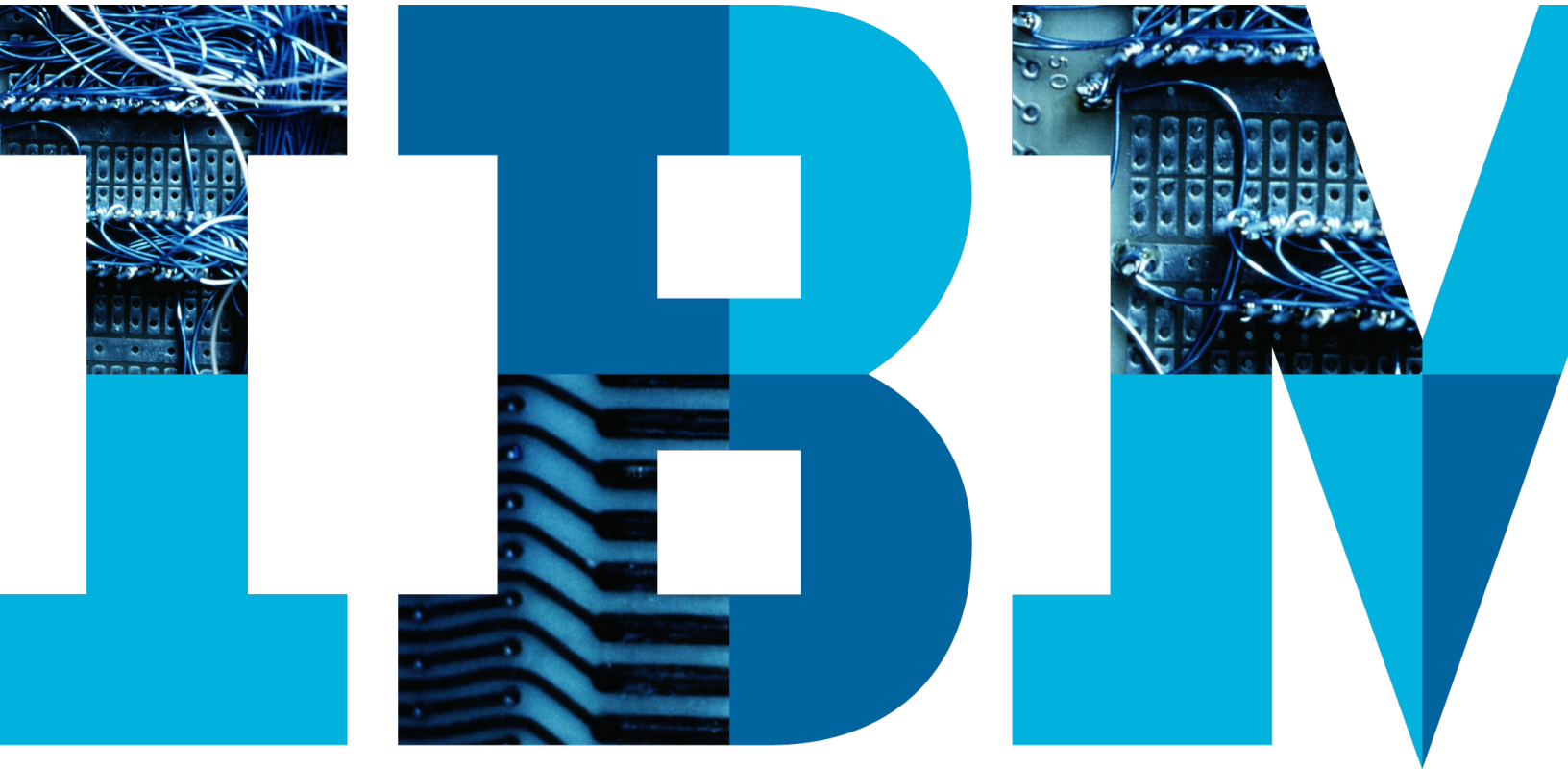# Master Information Management

Enhanced MDM with content and analytics for a uniquely complete version of the truth

Executive summary

To meet fundamental strategic objectives, organizations now clearly understand that they need to gain control over data that is locked within silos across the enterprise. The evidence is easily visible in the growth of the number of data projects that entail data mining, cleansing, consolidating, enriching and mastering data.

