Implementing Enterprise MDM

Enterprise MDM can be a powerful lever in business transformation programs, but only when companies establish a dedicated center of excellence that aligns all MDM projects toward one common goal and helps overcome hurdles along the way.

Executive Summary

With the advent of next-generation, multidomain master data management (MDM), it is now easier than ever to consolidate and standardize business processes and technologies in large and medium enterprises. It has long been acknowledged that the true benefits of MDM can be realized only when it is implemented across the enterprise and multiple lines of businesses, covering enterprise-wide data domains (customer, product, vendor, location, etc.), multiple use cases (operational, analytical, reporting, etc.) and multiple business areas (sales, marketing, risk and compliance, service, etc.).

This white paper reveals why an enterprise MDM, coupled with a comprehensive and integrated data governance environment, can more easily facilitate seamless information flow from the front office to the middle office to the back office, and vice versa. This, in turn, can act as a powerful lever in the overall business transformation exercise.

Business Transformation through Enterprise MDM

An uncertain economic climate and increasing consolidation of business processes and technologies across the globe have resulted in many large and medium organizations embarking on business transformation exercises to remain nimble and competitive. The following hypothetical scenario depicts a typical challenge faced by many organizations today:

Alpha-Beta was formed a year back, following the merger of two competing companies, Alpha and Beta. Following the first board meeting of the newly created entity, the CIO was asked to develop a medium-term IT-business transformation roadmap to address the following issues:

• Economies of scale in operations following the merger of Alpha and Beta.
• Synergies for cross-sell and up-sell among existing customers of the now defunct individual companies.
• Legacy system integration and streamlining of the application landscape of the new company.
• Compliance and regulatory reporting for the new company.

While the CIO was happy that the executive leadership of Alpha-Beta acknowledged the importance of IT in solving the most important business transformation challenges at his company, he was particularly disturbed by a comment in the meeting that “data would be owned and maintained by IT.”
Through his years of experience running IT-business transformation programs at other large and medium-sized companies, the CIO knows that data drives business decisions and is the lifeblood of an organization. An integral part of any business transformation exercise is the consolidation of data and the creation of a “gold copy,” or a single version of the truth, of the most critical data attributes (master data) that are referenced by many of the systems used to inform operational decisions. An MDM program, therefore, should act as the lever driving a business transformation exercise and not a scaffold supporting the transformation. As a result, the processes and data management around this transformation should be owned as much by business as by IT.

MDM has not always been as comprehensive in solving enterprise-wide business transformation problems as it has become over the past couple of years. Both process and technology consolidations have been improved with the advent of multidomain MDM — which is a leap ahead of the traditional approach of a single-domain, single-business-unit, single-location MDM.

While multi-domain MDM is certainly more effective than its predecessors, it is not an over-the-counter panacea for all business transformations. There are many challenges to be addressed before an organization can effectively use a multi-domain MDM solution to drive its business transformation program. However, it certainly can be a lever, and a very strong lever at that, if used effectively.

Multi-Domain MDM Challenges
As the emergence of multidomain MDM has broadened its scope and applicability, it has also created certain challenges:

- **Defining MDM utilities in business language and linking them to business processes is challenging.** It is equally difficult to measure process improvements in terms of business KPIs and convert these metrics into dollars; hence, calculating the ROI of an MDM program is still a puzzle to most organizations.

- **The time and cost of an MDM program** is often considered to be a hindrance to organizations that have a short-term view of managing their data.

- **Organizations that have realized the importance of MDM** for their long-term business efficiencies are often unsure of how to undertake the actual journey.

- **Organizations that have started the implementation** sooner or later realize that executing an enterprise MDM initiative is much more difficult and challenging than it looks on paper.

- **Organizations that have multiple MDM projects in parallel** often lack a formal body to govern different programs, resulting in duplicate efforts, wasted resources, conflicts of interest, etc.

- **Organizations that have avoided these roadblocks** may still find it easier said than done to get employees to treat information as an asset and key stakeholders to see MDM as a business enabler.

Understanding the Challenges
Overcoming these hurdles requires a holistic approach. It is not just about data management; it is about the culture inculcated in the enterprise. To understand the benefits that enterprise MDM entails, we need to view MDM through a very different prism:

- The scope of MDM efforts is often cross-functional, if not cross-enterprise.

