

How Technology Enables Data Governance

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How Technology Enables Data Governance

INTRODUCTION

What do master data management (MDM) and data governance have in common? More than both being in the top of Chief Information Officers' and Compliance Officers' minds, they also help address poor data quality. The cost of poor data governance (DG) is hidden in inefficient business processes and excessive data management activities and, more importantly in the inability to use information for strategic business advantage. These all translate into lost opportunities to increase profitability – it is no wonder they are garnering so much attention.

MDM is the technical foundation of data management while data governance is its facilitating and supporting framework. More precisely, DG is a convergence of people, technology and processes that helps a business to manage the availability, utilization and security of their data assets. A sound data governance strategy not only aligns business and IT to address data issues; but also, defines data ownership and policies, data quality processes, decision rights and escalation procedures. Equally, MDM is an important component of a data governance strategy as it serves as the technical foundation providing a single, reliable enterprise-view of data while facilitating auditing, reporting and compliance.

DG specifically helps establish strategy, objectives and policy to effectively manage corporate data by specifying accountability on data and its related processes including decision rights. For example, DG defines who owns the data; who creates records; who can update them; and also, who arbitrates decisions when data management disagreements arise.

DATA AS AN ENTERPRISE ASSET

Managing data as an enterprise asset means tracking, protecting and measuring it with the intention to treat it in the same way as any other enterprise asset. Since a DG program consists of the interrelations between strategy, standards, policies and communication it provides the necessary support for an organization to fully leverage their data. For instance, the DG team is responsible for creating and enforcing policies on data security and data access rights. They are also the primary group responsible for monitoring and measuring data quality, movement, availability and accuracy. In this way, instituting a comprehensive data governance program helps an organization actively manage their data as an enterprise asset.

The assumption is that this process will result in added business value, rather than simply imposing ineffective bureaucracy. The business value derived from a sound DG program comes from improved productivity, data quality, context and usability. Each of these positively impacts an organization's ability to improve, among other things: customer experience, supply chain and operational efficiencies, marketing efficacy and adherence to regulations.

For example, by reliably and continuously measuring customer data quality, an organization can achieve and maintain a clean, consolidated, deduplicated and shared customer base. This, in turn, increases their ability to sell more products and services by being able to tailor product and service offerings to meet

“Data quality software without data governance wastes valuable time and resources, and is destined to deliver results below expectations.”

Information Managers: Deliver
Trusted Data With a Focus On
Data Quality,

Rob Karel, Forrester Research

customers' needs. With improved data quality, an organization is better able to reduce costs and increase revenue through productivity improvements and streamlined business processes. In addition, clean, accurate and well-managed customer and account master data facilitates improved reporting, decision making and regulatory compliance.

Finally, DG enables organizations to fully unveil the benefit of having implemented MDM, thereby leveraging technology to manage data as an asset. MDM allows business stakeholders to effectively manage their data; yet, its efficacy requires organizational support. That is where a comprehensive DG program enables an enterprise to adopt the data management policies and processes put in place that in turn amplify the benefits of MDM. It is only with data governance that an organization can fully deliver the value of MDM and expose the business value of its enterprise data.

DATA GOVERNANCE CHALLENGES

Organizations tend to manage data by adopting ad-hoc data governance policies that over time root themselves in day-to-day data management operations. Data management is further hampered by a lack of a central place to control day-to-day data management activities (i.e. an MDM hub), a lack of clear representation of data operations and an inability to continuously measure data quality at the attribute level. These approaches reduce an organization's ability to foresee and effectively plan for data management issues in light of a growing reliance on the proliferation of sales, service, product, finance and marketing data from myriad sources.

Despite companies now recognizing the importance of their enterprise data, they still have a difficult time effectively managing it as an asset. Some of those challenges arise from a lack of business involvement and sponsorship, an inability to identify data owners and encourage accountability, or a reluctance to share data.

Business involvement and executive level sponsorship is one of the biggest challenges in governing data. DG tends to be a cross-functional program that no individual organization wants to or should independently own, which makes finding an executive sponsor difficult. Executive commitment is also difficult because DG is often perceived as an esoteric issue, rather than as a program that delivers measured business value. Consequently, few people are raising their hands to run a program that may be perceived as delivering little value.

However, executive and senior business leadership involvement is essential to the success of DG because it helps to identify data owners while holding people accountable to the agreed upon standards, policies and processes. Executive involvement also helps to manage, arbitrate and resolve difficult cross-departmental decisions, many of which typically arise while deploying an MDM technology platform. Executive sponsorship helps ensure that the DG program is aligned with corporate goals and objectives, while facilitating the sharing of data across departments by breaking down organizational barriers and encouraging the view of data as a shared asset.

