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Is Your Approach to Multidomain Master Data Management Upside-Down?

How to Avoid the Trap of MDM Silos

Some master data management (MDM) technologies have created a misperception in the market that MDM is designed to solve only a single business problem. This could not be further from the truth. Fundamentally, MDM is designed to solve multiple complex business problems across business units, departments, divisions, and regions—eliminating the need to create a unique MDM solution for each business problem. The ability to start small by addressing one business problem and then scale to solve other business problems is the inherent beauty and value of MDM. Many companies recognize this fact and are successfully leveraging their multidomain MDM investments to solve many business problems, such as maximizing account penetration, optimizing account coverage, improving service delivery, introducing new products efficiently, obtaining more accurate reporting, and supporting compliance. Unfortunately, other companies are falling into the trap of creating more silos, rather than reducing them.

Contrasting Two Approaches to Multidomain MDM: Application vs. Platform

There are two distinct approaches to multidomain master data management: application MDM and platform MDM. Both can address a pressing business problem that is caused by inaccurate, incomplete, and inconsistent data. However, an application MDM approach is short sighted because it only solves the business problem for which it was designed. Because it comes with a predefined data model, business logic or functionality, and specific graphical user interface (GUI), it cannot be extended to other business problems. The concept is similar to buying an off-the-shelf sales force automation (SFA) application for managing the sales pipeline or a procurement application to manage the purchase of direct or indirect materials for the supply chain. The paradox of this approach is that it inevitably leads to more data silos and cost overruns. Because it starts with the application rather than the data, we call this the "upside-down" approach. See Figure 1.

Upside Down Approach
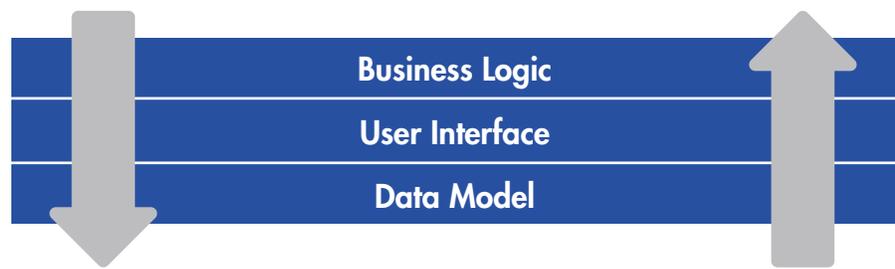
Right-side Up Approach

Figure 1: Depicts the contrast between the application approach or the "up-side-down" approach to MDM and the platform approach or the "right-side-up" approach to MDM.

In contrast, the platform MDM approach takes a longer view. It can be extended to solve other business problems using the same MDM platform. This approach generates a higher ROI because the MDM technology investment can be used to evolve and scale to address additional business problems in a division, as well as the business problems encountered by other divisions, departments, and regions. Platform MDM is domain and data model independent. It allows organizations to flexibly define their own data model, generate logic and functionality based on this defined model, and provide support to configure the GUI based on the functionality. This approach lowers the total cost of ownership (TCO) and shortens the time to value. Because this approach starts with the data, we call this the "right-side-up" approach.

For example, a Fortune 50 manufacturer decided to leverage a platform MDM approach to improve buy-side and sell-side supply chain processes—in particular, to more effectively procure direct and indirect materials and to improve the distribution of products. These complex business issues involve managing vendor, customer, material, and product master data. Implementing a customer data integration (CDI) or product information management (PIM) solution would only solve one dimension of the business issues. Such an application MDM approach would prevent the company from leveraging its technology investment to tackle other business problems that involve the same types of data.

To further illustrate how these two approaches differ, let's look at another business problem experienced by a global pharmaceutical company, which organizes its business into multiple divisions: conventional pharmaceuticals, over-the-counter medicines, biotechnology, and medical devices. The conventional pharmaceuticals division, which offers medicines for serious and widespread diseases such as cancer, HIV/AIDS, and bacterial infections, encountered serious problems with compliance reporting. These problems arose because the antiquated systems its sales force used to track sales activities such as outreach to doctors, hospitals, and pharmacists was plagued with duplicate records. Management and IT decision makers within this division decided to address the problem through an MDM initiative that would result in an integrated physician master. This physician master would cleanse, standardize, and consolidate information from a variety of sources and then return it to the division's sales force systems. With accurate data on physician outreach, the division would be better able to generate accurate compliance reports in a timely manner.

Implications of the Application or Upside-Down Approach

Imagine if this IT group decided to use an application MDM or upside-down approach. They would have solved the pressing business problem of supporting compliance, but their approach would constrain them from addressing other business problems that will likely arise in the future. A common example is that six months after going live with this new system, the operations team within the pharmaceuticals division identifies a business problem—duplications and other errors and discrepancies in supply chain data is beginning to adversely impact its production schedules. Not surprisingly, MDM would be the best solution for this problem. Unfortunately, the business logic, GUI, and data model employed for the original MDM solution that addressed the compliance reporting problem would not be able to address this new problem. Because the original MDM solution was purpose-built to handle a single business entity—the unique particulars of the division's physician outreach and compliance processes—using the application MDM approach, the MDM initiative could not scale to solve this next business problem. As a result, the pharmaceutical division would have to create an entirely new and separate MDM solution to address this new supply chain data problem. Ultimately, the company would end up with two distinct MDM silos, compounding the problem it set out to fix. See Figure 2.

