SEVEN BEST PRACTICES FOR MASTER DATA MANAGEMENT SYSTEMS

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ABSTRACT

// RESPEC presents useful technical information about master data management (MDM) planning and ways for organizations to control and use their data to optimize analysis, reporting, operations, and processes. This white paper is structured with seven best practices that organizations need when starting an MDM implementation. Discover the mechanisms and associated benefits of improving your organization's results from professionals at RESPEC, an Oracle Gold Partner.

INTRODUCTION

RESPEC supports large and small enterprises with challenges in data management. MDM has been available for at least a decade in various implementations and, at its heart, MDM is a way for organizations to control and use their data to optimize analysis, reporting, operations, and processes. Unfortunately, most MDM implementations never achieve their capabilities because many organizations do not follow seven crucial best practices.

If your organization is just starting MDM implementation, RESPEC can help you identify ways to create the best foundation. If you are already running MDM, these practices will help you find mechanisms to improve results.

1 Business leadership, not corporate IT, must own Master Data Management projects.

2 Identify the business' purpose for using Master Data Management.

3 Ensure that the team is complete and identified at the beginning of the process.

4 All applicable processes, datasets, and sources must be identified.

5 Identify the data owners and associated data governance rules.

6 Identify the data standards.

7 Identify the record deduplication rules and methods.

SEVEN BEST PRACTICES FOR MASTER DATA MANAGEMENT

As a powerful method of linking all critical data to one master file, RESPEC's MDM system is a business solution that defines, manages, standardizes, and integrates an organization's critical data to eliminate errors and redundancy, and works from an authoritative common point of reference.

MDM objectives include collecting, aggregating, matching, consolidating, performing quality-assurance on, and distributing data to ensure a common understanding across an enterprise. With MDM, one version of the truth is determined to maintain the consistency, accuracy, and control of the company's data. Streamlined data sharing among all users results in quality improvement for the whole organization. MDM also plays an important role in multiple system architectures, platforms, and applications.

RESPEC's award-winning professionals use the following seven best practices to help clients start an MDM or improve their results.

1

Business leadership, not corporate IT, must own Master Data Management projects.

// Implementing an MDM system is a business problem and needs to be owned and directed by the business. MDMs systems can be complex, but your corporate IT team is truly only a technology advisor and implements systems on behalf of the business. This applies whether or not your IT team consists of in-house employees, external vendors, consultants, and/or MDM experts. MDM is all about improved business information and associated returns and optimizations for the business and, no matter how good or knowledgeable your corporate IT team, the business leadership must own and lead the effort. Only the business can identify the critical processes, owners, and effective data that will improve their returns.

2

Identify the business' purpose for using Master Data Management.

// MDM systems have multiple potential roles and functions within a business. At the lowest end, they are a point of consolidation and reference to use when reporting and standardizing business analytics. MDM systems can also be a reference hub for other systems and can become an integral component to your other systems. For example, using a single MDM system to maintain all of the core reference data for customers will allow other systems to obtain customer information from the single MDM system. The key is identifying the data that requires an MDM system (e.g., customer information) and the systems that are the masters for specific data elements.

The system's purpose and vision are the purview of the business owner. Defining the near-term purpose and long-term vision for the MDM system is crucial. If the goal is to create a reporting and analytics system, different architectures and needs will be needed for the business. Identifying the purpose and intended outputs are important, including identifying who will use the data, when the data will be used, and under what circumstances the data will be used. Some of these outputs can be determined by asking the following questions:

» Does the MDM system need its own user interface?

» Will the MDM system provide its outputs through existing reporting and analytics tools?

» Will the MDM system provide its outputs to other existing or new systems?

As with the other best practices, documenting and communicating this information across the team and throughout the affected parts of the organization are critical.

3

Ensure that the team is complete and identified at the beginning of the process.

// Because implementing a MDM system is inherently a business solution, the MDM implementation affects the business processes. Ensure that a good business analyst or a business process engineer is included on the team to identify the processes and systems involved. The MDM implementation may also lead to opportunities for process improvement or reengineering.

RESPEC's team takes the "scare" out of MDM implementation and helps clients embrace it. The MDM system and its results should be independent (but supportive) of the specific processes, so process improvements can be implemented on an as-needed basis while the MDM system is in operation. Changes to the MDM system (such as additional data elements to be tracked or outputs and integrations to be implemented) may be required but should not change its core functionality.

Although business leadership must own MDM projects, a good IT team with knowledge of the relevant infrastructure, systems, and data will also be required. The IT professional will need to understand MDM technologies and implementations and recommend the best solution that can be supported by your organization for your needs and infrastructure.

4

All applicable processes, datasets, and sources must be identified.

// An MDM system will be focused on a particular business need or set of needs. The business must define the needs and identify all of the business processes that affect those needs. While this best practice may cross internal organizational boundaries, involving the correct indivituals and ensuring that they understand the goals at the beginning of the project is beneficial; however, this best practice may not always be possible and additional business divisions that impact the data can be brought in later. Identifying all applicable processes, datasets, and sources at the beginning of the project decreases the complexity of operations.

Imagine an organization that wants an MDM system for their customers and purchased services. If five divisions of an organization identify customers and collect customer information, all five divisions should be involved in defining the customer data that will be collected, the standards and practices that will be followed, and the individuals who will collect the data. If only three divisions are involved, the other two divisions could still be collecting data and inputting it into the MDM system, but those two divisions will not follow the same standards or practices. Using different standards or practices results in poor or suspect data in the MDM system, and these data will likely need to be cleansed and/or deduplicated, which will require the business processes and rules to be reanalyzed. While this process can be completed after the MDM system is implemented, the overall costs, schedules, and operations will increase, even though most organizations are implementing MDM systems to improve operations and gain efficiencies. With all of the affected divisions involved, the business divisions will need to identify the processes, data sources, and datasets that will be included in the MDM system to achieve the company's goal.