"Most companies do not combine data governance and MDM when getting started, so they fall short in addressing the people and process issues that cause data quality issues in the first place. Oracle's Data Governance Manager simplifies and streamlines data stewardship tasks and is a core tool for improving data quality - a key to MDM success."

Kelle O'Neal, Managing Director,
First San Francisco Partners LLC.

Executive commitment needs to be earned by demonstrating specific business improvements, and it needs to be maintained with an effective communication process. This is where measurement and monitoring comes into play. Without understanding how the data is improving over time, and what those improvements mean to the business, sponsorship and commitment will evaporate. An effective governance program regularly measures data improvements and communicates to the business how those improvements are helping to inform better decisions, increase revenue, reduce costs, be more competitive and comply with regulations. Technology plays a significant role in the measurement process.

DATA GOVERNANCE PROGRAM COMPONENTS

How does an organization put all of this into action? The success of a DG program relies on several requisite steps, whether your data governance initiative spans the entire organization or any one line of business or division. Let us take a closer look at five essential components to launching a DG program.

Successful data governance programs institute 6 critical components: strategy, policies and processes, organization, measurement and monitoring, a communication plan along with the technology needed to make it all work.

Comprehensive Data Governance Program Components



Figure 1. Components of a Data Governance program

1. Strategy

A data governance strategy articulates the vision, mission, objectives and guiding principles of the overall program. These tend to be unified into an over-arching charter. The charter defines the mission, objectives and guiding principles of the program. A mission statement should communicate the primary purpose of the data governance program and act as a reference for all future decisions. More importantly, it should tie the goals of the program to the corporate strategy and align people, process and technology to common objectives. The charter should also define the scope for the data governance standards, roles and responsibilities.

In this way, the program will more readily gain buy-in and the required resources needed to ensure its success. And by tying the mission statement to the corporate strategy, it can readily be adopted across the organization. Ultimately, the charter will help your organization make faster, more consistent decisions and enforce them – a primary role of data governance.

Included within strategy is the operating model. The operating model forms the basis for the data governance organizational structure and ensures the proper oversight and expertise are in place to resolve data related challenges as they arise. The operating model further outlines ownership and accountability, along with decision rights and controls. It defines who gets to make decisions concerning the data such as: Who has the authority to add new customer records? What information needs to be verified, and by what process? How long is data retained or archived and what is the audit process?

The operating model further defines the metrics an organization wishes to track, along with measurement and monitoring processes. Metrics should reflect the mission and objectives of the data governance program. For example, if a key program objective were to improve customer data quality, then a possible metric would be the number of duplicate records or the accuracy of billing and shipping information. In this instance, the number of duplicate customer records could be easily monitored using a data quality or MDM solution; however, measuring the accuracy of billing and shipping information is less clear. Data may be compared to a benchmark, such as a feed from a data service provider, or it can be validated manually, else monitored by the amount of returned mail. Regardless of the chosen metrics, it is critical to communicate the agreed upon metrics and performance against identified goals. **Everyone involved with data governance should know what success looks like, and how it is being measured.**

2. Organization

A data governance organization and its structure should be defined to align with your company's organizational hierarchy and resources. Consequently, how this manifests itself in each organization is slightly different and unique. Most importantly, it should consist of two main bodies – an executive group or Data Leadership Council, and an operating committee or Data Governance Committee. The former is the executive arm and is empowered to approve, fund, prioritize and recommend projects to address data and business needs. Typically, stakeholders included in the Data Leadership Council are Senior Vice President and Vice President levels within marketing, sales, business systems and the geographic regions. This group is responsible for data governance across lines of business and across the organization.

On the other hand, the Data Governance Committee is the working and analysis body of the organization. Project teams are formed from its members, with assistance from subject matter experts when needed. They are comprised of the following roles: data strategist, data steward, data model lead and data governance lead. The roles and responsibilities of each member should be documented and communicated across the data governance organization.

3. Policies and Procedures

The data governance policies and procedures are documented guidelines, processes and tasks that provide direction to the data stewards and other data managers. Policies and procedures that are well documented are valuable as these are the tools that lay the groundwork for data quality and enterprise-wide standards and efficiencies. The ability of an organization to leverage data, its most important

asset, and make informed strategic decisions is dependent on the quality of the foundation of documentation, procedures and policy.

More specifically, policies flow out of the data governance program objectives and goals. Whereas, processes and procedures are the actual means through which policies are enforced and measured. The nature and number of data governance processes put in place depend largely on the scope of the organizational requirements and any associated MDM initiative. Typically, data governance policies span those related to: data asset management; naming standards; data access, security and protection; match and merge rules; conflict resolution; and principles for authorization.

4. Measurement and Monitoring

Measurement and monitoring is another critical part of a comprehensive data governance program in that it helps to track adherence to policies and processes while encouraging accountability through better management of personnel and resources. Measurement provides the mandatory feedback to ensure that the data governance program continues to be relevant and add value to the organization - it is the glue that holds everything together.

