

Enterprise Master Data Management: Market Review & Forecast for 2008-12

An MDM Institute MarketPulse™ In-Depth Report

EXECUTIVE SUMMARY

Corporate master data is a critical asset that must be increasingly managed within and beyond the enterprise — primarily to solve business problems in compliance, customer service, sales, and marketing. Such master data may be identified, harmonized and integrated at multiple levels of the software stack to materialize a “single customer view” (or supplier, product, view etc.).

Master data management (MDM) solutions will vary by industry in terms of tactical approaches taken – e.g., pharmaceutical/life sciences will adopt semi-batch, database-centric approaches for master physician data to be deployed to sales forces, while financial services providers and online retailers will require near real-time, business process-centric solutions to compete in the business-to-consumer online world.

During 2008-09, most large enterprises will focus on MDM by deploying 3rd generation packaged MDM solutions to deliver panoramic customer, product and supplier views across multiple channels, business lines, and heterogeneous IT environments. By 2010-11, 4th generation solutions will begin to predominate due to requirements for multiple master entities, unstructured data, etc. By 2012, more than 80% of the Global 5000 size enterprises will have committed to enterprise MDM as a core business strategy and have implemented at least one master entity – whether party (customer/supplier/citizen) or product.

The aggregate enterprise MDM market (customer and product hubs, plus systems implementation services) totaled US\$730 million at YE2007 and will reach US\$2 billion by the end of 2012. Software sales are but one portion as MDM systems integration services reached US\$510 million alone during 2007 and are projected to exceed US\$1.3 billion per year by 2012.

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September 2008

Executive summary

The market for master data management (MDM) solutions continues to grow, diversify, and mature. Mega vendors IBM, Oracle, and SAP are the dominant solutions with more than 80% of the total market between them, however, best-of-breed vendors continue to proliferate and accelerate their market share across this rapidly growing market. Unlike other analyst research reports which measure MDM as an aggregate/macro market (including data quality tools, data service provider/hosting revenues, and more) this is the first report to exclusively examine the “enterprise MDM” market under a microscope – e.g., the sum of customer data integration solutions that are also enabled to support product information management masters.

MDM rationale. Enterprises are increasingly turning towards MDM as a means to increase business optimization by rationalizing and sharing master data and processes – e.g., a single view of the customer/product/supplier.

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Master data management (MDM) solutions will vary by industry in terms of tactical approaches taken – e.g., pharmaceutical/life sciences will adopt semi-batch, database-centric approaches for master physician data to be deployed to sales forces, while financial services providers and online retailers will require near real-time, business process-centric solutions to compete in the business-to-consumer (B2C) online world.

Since 2004, given the choice of building or buying an MDM solution, the trend has clearly been to purchase off-the-shelf MDM packaged applications and customize them to the organization’s needs – similar to prior trends in Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM). The two primary MDM markets remain: customer master data (referred to as Customer Data Integration or CDI) and product master data (referred to as Product Information Management or PIM). Based on quarterly surveys of the MDM Institute Business Council™ (8,000+ subscribers to the MDM Alert newsletter engaged in MDM projects), the perennial top five business drivers for MDM initiatives are summarized as: (1) compliance and regulatory reporting; (2) economies of scale for mergers and acquisitions (M&A); (3) synergies for cross-sell and up-sell; (4) legacy system integration and augmentation; and (5) “once & done” economies and customer satisfaction.

Market trends. The aggregate MDM market will grow from US\$2.8 billion to US\$4 billion over the forecast period (2008-2012), including revenues from both MDM packaged solutions and implementation services as well as the billion plus dollars related to data service providers such as Acxiom and Dun & Bradstreet. The above figure does not include the discrete software components such as extract-transform-load (ETL) or data profiling. Implementation services account for 21% of MDM market revenues today, but will rise to 26% of all MDM revenues by 2012 as Microsoft and other vendors deliver lower-end solutions targeted at the mid-market.

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Even after several years of healthy adoption rates, the MDM market is actually just beginning its trajectory toward broad adoption and deep penetration. Moreover, during the next five years, we will also see buyer behavior migrating from point products (i.e., to address customer or product master data only) to enterprise MDM (supporting multiple entities/data domains such as customer, product, supplier, location, price, etc.) — and, to a lesser extent, from software products to hosted/managed services (software as a hosted service). Concurrently, MDM vendors will

decompose their products into service-oriented architecture (SOA)-enabled functions, and in turn repackage and OEM them through a wide range of channels (vertical and horizontal).

Technology trends. In our meetings with the MDM implementation teams at these and other venues, we have noted that the requirement for commercial MDM solutions to provide support for multiple types of master data (“domains” or “entity types”) is increasingly on the minds of business technologists at these large enterprises. Specifically, the overarching concern is to avoiding “*repaving the cow paths*”. This occurs when an IT group executes on a shortsighted strategy of mastering the master data in one given business area with a specific brand of MDM solution and then discovers that another division or line-of-business has chosen a different brand of MDM product (and architecture) to solve their MDM issues. All too often these different product-specific MDM solutions do not offer the capability of integrating master data “across” the great divide between “party” master data (customers, suppliers, employees) and “product” ... resulting in “*random acts of MDM*”.

