Master Data Management and Life Sciences: Industry Complexity Requires Investment, Governance, an Enterprise View and Mission-Specific MDM Tools

For life sciences companies, information and data come into the organization from a multitude of sources across many lines of business. It is vital that the information captured is accurate, consistent and reliable across many different functions and disparate systems. Unfortunately, most companies have challenges keeping their customer and product-related data consistent — whether it’s internal or external to the organization — and that translates to lost productivity and poor return on technology investment. Master Data Management (MDM) offers a set of tools and practices that can bring a single, accurate and well-maintained set of product and/or customer data into reality at a time when companies are seeking more efficient and cost-effective ways to conduct business.

The industry has a number of unique data issues such as strict (and ever-increasing) regulation, constant price pressure and the need for reducing risk while increasing efficiency. Further, there is an on-going need to discover and deliver effective new products to the market while protecting the privacy of patients and other customers. None of these functional areas work in a vacuum, and accuracy and efficiency brought by disciplined MDM can help companies overcome many barriers to getting control over their data proliferation.

New business-focused MDM tools and techniques, specifically designed for life sciences companies, are becoming available to the market. In this paper, we will look at life sciences MDM — with a focus on the customer domain — and some best practices and challenges around building a pragmatic MDM program.

We believe there are three fundamental truths about life sciences MDM:

- MDM technology has come of age and, therefore, is worthy of investment.
- MDM is a journey, not a destination.
- Effective MDM marries business and IT needs.

MDM in Life Sciences

The complex, interrelated flow of data in a global company requires a reliable master data foundation that rapidly yields relevant business data. While not a new area of focus, customer data management is no exception. When centralized and cataloged, this data provides better insight into customer-related information that can improve and prioritize decision making. MDM can improve business processes and bring cost savings in a number of areas, including:

Regulatory and Compliance — For compliance, life sciences companies need a single point of trusted information to track physicians across functions in the enterprise, with the most current opt-in/opt-out, spending levels, and key opinion leader and investigator status. SOX, HIPAA, and Medicare/Medicaid regulatory requirements are complex, have severe penalties for non-compliance, and require...
accurate MDM sources coupled with best business practices to succeed. Aggregate physician spend tracking is a requirement, and effective MDM can help identify potential conflict of interest and spend level problems before they become costly violations. According to Forrester Research, Inc., “Highly regulated industries including financial services and healthcare often drive early adoption of and best practices for trusted data investments like (Data Quality) DQ and MDM.”

Efficiency Improvement — Call centers are an area where effective MDM can bring great improvements in efficiency. Forrester Research, Inc., says: “Call center representatives may spend a few minutes on a given call searching for the correct customer record, correcting an inaccurate record, or mistakenly creating a new entry when one already exists. When this inefficiency is multiplied for all calls to all reps in the call center over a period of time, the total cost of poor quality data in the call center becomes clear.”

Improved Commercial Effectiveness — Effectiveness metrics for life sciences functional areas (like sales and marketing) can be improved by the right MDM tools and program design. MDM can provide a trusted, single source repository for professional, account and affiliation data, including state license verification. In addition to eliminating redundancy, this single source of data can help prepare sales representatives and medical hotline staff with accurate and up-to-date data. Using this single source of trusted data will help sales managers with campaign targeting and message tuning, thus improving performance and quality of messages to drive sustainable revenue and reduce cost.

M&A integration — In the life sciences industry, being prepared for the realities of mergers and acquisitions is a business necessity. Whether in purchasing another entity or being acquired, companies need to provide or receive all data in a coherent data format. The ability to be able to quickly and accurately integrate (or provide data) related to the sale or acquisition of an entity can have dramatic impact on the business case of the initiative — especially with regard to regulatory and profitability concerns.

Truth 1 — MDM Is Worthy of Investment

Life sciences companies have many sources for customer data that must be processed and stored in a variety of applications — often with little or no integration. This results in many challenges including: duplicate customers, data latency, incomplete customer information, fragmented/unknown influence network, integration, cost, and regulatory compliance, among others. The lack of a single, reliable source for customer data translates into challenges affecting business performance, revenue growth, customer service and cost of ownership.

MDM can help companies resolve these challenges by offering improved customer data access and quality. Improved quality of data has a direct, positive impact to commercial functions such as sales and marketing by allowing more effective processes for targeting and messaging that can help drive greater productivity and more value per dollar. Additionally, improved data access supports compliance with regulatory requirements and helps minimize exposure to penalties as well as negative publicity for non-compliance.