5

Identify the data owners and associated data governance rules.

// After all of the datasets, data sources, and associated business processes are known, implementing a data governance approach needs to occur. For each dataset and data source, an owner—meaning an individual who is empowered by the business to make decisions about that dataset and data source—needs to be identified. Owners of the individual data elements within the datasets and data sources will also likely be required. Data owners must understand the business processes that create the individual data elements, datasets, and data sources

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If data include the customer information with the name, address, telephone number, and email address, the name, address, and telephone number combinations need to be kept in sync. Whoever owns the database of customer information must control how and when these data are changed; however, only email addresses may be collected for marketing communications. The marketing owner may then own the email address and control how and when it is changed.

The ownerships and associated restrictions and controls need to be documented and communicated for all of the affected businesses. While this communication may not change how business is conducted or rules are implemented in their specific systems, this communication does define the requirements for how the MDM system will address each of these data elements and sources.

6 Identify the data standards.

// After all of the data sources, datasets, business processes, and associated owners are identified, the standards that will be used for data entering the MDM system will need to established. Propagating these standards to your source systems and those systems' data-entry layers can prevent data that violate these standards from entering your system; however, in many cases, this method is not possible. These standards must be implemented as part of the processes that will load and update the MDM and include basic items such as formatting a name (e.g., title case, all caps, or first then last), and any validations (e.g., address, telephone, and email) that will be performed.

Identifying the allowed exceptions will also be necessary, and these exceptions should be very specific. For example, if the address validation is allowed to be violated, business processes that are allowed to violate the address validation must be identified and the circumstances in which the violation is allowed also needs to be determined. The exception would include a method for identifying these unvalidated addresses in the MDM system and the outputs using these data. Be cautious with exceptions because, if most of your processes and circumstances would generate nonvalidated addresses, the owners will need to determine whether or not the address validation exception applies.

For each of these standards, a business reason for the standard should be determined. The corporate IT team can provide recommended standardizations and rules, but the business must ensure that a reason exists for each standard. The owner of the MDM system must communicate the reasons for each standard to their staff members and manage the associated business processes in the future.

If the organization performs many customer mailings and has a large cost for returned mail, then the address validation standard may be very useful and cost effective with a high return on investment. However, if the organization rarely sends out mailings, the address validation investment may be largely unneeded and could be an allowed exception.

For the information that is most valuable to your organization, do not be frugal on the validations or associated validation tools. A good validation tool that verifies the format and validates that the information is accurate and current is highly worthwhile for your most valuable information.

7 Identify the record deduplication rules and methods.

// Almost every system and organization have duplicate records. Duplicate records may occur within a single system, between systems within operational silos, across systems in different operations' silos, or with all of these options. Regardless of how many data and operational silos will be integrated into the MDM system, deduplicating records will likely be necessary before implementing the MDM system.

After the information, data sources, and validations have been defined for the MDM data, the sources of potential duplicate records will be visible. The team will then identify these potential sources of duplicate data.

If your organization has a Customer Relationship Management (CRM) system, an inventory management system, and a shipping system, the customers' names and addresses could be located in at least two of the three systems. Identifying these sources and the potential duplicate items (e.g., name and address) and understanding how to deduplicate (or merge) these records will be crucial. The previously defined ownership constraints should apply in this area here but may not be entirely sufficient.

The CRM system owner may have defined that the CRM owns the name, and the shipping system owner defined that their system owns the shipping address, which may be sufficient for the records. However, the team would need to verify these data to ensure that no data would invalidate this rule. If multiple names are associated with a shipping address or multiple records occur for the same name in the CRM, determining exactly how to apply the deduplication rules to the records will be necessary.

For deduplication, avoid skimping on tools that could help the MDM achieve its goals. Although only data validation and deduplication have been addressed here, data quality is also critical to the proper operation and results from an MDM system. Data validation and deduplication are just two of the data-cleansing processes and tools that will likely be needed as part of the MDM system. The extent of this need can best be determined by a data quality assessment after these seven best practices have been completed.

CONCLUSION

Poorly integrated master databases cause serious operational issues and slowdowns. RESPEC's award-winning professional team is ready to help your organization apply these seven best practices to your MDM process to improve your enterprise. We have extensive experience in using MDM systems to protect your operational efficiency, customer base, decision support, security, and compliance.

ABOUT RESPEC

Founded in 1969, RESPEC is a global leader in geoscience, engineering, data, and integrated technology solutions for major industry sectors. Award-winning collaborators in full-service data and information system solutions, RESPEC is an Oracle Gold Partner that specializes in Billing and Revenue Management (BRM), Business Process Management (BPM), Business Intelligence (BI), and Custom Software Development. We are known for our focus on client satisfaction, and our professional team helps clients get the most from their business systems by:

» Integrating and enhancing client's existing enterprise software applications.

» Implementing master data management systems.

» Consolidating revenue management solutions.

» Developing custom software.

» Unifying business processes.

» Creating integrated technology solutions.

As leading-edge innovators in mission-critical technology solutions, RESPEC transforms organizations for peak performance. We bridge the gap between technology and business processes to integrate every function of the company, so that our client's companies work smoothly and efficiently. RESPEC's mission is to conduct business with the highest integrity, employ the best standards of practice, fully understand our client's needs, and serve as a trusted technology resource.