A Hub Designs White Paper

The Evolution of Customer Master Data Management for Life Sciences

By **Dan Power**, Founder & President, Hub Designs
and **Julie Hunt**, Editor, Hub Designs Magazine

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EXECUTIVE OVERVIEW

The life sciences industry faces many complex challenges, particularly when it comes to understanding customers and gaining greater insight into their behavior. For many life sciences companies, even defining the customer can be complex, since customers may be many things such as physicians, payers, or an integrated delivery network.

For companies to derive meaningful customer intelligence, continuous access to an increasing number of data sources has become critical to business success. Reliable and timely customer data is crucial to:

- Focus in on high-value customer segments
- Conduct accurately targeted marketing and sales programs
- Plan more effective promotions
- Ensure the metrics tracking the success of their business are reliable
- Meet increasingly stringent compliance and reporting requirements

> "Multitenant cloud applications offer the potential to address some of a life sciences company's most challenging problems in radically new ways. Customer data management is one of these opportunities."
>
> *Source: Eric Newmark, Program Director, Business Systems Strategies, IDC*

Organizations continue to invest significant effort in customer master data management (MDM) initiatives to answer critical questions about their customers.

The growing reliance on third-party customer data compounds the difficulty of managing customer information. Third parties provide valuable data, but incorporating it requires time and effort, as does ensuring the privacy and security of proprietary customer data.

Traditional methods and solutions for life sciences companies have produced mixed results, often not providing the expected business value and return on investment.

However, recent industry trends around cloud-based delivery models, industry-specific solutions, and collaboration around data are poised to change. A new evolution of customer MDM solutions for the life sciences industry is on the horizon based on:

- **The movement to the cloud:** Cloud-based solutions offer many economic and operational advantages over on-premise or hosted approaches while maintaining the security and integrity of entrusted data. The life sciences industry has already adopted cloud-based technology for many other business functions and operations.

- **Purpose-built industry applications:** The second major trend is solutions that are purpose-built for specific industry requirements and customer segments. These offer superior benefits in terms of business fit and time-to-value over general-purpose MDM tools.

- **Shifting competitive nature of data:** Life sciences companies are realizing diminishing returns from managing what is mostly perceived today as commodity data about their customers within their many silos. While still viewed as business critical, third-party and public domain data sets have eroded the competitive barriers previously associated with such information. Companies are increasingly interested in ways to reduce the cost of acquiring and managing such data.

Some forward-thinking MDM vendors recognize the significance of these three trends and offer industry-specific, cloud-based solutions for customer master data management. Adding an industry collaboration model to augment the collection and management of data, particularly third-party sources of public data, brings a dynamic cutting edge to using data in the cloud. This evolution of customer MDM is pointing the way to the future of the MDM industry in general.

Customer Data: The Multichannel CRM Factor

Actionable customer data is at the heart of most life sciences companies—to drive business growth and efficiency, and to deliver at higher levels with tighter budgets. And until recently, gaining a 360-degree view of the customer was the goal of many customer MDM initiatives. But the traditional 360-degree view is frequently based on "backward looking" data which typically is comprised of transactional data that doesn't provide an accurate picture of the customer and how they behave.

Today's customer data has many dimensions: relationships, affiliations, behavior, sentiment and locations.

Sources of customer data span many channels and touch points. Real-time correlation of all of this data has become essential. Reliable, high quality customer data provides the foundation for the evolving multichannel Customer Relationship Management (CRM) requirements of the life sciences industry.

For commercial organizations to launch effective campaigns and sales initiatives, they need the most up-to-date and accurate customer information including a physicians' primary specialty, as well as unique identifiers such as their National Provider Identifier. Life sciences field teams are mobile and rely on the latest physical contact addresses to productively engage face-to-face with customers within their territories. Digital profiles including email addresses are also essential, as email is fast becoming a preferred method for sales teams to reach out to customers who have limited availability.

Multichannel CRM involves much more than just a "one way" push of content and messages to customers. An integrated feedback loop into customer behavior and sentiment across multiple channels is key to continuously improving customer engagement. A flexible customer MDM solution should be closely integrated with multiple channels of interaction and designed to capture and manage a customer's channel preferences and changing customer profile data in real-time.

