

Master Data Management Builds Business Flexibility

Master Data Management

Master Data Management (MDM) is a strategy for identifying, validating, managing and sharing selected corporate information. In a sense, this has been going on for many years but MDM more recently refers to the isolation and formalization of data management processes around important application domains. The business case for this formalization is usually based on the high cost of poor quality data and the associated waste, ineffective decisions, poor customer service and lost opportunities. More recently, compliance has entered the business case. Of the MDM application domains, Product Information Management (PIM) has one of the clearest business cases, but Product Data Management (PDM), Customer Information Management (CIM), and others clearly benefit from the application of MDM principles and processes.

MDM Solutions

Indeed, there are plenty of available solutions for specific application domains, and some businesses may only need one domain with highly vertical capabilities. But the challenge for many end users will be to identify and facilitate general MDM capabilities while minimizing the eventual problems of disparate and overlapping solutions. This is complicated by the nature of MDM solutions which is functionally somewhere in between technology platforms and application suites, and coupled with both.

The implementation of MDM is only partly a technology problem. Organization, business processes, validation rules, data structure, data governance, data ownership and a host of others must be balanced across multiple MDM domains while keeping an eye on general business objectives. For example, MDM strategies must increase business flexibility but putting more controls over data management and increasing integration may tend to decrease flexibility.



Oracle Release R12 Product Information Management Architecture

MDM solutions are available from several types of suppliers, and it is natural that the database and large enterprise application suppliers are heavily involved, as well as several MDM specialists. ARC research indicates that Oracle is the leader in MDM as we define it (See MDM 2006 Market Outlook Study, Steve Banker). Oracle MDM was first released about four years ago, and in general the product roadmap leads to Oracle Fusion (about two years away), indicating that Oracle is committed to MDM. Oracle MDM has a relatively large user base and has been evolving as a near standalone offering. Accordingly, an examination of Oracle Product Information Management (PIM) Data Hub in Oracle's most recent release (R12) will help establish a general framework of MDM capabilities and directions.

Oracle PIM Data Hub is one of a dozen MDM products on the Oracle roadmap, also including financial, marketing, customer, sales and service domains. The roadmap also contains vertical focuses on health care and life sciences. Oracle PIM is a family of products including Oracle PIM Data Hub, Oracle PIM Data Librarian and Oracle Product Data Synchronization for GDSN Services.

The evolution of all offerings is guided by a reference architecture that enables Oracle to minimize customer infrastructure over time when multiple offerings are used. It also enables the re-use of MDM tools for data cleansing, matching and blending, integration, business rules and analytics. This strategy has the potential for minimizing the cost of procuring, deploying and maintaining multiple MDM solutions, and justifies a careful evaluation from end users with long term data management needs in mind.

Oracle PIM Data Hub includes the tools needed to create, maintain and share high quality master product records. The architecture includes a common repository of master data that is created using PIM import tools, such as integration software to access disparate data sources, and rules-based data validation, cleansing and matching software. An Import Workbench has been released in R12 along with advancements in matching technology, source data cross referencing, import exception management, and others. Master records are published, making consistent information available to a variety of applications both internal and external to the users business, such as for electronic catalogs. Data loading is a significant cost

component of MDM, and Oracle is wisely investing in capabilities, not only to cut costs but also to make the process more dynamic and visible.

Master data typically remains in, and is generated by, applications such as ERP, CRM or PLM. Accordingly, Oracle PIM Data Hub includes an event driven architecture for automatically maintaining synchronization of master data providers, the repository, and data users. This architecture produces good traceability and visibility to activity which is important for growing compliance requirements.

Frequently, a master data record must be created using information from multiple sources. In this case, a business user must define and extend the master record structure in PIM, and map data sources to fields. Within Oracle PIM Data Hub, this can be done without programming, and the responsibility can be securely distributed to various roles. This is essential to provide the business flexibility and speed needed for complex collaborative data management processes.

Oracle offers industry best practices for High Tech, Industrial Manufacturing, Automotive, Financial Services, Telco, and Retail and Consumer Products. This gives the Oracle MDM group ample use cases to generalize and optimize their architecture and tools. With the growing interest in MDM and formalization of data management, it is certain that other industries and application domains will need to be covered.

Will MDM Evolve into Applications or Technology Platform?

The Oracle MDM strategy builds on both their technology platform and enterprise products, creating a set of focused functions that lie somewhere in between. Other suppliers have different product portfolios and business strategies, and this is reflected in whether their MDM offering is closer to technology or application; the role of professional services also influences their balance.

As very large enterprise suites become more interoperable, it makes sense that MDM might have a stronger association with the enterprise suites data model. However, customers, partnerships and acquisitions will always demand more sophisticated integration, matching and blending technology. Business flexibility demands role-based work environments where

business users can perform their data management tasks without programming and without cycling all change requests through scarce IT resources. MDM is not likely to shift completely toward technology or applications. It is more likely that many MDM functions, as we know them, will dissolve in both directions, leaving core MDM services. This will be necessary to easily deploy MDM according to specific end user practices as well as build increasingly vertical solutions.