Customer MDM can provide benefits across functions, keep accuracy high and minimize record duplication. By implementing governance processes, appropriate MDM tools and having an experienced partner, Life Science companies can expect to realize benefits including:

- Consistent, accurate data across the enterprise creates an integrated application portfolio, thus increasing portfolio performance and driving down ongoing maintenance and integration costs.
- A reliable, accurate single reference dataset provides a consistent view of a customer across applications which eliminates conflicting customer views and ensures business decisions are supported by a single, reliable source.
360° view of a customer provides a richer customer view by integrating internally and externally available customer touch-point data across channels.

Supports regulatory requirement needs, thus reducing the risk of non-compliance with 21 CFR Part 11, SOX, Physician Payment Sunshine Act, and others by having quality data.

**Truth 2 — MDM is a Journey, Not a Destination**

Effective MDM of customer data can create competitive advantage for those companies that provide the level of effort required to be successful. Companies who have embraced MDM will likely agree that ultimately MDM is a journey, rather than a destination. The journey begins with developing a business case to gain approval for an MDM initiative, which will involve aligning business and IT priorities and objectives. Working with an experienced business partner can help ease this process.

The journey continues with the evaluation and selection of commercially available tools as well as experienced partners to implement selected tools. There are several robust platforms which provide the necessary foundation for Master Data Management, but none provide pre-built functionality to directly address the complex needs of the life sciences industry. Companies should also consider that existing MDM solutions require custom implementation which can be both lengthy and costly. Selecting a systems integration partner with industry and implementation experience is essential to program success and can perhaps make the journey more enjoyable.

Governance needs to be established early in the process and must include a range of resources to manage the data, rules and processes, as well as include executive support for the overall program. A successful strategy involves a governance process that will support ongoing maintenance to ensure quality data.

In our experience, many companies begin their enterprise MDM journey by focusing on the customer domain and then venturing to other areas of focus including contracts, products and employees, as priorities are established.

**Truth 3 — Effective MDM Marries Business and Technology Needs**

We believe life sciences MDM initiatives are truly a partnership between business and IT and should be designed and implemented with consideration toward the entire enterprise and the full lifecycle of data management. MDM is not just a technology decision, rather a joint decision involving business and IT. MDM program design should begin with life sciences enterprise business priorities, instead of those that drive the initial implementation.

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**Figure 1 — MDM Program Definition components**

Source: (CSC Master Data Management Services)
In Figure 1 above, we divide out the key pieces of an MDM Program — into components that address business needs, those that address specific IT needs, and components that are both business and IT focused. The long-term success and ROI of any MDM program will also depend on data governance; making sure that leadership, organizational structures and processes are aligned to maximize the value of MDM. In our experience, it is a fundamental necessity for life sciences companies to realize that MDM programs touch so many mission-critical areas of the organization that they should not be viewed simply as IT projects.

**Getting Started**

As mentioned earlier in this paper, effective life sciences MDM programs begin with identification of high-level business drivers and related IT subprojects that organically emerge from the business drivers. Some key advice points:

**Look for a rational framework** — Tools should provide rational framework for organization and use of life sciences data. As Forrester puts it, “… master data management is useless without effective organizational oversight. The most valuable best practice Forrester can recommend is to build a data governance program complete with executive sponsors, business and IT stewards, and a program driver. This data governance organization is your key to effectively defining your MDM vision, priorities, road map, and specific requirements that must drive your architectural and technology decisions.”

**Identify potential quick hits** — The best way to get “Quick Hits” from MDM initiatives is to focus resources on the business units that, as Forrester describes, are “best able to articulate and quantifiably measure the financial impact of poor quality customer data on their business processes.”

**Find MDM tools that can decrease startup time** — Having tools that require minimal customization to come online can speed realization of an MDM initiative, can decrease overall program risk and decrease implementation time by up to 25 percent.

**Look for lowest Total Cost of Ownership (TCO)** — Decrease risk over time by having a lower TCO and require less staff to support, as the product will be supported and updated over time:

**Life sciences-specific** — Finally, it is important to select a life sciences-friendly MDM toolset, that can be made more powerful with the addition of purpose-built tools that enhance platform functions and adds preconfigured functionality, specifically for MDM in life sciences.

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