

Master data management and data governance: Establishing the right implementation approach

EXECUTIVE SUMMARY

As company data needs become more complex with the introduction of diversified cloud applications which share information across ecosystems, the need for data governance solutions has intensified. Companies everywhere are looking for solutions that bring together people, process and technology to ensure data integrity and reliability. From a technology perspective, the foundation of good data governance begins with a clear and effective master data management (MDM) system which supports the governance process and empowers people to manage the data they own.

As the marketplace for MDM software has become crowded with products that span everything from end-to-end enterprise data management systems to lightweight data quality oversight, companies looking for options often have difficulty weighing cost, features and system compatibility.

For enterprise organizations with large data governance technology budgets, the plethora of available features and options can cloud the overall objectives of an MDM project, leading to heavy implementation costs and long timelines. For middle market and smaller companies, the perception that cost will bar them from implementing software that will provide enough features and impact is prevalent, therefore many opt to hope that process alone will get the job done. So how do companies ensure that an MDM system implementation supports a data governance journey while providing the right balance of needs versus wants to support their use cases?

Having a valued advisor with a balance of industry experience, technical knowledge and software provider relationships can be a key to ensuring the road map to MDM is informed by best practices for the needs of an organization. From enterprise to mid-sized companies, not all governance needs will be the same. Mapping the use cases to a tactical plan will provide assurance that, in the end, data-driven organizations can leverage information in the most efficient and effective manner.

Data governance technology platforms: The foundation of good governance

In any data organization, everything starts at the master data domain level. Systems such as ERP, CRM and EPM are all driven by a base set of key master data objects including customer, item, account and employee. For organizations that don't have proper controls, visibility or communication, irregularities in data that have compiled over years are quickly brought to light. This lack of proper data management often manifests itself when projects come along such as artificial intelligence, machine learning or data lake implementations, or finance transformations. Having proper controls and stewardship processes to handle master data is the basis for good data governance and will lead to more consistent and reliable transactional data infrastructure.

Once master data standards, processes and controls are implemented, visibility into data processes, key performance indicators (KPIs) and data transfer logic can ensure that both transactional data and the key reporting metrics on which they are based provide auditable reconciliation points which validate the consistency and validity of all data used by the company.

Finally, being able to trace and track stewardship and remediation processes, as well as provide audit trail details for the who, what, why, where and when of data changes across an ecosystem are key for an organization to be able to call itself a fully governed data-driven company.

For any company that is embarking on any data transformative project, now is a perfect time to consider incorporating data management platforms such as MDM, data governance process automation tools or unified data governance solutions.

UNDERSTAND THE ORGANIZATION: PEOPLE, PROCESS AND TECHNOLOGY

When an organization is looking to create a best-in-class governance framework powered by today's leading technology infrastructure products, it must assess the people, process and technology which the system and its components will be overseeing. Each plays a significant role in right-sizing the solution so tools support the processes and skill sets available to the business.

People within the organization must have the skills to manage, run and administer data policies within the chosen system.

Below are some key questions to start those conversations:

- **Is the organization more business- or IT-balanced?** This can often determine where the administration must focus. Tools needing less technical aptitude so as to not overwhelm an already overloaded IT organization will quickly move to the front of the line.
- **What is the current skill level of employees?** In many organizations, users have high IT acumen and implementing more complicated solutions will have less transition time. Doing base implementations and building services like reporting or integrations on top to support business functions may be more attractive for budget-conscious organizations.
- **Does the organization have a governance hierarchy?** To provide support and guidance for the principles to be implemented in a technology solution, a governance hierarchy made up of senior-level leadership, data owners, and functional and technical data stewards should be in place to drive the rules, processes and implementation expectations. Even if a defined structure is not in place, understanding the key stakeholders, and assigning the right resources to key governance roles should be a high priority.
- **Has the organization defined or understood the proper governance roles?** For those organizations that believe they have identified the key resources, many lack a data governance organizational chart with a structured definition for key roles. Those resources need to understand the responsibilities and expectations of roles throughout the hierarchy, not just where they may sit. Defining these roles will also help with the alignment of process workflows, many of which will be automated through the technologies chosen.

