

The Business Value of Metadata for Data Governance: The Challenge of Integrating Packaged Applications

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The Importance of Data Governance in the Digital Economy

Data drives today's modern business. In the age of digital transformation, Big Data, and rapid technical innovation, more and more organizations see the value of data in driving business success. Think of Amazon, whose revolutionary recommendation engine to increase sales was based on the ability to capitalize on its massive wealth of data around customer purchasing patterns. Uber is another classic example of an entirely new business model based on optimization of location-based data to manage supply & demand and completely disrupt the transportation industry.

As we see in these examples, not only can data improve efficiency & profitability of data-driven processes such as targeted marketing campaigns, customer support, product development, and more, but entirely new business models are arising from organizations leveraging their data assets to strategic advantage. As a result, organizations are seeing the need to manage and govern this critical business asset – data. Just as finance and accounting departments are put into place to manage the financial assets of an organization, data governance teams are required to manage the firm's data assets.

Key Components of Data Governance

Typically, data governance focuses on the people, processes, policies, and supporting technologies that drive a data-driven culture, as outlined in Figure 1. Key components of any successful data governance program include:

- **Vision & Strategy:** What are the goals of the organization, and how can data and its governance best support these goals?
- **Organization & People:** What organizational structure and roles exist to support the efficient management & control of data within the organization?
- **Processes & Workflows:** What workflows are in place to make sure that both upstream and downstream processes that create, read, update, and delete data are coordinated effectively?
- **Data Management & Measures:** How is progress & success managed with core KPIs and metrics? What data management practices such as metadata management, data architecture & modeling, etc. are in place to support data quality & control?
- **Culture & Communications:** Does everyone in the organization understand the importance of data and their role in managing it effectively? How is data best communicated & shared across the organization? How can collaboration help discover new data-driven insights that support the organization?
- **Tools & Technology:** What technology currently generates or updates data? What technologies are needed to manage and control data effectively? Just as finance departments have software systems to manage financial assets, software systems are also needed to manage data assets.

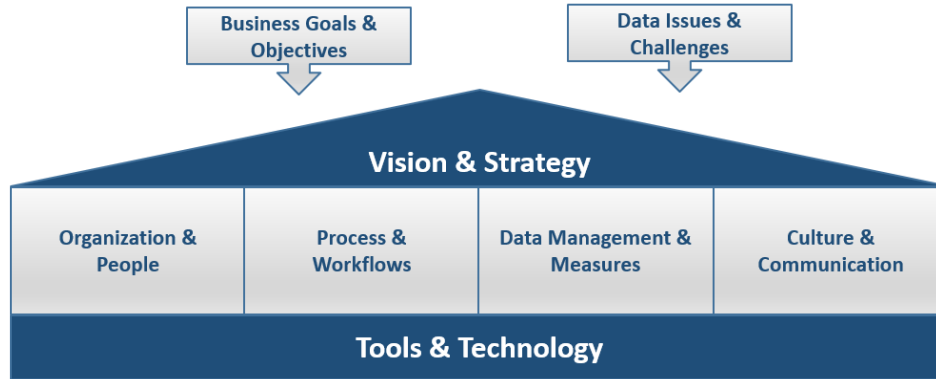


Figure 1 Components of a Successful Data Governance Program

A successful data governance program should always begin with a focus on business goals and objectives, followed by analysis on which data areas support these objectives. For example, if a key goal of the company is to drive sales for a new product launch, priority should be placed on the data that drives the marketing campaigns and sales initiatives that support that initiative. Typically, this would include data around customers and their purchasing patterns, marketing campaigns and their effectiveness, sales staff and their productivity, etc. This type of data is typically stored in a number of systems across the organization and, very often within packaged CRM and ERP applications such as Salesforce, Microsoft Dynamics, SAP, etc.

The Importance of CRM and ERP System Data

CRM and ERP systems contain some of the most valuable data assets in the organization around customers, sales, campaigns, accounts payable, and more. Achieving a comprehensive view of systems such as these, however, is a daunting task due to their size and the high degree of complexity required to execute their business processes. These two conflicting aspects are what often create frustration and challenges many organizations—while these systems contain some of the most valuable information, they are also the most difficult to decipher.

Consider an organization who is trying to obtain a 360 view of their customers: their characteristics, their past purchasing patterns, what marketing campaigns may have attracted them, etc. Often, to achieve this 360 view, organizations develop a data warehouse and/or MDM hub to consolidate all information about customers in a single place for reporting & analysis. This view is populated by a number of systems across and beyond the organization. Figure 2 shows an example of the complexity of systems and applications that can make up a typical warehouse infrastructure.

