

*White Paper*

*Enterprise Data Governance*

**Building an enterprise asset through a collaborative  
governance board**

*Version 1.0*

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## 1 EXECUTIVE SUMMARY

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Tightening markets, identity theft, Sarbanes-Oxley (SOX) as well as the need for proactive competitive analysis has made the data lying dormant in individual operational stores more valuable to the organization, corporate competitors, regulators, and corporate predators. Many corporations have now realized that for competitive and legal reasons they must manage their data as an asset. If organizations do not concentrate on their data environment the next time there is an event, such as a merger or transformational information technology project, the activities will take more time and cost more than necessary unless the organization embraces data governance.

As part of a strategic plan, data governance can be a multi-year effort, starting with getting control over the data. Often, cultural norms affect the outcomes of any attempt at governance. Also, where the governance is championed and the governance board is situated can make all the difference between a failed opportunity and achieving the goals set out for stewardship.

Data governance has become increasingly visible within the business intelligence community as well. A survey within the last six months done by The Data Warehousing Institute shows that a full one third of all businesses are embarking on building a data governance model for their organization and another one third have something in place. Data governance brings about underlying cultural changes. The diversity of the members needed to make it successful will cause individuals that have never communicated before to be thrown together to steward the corporate asset.

The following white paper lays out the basics in simplistic terms, but is not meant to be a cookie cutter approach to building a data governance model for all corporations. The correct business drivers must exist to build a strong data governance organization to support the businesses strategic and tactical needs.

## 2 INTRODUCTION

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Data formed into useful information can be a strategic asset for any company, large or small. The data captured within operational stores have the ability to give an organization incredible insight into its own performance as well as the organization's customers, competitors, and exposures. In the emerging "age of compliance," identity theft, and globalization, data (both structured and unstructured) can no longer be left sitting as an unsecured commodity. Neither can it be abused, manipulated, or used to change the natural outcome of a business financial transaction.

Data governance supports both the age of compliance and globalization by actively managing the raw data as an invaluable key to profitability and growth. Data governance is not a mere

intellectual exercise on yet another information technology process; it is a business-driven necessity for all companies struggling with compliance, privacy, security, warehouse implementations, business intelligence and international competition.

### 3 DATA GOVERNANCE DEFINED

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*Data governance is the ability to proactively identify change to data within an organization, document that change, ensure compliance with defined data standards, and to communicate these changes to all appropriate parties.* Those implementing data governance need to review where change is happening throughout the organization. It is important to remember that data is being created in not just the operational systems controlled by the application team, but also in business intelligence systems as well. A Data Governance Board (“Board”) should ensure that all data types are being created consistently across the enterprise. The Board should be aware if there are other organizations that govern aspects of the enterprise and integrate into the overall governance model if possible to reduce redundancy. The Board should be the decision making body to track and manage the quality issues with data and decide where the data should be fixed (either in the operational systems and ETL process.). The Board should be actively pursue these matters and document them.

The key components of data governance within an organization are 1) an active cross functional team of business and information technology professionals; 2) standards and processes; 3) leadership from the executives and the boardroom; and 4) business drivers for data as a quality asset. Without each of these key components most data governance organizations may make small impacts on the organization but not change the fabric of the way the business addresses its data. The relationship between business and information technology is especially critical because the business owns the data within the information systems stewarded by the Chief Information Officer (CIO). These are explained in greater detail later in the paper.

### 4 SCOPE OF DATA GOVERNANCE

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Data governance usually finds a place in business intelligence projects, in the development of a new primary system, or the re-hosting of a current system. However, in order for data governance to be effective, the Board must have broad authority over all organizational data, both structured and non-structured. This includes the introduction of new data sources being developed in the operational or business intelligence environments. Within existing systems, new data attributes or new values within an existing data attribute need to be reviewed, approved, and documented.

All changes that occur must be reviewed against established and approved data standards. The data standards should be approved prior to the review of the environmental change, and distributed to all members of the organization that can define, develop, or deploy this new data into the organization. Beyond adding new data to business intelligence or reviewing and approving operation stores, the data models and data quality issues need to be addressed.

The Board can be a real asset to the business and information technology organizations by managing quality in the context of managing the change control around data cleansing and data manipulation. This should occur within the business intelligence systems as well as operational data applications.

There is a strong relationship between data governance and data quality. Data quality programs do not usually run under the umbrella of the data governance program but there is a strong correlation between the inherent authority of the Board and the direct outcome of data quality. By managing the change between operational system data and transformation logic in the ETL layer governance can improve data quality for business intelligence applications. The fundamental change that governance brings to the organization is through the formalized documentation and communication of changes within the transformation layer of the data in order to improve quality to the operational stores.

