Establishing data stewards

Managing information as an asset requires knowledgeable business leaders.

by Jonathan G. Geiger

Most organizations understand what it takes to manage assets such as money, facilities, employees and inventory. However, when it comes to one asset—data—companies often fail to deploy the responsibilities and accountabilities needed to effectively manage it. A common result is that data availability, accuracy, timeliness, protection and accessibility issues abound. Additionally, when employees aren’t certain who is responsible for data management, they may point fingers at each other and scramble to address the symptoms without truly resolving the problems.

Every other business asset has an organizational accountability assigned to manage it. Data should be no exception. To truly manage data assets, an enterprise needs to establish a cross-functional governance committee and designate data stewards within its business organizations. The governance committee should promote the importance of managing data as an asset, establish policies and stewardship responsibilities, and enforce compliance. Stewards should have the knowledge, responsibility and authority to describe, establish, declare and enforce business rules about data. This ongoing role is ultimately responsible for establishing quality expectations and ensuring that they are met.

Custodianship versus stewardship responsibilities

Ultimate success depends on cooperation among data stewards as well as a strong ongoing partnership between stewards and custodians.

<table>
<thead>
<tr>
<th>Custodianship—IT</th>
<th>Stewardship—Business</th>
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<tbody>
<tr>
<td>Create the business data model.</td>
<td>Contribute to the business data model. Provide the business rules, definitions, etc.</td>
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<tr>
<td>Gather business requirements. Interview data stewards and other business representatives to define the business requirements. IT team members gathering the requirements must apply interviewing and analytic skills to ensure that they ferret out the requirements and translate these into the information required to understand what needs to be designed and built.</td>
<td>Provide business requirements. Work with IT analysts during the system development and provide them with the requirements.</td>
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<tr>
<td>Establish data access restriction facilities.</td>
<td>Determine who can access what data. Input information on who has access capabilities into the data access restriction facilities.</td>
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<td>Deliver quality data with supporting audits and controls, and resolve deficiencies. Build systems that meet business expectations and provide evidence (through audits and controls) that the data has been processed correctly. Errors disclosed through audits and controls indicate data processing deficiencies and must be addressed by IT.</td>
<td>Establish quality expectations and ensure compliance. Ensure that realistic quality expectations are consistent with business processes. In addition, ensure that the data conforms to the quality expectations.</td>
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<td>Incorporate changes as needed. Continuously communicate with the data stewards and other business representatives to keep informed about business changes that impact the systems and data. When these occur, gather detailed requirements and incorporate the changes to the existing environment.</td>
<td>Keep IT informed of business changes that impact data. As the business environment evolves, changes are needed in systems and data to ensure that they continue to support the business. Information about these changes must be transmitted to IT on a timely basis to ensure that the data asset can be appropriately leveraged.</td>
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Data management responsibilities

The chief financial officer (CFO) is in charge of planning, acquiring, maintaining and distributing financial assets; the personnel director has similar responsibilities for human resources, etc. But who assumes these responsibilities for data? For example, asset planning includes establishing how the asset is categorized and organized as well as forecasting its needs. For financial assets, the CFO develops the chart of accounts and (with input from other areas) projects revenues and expenses. For data, the equivalent of the chart of accounts is the business data model. Data requirements are analogous to the revenue and expense projections, and the metadata management system is functionally similar to the general ledger system.

While the chief information officer is recognized as having authority associated with managing the data asset, other business areas also claim responsibilities, resulting in overlaps (creating tension, redundancies and inconsistencies) and gaps (creating deficiencies). This problem can be resolved by separating the responsibilities into custodianship and stewardship. Custodians are responsible for the “buckets” that store the data, and for the systems that process it; stewards are responsible for the “content”—the data itself.

IT is the custodian of an organization’s data assets. This department gathers business requirements, develops the application systems, operates these systems and supports their users. Further, it manages the infrastructure on which these applications operate and ensures that the data is properly stored and protected. Data protection, for example, might be accomplished by providing a security system and periodic backups. To perform this role, IT establishes processes such as the system’s development methodology, facilitates the development of the business data model, and sets security administration and enforcement policies.