However, while decades of customer relationship management (CRM) and enterprise resource planning (ERP) initiatives—combined with more recent customer data integration (CDI) and product information management (PIM) projects—have delivered localized business value, they do not often lead to the effective use of information on an enterprise-wide basis. In fact, many companies have become confused as to why repeat efforts to cleanse and consolidate data to support specific business requirements have not delivered results and return on investment (ROI) that reach across the enterprise.

Too often those initiatives—intended to deliver comprehensive views of enterprise information—are walled off from each other. As a result, organizations are not leveraging data assets at an enterprise level and suffer from departmental projects that create islands of data and multiple data "masters" across their companies.

To overcome those tendencies, and to better understand the life cycle of their data, including where, who and why it is used, organizations must look at their information management strategy as an integrated whole. With the Master Data Management (MDM) portfolio, IBM can help organizations understand and control information strategically, turn data assets into business assets and help enable the right people in the organization to access the right information at the right time.

Master Information Management

The most common and valuable information in an organization is business-critical data about customers, products, accounts, location and assets—commonly known as master data. Despite its importance, master data is often replicated and scattered across business processes, systems and applications throughout the enterprise. Addressing this challenge is the reason why so many organizations have embarked on MDM projects during the past decade.

But MDM projects are just one piece of a broader enterprise information management (EIM) environment. Other parts include business intelligence (BI), information integration and content management. Those systems play a significant role in the life cycle of data and its governance, and influence changes and updates to master data. They effectively create a uniquely complete version of the truth about information, which no other system in the organization holds.

The presence of content and analytics working together with traditional MDM to help enhance and enrich data is what Master Information Management (MIM) represents (see Figure 1). MIM effectively creates a uniquely complete version of the truth about information, which no other system in the organization holds.

MIM is a foundational part of an organization's EIM strategy. Through MIM, organizations can create a true, single view of enterprise master data and deliver this view to the channels, systems, people, processes and external user to effectively run the business, not only at a point in time, but over time.

Re-establishing MIM as a long-term EIM strategy

MIM must be viewed and executed as a long-term strategy closely tied with MDM initiatives driven by the organization's enterprise information strategy.

As organizations implement MDM projects, they quickly realize that these programs generally do not have a "finish line." As the anchor point of an enterprise information strategy, MDM grows and evolves as the business requirements do. Data-related problems that were solved with CDI or PIM solutions often grow beyond their original requirements—they have a broader scope in terms of the types of data that need to be managed and other information that is needed, such as content, to provide a truly complete picture of an organization's master data.
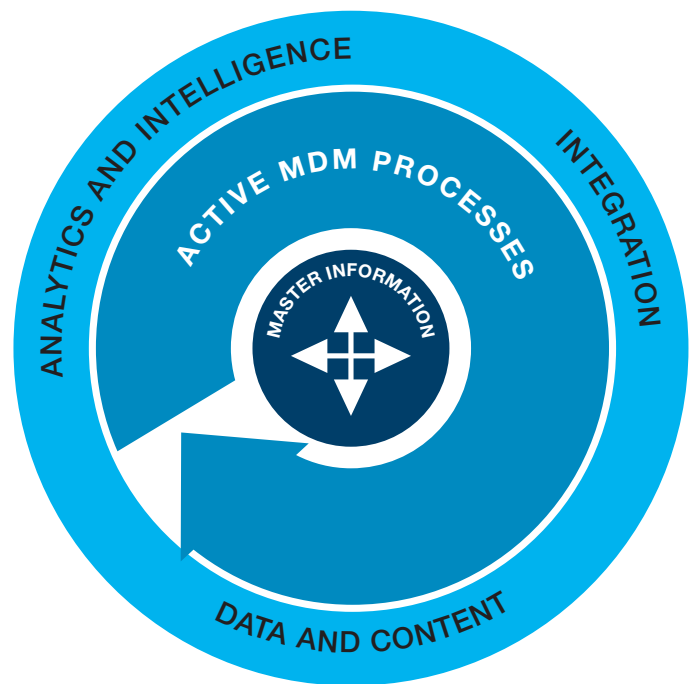
Master Information Management

Figure 1: Master Information Management: Master data enhanced with content and analytics to create a uniquely complete view of "truth."

For example, consider a project sponsored by an organization's marketing department that requires a single view of a business-to-consumer (B2C) customer across multiple channels. Once the single view has been established and integrated within the channels, the business realizes particular efficiencies—perhaps in the call center or costs reduced through better direct mail—and wants to further exploit the value of having master data to produce customer-specific product bundles.

