



**Agile Master Data Management<sup>®</sup>—  
A Better Approach than Trial and Error**

*A whitepaper by First San Francisco Partners*

## Executive Summary

Market leading corporations are embracing master data management (MDM) to help make use of their information assets in order to strengthen their competitive position. Others are either in early stage planning or at risk of lagging behind those who already dominate their markets. Although still an emerging technology, MDM is quickly becoming a mainstream tool in light of a stagnant economy, globalization and the complexities of government regulations. By now, both IT and business managers are all too familiar with the high costs and expenses incurred by bad data.

However, master data management also brings new challenges companies typically have not faced when deploying new business systems: defining business processes and data requirements that span lines of business, divisions and geographies. Here is the crux of the MDM challenge—data is commonly understood to be an IT domain issue, yet the business cannot operate without it. At the same time, business users usually need to access and view data in specific and sometimes prescribed ways. Business needs to “own” the data and they also need to effectively use technology to manage it. Some examples of entangled business and technical issues include:

- How should the data be used, and in which business processes?
- How is data shared among users, divisions, geographies and partners?
- By what processes and procedures is the data changed?
- Who manages approval processes?
- What processes ensure compliance?

Solving the many challenges associated with master data is a complex and extensive undertaking given that master data touches or draws from nearly every function across an organization. A successful master data solution requires organization-wide efforts, buy-in from stakeholders and a comprehensive technology approach. The primary reason MDM projects may fail is that the scope and complexity of the initiative is not recognized and/or the project plan does adequately map out how to resolve and overcome these challenges.

An agile approach to MDM is proving to benefit organizations through more efficient usage of their scarce resources, improved operational efficiencies, improved customer satisfaction and increased competitive gains.

## MDM Delivers Business Value

A common set of questions often crop up among C-level executives and other stakeholders when the subject of MDM arises including, what is master data? When the answer comes back that master data consists of entities related to customers, products, services, suppliers and partners, the next logical question comes—do we not already have systems in place to manage this data? Good question! Strategic IT initiatives of the past decade or so—such as customer relationship management (CRM) and enterprise resource planning (ERP)—promised to deliver a unified view of customers or products. Given that many of these broad, expensive initiatives did not deliver on their promise can be a point of contention among business and IT management.

However, organizations today are finding MDM holds out real promise to deliver a unified view of data across the organization. Corporations implementing MDM are now realizing business value and return on investment (ROI) because MDM is allowing them to:

- Present a single face to the customer
- Create data service platforms as part of a service oriented architecture (SOA)
- Facilitate “single sourcing” of data for operational, regulatory and analytical applications
- Create and implement common enterprise systems and processes to govern enterprise data.

Business value derived from MDM is commonly found where untapped knowledge residing within existing systems can be used to improve performance, drive business value and operational efficiencies, or address regulatory compliance—typically a combination of these. In the pharmaceutical industry, for example, industry and government regulations increasingly govern how sales representatives can interact with physicians and healthcare providers. MDM provides clear insight into customer interactions allowing pharmaceutical companies to not only document physician interactions to meet compliance requirements; but also, use sales performance metrics to align sales territories and better allocate marketing resources. Generally, similar benefits are applicable to other industries. Beyond ROI measurable benefits, MDM delivers several strategic and soft benefits including streamlined mergers and acquisitions integration and better insights into actionable information for faster, improved decision making.

## Common MDM Initiatives and Benefits

Customer Optimization	Operational Efficiency	Risk Management	Regulatory Compliance
<ul style="list-style-type: none"> <li>• Improve up sell, cross sell and customer retention</li> <li>• Access complete customer views of transactions, products and interactions</li> <li>• Understand customer lifetime value</li> <li>• Leverage relationships and areas of influence</li> <li>• Provide customer experience equal to customer value</li> <li>• Segment customers accurately</li> <li>• Improve customer interactions</li> <li>• Improve marketing effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>• Send the right marketing and compliance materials to the right people in the right place</li> <li>• Improve reporting processes by making them easier, faster and more accurate</li> <li>• Reduce business process exceptions due to inaccurate, conflicting data</li> <li>• React more quickly to events and changes</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor complex fraud patterns across products, systems, divisions and geographies</li> <li>• Gain visibility into customer credit risk across financial and accounting systems</li> <li>• Analyze product risk across distribution channels, uses and geographies</li> </ul>	<ul style="list-style-type: none"> <li>• Manage opt-in preferences across product lines and geographies</li> <li>• Ensure privacy rules are managed</li> <li>• Manage industry specific compliance such as Basel II in banking and HIPAA in insurance</li> </ul>

