



A M Axtria Intel Monitor



SINGLE SOURCE OF TRUTH WITH MASTER DATA MANAGEMENT

Unreliable Business Data = Poor Business Decisions

The healthcare industry is experiencing greater change than ever before. The rise of digital, a shift from volume-to-value and a changing regulatory environment has truly transformed the landscape. Moreover, the industry is realizing the rising importance of data capabilities in life sciences and understands that accurate data is yielding business process optimization and augments efficiencies. The market calls for new insights, new approaches and new ways of thinking.

From a customer perspective, the physician is no longer the only target. In nearly all markets, access to physicians is more restrictive, prescriber autonomy is decreasing and purchasing decisions are being heavily influenced by a new range of stakeholders. At the top level, healthcare providers are consolidating with hospitals and medical groups merging into networks and large health systems. The customer landscape has transformed.

The rise of digital channels also means that interactions are no longer just face-to-face, and customers can choose how they engage based on preference. Whilst this offers Pharma companies new ways of interacting with their customers and patients, it also makes it much more challenging to orchestrate a consistent and contextual engagement. More channels mean more data, more systems and more integrations. The importance of maintaining an accurate customer 360, and truly understanding all interactions across channels, is as critical as ever.

And this increase in data sources, data volume and data velocity are not just seen across customer channels. The explosion of data is occurring in all areas of the business, including product, patient, health-plan, payer, provider, clinical studies and even intellectual property. With the constant explosion of newer data sources, the life sciences industry never had better potential than now to get closer to the patients and their journey. Whilst this provides a significant opportunity, it is not of value without a consolidated view and a single source of truth.

These challenges demand a new way of thinking that goes way beyond just shifting legacy, process-driven applications to the cloud. This needs to be about much more than just modernizing CRM, ERP or digital channels. This is about breaking down the enterprise silos and establishing a modern data management layer that drives a single source of truth about customer, product, health-plan, payer, patient, and clinical studies across the company. This is the only way to ensure your organization can leverage insight and make data-driven decisions with confidence and real-time.



Over the past decade we have worked with over 100 life sciences companies in the commercial insight and information management space, helping them accelerate their journey from data to insights to operational impact. Based on these engagements and our learnings, we have created this strategic 5 step guide for senior executives on Master Data Management.

Step 1: Think beyond the customer master

Sten 2: Look for relationships

Sten 3: Focus on data veracity

Sten A: Plan for the unexpected

Sten 5: Leverage the cloud as enabler



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Master Data Management (MDM) has long been associated with the data quality of the customer record in CRM. Do you have the golden record... do you have a 360-degree view... do you have the most up-to-date and accurate information?

And whilst the importance of the customer has not changed, there are higher emphasis on MDM across the modern organization. Product, patient, managed markets, plan, payer, affiliations, clinical studies and even intellectual property all require a consolidated view and single source of truth.

Before thinking beyond the customer however, it is important to consider how you interact with them. In our experience, most organizations have processes in place to keep healthcare professional (HCP) and healthcare organization (HCO) information accurate and up-to-date. However, we see much less maturity on the multichannel engagement side of things where multiple systems are used to interact with the customer. There is a need to ensure that the channel-relevant data and KPIs are provided at the most granular and appropriate level.

The ability to blend data from multiple sources including traditional call, email, online, educational, social, IoT and other third-party feeds is often lacking. Despite the importance in providing contextual engagement, very few organizations have established a true customer interaction master.

Product Master is another hot area for Pharma, required to support global reporting, competitive performance, pricing analysis and compliance. However, gaining an accurate and consistent view of product information is still a challenge. Pharma companies often contract with multiple data vendors and rely on them to consolidate and master the information provided. Key product information will vary by provider. Understanding of the product data hierarchy, product names and descriptions also vary by affiliate and country which makes it difficult to get a consistent global view.

STEP 1: THINK BEYOND THE CUSTOMER MASTER

We would always limit MDM to our CRM. But a single source of truth is now necessary to support every piece of business-critical data

Head of Commercial IT, US Top 10 Pharma



A modern Product MDM solution allows you to accurately standardize, match and cleanse product records into consistent profiles and groupings that account for various forms, strengths and geographical variations



It is recommended to enhance the traditional product master beyond the commercial scope with clinical data such as active ingredients, passive ingredients, color of medicine, serialization, packaging, manufacturing and barcode information. This enhances the richness of the data and it can add value to the organization. Flexible product hierarchies should then be established by brand, country, market and segment, allowing the product information to be grouped and analyzed from a range of perspectives.

