Enabling the Agile Enterprise:
Driving Digital Transformation via Data Governance

Enterprise Data Governance for the Data-Driven Enterprise
An MDM Institute White Paper
As society becomes increasingly data-driven, the role of the CFO is becoming more strategic and influential in the drive to adapt to the new networked economy’s challenging environment. The transition from “rote accountant” to “trusted digital change agent” produces opportunities for the CFO to be more strategic, to assist the company with its transformation, to streamline the business, and to help execute key programs such as M&A to increase the stock price.

CFOs must show relevance beyond their historical back-office image and emerge as a collaborative force. This enables their enterprises to jumpstart the transformation process in becoming an “agile enterprise” in a more inclusive manner that bridges the classic information and functional silos.

This year, the trending topic for CxOs is “Enterprise Data Governance.” Sound familiar? Clearly, without Enterprise Data Governance processes, an enterprise can’t manage its business as an agile data-driven entity—let alone meet increasingly stringent government compliance directives.

In short, you’d be hard pressed this year to locate a CxO at a large, public company who hasn’t pronounced Enterprise Data Governance as a transformational program that pivots the company business model to render the company flexible and agile (rather than the way we did business a decade ago).

Clearly, the new “data-driven enterprise” mandates a healthy dose of Enterprise Data Governance to be cost-effective, measurable, transparent and sustainable.

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Executive Summary

Constantly changing regulations. Margin pressure. Industry consolidation. Nimble data-driven competitors picking off high-margin markets. Data is central to contemporary data-driven businesses and mandates a business-relevant strategy for the governance and growth of such vital assets.

In their quest to become an agile enterprise, organizations must plan for ongoing business transformation as society and business models become increasingly digital (data-driven). Clearly, Chief Finance Officers, Chief Data Officers, CIOs and other business leaders must put the governance of information assets at the center of corporate IT investment strategies.

The management of such enterprise dimensions is known as “Data Governance.” Savvy CxOs at market-leading businesses do not consider Data Governance to be a set of rigid controls. Instead, they understand that Data Governance frameworks (for example, master data models and related governance processes) ultimately enable their organizational models to be flexible enough to respond to any change—whether it is an ongoing merger and acquisition mode, the merging of brick and mortar with web commerce, or other such fundamental business transformations.

Because Data Governance is increasingly mandated as a strategic initiative involving multiple functions across the enterprise, organizations are increasingly turning towards an overarching layer of Data Governance to manage and coordinate the enterprise’s business dimensions. Such “Enterprise Data Governance” is the future key to enabling both business and IT to manage change effectively as enterprises strive to adapt to the networked economy and become data-driven businesses.

Key Business Initiatives

Given the maxim that “change is the only constant,” to provision an IT infrastructure that is agile to meet the needs of 21st-century business transformation programs, such change must be planned to accommodate both IT and business complexity.

Enterprise Data Governance is the means to that end by facilitating the formulation of policies to optimize, secure, and take advantage of information as an enterprise asset.
Business Transformations are not unprecedented in the history of enterprise evolution; they have always happened.

Data Governance is, in effect, the binding connective tissue that insures the enterprise against regulatory risks, financial restatements, compliance lapses, and financial security law violations (and resultant fines).

#1 – Business Transformation
To differentiate themselves, companies are constantly evolving to create new value through product and process innovation, new business models that address constraints from new regulations, or an underserved market, and as a result, help capture a larger share of wallet. Companies that transform themselves are most likely to survive nimble competitors, technology disruption, and changing customer preferences as the world economies move to a customer-to-business (C2B) “pull” model, rather than B2C “push” model of the recent decades. To succeed with the lowest risk, an iterative approach based upon in-process learning and refinement is more likely to bear results. In order to cope, enterprises need the ability to reorganize themselves, adapt business processes to new operating and business models, simplify and streamline IT systems to be more agile, and identify specific programs to support the larger transformation initiative.

A company’s ability to introduce changes in a controlled manner is greatly enhanced by performing adequate scenario analysis (including pro-forma impact analysis and applying future structure changes to historical data sets) to secure business leadership buy-in. This approach can help companies accomplish a “minimum viable transformation” in the face of limited resources and debilitating constraints.