- Due to the significant cost of entry from a software and services standpoint, MDM will return the greatest value when leveraging economies of scale.

- The greater the adoption of an MDM solution across multiple and disparate parts of the organization, the lower the cost of ownership and the higher the ROI that can be realized.

- An MDM “program” is rarely a one-time, do-it-and-forget-it implementation — it is an enterprise-wide initiative typically involving multiple waves of implementation and not merely a project.

- It is important for stakeholders to understand that MDM is a culture and not just a technology. For the success of long-term MDM programs, and to take in stride the organizational changes and challenges, it is important to imbibe the MDM culture.

- To achieve the desired end-state for the MDM program, it is also important to lay out the long-term strategic roadmap and discover how different MDM projects align with related initiatives for achieving this end-state.
The organization needs self-sustaining and in-house data governance, process governance and PMO capabilities to kick-start the MDM program and to grow and reach the desired end-state. To do this, it is important to manage information as an asset.

Addressing the Challenges

Understanding the new challenges around multidomain MDM is only the first step toward addressing the underlying issues. Implementing an enterprise MDM program is a totally different ballgame for organizations accustomed to entity-specific and location-specific MDM projects. There are many underlying risks, and to mitigate these risks, we need to keep a few best practices and critical success factors in mind, including the following:

- Always define the entire program in multiple projects, and define each project in smaller phases.
- Start small:
  - Pick a line of business and business drivers.
  - Consider the easiest implementation style that delivers business value.
  - Consider real-time continuous conversion instead of full batch load.
  - Consider full batch load without cleanse/merge/match/link. Provide cleanse/merge/match/link/load capabilities on-demand after the system goes live.
- Involve business users throughout the program, from planning to execution.
- Enlist senior-level executive support and, if required, leverage their buy-in to get things moving.
- Implement data governance; define/refine corporate policies, standards and business rules.
- Be prepared to change business processes for better outcomes.
- Measure data quality issues and successes.
- Communicate, communicate, communicate.
- Enlist experienced MDM implementers – people with a holistic view.
- Choose the right MDM solution that can handle current and future needs: Multidomain MDM.

Our experience tells us that MDM is not just another IT project – it is often as complicated and as risky as an ERP project. But if it is successful, the rewards will be equally big. To accomplish this requires a structured approach and the establishment of an organization within an organization – a dedicated team that lives, breathes and dreams MDM throughout the rollout. This dedicated team will form an MDM center of excellence for the various MDM projects within the organization; align and prioritize them toward one common goal; and be prepared to overcome the hurdles along the way.

Establishing an MDM CoE

An MDM CoE is a dedicated organization that ensures the MDM program does not suffer the fate of so many other complex, big-budget IT implementation projects that start on a high note but fizzle due to the lack of requisite support and guidance from the business.

An MDM CoE accomplishes the following:

- Provides MDM as a service to achieve early and tangible returns on investment.
- Provides end-to-end MDM support in terms of the people, process and technology necessary to meet the MDM vision of an organization.
- Delivers a shared business service that provides guidance around MDM discovery, strategy, roadmap, governance and implementation based on industry best practices through a one-stop-shop approach.
- Ensures that different mini-MDM projects in an organization are all in sync and gains business buy-in at every stage of the program. This requires a governance body that comprises all stakeholders to oversee the execution and appraise the effectiveness of the MDM program.

CoE Objectives

Among many other long-term strategic benefits, an MDM CoE will help meet the following objectives:

- Lay out the long-term strategic roadmap/desired MDM end-state for the organization, as well as how different MDM projects would align to meet this end-state.
- Socialize the enterprise MDM vision within the organization to realize maximum business value.
• Ensure that data governance, process governance and PMO guidelines are in place to help achieve these long-term objectives.
• Make sure the data infrastructure architecture can accommodate acquisitions.
• Embrace MDM as a shared services platform, which will help the business achieve its long-term MDM vision.
• Set up the process through which stakeholders across the organization can request MDM services and benefit from MDM.
• Support consistent and successful delivery of all MDM applications across the organization.
• Create guidelines for architecture, technology and processes, keeping in view the “big picture.”
• Build organizational MDM capabilities through mentoring, training and direct project support.
• Reduce total cost of development and time-to-market through identification, development and maintenance of reusable MDM assets.
• Ensure that all prerequisites are met prior to the next project kick-off to facilitate smooth execution of subsequent MDM projects.
• Ensure that the learning and best practices from every project are scaled up and disseminated across the MDM program.