With real world data sources such as claims and EHR data now available in many markets, the ability to inject insight into decision making process that touch the patient, managed markets, plans and payers become possible. But like Customer and Product MDM, the available of the data sources is only the first step. The need to establish a consolidated view and single source of truth to govern the volumes of data is the only path to confidently generating insight.



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The pharmaceutical landscape is continually evolving. Access to physicians and prescriber autonomy are decreasing and new stakeholders are emerging.

Smaller healthcare providers are consolidating with hospitals, medical groups, IDN's and large health systems. These larger organizations exert more control through guidelines, protocols, procurement decision, and incentives. Understanding the universe of healthcare professionals, stakeholders, key opinion leaders (KOLs), organizations and their relationships to each other is critical for success.

There is a need for insight-driven affiliations management to support commercial teams in engaging with the new range of stakeholders.

As fundamental as it seems, there is first the need to understand the healthcare professional (HCP) to healthcare organization (HCO) relationship. Not just the link between professional and organization, but also the role, influence and tenure in the context captured. It is also important to consider that an HCP may map to multiple organizations, directly and indirectly. This should also be captured and maintained.

The relationship and influence from one HCP to another HCP is another important affiliation to capture and maintain. It is also important to consider the relationship and influence with other stakeholders in the organization as well as external KOLs.

With the consolidating healthcare landscape, it is also important to capture the HCO hierarchies and relationships within the healthcare systems. Beyond just the HCO to HCO mapping, how entities are setup, related and the influence they carry within large healthcare networks and delivery organizations

STEP 2: LOOK FOR RELATIONSHIPS

The landscape is changing and it's a different playing field. Identifying the right business stakeholders and their influence is key to success

Sales Manager, European Top 5 Pharma



In the new selling landscape, understanding these relationships and how to navigate the healthcare systems is key to success. From relationship selling to strategic account management, it is a fundamental pillar of the modern go-to-market strategy.



With these core relationships established, it is then necessary to look outside the traditional patterns to truly innovate and differentiate.

Correlating patterns between HCPs and patients, HCPs and products, HCPs and KOLs, and even HCPs and digital content provides insight that supports pro-active engagement, contextual experiences and a smarter understanding of stakeholder influence.

It is also important to remember that relationships are subjective and can often change. There will not be a direct data source that covers all areas of affiliation mapping. Field collaboration should not be overlooked as a key source of input here, leveraging local knowledge and insight gained from face-to-face meetings.



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Even once you have established a single source of truth, the insight generated from these data sources is of no value to the commercial organization, unless they can trust it.

Data quality is the fundamental pillar of enterprise data management. The ability to understand and pro-actively monitor the quality of master data is critical to all commercial applications that uses it.

Key decisions that business users take from potentially inaccurate data can have significant consequences. Your go-to-market strategy, marketing planning and investments, market access plans and compliance are all at risk if the underlying data quality is in doubt. In fact, Gartner predicts that poor data quality is a primary reason for 40% of all business initiatives failing to achieve their targeted benefits.

Data quality checks should be carried out against the dimensions of completeness, consistency, timeliness, uniqueness, validity and referential integrity. Business rules should also be applied to the data sets, checking for anomalies, thresholds and process violations.

As the volume of commercial data explodes at a rate much faster than can be manually reviewed and corrected, companies are looking for more automated ways to solve the data quality problem.

From our experience in the industry, we have seen a lot of success in moving away from manual, error-prone processes towards innovative cloud-based data management solutions.

STEP 3: FOCUS ON DATA VERACITY

We have had several escalations where the business has lost confidence in their performance reporting because of data quality issues

Head of Business Analytics & Insights (BAI), US Top 10 Pharma



Modern Data Management Platforms, such as Axtria's DataMAx™, leverage advanced data science techniques to proactively on-board, manage, monitor and improve data quality issues across a complete range of commercial data sources.

Axtria DataMAx™ provides a complete DaaS (Data-As-A-Service) framework pre-configured for life sciences industry specific data needs. It supports several applications including master data management, data quality, data integration and data enhancement



The centralized data management platform allows Data Stewards to take control of the commercial data sources with better transparency, consistency and agility. This increases confidence and accuracy in the data used to drive strategic business decisions.