#2 – Governance, Risk Management & Compliance
Without a formal governance-operating model, Finance leaders are vulnerable to quality issues in management and financial reporting, resulting in public embarrassment, regulatory scrutiny, and financial restatements. In addition, regulatory agencies like the SEC are increasingly taking enterprises to task by setting expectations regarding reporting transparency and turnaround times, compliance reviews, and enormous penalties for skirting sanctions. Corporate Finance departments thus rely upon Governance, Risk Management and Compliance (GRC) initiatives to mitigate such risks. In the digital economy, compliance with privacy and financial laws is challenged by the feverishly fast evolution of business models, product and service innovation, and customer expectations.

Data Governance enables policy-driven discipline and collaborative consensus building among cross-functional stakeholders to build a shared business perspective. It also promotes joint ownership and accountability across departments and lines of business that are essential for trustworthy reporting and effective decision-making.
#3 – Mergers & Acquisitions (M&A)
Due diligence is a part of any merger, acquisition or demutualization. M&A advance teams are sent in to look at finances, sales pipelines, product portfolios, and inventory assets. Such due diligence looks for opportunities to cut costs through synergies promised to the joint stockholder bases. Additionally, M&A due diligence may include scenario analysis and modeling of target information assets, alongside corporate structures into which they may map or be integrated. Creating a pre-event understanding of these relationships provides critical mechanisms for visualizing synergies, identifying overlap, and developing a data-driven understanding of the combined entities. Post event, the same scenarios may be adapted to accelerate integration and support coexistence architectures where necessary to provide a tailored coupling of assets that may be integrated at the optimal pace desired by decision makers.

#4 – “Operationalizing” Business Analytics
In the data-driven future with Big Data emerging as a key factor, such business analytics need to become increasingly inserted into the operations, not just the decision-making, of the enterprise. An agile enterprise requires Data Governance to facilitate the delivery of key financial measures, related hierarchies, mappings, and reporting attributes. Examples include a financial data warehouse to drive enterprise performance management initiatives, financial planning and budgeting, financial consolidation, profitability, cost management, tax reporting, and more. The next generation of such Enterprise Performance Management (EPM) capabilities will need to incorporate the “new” business models for C2B and (increasingly) real-time “operationalization” of such analytics. This is in line with the business requirement to be more predictive and prescriptive for both front office (sales and marketing) and back office (supply chain, accounting). Trustworthy reporting and effective decision-making mandate collaboration among enterprise stakeholders to build agreement around the enterprise dimensions and business metrics.

Business analytics and intelligence can be “operationalized” via the provisioning of a governance process that guarantees dimension conformance. Clearly, Data Governance in the context of business analytics and reporting involves delivering referential integrity across separate yet related business perspectives. This ensures that when changes occur, they are aligned across:

+ Marketing view of revenues by market segment
+ Sales operation view across territories
+ Product line owner view of detailed product hierarchy
+ CFO view across the various geographic regions

Key Takeaways
An Enterprise Data Governance program should include a governing body (steering committee or council), an agreed common set of procedures, and a plan to communicate and execute those procedures across the master data domains to be governed—typically Finance, Sales and Marketing (Customers), and Products (Products, Locations & Suppliers).
For many (if not most) finance departments, their existing governance processes are becoming obsolete. As a result, the above four key business initiatives are driving the next generation of Data Governance capabilities and are increasingly part of an Enterprise Data Governance program in the Global 5000–size enterprise.

What Key Capabilities does Enterprise Data Governance Provide?

Most enterprises approach Data Governance with a focus on data quality and policy management, regarding various data aspects such as accuracy, consistency, completeness, and lifecycle.

This is natural, given the immense and dynamic challenges of managing a singular data domain (such as Customer, Product or Supplier) across a complex data infrastructure with diverse semantics, data structures and competing use cases. At enterprise IT level, this becomes even more pronounced due to ongoing complexities of co-existence, system consolidations, migrations and upgrades.

Concomitantly, IT organizations have been perennially criticized for slow response to rapidly evolving business requirements—even more so in the networked economy as new channels, new product lines, and new business models such as Customer-to-Business (C2B) evolve at a pace unknown to prior generations of IT executives and managers.