MDM CoE Target Operating Model

Figure 1 describes the standard MDM CoE target operating model. This model is built with a combination of a factory model and a set of governance forums. The factory portion contributes the operational efficiencies of utilizing attributes such as repeatability and reusability of artifacts and utilization of the same resource for the same task (i.e., leveraging the learning curve and standardization of templates, as well as establishing standard operating processes). The factory also
utilizes the core-flexi model to balance resource requirements.

Each of the governance forums, meanwhile, has specific objectives and is formed with relevant people from inside and outside the MDM CoE. The outcome of one forum can be used as an input for others. Each forum has its own agenda, activities, SLAs, workflows and governance body. Generally, any process – such as new project on-boarding, change approval, release planning, etc. – goes through the appropriate governance forums, and every forum must act on a certain part (or parts) of the processes.

There are also a few processes, such as architecture decision-making, that are completed in their entirety by a particular forum. The overall objectives of multiple forums include:

- **Identifying and segregating the important activities and decision-making processes** and providing a focused forum for relevant people to act on them.
- **Speeding the entire process** by creating separate forums that can work in parallel on different issues and facilitate agile decision-making.
- **Bringing the right level of agility** and governance by federation.

**MDM Factory Model**

The MDM factory model includes four components:

1. **A set of specialized shops within the factory.**
   The shops are logically placed in sequence, in a production-like line. The examples of various shops include requirements analysis, design and architecture, development, etc. Each shop has a group of resources trained on the particular subject and methodology, as well as ready-to-use templates, tools and accelerators to carry out the tasks in that shop.

2. **The factory production line.** All shops are placed in a logical sequence so the output of one shop can be the input of the next shop. The shops can also work on parallel tasks. The production line works as it would within a manufacturing company. For example, at an automobile company, the final output of the production line is an assembled car, and the first input is raw material. Similarly, the first input in the MDM factory is production scope and business requirements, and the final output is the software implemented in the live environment.

The entire production of the whole project must pass through all the shops over the course of a few months; all subsequent changes also must go through all the shops in the course of a few weeks. The objective of the production line is to increase the efficiency of a factory by delivering output(s) every day.

When MDM is in full swing, there will be multiple MDM projects going on in parallel, and different projects will be at different stages of production. In other words, some projects may be in the requirements phase, while others may be in the development or testing phases. This means that shops need to work concurrently and sequence their tasks. There may also be a scenario where a single shop must handle testing for multiple projects. The varying workloads of every shop at different points in time is taken care of by the core-flexi model.

3. **Competency centers, such as a knowledge repository, product, tools, domain expertise, etc.** These competency centers maintain and share their knowledge of processes, methodologies, tools and best practices in their respective areas. Any of the shops within the governance forum can use the services of these competency centers. The competency centers provide the best-in-class practices of MDM program management and delivery.

4. **Shared services, such as infrastructure support and production support.** These shared services work with all the shops at various stages of the project lifecycle and provide necessary support in areas such as infrastructure planning, on-boarding, management, product roll-out, bug fixing, etc. The shared services model ensures that the support in these areas is consistent, continuous and standard for all the groups. It also ensures that issues are quickly resolved through a single service group. This streamlines the overall governance process.

**Governance Forum**

There are four major governance forums:

- **The MDM steering committee** provides oversight and helps monitor and manage the enterprise MDM program from tactical and strategic standpoints.
- **The MDM change management board** details an effective MDM change management process.
to reduce the risks and costs associated with the changes during the enterprise MDM rollout. It helps the rollout deliver an increased and early ROI by reducing both the time-to-value and time-to-market of an enterprise MDM rollout.

• The MDM architecture advisory board works closely with the organization to gather the exact requirements and lay out a roadmap for the rollout of MDM across the enterprise. It will also address key rollout issues.