## Case Study: MDM by Trial and Error

In one recent example, a large chemical and equipment manufacturer embarked on an MDM project to consolidate data for marketing and research and development. The IT team identified the primary data entities as customers, products, financial data, distributor organizations and locations (depots). They also identified the following issues that were impeding business performance:

- Direct marketing response rates lagged as a result of incomplete data
- Order fulfillment was delayed with outdated product data
- Regulatory compliance infractions and penalties resulted from data errors
- Business managers lacked confidence in reporting and analysis
- Customer expectations were underserved due to a lack of consolidated views
- Business processes were unable to span organizational and geographic boundaries

The IT project team decided to first tackle distributor master data, thinking they could first prove the MDM approach within a small business process before moving onto others—despite the preliminary indication that other business process improvements would result in higher ROI. On the surface, this approach seemed to be sound. However, the business was not aligned with it.

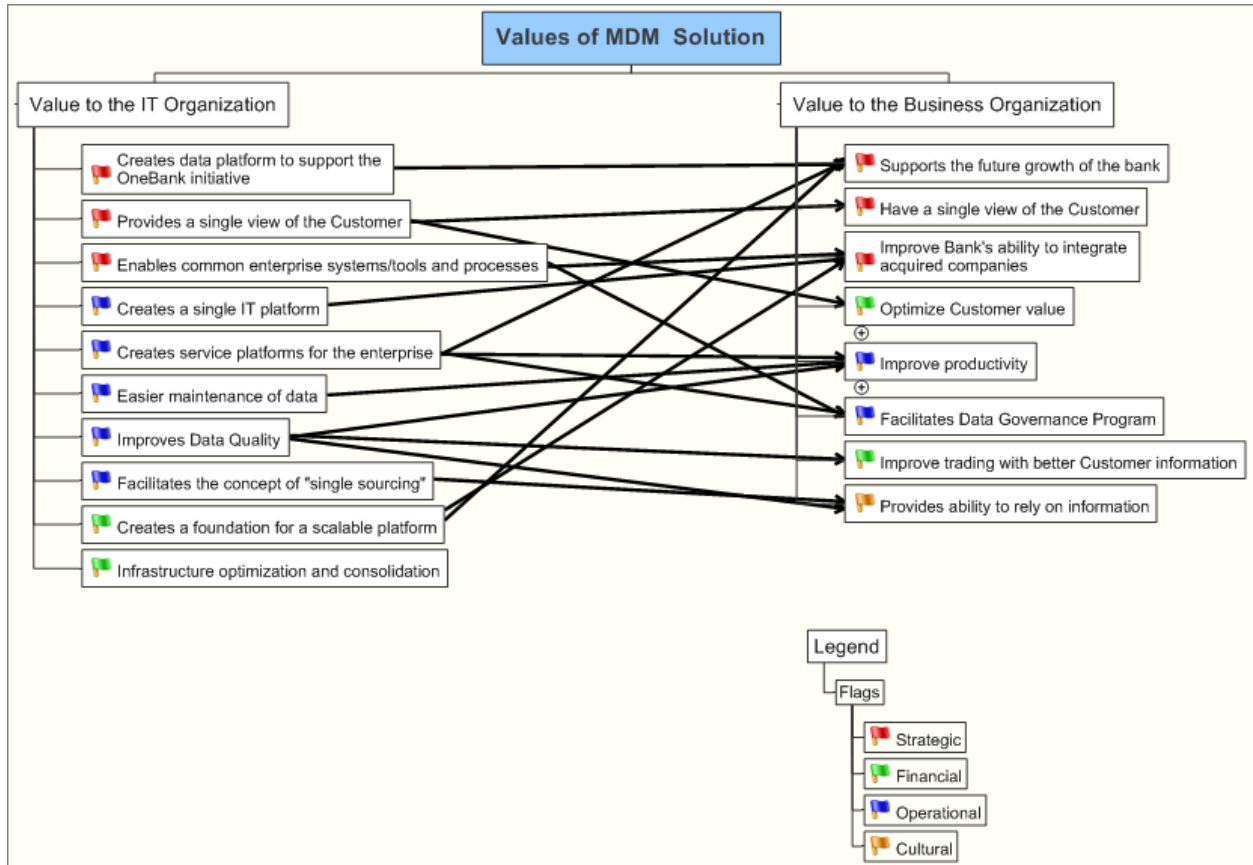
Consequently, the business groups were not willing to contribute the required resources for data stewardship. IT tried to fill the gap but with insufficient data domain expertise they were unable to resolve data quality issues. The lack of business buy-in further delayed deployment because the business rules and processes were being discovered along the way, rather than in advance. And the scope of the project was severely limited by excluding marketing data from external data providers, and sales and customer data.

