirements for all product data quality issues across all implementations; and the newer data quality solution is an unknown entity in the MDM of product data market. Some Tibco customers have successfully maintained (i.e., synchronized) master data across multiple Tibco CIM systems, but this is the simplest of an emerging set of requirements for governance. Tibco is a recognized best-of-breed

MDM vendor, strong in MDM of product data, with a believable vision for broad-based MDM. Users are asking their MDM providers to model, measure, report, analyze and organize product (and other) master data across the enterprise, even across other MDM systems. This is an area that Tibco does not address with any separate solution, and it has no plans to do so. Evaluate Tibco's governance capability based on what you see in Tibco CIM.

- **Data quality:** CIM supports survivorship and versioning, and can construct a point-in-time view for analysis purposes. Its data quality capabilities were developed on top of an open-source data quality engine (Lucene). Additionally, Tibco provides "pluggable" access to BI tools, enabling the creation of reports on the master data and on the workflow processes. Data quality has been a focus for the vendor in 2009, and it announced a partnership with Netrics, a niche data quality tool, with no track record with product data. Users with data quality challenges in the product data domain may not find Tibco's efforts strong enough when compared with best-of-breed product data quality tools, and may not be able to wait for Tibco to gain the experience with its integrated offerings (see "Magic Quadrant for Data Quality Tools").
- **Global coverage:** Most implementations of Tibco CIM have been in North America, but Gartner estimates that 50% of its MDM business is now outside North America. Despite this change in focus, client interaction suggests that prospects in Europe, and particularly Asia, need to pay careful attention to technical and implementation support.
- **References:** Tibco was not compliant with respect to the increased requirements regarding references for this analysis. Older customers in industries where Tibco has been selling longest report good results. Cautiously review the solution in industries where Tibco has few or low numbers of references.

## RECOMMENDED READING

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"Mastering Master Data Management"

"Roundup of Master Data Management and Related Research, 1Q08"

"Vendor Guide: Master Data Management, 2009"

"How MDM Can Help Enterprises Achieve a Single View of Product"

"10 Best Practices for Product Information Management"

"Key Issues for Master Data Management, 2009"

"Toolkit Best Practices: Strategies for Successful MDM Implementation"

"Vendors Have Different Approaches to Implementing Master Data Management"

"Magic Quadrant for Data Quality Tools"

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

"Use the Gartner MDM Maturity Model to Show the Business Benefits of MDM Investments"

"Four Dimensions of MDM: Understanding the Complexity"

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

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

## **Note 1**

### **MDM Definition**

Master data is the consistent and uniform set of identifiers and extended attributes that describe the core entities of the enterprise, and are used across multiple business processes. 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 view 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/reference deployment.

## **Note 3**

### **PIM Definition**

PIM solutions are applications designed to create a single view of a product for an enterprise, across all operational and analytics uses, independent of any other repository of product data. PIM solutions store master data (and/or metadata) related to products, and other attributes of data pertaining to products. A PIM system 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 PIM solution as a "look-up" to locate and access the data) or as a mixed record/reference deployment.

## **Note 4**

### **Architectural Styles of MDM Systems**

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 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; 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 the master data for authorship, storage and validation, and is the most invasive style, due to the change in application and information architecture. This is commonly desired when there is a high demand for automated integration between source systems and MDM infrastructure. 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 that, combined at runtime (i.e., 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, therefore, changed evaluation criteria, or a change of focus by a vendor.

## Evaluation Criteria Definitions

### Ability to Execute

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

**Overall Viability (Business Unit, Financial, Strategy, Organization):** Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood of the individual business unit to continue investing in the product, to continue offering the product and to advance the state of the art within the organization's portfolio of products.



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

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

**Marketing Execution:** The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message in order to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional, thought leadership, word-of-mouth and sales activities.

**Customer Experience:** Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements, etc.

**Operations:** The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

### **Completeness of Vision**

**Market Understanding:** Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen and understand buyers' wants and needs, and can shape or enhance those with their added vision.

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

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

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

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

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

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

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

## REGIONAL HEADQUARTERS

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### **Corporate Headquarters**

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