Process will define the desired outcomes and features of a data governance solution. Understanding the process will give visibility into gaps that cause data inaccuracies.

- **Has the organization defined the needed processes around data governance?** Understanding the end-to-end flow of master and transactional data from inception

to sunset allows for a targeted technology selection. An organization should understand key data processes such as where data domains originate from, what systems are utilizing the data, what manipulation is done and how issues are remediated. Defining the process upfront can save time and money, as well as uncover the technologies needed to support the underlying issues.

- **What processes have the most gaps or opportunities to be improved?** If it isn't broke don't fix it—this can be a good way to keep costs down or determine which data management systems need to be in play. In addition, this approach can help when budget-conscious companies scope a technology implementation, or there is a lengthy road map where needs can change over time.

Technology used in the current architecture will often provide some clarity on the best options for vendor selections.

- **Does the organization have a cloud or on-premises technology stack?** Most companies are in the process of or are making a cloud journey. However, if on-premises architecture is still a large component of the infrastructure, then options that are non-cloud based could limit possibilities or any cloud-based systems would need to have the right connections and capabilities to access legacy systems.
- **How disparate are the data systems in the organization's ecosystem?** Centralization of master data domains is the key tenet of data governance. For companies with a wide range of systems, the right data governance tool must be able to handle complexity through a combination of native connectors and application programming interface (API) managers to access those target systems. Having a data governance tool that also can serve as an integration platform to centralize the management, especially in heavily IT-dependent businesses, can alter the perspective when it comes to vendor selection.
- **Where will technology not solve the problems?** Any time an evaluation of technology occurs, gaps that need human intervention or oversight may be identified. While evaluating the current technology stack, along with new solutions, understanding the human elements that may be needed will be key to successful resource alignment and adoption.

HOW USE CASES DRIVE IMPLEMENTATION FACTORS

Once an organization understands the people, processes and technologies which will be managed by the data governance system, it must then analyze specific use cases to ensure the implementation road map is aligned to data governance goals. Most use cases are tied to one of three areas: data processing, data visibility, and process tracking and monitoring.

DATA PROCESSING USE CASES

When implementing a data governance technology stack, one of the main functions is the processing of data origination and changes across an ecosystem. A quality technology solution will house the rules that all data should adhere to and ensure that changes to the data are being driven by systems which are qualified to make such changes. Additionally, the data processing will quarantine or stop data which does not adhere to the rules and notify proper owners for review. All the decision making and rule analysis should be automated and able to be controlled by a centralized entity.

Organizations with a consistent technology infrastructure

For organizations that use enterprise software with a consistent data architecture, staying within that vendor's space can often provide the most effective and efficient ways to provide the oversight and management of data.

Pros:

- Pricing can be combined with software solutions
- Integration with major systems is seamless
- Often the skill gaps are smaller because tools are built on the same platforms, meaning less training and less support issues

Cons:

- Being locked into a software vendor tied to multiple systems can make it more difficult to decouple if future changes warrant
- Enterprise systems tend to be on the pricier side

Most of the large enterprise software vendors can provide services or technology to support centralization of data within their own architecture. For those who can't, a preferred provider is usually available that they work closely with. Understanding these synergies can help with ensuring the evaluation of the best software option for the environment.

Organizations with disparate technology infrastructure

For organizations with a wide variety of software vendors that hold and manage data, it is important to choose a provider that can deliver services across several service types.

