End-to-end Master Data Management

The business value of managing product master data

Highlights:

- Produce better business outcomes by mastering product data
- Create business value with product master data
- Build end-to-end Master Data Management solutions
- Industry example use cases for retail and financial services

Business challenges

For years, companies have been aligning their business processes with the investments they've made in a vast array of technologies, such as sales channel automation, enterprise resource planning (ERP), information warehousing and business intelligence (BI) systems, to name just a few. More and more, companies are unlocking the value of data within those systems and are looking to new technology investments to improve the effectiveness of their IT infrastructure as a key means to impact their business' bottom line.

But the success of those types of investments depends on the ability to trust and adequately utilize the vast amounts of data required to operate any sizeable company. As the amount and complexity of information continues to grow exponentially, the resulting web of data reduces efficiency and, ultimately, the organization's performance and growth. Every organization faces a similar challenge with their data, particularly as they try to manage relationships with customers and the products and services they sell. This explosion in quantity and complexity of data affects all facets of a company's bottom line.

A Master Data Management (MDM) strategy is key to unlocking the value of your company's growing data and information. It provides critical business processes with timely, accurate and complete information; helping to generate better results regardless of the business need. MDM offers a clear and concise understanding of your data, whether the data you are mastering pertains to customers, products, partners, suppliers, locations, assets or other domain types.

Defining master product data's true value to an organization

In the context of the master data life cycle, product data must be defined, enriched and ultimately made easily accessible to consuming business processes via operational systems and applications. Once product master data is created and made readily available, all access and updates to the product master data have to be managed consistently over time.

The requirements for managing product master data vary from company to company and even differ at the line-of-business (LOB) and business process levels. Whether it is design-intensive processes around product creation or simpler add-and-update processes to maintain product data, an effective product master data implementation requires the ability to define a flexible data model. It also requires access and security rules, workflow, rich user interfaces (UIs), business logic and stewardship processes. Additionally, an OLTP hub infrastructure and synchronization capabilities are key to maintaining master data across the enterprise. Depending on the business need, several—or all—of those capabilities may be part of a product-focused MDM implementation.

A product master data implementation may also require extensive use of secondary, cross-over domain information—such as identifying relationships and connections among and between product master data and associated domains, such as suppliers, vendors and locations. Product data implementations can also require connectivity to global data pools to deal with suppliers and products.

Moving from tactical to strategic with end-to-end MDM

However, most companies that have focused on product MDM have not been ready to tackle the problem end to end—from product authoring and approval through to making the "golden" product data operationally available in real time. Instead, companies typically have begun their journeys tactically, either with workflow and authoring-centric use cases (such as new product introductions) or with centralized system-of-record use cases.

As a result, most MDM initiatives are typically implemented in a fragmented, piecemeal fashion in which the end goal is to provide capabilities for specific business problems. Often an MDM strategy can lack the vision and foresight to ask, "For what purpose do we use this product data and how will it be consumed across various business processes across the enterprise over a long period of time?"

As the MDM journey evolves, companies are looking for capabilities that support broader and more strategic end-to-end master data use cases. They want to manage product data across its entire life cycle so it is relevant to all company processes that require the data—not just a specific use case. This end-to-end strategic approach is essential if a company seeks to avoid generating siloed MDM tools and technologies.

Leveraging product master data

Many industries use product master data in different ways based on business processes and even regulatory compliance. MDM solutions help enable authoring, enrichment and access of product data according to industry-specific and even company-specific requirements.

Retail industry

No industry has deeper roots in managing product data than the retail industry. Retailers focused on the products they sell can trace the origins of MDM back to the early days of Product Information Management (PIM). PIM use cases predominantly deal with business processes focused on product data: new product introduction, catalog management, connecting to global data pools and multichannel commerce. PIM implementations are generally deployed using capabilities focused on collaboration and workflow to meet desired business results. A key aspect in product-focused MDM implementations is data model design and flexibility. With companies managing massive volumes of products with various categories, hierarchies and combinations, a flexible data model is considered a key requirement.

The basic requirements for managing product data for retailers have not changed, but have expanded beyond the traditional capabilities of PIM. The current complexity of commerce channels is one example of how retailers' requirements have evolved to include PIM and new, real-time, single-repository, hub-style deployments. Instantaneous access to the most up-to-date and accurate product information is needed to adequately display the products to the correct customers.

As retailers become more sophisticated, other information technologies are becoming relevant within the MDM arena, such as enterprise content management (ECM) and business intelligence (BI). For example, as a retailer manages a single view of a product, it can tie master data to unstructured content, such as images or PDF files, and make that enhanced view available, through UIs, to the channel or suppliers and internally to employees.

Financial services

Financial services companies, such as retail and commercial banks, insurance companies and brokerages, are amongst the leaders in overall IT budget spending for managing master data, specifically customer master data. Providing the single view of a customer has been a central business theme for those organizations. However, the financial services industry has historically trailed behind retailing and manufacturing industries when it comes to managing product data.

As MDM implementations mature however, financial services companies are now beginning to focus their attention on managing product data as well as customer data. The cross-domain synergy between product and customer helps ensure that companies are more competitive in the financial market landscape. The need to respond to changing market conditions and rising customer expectations have driven financial services organizations to re-examine how they bring products to market. Creating new products within banks is a fairly cumbersome processes that can take anywhere from three to twelve months. Once products are created, the inability to tailor products to specific types of customers and geographical regions reduces the ability to compete for customer share of wallet. Companies are strategically positioning their infrastructures and re-architecting their processes to help ensure that they can offer the right product to the customer and efficiently manage that product over time.

The expansion into the product domain by financial services firms clearly demonstrates the need for end-to-end MDM. This can be done simply by tracing the life cycle of a financial product from product inception to purchase by a customer. First, the product must be authored. This requires a workflow process around collaborative authoring in which products are created and defined. Product creation includes attributes such as product definition, offer definition and pricing and eligibility rules. This use case for managing product data directly coincides with the PIM use case mentioned previously in the retail industry example. Creating, defining, enriching, approving and synchronizing product master data are all active MDM processes that are part of managing the master data life cycle.

After products are created, they must be made available to the various customer channels such as call centers, retail branches, internet, potential partners and third parties. This is where a real-time transactional hub-style use case is deployed. These real-time hubs may also have other critical domains deployed within the same MDM instance. Here the traditional PIM approach is expanded to deal with the products all in a real-time, services request environment.

The ways in which products are offered are also becoming increasingly complex. The ability to bundle offers to create attractive rates is regarded by the industry as a competitive differentiator that is helping keep their customers loyal. This requires a more sophisticated level of management of product information. Altering financial products to fit requirements for sale based on concepts such as segmentation and geography are becoming common competencies for managing product data.

Summary

Mastering product data requires flexible and robust capabilities, as well as defined business processes to help ensure accuracy and accessibility. Many industries, such as the retail and financial services examples outlined above, are leveraging product data for competitive advantage and to increase customer satisfaction.

IBM offers complete end-to-end MDM capabilities with its MDM portfolio, including IBM® InfoSphere™ MDM Server for PIM and IBM InfoSphere MDM Server.

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