In terms of technology directions, MDM packaged solutions continue to evolve in several directions. Specifically In the past 12-18 months, there has been a great deal of both marketing and product development to support multiple entities or data domains. Additionally there’s been increased emphasis on adding or improving fundamental data governance capabilities beyond mere data steward consoles. We’ve also seen emphasis on data profiling as well as the integration of analytical capabilities such as dashboards and reporting. Both software as a service (SaaS) and open source movements are also interesting as they are providing lower price points as well as fundamentally fresh approaches to software licensing.

During 2008-09, most large enterprises will focus on MDM by deploying 3rd generation packaged MDM solutions to deliver panoramic customer, product and supplier views across multiple channels, business lines, and heterogeneous IT environments. By 2010-11, 4th generation solutions will begin to predominate due to requirements for multiple master entities, unstructured data, etc. By 2012, more than 80% of the Global 5000 size enterprises will have committed to enterprise MDM as a core business strategy and have implemented at least one master entity – whether party (customer/supplier/citizen) or product.

Summary. The goal of this MDM Institute MarketPulse™ market forecast is to outline the requirements for such capabilities while providing an industry road map that highlights the planning assumptions necessary.

Enterprises on the enterprise MDM journey are challenged to focus on mitigating the organizational and business case challenges that such an enterprise -wide, multi-data domain business strategy introduces – often this is Business Process Optimization and Business Transformation at their grandest. Among the challenges facing such enterprise MDM initiatives include: the architecting of a comprehensive SOA¹-based technology infrastructure and the concurrent revitalization of the relationship among business and IT organizations.

Despite such significant challenges, the business goal of delivering trusted data throughout the enterprise shouldn't be downplayed or ignored as the competition most likely has already begun their drive to this end goal. Instead of envisioning MDM as a “game change” strategy (which it often is), the pragmatic business will acknowledge although enterprise MDM is a multi-phase, multi-year, evolving business capability, it is an essential business strategy for keeping the enterprise sound in the increasingly competitive 21st century. The goal of the agile corporation mandates delivery of trusted, high quality and timely customer, product, and other vital master data.

¹ SOA – Service-oriented architecture

Key findings

Clearly, enterprise MDM is a major IT initiative being undertaken by a large number of market-leading Global 5000 size enterprises. Both as an IT discipline and an integrated set of technology solutions, MDM continues to evolve at a rapid pace. This research focuses on the below top five market trends for MDM and advises which actions enterprises should take to generate business value and achieve competitive advantage. These are the key findings of this MarketPulse™ market report.

1. Steady evolution away from data-centric hubs into application hubs
2. Elemental movement towards Enterprise MDM in multiple phases
3. Futile dogmatic resistance is fading against the power of multiples
4. Inexorable shift to formal data governance structures
5. Rapid growth of MDM market into mid-market as well as across industries and geographies

Steady evolution away from data-centric hubs into application hubs

Enterprise MDM solutions are steadily but rapidly evolving away from data-centric hubs into full blown application stacks.. In other words, MDM is becoming less of a standalone technology infrastructure as the emphasis is increasingly on relationship between domains, user interface, and integration with other emerging and adjacent technologies such as RFID, entity analytics, business intelligence, etc. This “application hub” focus concerns more than integration with existing CRM and ERP systems. It is recognition that MDM is the type of infrastructure solution that will leverage all other systems – other application stacks, other CRM and ERP instances, other data feeds, etc. Finally, such hubs are increasingly integrating more than applications, etc. within a line-of-business and are actually fundamental to integrating the actual lines-of-business.

Elemental movement towards Enterprise MDM in multiple phases

Enterprise MDM is “strategic” and therefore is the appropriate focus across multiple lines of business, multiple channels, and therefore across multiple years. Such enterprise MDM becomes a reality of multiple factors – especially when the enterprise desires to leverage one MDM product or platform across domains. Both IT and business management are increasingly focused on the longer term, i.e., 2-5 years down the line. Therefore, these same IT strategists are looking for vendors who can provide solutions that span more than one phase. Savvy customers are starting to ask for an integrated platform that indeed does support multiple domains across multiple phases.

An example of multiple phases is where the tactical project might start with batch and very little SOA as perhaps just a registry-architected solution. At some point in the 12-18 months horizon most organizations outgrow registry architectures and require much more of a full blown hub architecture.

Futile dogmatic resistance is fading against the power of multiples

MDM is increasingly concerned with the notion of “multiples” – multiple data domains, the multiple relationships among them, and the multiple usage styles. Even a tactical MDM project will require facets of an enterprise MDM solution set, for example a financial service provider will need to master more than “customer” as it looks to master “product” in post phase one stages. Additionally, product-centric MDM tactical projects quickly move to address customer master attributes such as pricing, entitlements, etc. to be simplistic, it is important not to paint one’s self into a corner. Typically all projects start with A, B and C but must be able to grow else they create yet another data silo. MDM architects need therefore to think broadly in terms of styles (operational, analytical, and collaborative) as it quickly becomes evident that the business requirements will bleed into more than one data domain and deployment style – “think global, and act local”.

