Transforming business processes and information by aligning BPM and MDM

IBM

Whatever your industry and whatever your size, the day-to-day operations and strategic ambitions of your organization are entrenched in your ability to execute, monitor and continuously improve the processes that make up your organization's core functions.

Transactions, support and information drive processes

There is a strong link between information and processes. Business transactions require accurate information to be passed to the process and held internally in an enterprise for use within processes for optimized performance and accuracy to improve business results. Support processes also require accurate and timely information to manage customer relationships appropriately, efficiently and accurately to provide a differentiating customer experience. Finally, accurate information managed well within an organization can be used to assess business trends, new market opportunities, product gaps and specific client segments to aim new products at driving cross-sell, up-sell and new product introduction processes.

Data that exists in a vacuum—even highly structured data—fails to qualify as information until it can be associated and used by a business process, which derives value from the information. But many systems professionals fail to grasp this simple truth. In a recent Forrester survey, just 11 percent of respondents claimed that "their master data management (MDM) and business process management (BPM) initiatives share the same cost center and team members who work together on a daily basis to develop solutions for the business."[1] The other 89 percent are operating in separate worlds under a different set of values and beliefs—in short, working in silos.

Accuracy, timeliness are two critical factors for information and processes

1. Master data: One of the critical links

Many of the most critical business processes depend on high-quality data and the relationships inherent in that data. These critical data assets, most of which are central to running the business, are called "master data." The high-value, core information supporting critical business processes throughout the enterprise, master data is at the heart of every business transaction, application and decision. Master data may include information about customers, patients, citizens, suppliers, partners, products, materials, employees, accounts and much more.

When the data is of very poor quality—inaccurate, incomplete, lost or duplicated—the business processes dependent on that data can become inefficient, ineffective and costly, or can increase business risk. Often, an enterprise's data is dispersed among many non-integrated and siloed information repositories. Meanwhile, the volume of data the enterprise manages and stores continues to grow dramatically, compounding the problem over time.

"MDM, SOA and BPM can address challenges in two areas. They can enable more accurate and timely decision making to enhance business performance, by using BPM to optimize process with human tasks, automated tasks, and improved visibility. MDM can provide trusted and timely data to business processes. Enterprise process agility with BPM and trusted timely data from MDM may be combined."[1]

—Amy Wohl, Industry Analyst

The challenge for MDM is not only centralizing enterprise data for use by enterprise processes. Enterprise processes assume and require that MDM has its own data governance and stewardship processes in place for continuous enforcement of data quality when new information is created or added, when it's updated or modified, or when there are multiple data repositories which require alignment and synchronizing.

Example 1: Capturing new data from enterprise process business transactions with MDM

An existing bank customer who has a standard savings account is interested in another service the bank offers. He is registered as Jonathan D. Smith for that account. However, on registering for the new services, he tries to register as Jon D. Smith, entering the same address and contact details as his previous account. Many service-opening account processes would search for a person with that name and address, then assume it was a new customer when there was no match. This can lead to confusion about how many clients there are and how best to treat them in an enterprise. If there were any cross-selling offers linked to the service-opening process, these might propose offers that are not best suited to the customer, thereby reducing cross-selling success rates.

Having MDM perform more rigorous data governance checks and processes on the new-customer information, highlight the similarity in name and same address and take some data governance action to resolve and clarify this ensures the enterprise has better data input at the source and maintains the best way to provide offers to clients opening new services.

Example 2: Better information driving improved processes with MDM

A new bride receives a catalog in the mail from a retailer, addressed to her by her married name. The next day, she receives the same catalog addressed to her by her maiden name. In the mailbox beside it is the very same catalog addressed to her husband. Why did this occur? Because both people, at some point, placed a catalog order from that retailer, so there was master data on each of these individuals. Even the name change for the woman had been captured by the customer relationship management (CRM) system. The catalog mailing and shipment process, using the information in the mailing list, would not detect this problem. However, what was missing was an MDM system to link and reconcile the three names by their current shared address, which would have resulted in just one catalog being delivered to the newlywed's home. It would also have reduced costs for the retailer.

That's the power of MDM. It connects all the information amassed about a particular entity or event—a customer, a product, a transaction—from all the enterprise systems to form a more complete view of that entity or event, understand its total value, provide better service and reduce operational costs. MDM also provides mechanisms and governance for consistent use of master data across the organization. MDM helps produce better business outcomes across business processes and applications through trusted business data and information. Another way to say it is: MDM drives better processes.

2. Agile, highly scalable processes: The second critical links

It doesn't matter how good the quality is of the information a business maintains if the main business processes are inefficient, don't fully meet client needs and are hard to adapt to meet new business challenges or market segments the competition is focusing on. The information cannot be used as effectively as possible.

If different parts of the process require that information be entered multiple times, manually, there is potential for mistakes, even if it's from an accurate data source like MDM. Additionally, entering similar data multiple times is inefficient and will impact the performance of the business processes, which will be more costly and require more resources to run.