An Enterprise Data Governance solution may appear to simply be a set of organizational processes and data flows to facilitate the definition and execution of cross-department information flows. However, there are key software technology advances that need to be embedded in any robust Data Governance solution if that solution is to provide both the necessary flexibility and rigor mandated by the current and next-generation operational business models.

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**Figure 3-**

**Key Capabilities Enabling Enterprise Data Governance**

1. Policy-driven data foundation
2. Enterprise hierarchy relationships
3. Standard metrics & measurements
4. Collaborative workflows
5. Cloud integration & enablement

*Source: The MDM Institute*

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#1 – Policy-Driven Data Foundation

Organizations must be able to model multiple business entities—both separately and together across multiple constituencies. Rather than a singular
The Need to master enterprise data assets is fundamental to the business rationale for Enterprise Data Governance.

The line-of-business user needs to be able to get the view that is most relevant to them, in order to do their day-to-day job. But they must also have peace of mind that their view is part of the overarching “shared” business model. This shared model provides “referential integrity in the face of change.” An individual’s changes will not break downstream (or upstream) policies or rules, nor will it insure conformant behaviors across the enterprise. Rich versioning that includes “as is,” “as was” and “should be” views that can be generated on demand help lower the maintenance burden of historical data sets within one’s data warehouse—thus delivering greater agility, and lower costs to make these business intelligence programs viable. Because data and relationships change over time, it is necessary to be able to recreate past and projected future master data relationships. Such “time machine” history functions are required in not just Finance master data but also Customer and Product master data.

#2 – Enterprise Hierarchy Relationships
The modeling of complex relationships is essential to the enterprise understanding itself, its business operation models, and to be able to help complex business decisions. Examples of decisions include multi-dimensional questions such as “how are we doing in this particular sales channel, in this particular geography, in this particular micro customer segment?” These complex relationships can typically be modeled in the form of agreed hierarchies and taxonomies that are manifested as conformed dimensions in an enterprise’s various reporting tiers. Along with reporting structures, these hierarchies also drive entity attribution, attribute inheritance, calculation and aggregation methods, data granularity rationalization, and data mappings.

#3 – Standard Metrics & Measurements
For application alignment and rationalized reporting and analytics, the impact of poor or non-existent standard metrics and measurements is profound. Errors in such reference data can ripple outwards and adversely affect quality of master data in each domain, which in turn affects quality in all dependent transactional and analytical systems. Because reference data is used to drive key business processes and application logic, errors in reference data can have major negative and multiplicative business impacts.

#4 – Collaborative Workflows
Much of the industry discussions around Data Governance focus solely on the notion of “data stewards” endeavoring to collaborate via Councils and Committees. The Enterprise Data Governance viewpoint is to enable “contextual data-driven workflows” to drive change management—not just among Data Stewards and Subject Matter Experts, but across and within organizational structures. Clearly, front-line business users need to be the authoritative sources of change, while all parties concerned will need collaborative workflows to provide agreement, enrichment, and associative enhancement. Enterprise Data Governance provides the ability to have changes begin with front-line business users and reconcile these changes across all information silos—front office, back office, and performance management office (for example Business Intelligence and Enterprise Performance Management (EPM) groups).
Which assets are most critical to the success of the enterprise?

Which generate the most profits?

#5 – Cloud Integration & Enablement
A key aspect of transforming an enterprise often entails innovative management of business processes, information systems, and related information assets across a heterogeneous IT landscape. As companies grow and expand, business models often become obsolete, costs increase, and enterprises must step back and evaluate transformative architectures. An enterprise’s decision to acquire a company, enter a new market, embrace a new business model, outsource a business function, shrink in-house IT staff, and migrate to cloud-based applications (off-premise, hosted), are all examples of transformational events.

Key Takeaways
In order to be technically viable, an Enterprise Data Governance solution must support key IT capabilities such as: a policy-driven data foundation, enterprise hierarchy relationships, standard metrics and measurements, collaborative workflows, and cloud-enabled processes and data. These are rapidly being recognized as essential (not optional) underlying capabilities for an Enterprise Data Governance program.