Increasingly, the notion of “multiples” includes not only more than a singular master domain (e.g. customer or product). Even the definitions of the domains are getting more sophisticated. For example, only several years ago “location” was a point in space, however, now it includes which party of assets occupy that location. Moreover, the attributes of a domain/entity are becoming more complex. Clearly, the MDM Institute analysts are increasingly seeing more RFPs where enterprises acknowledge that it is not provident to focus solely on one master data domain when clearly both party and product master data quickly bleed into each other post-phase one.

Inexorable shift to formal data governance structures

One of the greatest challenges is the political arena which necessarily accelerates or brakes the critical momentum of both tactical and enterprise MDM. While tactical MDM marts may be successful via judicious efforts of data stewards who focus on the data quality of a singular domain, when the business utilization of master data expands across departments and lines of business then the government’s framework is essential. Each and every consuming and producing organization has a duty or role in the governance of master data. For example once it is determined that master data is “a corporate asset” then that data must be protected across its life cycle from creation/capture through its retirement including such critical issues as accessibility, compliance, unfortunately most of the market did MDM solutions do not adequately address this formal requirement.

In fact, most vendors will point to their data steward console as the acme of their data governance capabilities. In reality, what’s needed are formal processes, assisted by workflow software, to enable formalized decision making, documentation, and delegation, regarding the rules rendered as part of the governance lifecycle. Another gaping hole in data governance capabilities of the majority of MDM vendors is their inability to directly store and execute such governance-generated procedures as part of the MDM logic that controls the software which in turn should enforce the governance. True data governance mandates the integration of people, process, and technologies via a formalized framework. These formal structures are inevitable as they are the key enablers of data governance policy functions – much are so than paper-based methodologies and accelerator/frameworks.

Rapid growth of MDM market into mid-market as well as across industries and geographies

The market for MDM solutions is significantly and quickly expanding – across geographies, industries, and price points. This in turn is making MDM capabilities affordable to mid-market enterprises (small-to-medium size businesses). The steady growth of the MDM market into this mid-market further makes it economically viable to apply the solution cross a broad range of industries and geographies. Three to five years ago the typical MDM solution cost in excess of \$1 million just for the software and an additional \$3-4 million for the implementation services during the first year. During 2008, price points and product packaging (we should say repackaging) a provider more modest MDM functionality and accordingly less complexity which supported market pricing in the sub \$500K range. Overall, MDM matured from “early adopter IT project” status to become a mainstay “Global 5000 business strategy” during 2007-08. These new price points are reflective of various types of projects and the related product capabilities, i.e., enterprise MDM initiative vs. very-specific business solution. Moreover market dynamics further drove price differentiation as the market became more sophisticated and understood the price::value ratio of hybrid vs. registry vs. tool kit vs. full fledged MDM application.

SUMMARY.

For the Global 5000 enterprise (and increasingly the small-to-medium sized business or SMBs), approaching “enterprise MDM” as an IT infrastructure development project is career-challenging, There is very little economic rationale in building such custom middleware (with this associated high maintenance costs) when commercial off the shelf software meets the performance, reliability, and scalability requirements of most every industry and size organization. There will be use cases that mandate the ultimate in speed and performance -- such as command and control systems for military applications or straight through processing for financial services, however these are not the norm.

Clearly, enterprise MDM is a major IT initiative being undertaken by a large number of the market-leading Global 5000 size enterprises. Most enterprises and solutions vendors are finding near-term success with the single-faceted approach inherent with the third generation of MDM solutions. Increasingly, however, these same enterprises are determining that this myopic strategy of focusing solely on a single data domain and usage style is detrimental to the longer term business strategy of integrating supply, demand, and information chains across both intra- and extra-enterprise boundaries. Coming to market during 2008-09 are multi-entity MDM solutions which are characterized as the fourth generation of MDM solutions which address the requirement for multiple domains and styles as well as the roles of the consumers.

To help IT organizations and their business partners focus on the more desirable longer term MDM strategy, vital issues that this market research report addresses include:

- What is enterprise MDM?
- Why is enterprise MDM considered “strategic” while domain-specific MDM data marts viewed as “myopic”?
- How does an organization plan for enterprise MDM deployment?

The value of enterprise MDM can be intuitively recognized in a range of business initiatives – from short-term fixes to a narrow set of problems such as capturing customer privacy preferences across product lines to long-term enterprise-wide initiatives to delivering infrastructure agility by embracing SOA.

For more information

To learn more about applying master data management to generate business value and achieve competitive advantage, send an email to: mdm@tcdii.com or visit: www.the-MDM-Institute.com.

About the MDM Institute

Aaron Zornes is chief research officer of the MDM Institute. For additional info on this topic or other MDM Institute offerings, please contact info@the-MDM-Institute.com.

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