Example 3: Improve process agility, performance with BPM
An enterprise has just completed a project introducing an improved MDM solution that can be used by its business processes. One of the key processes for the enterprise is retail order processing, which checks inventory stock and, when available, schedules a shipment to the customer.

Orders can be entered by sending in an order form, either through postal services or online. Each order is manually entered into a separate order system, which can lead to some entry mistakes. It's only at this time that checks are performed on the new MDM system for information accuracy. After order entry, the information goes to a separate inventory system, where product availability has to be manually checked at both local and remote warehouse sites. Finally, when the order items are identified, the customer's ordering information can be retrieved from the MDM system, assuming there were no data entry errors during the process.

By making use of BPM to improve process performance, multiple steps can be taken. Simply linking MDM earlier in the process to the online order process and validating the information entry sooner yields a greater percentage of accurate initial orders and can lead to greater customer satisfaction. In addition, this allows the enterprise to more intelligently market to those customers at initial order stages by using the information in MDM. The processes using BPM also can automate the information transfer and transformation between the different order management, warehouse inventory and shipping systems far more efficiently and allow flexibility for future changes.

The result is a far more efficient, less error-prone process that uses the information in the MDM system more effectively.

MDM initiatives need sponsorship from business process owners

An MDM initiative typically is identified by IT and driven by the business because it affects the business directly. Without the support of the business, MDM initiatives rarely, if ever, succeed. Business owners, such as those in operations, marketing and customer service, are interested in MDM because of challenges in gaining a single view of accurate information to drive and improve processes for mailings, marketing and customer service. Such a single view can help reduce costs, improve customer service and drive additional revenue through improved cross-sell and up-sell. Some IT owners, data architects and IT strategists examine their enterprise architecture and see that "good enough" master data exists in siloed systems. When asked by the business managers for a single view, they have a difficult time providing it. Enlightened IT staff see the value MDM brings to system consolidation and data accuracy. Finally, governance owners, such as data stewards, need solutions that include security and policies to control and monitor access to data. MDM is significant to them because it provides a centralized way to implement the governance process once in a single place rather than multiple times in different ways to suit each operational system.

A centralized and well-governed approach to MDM also gives an organization the license to package data and the overarching management services into reusable components. These can, in true Service Oriented Architecture (SOA) fashion, be reused across the various data stewardship processes. This is the underlying principle that builds agility at the core of data stewardship and, as Amy Wohl points out, forms the basis of intelligent business processes.[1]

Why granting BPM and MDM "equal billing" matters

According to blogger Clay Richardson, as early as 2009, he and a colleague highlighted the risks associated with keeping BPM and MDM in distinct silos, asserting that "the success of those two major enterprise initiatives are intertwined with one another."[2] Richardson believes that large-scale business process improvement initiatives will invariably fail if the BPM team doesn't take responsibility for maintaining the data, and business stakeholders are likely to reject large-scale MDM initiatives if the data-quality professionals in charge don't connect back to process improvement. Synchronizing these two efforts is Richardson's prescription for achieving success in both.[2] Ultimately, aligning BPM and MDM initiatives delivers higher value by enhancing process and decision performance with trusted business information.

"If you're leading large-scale process improvement, your initiative is doomed to failure from the beginning if the BPM team does not accept responsibility for maintaining data."[2]

—Clay Richardson, Forrester

For most BPM teams, concerns over data are subordinate to their focus on process and the user experience. Conversely, data management teams value data quality above all else, without regard to the broader context. Because of this kind of myopia, they often fail to establish the cross-enterprise value of MDM.

The alignment of MDM and BPM can enable trusted and accurate information be used by high-performance, agile business processes to improve performance, bringing trusted data to processes and more agility to data stewardship. In addition, a combined BPM and MDM solution has a lot of value for certain problems.

Organizations seeking to minimize operational risk and enhance adoption of process initiatives and projects using BPM can be helped by incorporating data modeling and data management activities for cross-functional process improvement projects. Additionally, increasing the visibility and importance of master data requires identifying and harnessing the most critical business processes that generate and consume master data. Above all, collaboration between the business and IT functions and cross-training between those siloed disciplines can help to make use of the full value of MDM and BPM.

IBM tackles joint MDM and BPM solutions

Thought leaders recognize the value created by unifying MDM and BPM project. Yet few companies are taking advantage of this strategy. IBM enables customers to realize the competitive advantage that comes from this strategy. IBM® InfoSphere® Master Data Management and IBM Business Process Manager

software support these MDM- and BPM-based solutions. As many customer implementations have proven, the open architectures of these products enable clients to deliver on this vision.

From a capability standpoint, we have already noted that business processes have a requirement that MDM provides the data governance processes needed to ensure the accurate information is the best it can be. To aid this capability, IBM InfoSphere Master Data Management V10 provides a solution that uses IBM Business Process Manager V7.5 Express to host the required data governance and stewardship processes. It also can use IBM Business Process Manager V7.5 Standard or Advanced editions for data governance processes.