When the scope broadens to include product data, organizations find they cannot meet the need because they did not anticipate the product would eventually be required as a master data domain. Add to that the needed ability to quickly and easily consolidate other types of data (reference data or unique data types, such as sales transaction data tied to a specific channel) for the purposes of supporting a wider or unique business initiative. This often happens, but companies do not have the underlying infrastructure to quickly gather, consolidate and share that information with the business processes that now needs it for a specific use case.

As a result, organizations are investigating MDM solutions that extend beyond product-only or customer-only data to take advantage of other critical information assets that live within their environments, including content in content management

systems and analytics found in BI and performance management systems, as well as other types of information, including metadata and reference data, that have an important role to play in the life cycle of data—particularly the data an organization deems to be master data.

Tactical approaches that meet short-term business requirements must to be married with a long-term vision. Successful organizations determine the most effective starting point for their MDM projects and create phased implementations that deliver value to the business incrementally. At they same time, they deliver reliable roadmaps for the future, recognizing that their initial projects will grow over time and spawn new, more strategically valuable initiatives.

MIM marries master data with content, analytics and other consolidated information that organizations deliver to applications for a specific business need. Together, they give the organization a truly complete and rich set of information upon which to execute business processes. With integration to content, analytics and master information, the IBM MDM portfolio provides the key pieces needed to establish a rich foundation of master data that can be quickly modified and enhanced to support new business needs.

The IBM MDM portfolio

The IBM MDM portfolio helps organizations manage tactical data projects, such as customer or product information initiatives, while simultaneously accounting for future data management needs.
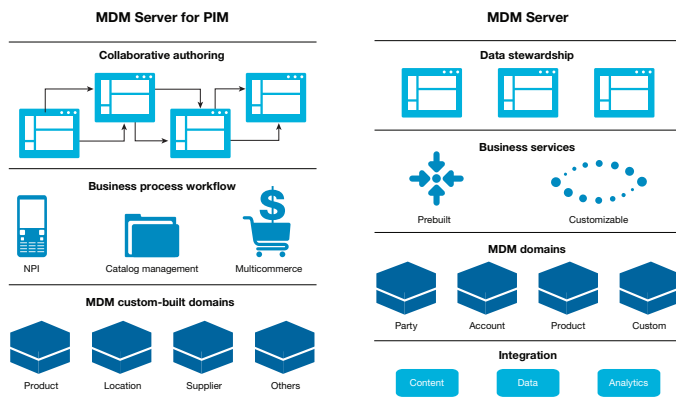

Figure 2: InfoSphere MDM Server and InfoSphere MDM Server for PIM

IBM MDM delivers a single version of truth of an organization's critical data helping them to produce better business outcomes and minimize cost and risk. IBM MDM makes it easy to manage, share and analyze master data to support a wide and varied set of business requirements where trusted data is required.

The IBM MDM portfolio consists of a rich set of capabilities and configurable functionality across multiple data domains to address a wide set of business requirements throughout various industries. It can deliver on MDM requirements across a number of tactical needs, including two of the most common MDM projects: CDI and PIM as well as the need for mastering other types of unique and industry specific domains. As MDM projects grow these technologies can be deployed together to fulfill long-term strategic requirements and generate even greater value for the business (see Figure 2).

IBM InfoSphere MDM Server

Designed to provide flexibility in its deployments, IBM® InfoSphere™ MDM Server cuts through the barriers imposed by separate lines of business (LOBs), applications and product-centric silos, helping to deliver on the promise of multidomain MDM. InfoSphere MDM Server is particularly effective in helping organizations gain real-time access to the trusted customer information needed for CDI projects, while also supporting real-time system access to master product and account data for other initiatives and having the ability to master "content" through integration with content management systems. Using a real-time MDM technology, such as InfoSphere MDM Server, can help organizations produce business value in areas such as:

Customer insight for retention and revenue generation

Organizations leverage InfoSphere MDM Server to gain a complete customer view across previously disconnected and siloed LOB and product systems. Additions and updates to customer profile information throughout the enterprise can be captured and distributed to all necessary systems. With a full, up-to-date understanding of the customer, channels can then differentiate and track high-value customers and provide heightened levels of customer service, helping to ensure retention. This type of functionality generates significant value for a number of industries. In telecommunications, an understanding of the customer's lifetime value can impact queue waiting times for call center support. Customer profile information, inclusive of product and account data, can also be used by customer touch points (such as call centers, ATMs and Web self-service systems) to identify cross-selling or up-selling potential, resulting in new revenue generation opportunities.