Pros:

- Going tech agnostic allows much more flexibility when adding systems to the infrastructure
- Finding a technology provider with a wide breadth of uses allows for centralization of code, rules and administration which is often an issue with disparate technology infrastructures
- Utilizing a third-party vendor opens the door to many technology platforms, vendors and partners, which can provide more options for functionality that may be limited in a single-vendor platform
- In cases where some vendors provide solutions that satisfy multiple use cases or proficiencies other than data automation, there is also opportunity for a hybrid approach with multiple providers to combine the best of both functions

Cons:

- Pricing is often at the consumption and connection level, so the more connectors needed the more costly the solution can be
- Limiting the vendor selection is often a greater task as the current landscape provides a plethora of options
- With a hybrid option, it is imperative to not over engineer and risk complicating governance infrastructure where management and insights become burdensome to the IT organizations

When going to a third-party vendor, it is often necessary to have customizations, so having a relationship with a consultant or vendor who can provide the knowledge and experience in all the technologies can often ensure a more successful technology implementation. While this additional insight may increase the price of implementation, the training and added value provide return on investment (ROI) on the back end, and organizations can be sure they have the proper support.

DATA VISIBILITY USE CASES

Data management systems can also provide needed visibility to the movement of data across diverse architectures. Managing data without this insight can often lead to inconsistencies because of processes and flows that are outside of integration or synchronization frameworks. MDM can also provide much needed internal and external audit documentation support.

For an organization in heavily regulated industries like banking, health care and insurance, visibility into data lineage, process flows and transformations is a key component to MDM and data management systems being implemented. Not all data management systems provide in-depth, easily accessible and robust reporting around data catalogs, dictionaries and lineage. Auditors are not always interested in the technical details, but rather data accounting to ensure financials and other operational reporting are consistent and reliable. In these cases, there are options to go with integration services that also contain reporting and visibility needed to support auditing.

Heavily audited organizations where data is contained to small subsets of systems

Some organizations choose to focus on data that is widely scrutinized for audit purposes during the selection process for data management systems. The focus is more on the management of data to reporting cubes, data lakes or data warehouses which produce executive and street-level information. For these use cases, the integration features are not always the best determining factor for system selection, but visibility is key. There is a give and take when decoupling the management of data flows and focusing on data visibility and reporting. For this reason, these use cases are targeted and should be leveraged only when integration is not a key factor in management.

Pros:

- Pricing for systems without integration can be more affordable
- By automating much of the audit data aggregation there is an uptick in efficiency for determining and remediating data issues in reporting

Cons:

- A lack of integrations means management is often split between business and IT, resulting in a lack of communication plans and process controls
- Enterprise systems tend to be more expensive

Organizations with various software vendors

For organizations with a wide variety of software vendors that hold and manage data, choosing a provider who can offer services across several service types is important.

Pros:

- Going tech agnostic allows much more flexibility when adding systems to the infrastructure
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Cons:

- Pricing is often at the consumption and connection level, so the more connectors needed the pricier the solution can be

PROCESS TRACKING AND MONITORING USE CASES

If an organization has technology which monitors integrations, and provides reporting and analysis of key controls, has a centralized source of truth and has visibility into the data repositories with reporting KPIs specifically designed for quality control, the last use case for analysis is proper process visibility and oversight. This classification includes an auditable trail of decision making, task management and sign off artifacts to ensure processes are in line with expected results, oversight and accountability.

Organizations that can leverage internal IT ticketing systems

Most organizations with internal IT departments have a ticketing system used to remediate IT help desk issues. In these cases, the best route is to create instances or ticket types that can route data governance-related issues to the data owners and stewards. The ticketing systems should be able to be configured to provide all the same functions but align to a governance process flow which is designed by the data governance oversight committee or councils.

Pros:

- Ease of adoption, as most users are already trained on the system
- No use for a brand-new implementation, providing a quicker path to Day One usage
- Implementation cost is often lower, as the skill set, subscriptions and other costs are already paid for or are far less than onboarding of new software

Cons:

- Decoupling the data governance process flows is key to ensuring that no overlap occurs between the IT help desk processes and data governance-focused task management
- Some IT help desk-focused software won't provide reporting that could be helpful to a data governance flow and third-party reporting would be needed or analysis needs would need to be aligned to available reporting

Often, due to the ease of implementation, this is a good pilot program which can be implemented to vet new data governance processes and assess for gaps and success. The flexibility means being able to change more process flow steps on the fly, fill needs quickly and be agile in the overall approach and learning for new implementations.