While starting with a small project suggested lower project risk, IT did not choose the biggest impact business use case or secure business buy-in. Unfortunately, this approach caused delays in the first project leading to additional delays with follow on projects. Having struggled with initial deployments and looking for a better approach, the company adopted the Agile Master Data Management approach. They were now able to align MDM projects with the business and get the MDM initiative back on track.

## Case Study: Agile Master Data Management

This business case example hints at several of the critical MDM deployment issues that need to be addressed. A successful MDM project is one that takes a business-first approach by understanding the business objectives and prioritizing deliverables in increments which are both measurable and validate the business value, all while taking a technology approach that can support rapid delivery to demonstrate the value of the project to the business sponsor, or as needed to quickly identify alternate priorities.

In another example, a European retail and commercial bank chose the Agile Master Data Management approach to implement MDM with great success. To get started, the common business objectives and their stakeholders were defined—and then linked to IT requirements. Further, stakeholders were mapped against each of the business objectives, as in this sample stakeholder map:



*Stakeholder map links value relationships between IT and business interests, and guides development of essential metrics.*

Once the business objectives were well understood and it was identified who in the organization would benefit from achieving the objectives, metrics were then defined to measure project success. The proper metrics both help maintain alignment and define the information needed to answer the desired questions. Metrics alone have limited value when they are not aligned with stakeholder interests. Once metrics are defined, an on-going process is required to review, track and report on the data to measure progress towards goals.

What followed next was a communication plan to address several questions:

- To whom does the project team need to communicate?
- Who from the project team should be communicating to the above?
- What information is important to them and how do the metrics map to their professional and personal goals?
- How frequently should they be updated and how?

With a communication plan in place, project teams were able to manage the expectations and reduce the anxiety stakeholders may experience by keeping them updated on project progress. At the same time, the project team was able to capture both new and changing requirements. Moreover, with regular communications and frequent milestones, project teams can proactively maintain the enthusiasm and interest of the business stakeholder—helping to ensure that ongoing project funding continues.

This example speaks to many of the essential principles of the Agile Master Data Management approach:

- Cooperation among business stakeholders and IT
- Keeping projects simple while growing them incrementally
- Frequent and regular iterations producing rapid results
- Knowledge transfer

In and of themselves, these principles are standard best practices for business application and IT projects—so, what uniquely defines Agile Master Data Management?

## Agile Master Data Management Defined

The most important metric, and sign of success of any approach to MDM, is an operational MDM hub that addresses the key business requirements and has been deployed in a reasonable amount of time to meet expectations. To achieve this, a complete understanding of the data, ROI opportunities, system architecture and data governance processes are mandatory. With preliminary information-gathering, planning and agreement on these areas, you can confidently uncover project risk and misconceptions in advance while being able to adjust as needed.

The Agile Master Data Management methodology encompasses four preliminary stages (or assessments), followed by a prototype, and finally an operational MDM hub. Time to production is especially rapid when the first three assessments are conducted in parallel, as they need not be sequential.

**Data Governance Assessment:** This stage identifies the current state and desired future state, and the gaps between the two in your data governance policies, procedures and roles. Deliverables detail all data flows, people involved, processes, procedures and dependencies while revealing all issues identified by business owners, data consumers, data owners and data stewards. Any supporting processes or technology solutions that facilitate the data governance process are discussed and compared to data governance best practices. The data governance assessment presents you with a data governance roadmap that is both realistic and able to be implemented to address your organizational challenges.

**Architecture Assessment:** During this stage, you gain a clear understanding of current architecture and systems infrastructure in place as well as your company's ability to absorb an MDM hub. The first step is to identify the current state architecture—platforms, databases, systems and data sources in place. With this information in hand and general concepts of the future state goals, the next step is to develop a vision of the future state architecture. By analyzing the architectural components and their role in the MDM solution, and by identifying areas of improvement along with a gap analysis, recommendations for how to attain the future state are presented. The architecture assessment further highlights areas of risk and concern and indicates areas of cost savings and architectural improvements.

**Data Assessment:** During this stage you gain a clear understanding of the current data landscape, areas of risk, concerns and opportunities for improvement. Some of the most pressing data questions to be answered at this stage include:

- What are the key issues in the data?
- How is data created and maintained and by whom?
- What is the quality of the data and what is the desired objective?
- What are the data flows?
- How is the data related and what are the dependencies?

The output of the data assessment includes recommendations for approaches to address data quality and completeness based both on business priorities and expected business value. Recommendations may include, among others, how to streamline existing efforts and processes and what technology is required to achieve the desired outcomes.