Delivering new offerings to differentiate in the marketplace (bundling)

Leading companies in many industries are attempting to differentiate themselves by offering account and product bundles. However, many struggle to support such business requirements within existing processes and applications. InfoSphere MDM Server captures product and account information and manages the relationships between those entities as they are assembled into bundles or value packages. InfoSphere MDM Server can also enforce associated terms and conditions. In the financial services industry, for example, an organization has the ability to manage a bundle of checking, retirement and college savings plan accounts, and then offer customers preferred interest rates based on the ownership of those accounts. InfoSphere MDM Server helps eliminate the manual intervention often involved in the setup and enforcement of bundles and their terms and conditions, helping to reduce errors in customer treatment.

IBM InfoSphere Master Information Hub (a component of InfoSphere MDM Server)

InfoSphere Master Information Hub (MIH) extends the IBM InfoSphere MDM portfolio by providing flexible capabilities used to create master data domains that meet unique requirements around master information. Master information refers to any operational data that needs to be managed and distributed across the operational systems, including reference data (such as state or country location abbreviations) and transactional data (such as sales information).

Quickly adapting to specific business needs

Organizations often demand new initiatives for competitive or regulatory reasons that require processes re-engineering and clean data to support those new processes. MIH helps enable the quick creation and delivery of new data domains (or custom domains) that can be flexibly developed to support new or specific business initiatives. As part of the broader MDM solution, MIH helps organizations create a more seamless integration into the information intensive applications that consume the data. With less development time and overhead attached to those types of data projects, organizations can get initiatives off the ground quickly and incrementally expand their master data requirements as the business calls for it.

IBM InfoSphere MDM Server for PIM

InfoSphere MDM Server for PIM addresses an organization's need to meet PIM requirements. This technology offers the ability to take a collaborative approach to creating and defining master product information. It provides a flexible data model, tooling, user interfaces (UIs), security and workflows to allow an organization to create and define product information—without the traditional barriers imposed by business function or existing processes. InfoSphere MDM Server for PIM can deliver value to the business in the following areas:

Accelerating time to market to lower costs and improve service

Time to market for new product introduction is crucial to the success of many organizations. However, current processes can be time-consuming and error-prone, and inefficiency can arise from manual efforts to consolidate product information throughout the enterprise, ineffective communication between stakeholders responsible for enhancing this information and lack of a common repository to store and share this information. InfoSphere MDM Server for PIM provides business users with the workflows required to bring a new product to market and create a common repository designed for the organization's particular needs. Retailers and consumer

electronics represent two industries that have leveraged this technology to help ensure that the newest products are available in stores in the shortest possible time. InfoSphere MDM Server for PIM helps enable the organization to streamline the new product introduction process and can help significantly reduce the time required to reach the marketplace and get products into the hands of customers.

Streamlining processes to create effective e-commerce

Creating effective processes to help ensure accurate and complete product information is perpetually available to be published to Web channels is a task beyond the scope of the e-commerce applications themselves. Companies struggle to consistently consolidate product information scattered throughout the enterprise, maintain additional product information (such as hierarchies that may be specific to the Web presence) and eliminate process bottlenecks that threaten timely data updates. InfoSphere MDM Server for PIM can help provide this critical information, help enhance and enrich the data and consistently publish it out to external-facing applications that support e-commerce initiatives. The distribution sector, for example, has leveraged InfoSphere MDM Server for PIM to help ensure that stakeholders in the

supply chain can populate product information directly into the system, thus making it readily available to internal users and external Web channels. As a result, organizations gain confidence that only correct information is delivered to all sales channels, helping to improve Web user experiences and streamline e-commerce processes.

Leveraging IBM MIM to fulfill strategic objectives

InfoSphere MDM Server and InfoSphere MDM Server for PIM provide proven, market-leading functionality for even narrowly scoped MDM projects, helping to enable organizations to deliver business value and meet initial tactical needs associated with CDI, PIM and other domain-centric initiatives. Companies can derive widespread business value from the successful implementation of each technology, including customer service and sales improvements, product and service differentiation, regulatory compliance, speed to market and elimination of costs by streamlining processes. However, in later phases of implementation, MDM initiatives stretch beyond requirements for CDI- or PIM-only deliverables, both in terms of the domains of master information and the ways in which the business will use and manage that information.