Why Traditional Customer MDM Comes Up Short

Life sciences companies realize that achieving the multifaceted view of the customer requires the ongoing aggregation of customer data from many internal and external sources. However, the process of incorporating and managing data sources into most traditional customer MDM solutions has been highly resource-intensive and costly, while falling short of business expectations. Traditional MDM often lacks the ability to provide customer views with sufficient granularity and contextual dimensions that are essential for actionable customer intelligence and the new requirements of CRM. And even more elusive is the ability to incorporate insights that reflect the real-time behavior and interactions of customers.

THE DATA STEWARDSHIP DILEMMA

Data stewards resolve conflicts between different sources that cannot be automatically reconciled, and verify changes to customer data provided by field reps.

Size of the data set, number of sources and frequency of update requests dictate how many stewards are needed to verify data through labor-intensive research and phone calls.

Some organizations spend millions annually on data stewarding alone yet still struggle to keep up with the verification to ensure high quality data.

Source: Hub Designs

Changing business models and regulatory requirements demand an agile MDM solution. Traditional customer MDM systems often call for expensive customizations to on-premise systems that fail to keep up with change, increasing the risk of non-compliance.

Direct access for end users is an important capability often not included in earlier generation platforms. Consequently, earlier generations of MDM platforms frequently fall short on usability and end user access. Instead of facilitating self-service capabilities for ad hoc, informal analyses and quick, responsive marketing campaigns, the user interfaces tend to lock people into a narrow, restricted worldview. This results in an increased reliance on an already overburdened IT staff.

Finally, most traditional customer MDM systems are not tailored for life sciences companies. Many life sciences organizations have built their MDM capabilities with tools that require on-premise deployments that tend to "silo" master data. Compounding this problem is the fact that expensive integrations are usually required to connect traditional MDM to other systems such as ERP and CRM.

For all but the largest life sciences companies, this is typically too costly to implement and maintain—due to licenses, hardware and software costs, as well as ongoing customizations, perpetual maintenance and upgrades. Updated versions of traditional MDM systems may be available infrequently and fail to keep up with the fast pace of change for life sciences companies.

Customer MDM in the Cloud: A Critical Platform for Life Sciences

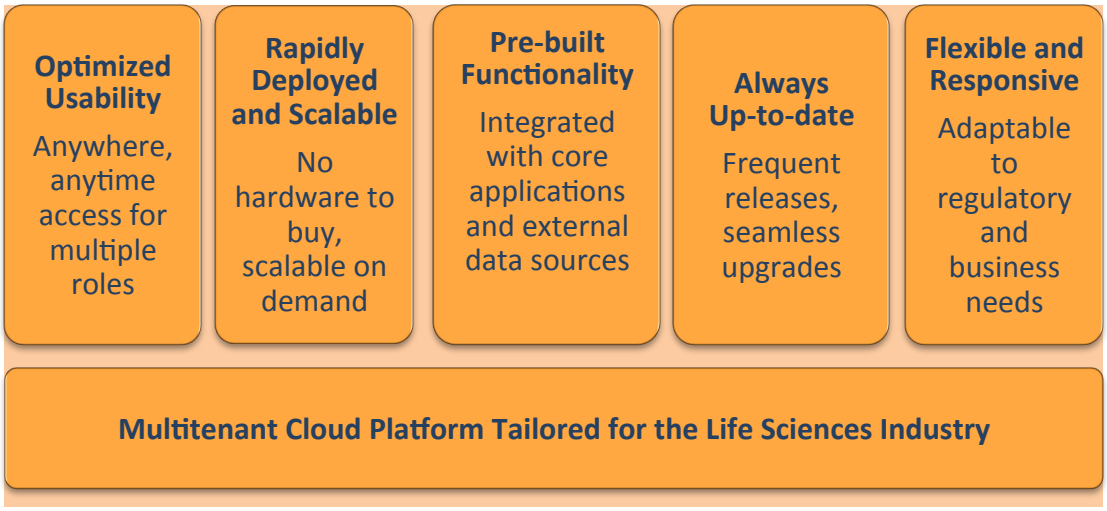
Leading master data management vendors are beginning to offer cloud-based solutions. The life sciences industry has already tapped into the value of cloud-based technology for many other aspects of business and operations. So it's a natural step to offer a cloud solution—specifically designed for life sciences—as a foundation for customer master data. MDM vendors that focus on life sciences exclusively bring the expertise and specialized capabilities that will best support companies in this challenging industry.

