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An Insight company

Understanding and managing data: The benefits of data governance and stewardship

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Introduction

Organizations have incredible amounts of data. But what is that data? Where does it come from? Who uses it and how often? Can the data be trusted? What's the value of the data, and when is it no longer valuable?

If you can't answer these seemingly obvious questions, you most likely do not have a data governance and stewardship program in your organization (or you have one that is not actively enforced). In most cases, companies simply do not understand what data they have or how to get the greatest benefit from it. Controlling data, trusting it, and assigning it value often appears to be an effort that most businesses put aside with the assumption they will address it in the future.

Why is data governance not a higher priority? Companies may not want to admit that they don't understand the importance. Or they may easily push it off thanks to the never-ending list of projects and eternal fight for time. Some organizations may even assume that information systems / technology is exclusively responsible for data governance. Regardless of the reason, understanding and controlling data requires an organizational approach.

Data governance and stewardship are essential

Data governance and stewardship provide organizations with the methodology and tools for understanding corporate data assets, relationships between data elements, and metadata definitions – all of which ultimately increase overall utilization.

Data governance and stewardship programs require a solid lifecycle methodology and structure. Data governance is a strategic business function that drives the way companies manage their data assets. It defines how data is created and manipulated, and how it meets precise standards including integrity. Everyone from executive leadership to part-time staff should understand how data will be created and used until it is no longer valuable, at which time it becomes ready for destruction.

The data governance program establishes the quality controls needed for stewardship, where data stewards and custodians hold everyone accountable, ensuring data is trusted. This tactical business function protects the quality, accuracy, and day-to-day viability of a company's data. As the program matures, it alters the way the organization thinks about data, thereby enabling better business decisions and conclusions.

Critical success factors for data governance and stewardship:

1. **Recognize data as a vital asset.** If a company is not committed to managing data, it likely will not create a data governance and stewardship program.

2. **Establish an active cross-functional governance body.** As different departments might claim responsibility for certain types of data, creating a cross-functional governance body helps ensure responsibilities are divided properly and any conflicts

can be easily resolved. The governance body will also determine overall data stewardship priorities.

3. **Data stewards must work together.** Because data crosses departmental lines, data stewards should work together to establish a consistent set of definitions and business rules.

4. **Create, maintain, and apply a business data model.** Every enterprise should have one model that describes business, concepts, events, places, and people of interest to the organization and the associated rules governing them. Adhering to this model ensures data will be consistent and reconcilable among multiple physical databases.

5. **Ensure data stewards understand their role and believe in its importance.** Data stewardship isn't easy. A steward must tackle difficult issues and arrive at solutions that correctly describe business rules concerning data.

Depending on the business, many regulatory standards require some level of data governance and stewardship. Some examples include:

- Sarbanes-Oxley
- Basel I
- Basel II
- Health Insurance Portability and Accountability Act (HIPAA)
- HITECH Act (Meaningful Use)

Regardless of why it's needed, data governance and stewardship starts with executive leadership. They must be committed to a structure, and that structure must be formally established, documented, communicated, and enforced.

Stewards and custodians then drive the initiatives forward.

Looking at data from an organizational perspective, metadata can be created for all data elements. Relationships between elements can be identified and mapped. Consistency across databases and applications are developed and maintained. If data elements cannot be exactly the same, translations between data elements will be documented to ensure consistent meaning and use. This level of uniformity improves data utilization and efficiency while lowering the organization's data management costs.

Data governance and stewardship may seem unimportant, but results show users have greater trust in data managed this way. Why? Because data is created with greater quality and integrity, which in turn increases the data value – perceived or quantified – across all business users. Data stewardship and the stewards and custodians assigned to support the governance program engender greater levels of cooperation across the user population. Stewards and custodians also give users a contact point to inquire about data elements, element relationships, meanings, or issues encountered while using them.

Success of the program depends on cooperation among data stewards and the ongoing partnership between stewards and custodians.

Here are some additional points demonstrating the interaction between custodians, stewards, and the stewardship process:

CUSTODIANS (IT)	STEWARDS (BUSINESS)
Create, maintain, and apply the business data model.	Provide the business rules and definitions for the business data model.
Gather business requirements by interviewing data stewards and other business representatives. Translate the requirements into information that will guide what needs to be designed and built.	Provide the business requirements.
Install security mechanisms to restrict data access.	Determine who has access capabilities.
Meet business expectations. Ensure through audits and controls that data has been processed correctly. Address errors identified through audits and controls.	Ensure data conforms to quality expectations and compliance regulations.
Communicate with data stewards and business representatives. If changes occur, gather detailed requirements and adjust the existing environment.	Inform IT of any changes needed to support the business environment.

Data governance and stewardship are essential (cont.)

Where do data governance and stewardship fit into an organization? The answer is simple: everywhere. It takes every user, business process owner, and technology owner plus executive leadership. To be completely effective, no single group or department can be solely responsible for the program. After all, data isn't used by just one area; it is shared, used in various ways, and created across many databases and applications.

To support data stewardship, stewards, and custodians, DAMA International provides the "DAMA Guide to the Data Management Body of Knowledge" (or DMBOK), which defines a standard industry view of data management functions, terms, and best practices. The organization recently launched the DMBOK2 project, an update to the existing DMBOK Guide.