Technology plays an integral role in measurement and monitoring. For example, data profiling and data quality tools help track changes and improvements to data over time. Other available tools have scorecarding capability to help track and manage the relevant key performance indicator's an organization defines as required benchmarks. Within this framework, an MDM hub provides a single place in which to monitor and report on master data.

5. Communications Framework

A key responsibility of the data governance function is communication. The communications framework is a guideline and process that drives stakeholder awareness and helps maintain momentum and participation. Some of the important questions that should be addressed when creating a communications framework relate to individual updates: To whom do we need to communicate? What qualitative and quantitative information is important to them? How frequently do they need to be updated? Who should deliver the information? What is the most effective method of delivery?

A communication plan outlines the details of each communication vehicle for each stakeholder group within the organization. Key elements of a communication plan include key meetings, frequency, audience, format and contact information. It is important to communicate the original plan and all updates, including communicating among the different project teams. In addition, data governance communication should have a formal distribution process and be made available via a company portal/intranet or newsletter so that everyone has ready access to program updates, metrics and accomplishments.

“Governance has emerged as a critical success factor for an enterprise-wide information management initiative. Now, technology can greatly facilitate data stewards’ daily tasks and help data governance teams fulfill their data management goals.”

Kelle O’Neal, Managing Director,
First San Francisco Partners LLC.

6. Technology Enables Data Governance

Each of these critical data governance program components: strategy, organization, policies and procedures, measurement and monitoring, and communications, are each enabled and enhanced by the use of technology – with MDM providing the technical foundation for data governance.

MDM inherently addresses data quality, data structure, data architecture, master data management and data security. Where data governance defines and standardizes master data definitions, MDM instantiates them within business processes so they stick. Where data governance prioritizes data management efforts to derive the greatest business value, MDM profiles the data to allow for data analysis.

Similarly, metrics and monitoring tools provided by MDM allow DG teams to track their progress, identify issues and continually improve performance. Where data auditing capabilities provide insight into how the data is created and corrupted, MDM propagates data fixes throughout the enterprise.

These and other tactical examples of how data governance is enabled by technology are best understood in context of the data governance technology framework.

DATA GOVERNANCE TECHNOLOGY FRAMEWORK

As mentioned, technology can help address the inherent challenges of data governance. Specifically, technology can help:

- **Define** and communicate data definitions, policies and business rules
- **Operate** consolidate, share and cleanse hub functions
- **Monitor** hub operations and track sources of bad data in the enterprise
- **Fix** data issues proactively and help tune data quality rules

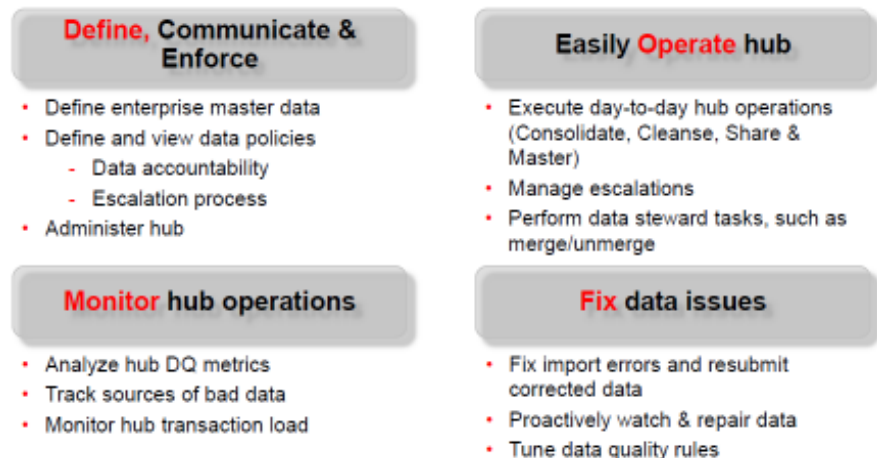


Figure 2. Technology requirements for Data Governance

Oracle Data Governance Manager was designed to simplify and streamline data stewardship tasks and is a core tool for improving data quality - a key to MDM success.

Oracle Data Governance Manager

Oracle Data Governance Manager (DGM) is designed specifically around the aforementioned requirements. It provides an intuitive graphical user interface as the single management destination for data stewards and business users alike. Using DGM, data stewards can easily perform stewardship operations on cross-departmental data in a centralized place. The DG overseeing group can also manage the data stewards' performance and workloads and generate data quality assessments to monitor and demonstrate progress for continued executive support.

DGM serves as a place to **define** and set enterprise master data policies and to **monitor** and **fix** data issues. It also helps **operate** the different functions in the MDM data lifecycle: Consolidate, Master, Cleanse, Share and Govern, and is designed around these functions, giving easy access to them, as shown in Figure 2 below.