With cloud-based MDM solutions, vendors are bringing the ease of use and cost effectiveness to master data management that was pioneered by consumer web companies like Amazon. For MDM, the cloud platform must go beyond simple hosting—to a full, multitenant architecture that provides a broader scope than just accessing an on-premise system via managed services.

A multitenant architectural model serves multiple customers from a single, shared instance of the application. In other words, only one version of an application is deployed to all customers who share a single, common infrastructure and base code that is centrally maintained.

In addition to enterprise-class MDM functionality, a next-generation customer MDM solution that takes advantage of the innate value of a multitenant cloud can deliver optimal usability for multiple roles from data stewards to sales and marketing users. With no hardware to buy or maintain, implementation is fast, cost-effective and scalable as needs grow. It comes with pre-built integration to core applications and data sources. New features are delivered frequently without painful upgrades. And most importantly, a next-generation customer MDM solution offers the flexibility to quickly respond to continuous change.

Criteria for the Next-Generation MDM Solution



Source: Hub Designs

The Evolution of Master Data Management over Time

Purpose-built master data management hubs were first introduced in 2004. Most products were strictly on-premise deployments, with a fixed data model, and no specialized industry focus.

The next generation, which began appearing around 2009, started to incorporate some cloud technologies, and had a more flexible data model, while still mostly focusing on horizontal capabilities.

The most recent generation, which appeared in 2013, is multitenant, specific to individual industries, and has advanced features like built-in third-party data, external data stewardship services and collaboration functionality.

Evolving generations of MDM:

	MDM 1.0 (2004)	**MDM 2.0 (2009)**	**MDM 3.0 (2013)**
Deployment	On-premise	Hosted/Single-tenant	Multitenant
Solution focus	Horizontal	Horizontal	Industry-specific
Data model	Fixed	Flexible, custom build	Flexible, pre-built
Customer profile data	Acquire and load	Acquire and load	Pre-loaded, included
Stewardship	Internal	Internal	External, integrated
Collaboration model	Internal	Internal	Industry
End-user access	Limited	Custom build	Included

Purpose Built for Life Sciences

Cloud-based customer MDM, specifically built for the life sciences industry, provides the capabilities to process variable internal and external data sources quickly and cost-effectively.

A growing number of cloud services for customer data benefit life sciences companies, including external data stewardship services. Direct integration with these data services in the cloud provides companies with the ability to attain high quality, actionable data at a reduced cost. The primary benefits are a richer and more accurate pre-loaded dataset resulting from the built-in connection to a third-party data provider. The ongoing maintenance of the data is done through external data stewardship services. These capabilities address both the “get it clean” and the “keep it clean” aspects of providing reliable, timely data to life sciences functions.

Next-generation customer MDM tailored to life sciences provides additional benefits: open IDs that allow customer records to be shared more easily between life sciences companies and their outside vendors, and cross-references between widely used numbering schemes. This simplifies data management processes and reduces friction and lead times when managing different data sets. Comprehensive tools for security and identity management protect the valuable data assets of life sciences companies.

Industry Collaboration: A Key to Richer Customer Data in the Cloud

Business information changes as much as 30 to 40 percent each year. Doctors come and go from practices, people change their names, phone numbers are updated, and offices move. Keeping up with these changes can be a big burden, resulting in life sciences companies using 20 or more data sources to assemble the required customer views. That adds a lot of complexity and effort to achieving continuously reliable master data.

Most of the maintenance for third-party sources is spent updating basic customer identifying data, which has become commoditized and is no longer considered a competitive advantage. Unfortunately, companies continue to expend significant efforts in acquiring, cleansing and integrating this basic data, with varying degrees of success.

To eliminate this costly drain, companies must standardize on a shared data platform in order to promote a common set of identifiers, attributes and data management rules - opening the door for industry collaboration of customer master data to augment data from authoritative industry sources.

Using a distributed network of people as sources of collaborative work and collective intelligence allows a significant amount of work to be accomplished quickly and efficiently. Applying this model to the collection and management of third-party data brings fresh innovation to cloud data pools. Subscribers to these data pools both contribute to and acquire data. A life sciences platform that receives data from users who are actually encountering updates through their daily activities, can capture changes essentially when they occur.

However, accepting inputs without governance (for example, Yelp or Amazon reviews) or are community-governed (like Wikipedia) are insufficient for life sciences customer data. Only a centralized governance model, with updates validated by external data stewardship services, can ensure the consistency and reliability of customer data in a regulated environment.