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The one constant in the pharmaceutical industry is change. Fierce competition, government regulations (DSCSA, IDMP, RDC 54, GDPR), rapid innovation and M&A activity have created a dynamic environment that is continually evolving. When it comes to data management, you need to plan.

The data sources managed, mastered and governed today, will be very different from those tomorrow.

Mergers & Acquisitions will only increase the complexity of the commercial data environment, often leading to multiple versions of the truth for master data. The desire is often to reduce and consolidate as quickly as possible, with the acquiring company's system being maintained as the system of record. However, not planning ahead and accounting for this sort of agility and flexibility in your data management architecture can make this a very painful and drawn out process.

Government rules and regulations is another dynamic area, especially in the area of customer and patient data. Taking a proactive approach to auditing and regulatory reporting of master data assets is recommended. From ensuring role-based access to the MDM environment and data, to being able to demonstrate that the data is protected, and privacy controls are in place, is all key to supporting future demands in this space.

The other unexpected element is the data itself. You need to be able to leverage new data sources as soon as they become available. The speed at which you can onboard, process and generate actionable insights from new data sources is a key competitive differentiator. Your data management platform should have the flexibility to adapt to the wide range of structured and unstructured data sources. It should also have the ability to link MDM with Social Networks, because the integration helps organizations to analyze what the market thinks about the company, its products and its services.

STEP 4: PLAN FOR THE UNEXPECTED

We encountered some challenging issues but having a partner that had been there before was key to working through them.

Head of Commercial IT, US Top 10 Pharma





You need to be able to quickly leverage new data sources, with the right mixture of people, processes and technology, and generate insights at scale.

People: Do you have the people in place with the experience, knowledge and skill sets to know where the industry is going and how to handle future data management challenges?

Process: Do you have well defined yet flexible processes in place that will allow you to adapt to change and rapidly leverage the insights available from new and evolving datasets?

Technology: Do you have agile, flexible and enterprise-grade platforms in place to handle new data sources which may be structured or unstructured, and in different formats and frequencies?

Experienced talent, strong governance and next-generation cloud technology are all needed to future-proof your commercial strategy against the unexpected.



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Companies are excited with the volume and variety of emerging data sources available. However, the analytics needed to drive commercial insight from these data sources is often hampered by one serious issue: the legacy data architecture.

The ability to leverage the cloud to create a single authoritative view of business-critical data and integrate disparate, duplicate, and conflicting data sources is the key to success.

Modern Cloud MDM is a fundamental enabler to a best-in- class Cloud Information Management, supporting you to:

- Evaluate and understand all new, relevant data sources
- Utilize pre-built connectors to rapidly onboard, manage and govern various data sources such as structured, unstructured and semi-structured with embedded quality checks
- Establish a master data foundation and single source of truth
- Deliver engaging, mobile-ready insights, and visualizations by business role
- Leverage the cloud for speed, agility, and scale

STEP 5:

AS ENABLER

The business demanded a 360 view across all personal and non-personal channels. We just couldn't do this with our on-premise CRM application.

Head of CRM, European Top 10 Pharma





To successfully technology-proof your enterprise data management you need to leverage a platform that meets your business requirements today, from a vendor who knows where the industry is going tomorrow.

The cloud makes it possible to consume innovation at a rapid pace, allowing you to quickly take advantage of new functionality and react to future business demands. Going forward, there will be new data sources, new technologies and new ways of going to market. You need to be ready.





This 5 Step Guide is a part of AIM (Axtria Intel Monitor), which is an engaging series of thought leadership that showcases Axtria's intelligence on therapy areas, emerging technologies, industries, and topics relevant to the life sciences.

Over the past decade, we have worked with over 100 clients in the life sciences industry and interacted with their analytics, commercial operations, and commercial IT leaders. Based on these engagements and our learnings, we have created a series of strategic 5 step guides on how to drive commercial excellence.

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Founded in 2010, Axtria is a global provider of cloud software and data analytics to the life sciences industry. We combine industry knowledge, business process, and technology to help our clients make better data-driven decisions.

Axtria's cloud-based platforms, Axtria DataMAx $^{\text{TM}}$, Axtria InsightsMAx $^{\text{TM}}$, Axtria SalesIQ $^{\text{TM}}$, and Axtria MarketingIQ $^{\text{TM}}$ enable customers to efficiently manage data, leverage data science to deliver insights for sales and marketing planning, and manage end-to-end commercial operations. We help customers in the complete journey from Data to Insights to Operations.