Some of the most important changes are:[1]

- New topics have been added to reflect changes in the industry (e.g., data in the cloud).

- "Data integration and interoperability" was introduced as a new knowledge area to highlight its emerging importance.

- "Documents and content" now appears in an earlier position on the wheel to represent its importance as part of the scope of data to integrate, analyze, and interoperate.

- "Data governance" is positioned as a unifying theory for all data management, and each chapter on individual knowledge areas feature a section on appropriate data governance activities.

DMBOK2 knowledge areas

Data governance

Data architecture

Data modeling and design

Data storage and operations

Data security

Data integration and interoperability

Documents and content

Reference and master data

Data warehousing and business intelligence

Metadata

Data quality

The value of data

Does all data have value?

Generally, data has value to a company when it drives new business initiatives and supports ongoing activities. Value is determined by many variables, some of which may be industry specific. Determining value requires a team evaluation by the CEO, CFO, legal counsel, compliance official, application owners, and business units. The evaluation comprises real business needs and uses, frequency of use, impact to sales functions, impact to service delivery, and even the cost encountered by the business if the data is lost or stolen.

How much is data worth? It depends on a number of factors, but the reality is: Data has value. For some companies, data can have even more tangible value than physical assets. Facebook, for example, is now worth about $200 billion, whereas United Airlines, a company that has airplanes and licenses to airport facilities and transoceanic routes between the U.S. and Asia, is worth only about $34 billion.[2]

The value of data changes frequently – for some industries, daily – based on the evaluation criteria. Generally, the value of data decreases as it ages. Eventually, data will lose most, if not all, of the value it once had. It becomes too old, out of date, or simply irrelevant to business today. Therefore, data governance should establish criteria for archiving or destroying data.

Data, even old data, opens an organization up to risk. All data – even data that's irrelevant or dispensable – must be protected in the following ways, and that costs money:

- **Storage costs** (disk space, electric, cooling)
- **Backups** (backup disk drives, backup tapes, tape storage)
- **Database and application efficiency** (in some instances, growing volumes of data decrease performance)
- **Business continuity and disaster recovery** (costs to include old data in recovery scenarios)
- **Migration** (moving old data as applications and databases are replaced)
- **Reputation** (data is lost or stolen; notifications and reporting)
- **Legal** (too much data can work against a company as much as help it)

Data governance and stewardship ensure that data meeting certain requirements is purged or destroyed on a scheduled basis, thereby minimizing costs and eliminating data that's irrelevant to the business.

Supporting tools

Are tools really necessary?

Data governance and stewardship can be done manually, but the downside is the inability to react quickly to support real-time business needs and requirements. Manual methods require greater investment in staff resources and time to drive the program. As with most complex programs, manual operations are also more likely to encounter delays or introduce error.

Automated tools are available to support data governance and stewardship programs. Advantages to these solutions include:

- Needing fewer staff to manage programs regardless of their size
- The ability to work with databases, spreadsheets, and other information files
- Combining multiple sources of information into a single view

- A concise dashboard with alerting and issue reporting
- Support for live data feeds for up-to-the-minute decision-making
- Generation of data management plans
- Enhanced quality assurance and lifecycle management
- Automated creation and maintenance of metadata libraries and glossaries
- Higher quality and accuracy to support business decision-making

Various vendors provide automation tools supporting data governance and stewardship. Organizations should research solutions and make decisions based on their industry, business operating model, maturity, and so forth. Based on The Forrester Wave diagram below, vendors such as SAP, Collibra, and IBM are highly rated for their solutions.[3]

Source: Forrester Research, Inc.

Summary

Businesses of all sizes operate each day without a data governance and stewardship program. So, what justifies the program? The answer in a nutshell is a greater understanding and utilization of data. Companies can make better decisions, improve business outcomes, and reduce cost and risk.

As technology continues to create more data, companies must find ways to maximize the benefits of this information. People can only do so much without the structure, guidance, and tools to make it work. As competition grows and the demand for data-driven decisions increases, understanding what data exists and how it can be used is absolutely critical. It also becomes more critical to understand when data has lost its value and should be purged or destroyed.

Data governance and stewardship will foster change in the idea of data, the value of data, and how data can do much more for companies when used to its full potential. Just because it exists does not ensure that you're making the most of it.

Datalink helps clients address a wide range of data management and data stewardship challenges – from determining the most beneficial data management policies, toolsets, and infrastructure; to analyzing business impact and measuring data over time. Our BC/DR, information security, architecture, and IT operations management consultants develop data backup, recovery, and archival strategies. Additionally, our teams implement primary storage infrastructure and automation for managing data through its useful lifecycle. Using best-of-breed technology and a vendor-agnostic approach, we help clients put the right data in the right place at the right time for the most efficient cost.

1   DAMA International, www.dama.org, Body of Knowledge, March 28, 2015.
2   Howard Baldwin. "Drilling into the Value of Data." Forbes, March 23, 2015.
3   The Forrester Wave™, Data Governance Tools, Q2, 2014.

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