Business representatives (stewards) must retain responsibility for the data content. Stewards define the requirements, verify that systems meet them and use the systems. The business representatives also have a data protection responsibility. This includes determining who can retrieve what data and enforcing access restrictions.

The table on the first page contrasts some of IT’s custodianship duties with stewardship responsibilities performed by business representatives.

Data steward qualifications and deployment options

A data steward needs to be a seasoned analyst who understands the business and data management concepts and is able to recommend and gain reasonable compromises that enhance the value of an organization’s data assets. Specific competencies include business knowledge, business-area respect, data management knowledge, analysis, facilitation and negotiation, and communication.

The data stewardship function may be established either formally or informally. The formal approach entails creation of the aforementioned cross-functional governance body and appointment of stewards for the data areas being addressed. The stewards would have job descriptions that delineate their responsibilities. This approach is viable in mature organizations that truly embrace data as an asset.

A pragmatic and informal approach to get data stewardship started is to use subject matter experts (SMEs) from the business organizations to provide at least some of the stewardship functions without the formal designation. In a data warehouse project, for example, business input on the enterprise definitions and business rules are obtained from SMEs. These experts contribute to the business (and data warehouse) data models and represent the business areas in

Data steward requirements

> **Business knowledge:** Data stewards must understand the business direction, processes, rules, requirements and deficiencies.

> **Business-area respect:** They need to influence business decisions and gain business-area commitments.

> **Analysis:** When faced with multiple options, they must examine situations from many angles.

> **Facilitation and negotiation:** They must facilitate the proponents of conflicting viewpoints to arrive at a mutually satisfactory solution.

> **Communication:** Stewards need to effectively convey the business rules and definitions and promote them with the business areas as well.

—J.G.G.
defining the enterprise views. Successes and shortcomings of the informal stewardship role should be documented as each project proceeds, and, at some point, the case should be built to formalize the function.

The data steward is a business representative who is ultimately accountable for determining, describing and enforcing the business rules and definitions for data. For long-term success, this effort should be supported by the establishment of a cross-functional governance body to ensure that data is managed as an asset. When a stewardship function is needed for a data warehouse and a formal program is not in place, a bottom-up approach can bring short-term success and provide support for building a viable data stewardship function.

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Critical success factors

These activities must be performed well to survive in the short run and thrive in the long run:

1. **The enterprise must recognize data as a vital asset.** The stewardship function requires a commitment to truly manage data. Without this recognition, it is unlikely that the function would even be created.

2. **An active cross-functional governance body must be in place.** Data is cross-functional in nature, and several departments might claim responsibility for certain data. A cross-functional governance body is needed to divide responsibilities and to resolve conflicts. In addition, the governance body determines overall data stewardship policies (e.g., the organizational accountability and authority of the stewards) and establishes priorities. The governance body must also promote the importance of data as an asset and support the data stewards in the performance of their duties.

3. **Data stewards must work together.** Unlike business processes, which tend to be aligned with the organizational structure, data crosses departmental lines. For example, the sales, marketing and customer service departments may all claim responsibility for customer data. While some of this data might clearly fall within the purview of one of these departments, all three have a claim on basic consumer information such as name, address, selected demographics, and the processes and systems for acquiring and managing this data. Unless a steward with ultimate decision-making authority for this data can be appointed, stewards from these areas must work together to establish a consistent set of definitions and business rules.

4. **A business data model must be created, maintained and applied.** This model describes the business concepts, events, places and people of interest to the organization and the rules governing them. There is only one such model in an enterprise, and its existence and application ensure consistency and reconcilability among multiple physical databases that may store the same data.

5. **The assigned data stewards must understand their role, be qualified to perform it and believe in its importance.** Data stewardship is not an easy job. In addition to possessing the needed qualifications, the person performing this role has to recognize its importance to the organization. A steward must be willing to tackle difficult issues such as resolving conflicts among seasoned business and IT professionals to arrive at a solution that correctly describes the business rules concerning a set of data.

—J.G.G.