## 5 TYPES OF DATA GOVERNANCE

Data governance is usually put into place because strategic business initiatives or IT projects utilize different standards, policies and processes, which make the delivery of consistent data almost impossible. Information is a corporate asset that drives strategic thinking and can lead to developing a high performing agile organization. However, it is very difficult to be agile if you have to translate data from department to department. Data standardization allows information to flow more quickly and less costly from a business process to a strategic leader. The goal is to increase universal corporate data (common data) and standard business definitions, while decreasing unique data within other organizational units, resulting in more uniform information to leadership.

This is achieved by developing governance boards and organizational hierarchies that deliver a comprehensive solution to manage the data asset. Depending on the complexity and size of an organization, a stand alone governance model may be sufficient. In smaller organizations a streamlined approach should be taken to ensure that the organization is responsive and not bogged down with a labor intensive processes.

### *Stand Alone*

A stand alone governance model may be sufficient for a division in a larger company if that organization is just starting to explore data management as a discipline and doesn't want to invest in governance until it has been proven. This model is also important for mid-sized businesses that have a need to optimize their data. A stand alone governance board will usually be a flat organization comprised of data subject matter experts and a leader from the business or information technology organization.

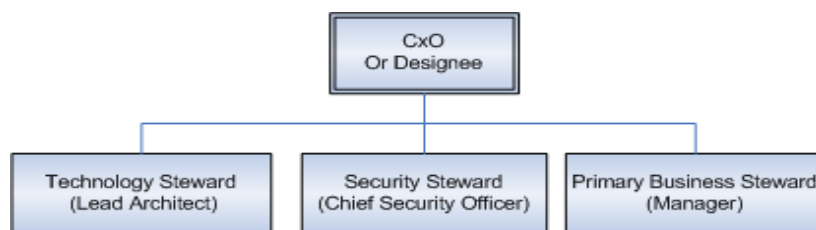


Figure 1: Example of a Stand Alone Board

## Peer to Peer

As organizations grow in size and complexity, there may still not be an enterprise focus on data management and governance. However, many of the divisions may have different standards or business needs for their Board. As an example, the finance department may have different standards and business needs than the marketing department, but both see a need to standardize on a set of data management processes and disciplines. If for no other reason than they would like to combine the information to get a view of the costs and profits of different customers, standardization of customer data would seem like a logical thing to do for both parties.

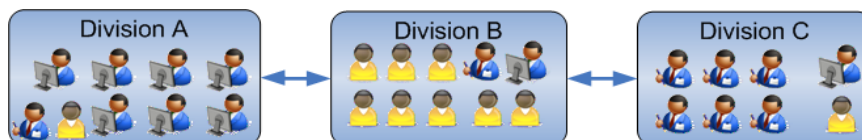


Figure 2: Peer to Peer with Representation

## Federated Enterprise Board

As an organization grows, an enterprise wide Board may be formed. The enterprise Board can take two separate paths to control data: a federated enterprise Board with a parent-child relationship or a single enterprise board for the entire enterprise. A federated enterprise board does not dismantle the organizations and boards beneath it. The goal of a federated enterprise Board is to change the stream of dialogue between individual departments so that communication exchanges happen at the enterprise level. This dynamic works well with divisions that are working together well and have made good progress on standardizing among their peers.

In the final approach, the leadership of the organization can develop an enterprise governance board that suspends and consolidates the lower organizations into a high level board with autonomy and representation of the lower organizations. The problem with enterprise boards is their scope and complexity. Without a good peer-to-peer organization beneath it, or a without a federated model in place, it becomes ineffective in scope and a bottle neck within the process. With that said, there are times during or after an audit, merger or acquisition, or during a consolidation that this approach may be necessary to deliver tangible results.

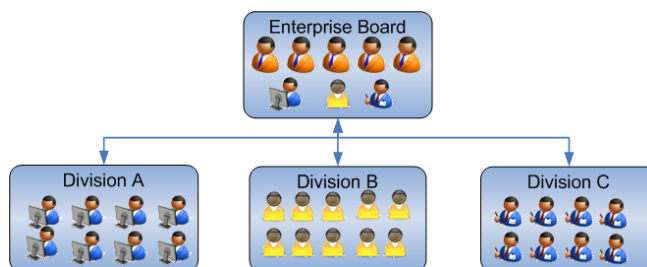


Figure 3: Federated Enterprise Board

In conclusion, how an organization makes a decision on what type of governance model to use? There are several factors that should be considered including the size of the organization; the complexity of products and services provided by the organization, the complexity and size of the data being managed; the culture of the organization, tolerance to formalized processes and the organizations leadership hierarchy.