• The MDM program and release management board ensures that the enterprise MDM initiative is sufficiently detailed to support the creation of a feasible and measurable plan with a specific timeline. The board is also responsible for creating a proper plan and support structure on the operational procedures to ensure that the organization is prepared for a seamless execution of its MDM rollouts.

MDM CoE Champion: Key to an Enterprise MDM Program’s Success

The MDM CoE is headed by an MDM champion: the person promoting MDM throughout the organization. Typically, this person is responsible for business or technology solutions across the organization and can influence enterprise-level decision-making and participate in various senior-level business and technology forums. The MDM champion isn’t just a cog in the MDM wheel of an enterprise but a pivot around which the end-to-end MDM program rolls out.

Since the MDM CoE champion plays a pivotal role in the success of an enterprise MDM rollout, this individual should have the following responsibilities:

• Socialize the concept of MDM in the organization.
• Develop the enterprise MDM vision and establish the MDM objective.
• Obtain senior management sponsorship and build the business case for MDM.
• Provide leadership in building the MDM strategy and roadmap.
• Facilitate the process of selecting the MDM software, consulting and implementation partner.
• Participate in various enterprise-level technology roadmaps, architecture strategy, technology council and other project board meetings to understand the requirements and position the MDM solution.
• Generate demand for MDM, secure funds and oversee the MDM solution delivery.
• Participate in governance council meetings for enterprise-level MDM program governance.
Tips for Delivering a Successful Enterprise MDM Solution

As discussed earlier, a successful enterprise MDM implementation requires thorough groundwork and a set of clearly defined steps to overcome the inevitable hurdles. While many challenges are specific to an organization, some of the “must-have” steps to ensure enterprise MDM success include:

• Clarify what you mean by an MDM solution to business and IT: Set the MDM vision.
  ➢ MDM requirements can be operational (i.e., running the business) or analytical (i.e., reporting on the business), or they can be used for combining scenarios or use cases.
  ➢ Focus on business-oriented scenarios and align the MDM vision with your organization’s short-term and long-term business objectives.

• Gain high-level MDM program sponsorship and business buy-in:
  ➢ Set revenue/cost management goals for the program.
  ➢ Focus on business-oriented scenarios.
  ➢ Obtain several sponsors throughout the organization.

• Build a business case for enterprise MDM:
  ➢ Demonstrate where revenue enhancements will come from and how costs can be reduced when establishing the business case for MDM.
  ➢ Demonstrate tangible returns from MDM.
  ➢ Look for business opportunities across the value chain.

• Deliver value early and often, and view MDM as part of a larger enterprise information management strategy:
  ➢ Design and implement an MDM program in small phases to deliver business value early and at every phase and ask for funding in phases.
  ➢ Identify the cross-functional and cross-departmental use cases that will deliver business value to multiple operations.

• Align the technology architecture of your MDM implementation with your long-term information infrastructure strategy:
  ➢ Build toward the long-term vision and strategy; don’t settle for an approach that is overly tactical and assembled in disconnected, multiple phases.
  ➢ Adopt various architectural styles during the phased implementation and build the end-state MDM architecture to meet the enterprise information architecture requirements.

• Identify the first MDM business project sponsor and then create a pipeline of projects:
  ➢ Carefully identify the first program to launch MDM in the organization; the success of MDM in the enterprise will largely depend on the success of the first project.
  ➢ Socialize MDM within the organization and identify ongoing and future projects that can benefit from MDM.

• Build a shared service model of MDM to maximize the benefits of MDM and share costs among divisions:
  ➢ Institutionalize MDM in the organization by creating an MDM CoE.
  ➢ Identify an MDM champion and create a long-term MDM roadmap.

A Way Forward

The hypothetical dilemma faced by the CIO at Alpha-Beta is commonplace at many large and medium-sized organizations, typically in the consolidation and rationalization phase of their business and IT evolution. As organizations evolve and grow, they find it increasingly difficult to manage their master data. As bad data drives bad business decisions, managing data effectively is critical to driving larger business transformation initiatives, since any business process would involve master data in some form or another.