Implications of the Platform or Right-Side-Up Approach

Now imagine that the pharmaceutical division adopted the platform MDM or "right-side-up" approach. In this case, the first consideration is the data model—building a detailed guide to where structured data is sourced from, how the various systems organize it, which applications draw on it, when, and so forth. Once this critical step is resolved, then the GUI can be configured to manage the data based on the business logic dictated by the business problem. By using this platform MDM approach, the IT team could have easily extended the system to handle any subsequent business problems that might arise. This holds true not just for problems within the division but also for business problems facing other divisions, departments, regions, or the entire enterprise.

For instance, the company could optimize the supply chain for the core pharmaceutical operation, enable the procurement team to improve contract management for the medical devices division, and enable marketing and sales to improve cross-sell and up-sell across the enterprise. Because the platform MDM approach is flexible, it can be used to create the most versatile multidomain MDM solution, allowing users to start with any domain, not just customer or product. In doing so, they can leverage the same technology investment to address any other type of business problem that may arise.

Platform MDM: Start with the Right-Side-Up

One of the great promises of multidomain master data management is that it removes the data errors and conflicts inherent in so many enterprises and ultimately eliminates redundant data stores and systems. However, using the application MDM approach makes it impossible to realize these benefits. In fact, this approach often leads companies to procure different MDM applications to solve different problems, hence creating the same data silos that MDM was supposed to eliminate. For these reasons, starting with the business logic, GUI, and then data model is actually backward, or upside-down, if you will.

Multidomain MDM is by nature horizontal. It optimizes data, which is used to solve many business problems and is accessed through multiple business applications. Undertaking a successful multidomain MDM initiative requires a mind shift away from how IT groups typically solve business problems—using applications such as enterprise resource planning (ERP), customer relationship management (CRM), and supply chain management (SCM) to solve a single business problem. By using the platform MDM or right-side-up approach, IT groups can quickly address one business problem while positioning themselves to solve other business problems using the same platform. This enables them to lower the total cost of ownership and shorten time to value, which is the inherent beauty and value of MDM.
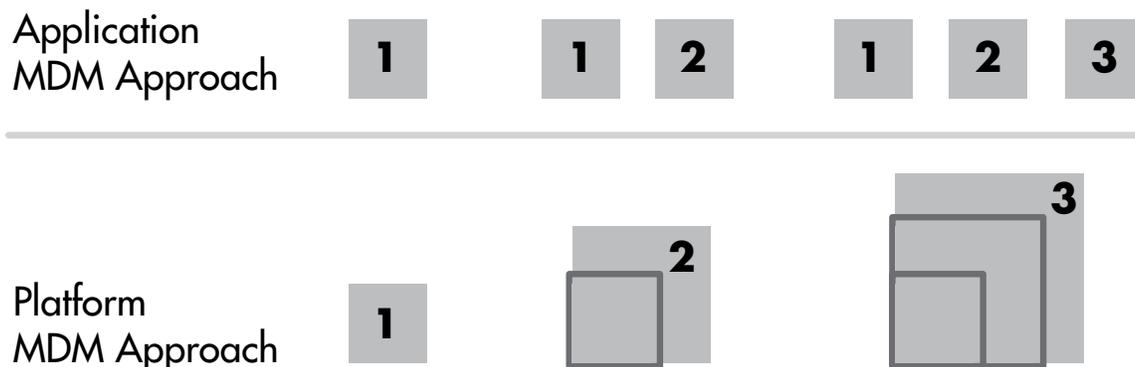

Figure 2: Using an application approach to MDM, IT teams solve the immediate business problem, but end up needing to build new individual MDM applications to solve each unique business problem. In contrast, using a platform approach to MDM, IT teams solve the immediate business problem, while positioning themselves to solve future business problems by leveraging their investments of time, resources and budget.

About Informatica MDM

Informatica MDM empowers business users to improve their operations with reliable views of critical master data distributed across data sources. The award-winning solution provides comprehensive, unified, open, and economical Master Data Management (MDM) on a single platform. It enables customers to manage multiple data domains and architectural styles and unifies all MDM requirements—data integration, profiling, quality, and master data management— on the same platform. Informatica MDM provides open data integration to all heterogeneous applications and data sources. Informatica MDM delivers faster time-to-value, lower TCO, and superior ROI because it can be rapidly implemented and is easily configured to quickly accommodate ever changing business needs.

About Informatica

Informatica Corporation (Nasdaq:INFA) is the world's number one independent provider of data integration software. Organizations around the world rely on Informatica to realize their information potential and drive top business imperatives. Informatica Vibe, the industry's first and only embeddable virtual data machine (VDM), powers the unique "Map Once. Deploy Anywhere." capabilities of the Informatica Platform. Worldwide, over 5,500 enterprises depend on Informatica to fully leverage their information assets from devices to mobile to social to big data residing on-premise, in the Cloud and across social networks. For more information, call +1 650-385-5000 (1-800-653-3871 in the U.S.), or visit www.informatica.com.

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