Organizations that want process management included in the data management system

Many enterprise-level MDM and data governance software provides stewardship workflow management as part of their packages. In cases where organizations feel alignment of the process should be done within the framework of the data governance technology stack, well-thought-out processes should be designed so that during the vendor selection, specific criteria can be given to vendors for demonstration and evaluation.

Pros:

- These software packages can provide some value outside of governance processes such as agile project management, risk and controls oversight, and internal controls reporting
- Robust automation features cut down on manual processes, meeting cadence needs and providing other people-focused tasks which can often be associated with greater or faster ROI
- Some software providers offer a modular approach to implementation which can often be scaled with process development so a tiered approach can be taken or services can be added on that may not be needed today but are considered for the future

Cons:

- Often, these features are part of enterprise software packages which could mean higher price points for adoptions
- A well-thought-out process should be defined and agreed to before evaluation, so lead time for agreement on vendor decisions can take longer
- If a well-defined process is not established, then misses in the evaluation of software could occur that lead to process gap remediation

Although a cost-benefit analysis is often needed and more prep work necessary around the direction for these options, the wide array of service offerings and features often make this a good approach. It can force organizations to understand the data governance process, which makes the implementation more successful in the long run.

HOW TO RIGHT-SIZE A DATA GOVERNANCE PLATFORM IMPLEMENTATION THROUGH PEOPLE, PROCESS AND TECHNOLOGY

Any time an organization embarks on a data governance journey, whether it is through organization and people alignment, change management process refinement or technology implementation to ensure the harmonization and standardization of data, it is important to right-size the effort. Making sure that an organization is making the right decisions on what is needed as opposed to letting outside influences intervene can be a daunting task.

By taking organizational factors into consideration along with use cases, creating a checklist is an easy and efficient way to provide the key insights into what is needed and a proper road map to implementing data governance. If an organization is starting a journey or even if it's in the midst, having a proper understanding of the needs will ensure proper alignment of the solution.

Scenario	Needs	Impact
IT-based organization	✓	High
Business-based organization		
Technical skills available	✓	Low
Internal audit needs		
External audit needs	✓	High
Data quality issues		
Data visibility issues	✓	Medium

Once a needs checklist has been completed, mapping those needs to the people, process and technologies needed to close gaps and prioritize the implementation will provide an implementation road map which is clear, focused and targeted to the overall business needs and long-term vision.

Q1	Q2	Q3	Q4
→			
Process definition Ticketing systems	→		
	Data visibility BI reporting	→	
		Organizational change Change management	→
			Master data upgrade MDM implementation

Being able to focus on the specific goals will ensure that each task involved with aligning the governance priorities supports the next, allowing for allotting of proper budgeting and resourcing to support the success of the overall implementation. Knowing what is needed and what is not needed will also filter out the time and costs associated with on-boarding or evaluating vendors that won't make meaningful changes.

Having a trusted advisor or outside perspective in all areas can also help reduce biases and ensure that current-state goals are not clouding long-term visions. For smaller organizations that lack experience or for larger firms that are burdened with multiple internal priorities, outside support can also enable best practices and limited noise to be the driver of the ecosystem design.

In conclusion, for those who are championing a new governance path, or those in the midst of a digital transformation, being able to clearly articulate the needs versus the wants and the vision versus individual goals will propel any organization to a highly efficient and effectively governed data environment. It will also set the people within an organization up for success by having the right tools, process and visibility to make decisions, process tasks and evaluate the company's data health.

RSM US LLP can provide a right-sized approach to data governance technology solutions based on the latest industry standards and data governance practices, while aligning with an organization's specific needs, capabilities and budgets.

For more information on developing an effective MDM and data governance strategy, [visit our website](#).

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