Managing master data at an enterprise level is tricky, and it calls for an enterprise MDM program. However, due to the very nature of an MDM program, it is extremely difficult to anticipate and address the challenges if organizations jump into a series of implementations without the proper groundwork. Therefore, before embarking on an ambitious enterprise MDM program, it is
important to lay the foundation through a robust CoE structure and build upon it through multiple iterations to ensure rollout success.

Pulling off a true enterprise-level MDM-enabled business transformation is as much about immaculate planning as it is about laying a strong CoE foundation and finding the right MDM champion. This is not easy, but it can be done if the aforementioned steps are faithfully followed. Figure 3 lays out cases where we have helped our clients succeed with their enterprise MDM initiatives.

## MDM Initiatives in Action

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<tr>
<th>Project Type</th>
<th>Client Descriptions</th>
<th>Highlights</th>
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| MDM CoE for Merchant Master  | World’s largest provider of merchant processing services                             | - Set up MDM CoE and made it operational with ongoing activities related to governance of MDM, which led to implementing best practices, planning, data governance guide and performance considerations.  
- MDM CoE provided process definitions, data ownership rules, change management, release management, execution methodology and acceptance criteria.  
- This ensured seamless adoption of MDM across the organization.                                          |
| MDM CoE for Strategic Program Management | A leading provider of prescription and related healthcare services | - Implemented MDM CoE, which helped in monitoring and managing the MDM program from both a tactical and strategic standpoint.  
- Provided overall supervision and helped monitor and manage MDM program from both a tactical and strategic standpoint.  
- Prepared an exact roadmap for rollout, addressing key rollout issues.  
- Helped create new competencies and support for MDM processes and services to ensure a smooth and high-quality delivery. |
| MDM CoE for Long-Term Strategic Roadmap | A leading manufacturing and retailing corporation of construction material, glass and abrasives | - Implemented MDM CoE, which laid out the long-term strategic roadmap to ensure data governance, process governance and PMO guidelines are in place.  
- Organizational capabilities built into MDM through mentoring, training and direct project support.  
- Total cost of development and total time to market reduced through identification, development and maintenance of reusable MDM assets. |
| Scalable DQ CoE              | A leading UK banking company                                                        | - Implemented data quality (DQ) CoE, which provided the basic data quality service and acted as a complete, robust and scalable model, providing a gamut of other specialized services to address the need of increasing data quality requirements.  
- Prepared proof of concept and final report for priority services.  
- DQ CoE monitored and managed engagements and ensured successful DQ processes and services implementation. |

Figure 3
Footnotes

1 Multidomain MDM is a solution for mastering multiple data domains and managing their inter-relationships.


4 The core-flexi model involves a core team in every shop, as well as an extended team. The core team is the permanent team, and its resources remain in the shop throughout the program to complete their work. Based on workload, the resources for the extended team are augmented by the larger CoE. Every shop has a bootcamp to quickly on-board new resources in the extended team and then deploy them on projects. By leveraging the core-flexi model, the resource ramp-up and ramp-down is rigorously managed to optimize resource utilization.

About the Authors

Souparna Giri is the Lead Business Consultant and Senior Manager in Cognizant’s MDM Strategic Advisory Services team, with over 10 years of experience in the IT field. His expertise spans MDM strategy, assessment and roadmap creation; business process modeling; data governance; business process understanding and feasibility studies; vendor evaluation; gap analysis; requirements analysis; functional specification design; and MDM implementation and program governance. Souparna has rich domain experience in CRM and MDM within the banking and financial services industry. He has a bachelor’s degree in mechanical engineering from Bengal Engineering College and an M.B.A. in marketing from Great Lakes Institute of Management. Souparna can be reached at Souparna.Giri@cognizant.com.

Vaibhav Kumar is a Senior Consultant in Cognizant’s MDM Strategic Advisory Services team, with over five years of experience in the strategic IT consulting industry. Vaibhav has rich experience in strategizing MDM and data governance roadmaps and rollouts in the retail, manufacturing, media and entertainment and hospitality industries and has worked at multiple client locations in the UK and Continental Europe. He holds a bachelor’s degree in electrical and electronics engineering from Manipal Institute of Technology, Manipal, and an M.B.A. in strategy and marketing from the Indian Institute of Management, Calcutta. He can be reached at Vaibhav.Kumar3@cognizant.com.

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