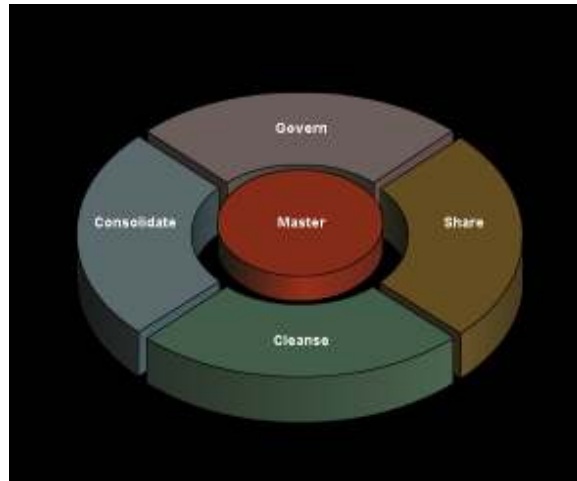
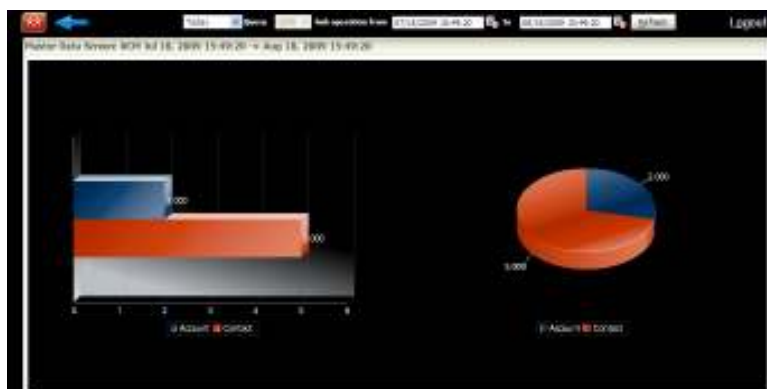


Figure 3: DGM Homepage

Master

The Master section shows the number of records that have been created and/or updated within a given period of time. DGM shows results for contacts and/or accounts and allowing for drill-down to individual records. This information gives insight into the activity that has taken place in the MDM hub.



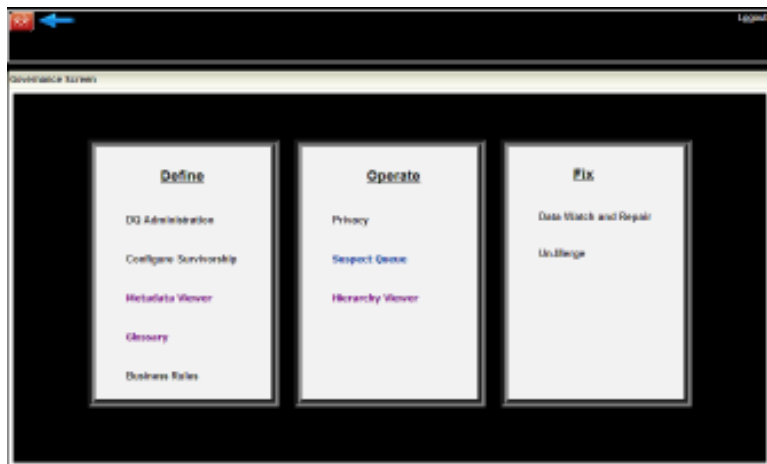


Figure 5: Govern feature in DGM

Oracle Data Governance Manager: Vision

DGM is envisioned as the single destination to store and define data definitions for an enterprise’s master entities, as well as the rules that govern them. This vision includes the following:

- Connect DGM to other applications in the Oracle MDM product family
- Single unified tool to administer data quality and business rules
- Expand data quality metrics to measure accuracy, conformity, integrity and duplication
- Introduce capabilities to monitor real-time activity, such as match and fetch requests that come into the MDM hub, and publish events that are activated by the MDM hub.

SUMMARY

Oracle Data Governance Manager is a new technology designed as a core capability within Oracle’s Master Data Management products. MDM is the technical foundation of data management while data governance is the overall business management framework that facilitates and supports technology implementations and ensures alignment with corporate strategy. In this context, DGM is designed to facilitate data quality and data stewardship processes for the data steward. It provides an intuitive graphical user interface that acts as the single management destination and reference for data stewards and business users to manage customer data throughout various stages of the lifecycle. By enabling and improving data governance processes companies benefit from reduced data management costs, business process improvements and more importantly the ability to use information for strategic business advantage.

“Once you define the scope, objectives, roles, and responsibilities that will frame your data governance initiative, you can begin the long, painful, but extremely valuable process of truly making your data a corporate asset.”

Information Managers:
 Deliver Trusted Data With a
 Focus On Data Quality
 Rob Karel, Forrester Research

ORACLE®



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