**Alignment Workshop:** One of the greatest challenges in any MDM initiative is to align different, and sometimes competing organizations that need to work in concert towards a shared long-term vision. By conducting an alignment workshop, you can achieve this by leveraging the results of the prior assessments (data governance, architecture and data) and identifying and quantifying the value of MDM to the company across multiple ROI levers such as operational costs, sales improvement and reduced IT expenditures. Other strategic or soft benefits can also be measured such as those resulting from streamlining mergers and acquisitions integration, improving customer satisfaction and avoiding regulatory fines.

The alignment workshop identifies common goals across departments and lines of business, prioritizes the impact areas and quick wins and creates a continual “buy-in” process among stakeholders. The workshop helps the project teams to think globally about the organization and the MDM effort and act locally to prioritize projects.

**Prototyping:** Once the four assessments are complete, it is time to begin prototyping. The primary goal of the prototype is to rapidly demonstrate a functional MDM hub. By rapidly delivering a prototype, risks and miscommunications are uncovered early to ensure that the solution most closely aligns with business goals. The close involvement from the earlier stages from both business and IT also helps secure a higher level of ownership. There are three critical success factors to the prototype:

- Business requirements are clearly understood
- Data quality and data management issues are identified
- Business and IT are willing to work in an iterative way to build the MDM hub

At the completion of the prototype stage, you will have a working, business-value focused prototype—one that is designed and built with early business involvement ensuring that what they thought they wanted is in fact what was delivered. Since the prototype can be thought of as moving the design, build and rules-tuning to occur earlier in the traditional project phase (and thereby uncovering risk earlier), the prototype has in effect leapfrogged a traditional IT project approach.

The final stage is to move the working prototype into production. It is important to remember that during prototype development, other parts of the project are still progressing forward, such as ETL design, job scheduling design and real-time services design. When the prototype joins the mainstream project in system and user acceptance testing, the meshing of these components is critical to ensuring success from an overall infrastructure and platform perspective. In this way, Agile Master Data Management ensures a clear distinction for systems integration activities to help you focus on the Agile Master Data Management approach, and more importantly the business objectives.

### Agile Master Data Management Benefits

**Start smart:** Begin your MDM initiative with the projects that deliver on business value.

**Reduce project risk:** Clear linkage with business objectives and technology requirements among stakeholders assures delivery of the right solution to the right people at the right time.

**Optimize costs and time:** With a clearly defined roadmap based on thorough assessment workshops, rework and miscommunications are minimized.

**Work towards a common goal:** Communication plans and business value assessments ensure project scope, schedule and phases are prioritized and aligned with business stakeholders.

## Summary

How does Agile Master Data Management ensure success? Success comes from blending the data analysis and the identification of the business objectives, along with organizational alignment and prioritization based on business value. The other success factor is having access to the requisite skills to work with leading MDM technologies.

Further, organizations who are either already underway with or about to embark upon an MDM initiative need to recognize and accommodate the nature of MDM as a cross-function and cross-geography initiative. Agile Master Data Management facilitates the definition of global goals with local objectives, ensures stakeholder alignment, produces rapid proof points and deploys master data solutions in increments. More specifically, it comprises data governance, data quality and systems architecture assessments, and alignment among stakeholders. The ability to rapidly develop a prototype validates those requirements and provides proof points to the users.

An agile approach to MDM is proving to benefit organizations with not only more efficient usage of their scarce resources; but more importantly, increased operational efficiencies, improved customer satisfaction and improved competitive advantage. Remember, even if you have already started an MDM project, it is never too late to adopt Agile Master Data Management.

## About the Author



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## About First San Francisco Partners

### Aligning the Enterprise for Master Data Management

A specialized professional services firm, First San Francisco Partners focuses on helping market leading companies understand and benefit from master data management (MDM). We excel in working with line of business owners, systems managers, operational executives and other stakeholders to make informed decisions about MDM planning and organizational alignment. With our knowledgeable guidance you will learn how to reduce risks, contain costs and anticipate problems before they can occur.

First San Francisco Partners approaches MDM from a vendor-neutral and technology agnostic standpoint. When you work with First San Francisco Partners, you can be certain that we will not steer you toward a particular solution set or engage you in open-ended consulting relationships. We deliver time to value. Our clients learn how to jump-start their MDM initiatives and achieve the greatest possible return on their investments in systems, services and software.

Founded by a core group of technology executives with more than forty years of domain experience and enterprise level data integration and MDM experience, First San Francisco Partners brings a rare combination of hands-on expertise and strategic thought leadership. The firm is made up - of MDM experts who have served in senior level capacities at leading firms in the data management, enterprise software and consulting sectors.

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