This provides the capabilities of IBM's extensive BPM platform for this MDM data governance capability while aligning common tools and runtimes to be used for both enterprise business processes and MDM data governance processes.

There are multiple joint-solution patterns. Here, we identify three and demonstrate their joint value:

1. Enterprise processes such as Account Opening, running on IBM Business Process Manager Standard and Advanced platforms, taking advantage of MDM Services for new customer creation, customer updates and customer information retrieval. MDM can process the MDM service requests as usual. The additional new capability enables data governance exceptions to be routed and handled by custom-developed data governance and stewardship processes running on IBM Business Process Manager Express and processed by data stewards.
2. Enterprise processes such as Account Opening running on IBM Business Process Manager Standard and Advanced platforms, with more complex data governance requirements, including information enrichment from other information sources. The data governance processes can be implemented as sub-processes on the main BPM platform, which invoke the MDM Services from the main BPM platform and enable data stewards to manage the information quality from there.
3. Data input and synchronization with other enterprise applications, using extract, transform and load (ETL) in the background for enterprise applications to use when needed. MDM already provides some data quality rules on importing information by way of ETL. The IBM Business Process Manager Express platform with MDM can be used for exceptions to these rules where data governance processes can be created and run, so data stewards can handle the exceptions according to established data governance policies.

IBM client use case

The following is an example of the second joint-solution pattern described earlier:

IBM and Cardinal Health

Cardinal Health is one of the largest healthcare services companies, with a mission to improve the cost-effectiveness of healthcare. A leading provider of products and services across the healthcare supply chain, it employs some 30,000 workers in 10 countries and serves more than 40,000 customers. The company distributes approximately one-third of all medicine prescribed in the US and manufactures or packages approximately 100 billion doses each year. Cardinal Health partnered with IBM in an "Innovation Engagement" that focused on applying IBM MDM and BPM technologies to build a solution for managing master data and to demonstrate the feasibility and benefits of the IBM technology.

Objectives

- Illustrate how the IBM MDM and BPM solution framework can help simplify the IT landscape, enable business agility and contribute to efficiencies in enterprise processes that use master data.
- Illustrate how this framework can be reused and extended to other enterprise processes that use master data.
- Illustrate a collaborative approach to realizing a "single version of the truth," while addressing separation of concerns by aligning data and process goals.

Approach

Cardinal Health and IBM teamed to apply a business process optimization approach to the jointly executed Innovation Engagement. Cardinal Health provided the business objectives for refining enterprise processes for authoring master data and the associated data governance processes, in-depth insight on the current state and MDM implementation skills. IBM provided business process and tooling expertise to capture the optimized process models and help deploy them on the IBM WebSphere® Process Server (WPS) platform. This platform was used for both enterprise processes and data governance processes.

Benefits

- Accelerate business value
  - Use data quality and consistency in business processes.
  - Create an agile platform to help yield faster time to market.
- Optimize processes
  - Reduce the need for disjointed applications and processes supporting master data.
  - Help drive efficiency by reducing duplication of processes.
- Simplify IT landscape
  - Reduce the number of tools and technologies.
  - Reduce integration and data-synchronization effort.
- Realize MDM vision
  - Align MDM implementations with business goals and processes.
  - Provide tangible benefits for MDM implementations.
  - Reduce complexity and bolster success of implementation.

Conclusion

Trusted data. Improved business processes. Cross-enterprise visibility and a single version of the truth. Governance and risk mitigation. Better decision making, greater agility and improved business performance. Enterprises are looking for ways to connect all these things in a managed technology solution. IBM's MDM product portfolio provides a way to apply governance to enterprise master data, using IBM's MDM solutions. In addition, the subsequent creation of the all-important single-data view ensures enterprise businesses are supported by master data they can trust. IBM InfoSphere Master Data Management V10 has the capability to combine process agility with trusted data and support processes and policies that help enforce data quality throughout the enterprise.

For more information

To learn more about IBM InfoSphere Master Data Management V10, please contact your IBM marketing representative or IBM Business Partner, or visit the following website: **ibm.com**/software/data/infosphere/mdm/whats_new.html

IBM Corporation
Software Group
Route 100
Somers, NY 10589 U.S.A.

Produced in the United States of America
February 2012

[1] Amy Wohl, "Master Data Management, Business Process Management and Service Oriented Architecture", IBM.com blog post, 21 December 2011 (https://www-304.ibm.com/connections/blogs/aim/entry/master_data_management_business_process_managemetn_and_service_oriented_architecture7?lang=en_us)

[2] Clay Richardson, "The Hottest BPM Trends You Must Embrace In 2011!", Forrester.com blog post, 23 December 2010 (http://blogs.forrester.com/clay_richardson/10-12-23-the_hottest_bpm_trends_you_must_embrace_in_2011)

Please Recycle

WSW14176-USEN-00