## 6 WHAT IS THE BUSINESS VALUE?

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Before embarking on data governance, senior management may ask: What is the business value of developing a data governance board?

### *Managing Change*

Data governance proactively identifies data changes and reduces work in complex organizations with large business intelligence applications. It moves accountability for data changes from the database administrators to the business requesting the data. It minimizes the impact of data changes to downstream processes, ensuring the data meets the technical and business standards established by the board.

### *Reducing Costs for Integration through Common Data Standards*

Common data standards are important to the development of quality data for an organization. Common data standards take several forms: 1) common nomenclature 2) standard prefix and suffix to field and table names 3) standard data types 4) proper business definitions 5) proper technical definitions 6) master data management values and 7) acronyms. Corporations can improve data integration between systems that have adopted the same standards. Using data standards across business intelligence applications increases the likelihood of quality data coming out of those systems. It is important to have developers, designers, and architects adhere to the standards as a way to manage the ETL costs of in the future.

### *Improve Data Quality*

Data governance reduces data duplication by reviewing changes and new requests to create data. This also promotes informed data decisions by both the business and technology offices. Data governance enforces standards and formats that make down stream systems more effective by ensuring that data elements are coded, named, and documented at the source. Data corrections within the operational stores reduce the need to do transformation in warehousing projects and speeds up the transformation process.

### *Improving Communications*

The Board eliminates reactive behaviors within an organization because both the business and technology professionals are in the room documenting and agreeing to changes in the operational stores. This results in less unknown change and encourages cross-communication about data and its use.

A recent study by The Data Warehousing Institute (TDWI) showed a survey of the top responses to the benefits of data governance, further demonstrating the business value of data governance.

Which of the following would benefit from data governance? (Select five or fewer.)



Figure 2. Based on 1,960 responses from 394 respondents.

In some cases data governance can bring awareness to quality issues that were hidden in the past, including the need to have the business define and steward the data.

## 7 CRITICAL SUCCESS FACTORS

### *Senior Management Support*

Regardless of the type of Board that is built, creating one has to be a visible sign and recognition within the organization that the leadership is serious about making data an asset. Senior management has to promote data stewardship at all levels of governance and support the allocation of resources to make these activities part of the regular duties of the individuals involved. On a quarterly basis, the Board, no matter what the level, should brief senior management on quality issues, cultural change, and the beneficial results of data governance in their organization.

### *Broad Participation across the Organization*

If data is a corporate asset, then broad participation becomes necessary due to the complexity of organizations supporting the data and information. Knowledge of the business information and data is required to make good decisions, and so is making the Board diverse with business developers, information technologists, data architects, security specialists, and project managers.

## *The Focus on the Asset*

Data governance is a discipline defined by process, policies and action. It is important to maintain governance and ensure that the processes of the Board are reviewed for efficiencies so apathy among the participants may be avoided. The organization must ensure that there is communication conveying the value of data decisions made each quarter. Another important point is to rotate the Board membership and make it something with which people want to be involved. In the area of data management, which at times can be very dry and technical, remember to reward those who are stewards of your most valuable asset.

## *Identifying Where Change Happens*

Change can come from any number of work streams. The following lists have been integrated with our change identification process.

- Organization Projects
- Policy or Organizational Changes
- External projects with a data connection
- Mergers and Acquisitions
- Business Growth or New Business Ventures
- Strategic Planning
- Laws and Regulations
- Research
- Risk Analysis
- Performance Management

Individuals working on data governance need to review what business should also be involved. An example of a close integration point is working closely with the organization's project management office to ensure that data governance processes are integrated into the organization's demand and project management process. Another example is working closely with the chief enterprise architect and his/her organization as many of the standards written and enforced can be caught and corrected early in the architecture process.

## **8 CONCLUSION**

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Data Governance is a complex governance board made up of a diverse group of users and practitioners in the area of data. It includes individuals from the business and technology areas of an organization. The larger and more complex your business, the more important it is to establish a data governance board that can efficiently manage your most valuable asset.

If you are interested in developing a Data Governance or Data Management program, please e-mail [j.houk@insourceconsulting.com](mailto:j.houk@insourceconsulting.com) or call 860.688.9900.

Credit for the statistics within this white paper is from The Data Warehouse Institute (TDWI) study on data governance. For further information you can visit: [www.tdwi.org](http://www.tdwi.org)