Next Steps

#1 – Build the Business Case
When building a business case for Data Governance, many organizations will simply look to cost avoidance, such as staving off the expense of restating financial reports and paying the regulatory authorities for non-compliance with watch lists. Responsible CxOs, however, focus on ROI value, including reduced costs relating to duplicate data quality controls and related IT and staffing costs, the realization of economic savings in terms of reducing the number of syndicated data contracts, etc. The inclusion of Data Governance programs to support key business initiatives such as mergers and acquisitions, financial transformations, and the consolidation of ERP or Data Warehouse systems, is increasingly common. Another high impact area (cost avoidance and hard ROI) is the provisioning of Enterprise Risk Management programs to manage credit risk associated with geographies and industries.

#2 – Inventory & Prioritize Information Assets to be Governed
Data profiling software is often enlisted to inventory (discover, document, value) key information assets and to assign Data Governance priorities. As each information asset is identified and categorized, a relative weighting is assigned. Such relative values are key metrics to insure that the most valuable information assets are given highest priority for Enterprise Data Governance.

#3 – Align Enterprise Data Governance Deliverables with Key Business Initiatives
Champions and sponsors of Enterprise Data Governance must ensure that their deliverables are measurable and aligned with both ongoing and planned transformational business initiatives. While this is true of any major IT expenditure or organizational re-engineering effort, the downside of not doing so with Enterprise Data Governance can be especially damaging to the current, as well as any future, Data Governance endeavors. Already typically
perceived as “bureaucratic overhead” or “IT processes getting in the way of the business.” Such governance initiatives must have strong public backing from the executive ranks to the degree even that one of the CxOs should have this as part of their measured portfolio for that fiscal year. And, such alignment should not be to a specific CxO personality, but to that functional group—albeit with the compensation and public recognition clearly tied to the high-level executive. This helps alleviate the danger that the CxO leaves the organization, and lack of a major patron dooms the Data Governance initiative(s).

#4 – Update Organizational Roles to Enable Agility & Interlock
When provisioning an Enterprise Data Governance program, organizations should consider the business drivers, project scope, roles and people filling each role. Such “operational models” for Enterprise Data Governance will often reflect the organization style(s) of the enterprise (i.e., strong centralized management vs. decentralized vs. conglomerate, etc.). The governance policies and procedures that dictate the staffing models must also take into consideration pre-existing data quality processes and staff, social norms, and the business-operating model. Data Governance is more than a single product or process. It is an ecosystem of products, processes, people, and information—often comprised of a set of customized workflows, user interfaces, and forms designed by a third party consultancy to fill the void, resulting from master data management solution providers not providing such an integrated set of governance processes.

#5 – Modernize Data Governance Tools for Data-Driven Growth
Traditionally, Data Governance programs have focused on people and processes due to a lack of sophisticated and integrated IT capabilities to enable this notion. As a result, Microsoft Excel and SharePoint have been the dominant software tools to document and share policies concerning data assets being “governed.” While such tools have minimal additional costs for most organizations, they lack the fundamental capabilities for Enterprise Data Governance as outlined in this white paper.

Conclusion

Enterprise Data Governance is a cross-functional hybrid process strategy, which is essential for an enterprise to align operations more strongly with a strategy.

Because such Data Governance is increasingly mandated as a strategic initiative involving multiple functions across the enterprise, organizations are increasingly turning towards this governance approach to manage and coordinate key business constituencies within the enterprise.

Such governance is the future key to enabling both business and IT “change management effectiveness” as enterprises strive to adapt to the networked economy and become data-driven businesses.

Market-leading businesses are applying “Enterprise Data Governance” now to enable their transformation into agile data-driven enterprises positioned to thrive in the networked economy.
About the MDM Institute

The MDM Institute is the world’s leading research and advisory consultancy exclusively focused on master data management (MDM). As chief research officer, Aaron Zornes delivers the technology-related insight necessary for its clients to make the right decisions in their use of MDM, customer data integration (CDI), reference data management (RDM) and data governance solutions to achieve their customer-centric business goals. The MDM Institute provides authoritative, independent and relevant consulting advice to senior IT leaders in corporations and government agencies, to business leaders in high-tech enterprises and professional services firms, and to technology investors.

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