A next-generation customer MDM platform governs the security and privacy of specific data fields to meet regulatory requirements and protects the proprietary data of each life sciences subscriber. Additionally, built-in integration with a third-party data provider which already delivers high quality data from hundreds of authoritative industry sources, and can further combine thousands of real-world customer interactions per day, will amplify the quality of customer information.

Centrally governed continuously updated data and services in the cloud can save life sciences companies significant time, effort and money. They can also prevent MDM systems from becoming just another siloed source of untrustworthy data. As an added benefit, life sciences companies can benchmark their performance against the aggregated data of others in their industry, and reduce “time to insight” dramatically.

Future-Proofing Your Customer Master Data Solution

Using technology effectively is a competitive differentiator in today’s global markets. Strategies for using cloud technologies center on agility and responsiveness, future-proofing organizations by enabling them to rapidly embrace business innovation, while strengthening the ability to change and act quickly as market conditions fluctuate.

A strong customer focus requires the right data management platform. Life sciences companies need an MDM platform tailored to their specific industry and business models. It must handle their continuously changing customer master data requirements and takes advantage of forward-moving technologies. This platform must meet complex operational and regulatory requirements without becoming a cost and resource drain. It's essential that the MDM solution:

- Tightly integrate with customer-facing systems like CRM
- Work seamlessly with high quality data from public and third-party sources
- Provide cost effectiveness, productivity and continuous innovation through the cloud
- Offer integrated data stewardship services

Cloud data management platforms can play a key role in orchestrating multichannel execution in life sciences commercial operations. By harmonizing customer profiles into a single system that can be accessed anywhere, anytime to support all teams with the most up-to-date and trustworthy data. Ensuring that essential data for sales, marketing and customer support is the freshest and most accurate in order to sustain improved customer engagement and interactions with the company.

In the near future, we'll see more of these capabilities in commercially available MDM solutions in other industries. Customers of forward-thinking MDM vendors in life sciences are already benefiting from this future-proofed technology of next-generation MDM solutions.

Recommended Next Steps

Business and IT people at life sciences companies may already have implemented a previous generation MDM solution, or could be starting this as a "green field" project at a smaller company.

To determine if a new approach to MDM is right for you:

- **Align with a strategic business objective:** Find an end-user project that would immediately benefit from the new solution. Examples include: Multichannel CRM, ERP and regulatory reporting. Estimate the productivity benefits from more up-to-date, accurate data and improved integration.
- **Set your data quality goals:** Understand your current data quality levels through data profiling, determining percentage of profiles that are incomplete and inaccurate. Assess how the new solution will improve your data quality and meet your goals.
- **Identify cost reduction opportunities:** Find areas that can provide significant savings including consolidation of third-party data sources, in-house data stewardship, ongoing hardware and software infrastructure support costs. Calculate the savings you could realize.

And as always, when adopting new technology, be sure to involve the major business and IT stakeholders from the beginning, to evaluate solutions and evangelize the change required.

Look for ways to "start small and think big," with progressively more ambitious deployments that solve business problems at each point in the process.

About Hub Designs

Hub Designs is a global management and technology consulting firm that focuses on strategy development, solution delivery and thought leadership for master data management (MDM) and data governance. The company publishes Hub Designs Magazine, one of the first online publications specifically covering information governance. The firm's Thought Leadership practice produces white papers and webinars, and Hub Designs' President, Dan Power, is a frequent presenter at conferences and trade shows. For more information, please visit hubdesigns.com or follow us on Twitter at @hubdesigns.

About Veeva Systems

Veeva Systems Inc. is a leader in cloud-based software for the global life sciences industry. Committed to innovation, product excellence,and customer success, Veeva has more than 275 customers, ranging from the world's largest pharmaceutical companies to emerging biotechs. Veeva is headquartered in the San Francisco Bay Area, with offices in Europe, Asia, and Latin America. For more information, visit www.veeva.com .

Hub Designs
188 Whiting Street, Suite 6A
Hingham, MA 02043 USA

+1 (781) 749-8910 office
+1 (781) 735-0318 fax

hubdesigns.com
hubdesignsmagazine.com

Veeva Systems
4637 Chabot Drive, Suite 210
Pleasanton, CA 94588 USA

+1 (925) 452-6500 office
+1 (925) 452-6504 fax

www.veeva.com