The ability to meet the requirements of MDM through the combination of IBM InfoSphere MDM Server (and Master Information Hub), InfoSphere MDM Server for PIM, along with their ability to integrate with content and analytics, will become a key competitive differentiator for organizations across a variety of industries.

Strengthening the corporate brand

The executive leadership of a major retailer set an organizational goal to become an industry leader by repositioning and strengthening the corporate brand. To achieve this, the company determined that a strong customer focus with a high level of product availability was essential to brand preference in the marketplace. When analyzed against current practices and abilities, management found that meeting their goal would require new infrastructure to support greater levels of customer service and attentiveness to membership subscribers, while also delivering the newest products to market more quickly than competitors and minimizing product stock outage time. The business stakeholders, along with their IT counterparts, evaluated a number of solutions, measuring each one's ability to meet those aggressive objectives. The team also recognized that large-scale success would require a series of interrelated IT projects, each delivering incremental value to the business over time. From a customer service perspective, the organization needed to quickly recognize the customer, their preferences and membership level within stores at the point of sale, on a self-service Web channel and during call center interactions. Yet finding a solution for the customer information challenges met only half of the long-term requirements, as the company also needed an effective method of managing master product information and quickly bringing new products to market. The retailer selected the IBM MDM portfolio, including both InfoSphere MDM Server and InfoSphere MDM Server for PIM, as the strategic solution to gain this customer focus and manage product processes to strengthen the corporate brand.

Supporting rapid organizational growth

The full IBM MDM portfolio supports companies with a mandate for rapid organizational growth. One such organization in the telecommunications sector set corporate objectives to greatly exceed the industry growth rate through acquisition as well as organic growth strategies. To help enable both types of growth, the company needed a common source of master customer information that could overcome the LOB barriers that had developed over time between landline, data services and mobile businesses. The master information source also needed to provide a process to create and supply multiple customer touch points, such as the Web, retail stores and call centers, with accurate and timely master product information. The customer chose InfoSphere MDM Server for PIM to provide common processes for collaborating and publishing master product information and a common master product repository to persist this information over time. InfoSphere MDM Server helped enable real-time access to master customer data, including account and product information; delivered the master data in context to all users when requested and provided an integration point for new customer systems as the company made more acquisitions. The organization has even more aggressive plans to fulfill their MDM strategy through the integration of both IBM products. This future state would allow the organization to create and define product information using InfoSphere MDM Server for PIM, then gain real-time access to this information by publishing the data to InfoSphere MDM Server.

Delivering a broad and comprehensive view of master data to the entire organization

Among both the private and public sectors, the need to better utilize both data and content together for a more comprehensive view of master data is becoming an urgent need. For example, a major metropolitan city's municipal government sought to achieve efficiencies across multiple agencies, offices and boards. MDM was used to provide better service to millions of constituents by providing a 360-degree view of the citizen. They sought to get a more client-centric approach to service delivery and improve data sharing capabilities to help enable agencies from housing, education and welfare view clients holistically. With very tight operating budgets, the city needed better automated and streamlined business processes and common standards across agencies for critical areas such as IT security and data confidentiality.

The "Single View" project, which has delivered secure data sharing and service enhancement, provides authorized access to citizen master data as a service, security and privacy requirements, data quality management, analysis and discovery services to resolve identities and discover relationships as well as integration with content stored in their content management systems to deliver images, PDFs and other types of unstructured content (scan of a birth certificate or national identity card) as part of a citizen view.

As a result, the municipality has been able to reduce costs by implementing citizen self service, increasing automation and reducing errors and paper processes. More importantly, the municipality can better service customer by offering more streamlined and efficient processes that are tailored to their needs and a generally improved quality of service across all transactions.

Conclusion

IBM MDM has the extensive set of capabilities across multiple data domains organizations need to address a wide set of business requirements, while focusing their future vision modeled on an enterprise information strategy. MIM takes the best of the capabilities offered within the IBM MDM portfolio and broadens the capability to include content, analytics and new types of master information that organization are increasingly required to manage and make available to critical business processes. As MDM projects grow and evolve, as they will, those technologies can be deployed together to fulfill long-term strategic requirements and generate even greater value for the business.

For more information

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