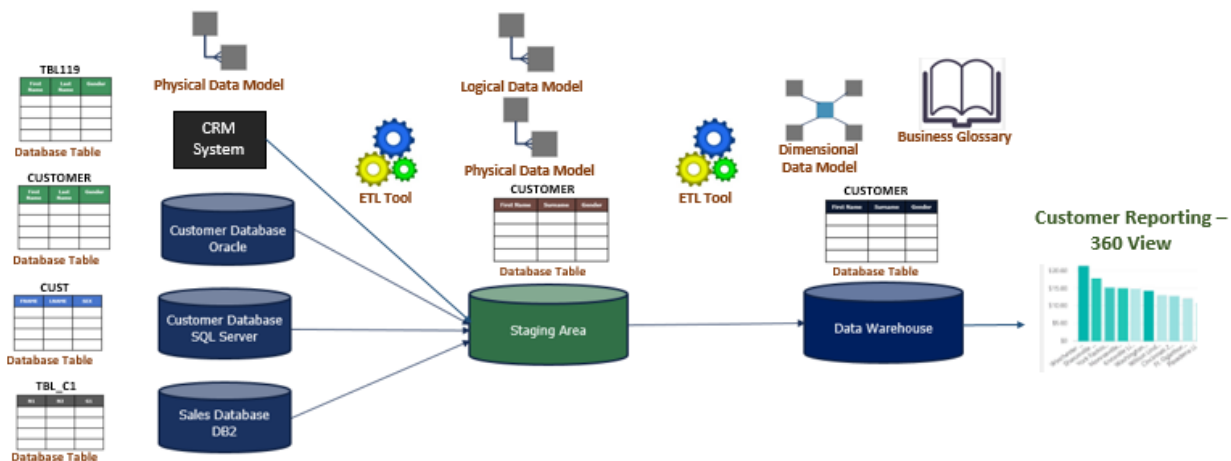


Figure 2 Generating a 360 View of Customer is Complex

Often the data assets that are most critical to the organization are also the most difficult to manage and consolidate. Customer information, for example, may be sourced through an online transactional sales system, housed in a CRM system for sales and marketing campaigns, and managed within Finance in an ERP system for billing & collection. To successfully integrate all of these systems, an understanding of both the technical and business architectures of these systems is required. This understanding is typically generated through metadata.

What is Metadata?

Metadata, while it may sound like a complex term, can be defined simply as the “who”, “what”, “where”, “why” and “how” of information. Where is data stored? How is it formatted? What is the business definition? Metadata is the critical link that aligns the business and organizational aspects of data governance with the technologies that support them. Business stakeholders in a governance program may be charged with coming up with definitions for core business terms such as customer, campaign, fiscal quarter, etc. For example, do we define customers as those who have purchased a product, those who have been involved in a marketing campaign, those who have an active loyalty card, etc? There are many subtleties in even seemingly simple concepts such as “customer” and these must be defined and documented as formal metadata in data models, business glossaries, and/or metadata repositories.

Metadata is the critical link that aligns the business and organizational aspects of data governance with the technologies that support them.

Once defined, these business concepts must then be linked with the numerous and disparate technical solutions that store this data. For example, customer information may be sourced through an online transactional sales system, stored in a data warehouse for reporting, and housed in a CRM system for sales and marketing campaigns, just to name a few. A robust metadata management solution can automatically parse the technical structures of this diverse array of systems to create a lineage between the business goals & definitions and the technical systems that run the organization. For example, if we

change our definition of customer to include only those who have responded to a marketing campaign, which systems should be included? Or more tactically, if we change the way in which customer names are formatted and stored, what is the downstream impact on the systems to make this change? Given the rapid pace of today's business environments, these changes must be understood in real-time. The business can't wait months for manual discovery and analysis.

Managing Metadata for Packaged Applications

A challenge in managing metadata for packaged applications such as CRM and ERP systems is that many of these systems present themselves as a 'black box' in that, due to their proprietary architectures, the technical and business definitions cannot be easily discovered through the analysis typically done for database systems via data models, metadata repository lineage, etc. To be fair, these systems were written with the goal of managing complex enterprise systems, not metadata sharing. But without the metadata from these critical systems, any governance effort will be hampered and limited in its success.

The good news is there are tools, such as Safyr® from Silwood Technology Limited, that can translate the business and technical metadata from these systems so that they can be integrated with the other data systems such as data warehouses, MDM hubs, transactional systems, metadata management systems, etc. Figure 3 shows how the complexity of tables in a typical packaged application can be understood by linking the technical architecture with business-friendly definitions. Through metadata, the thousands of database tables in the typical packaged application can be organized by business subject area, with business-friendly definitions of what the individual tables are used for and what information they contain.

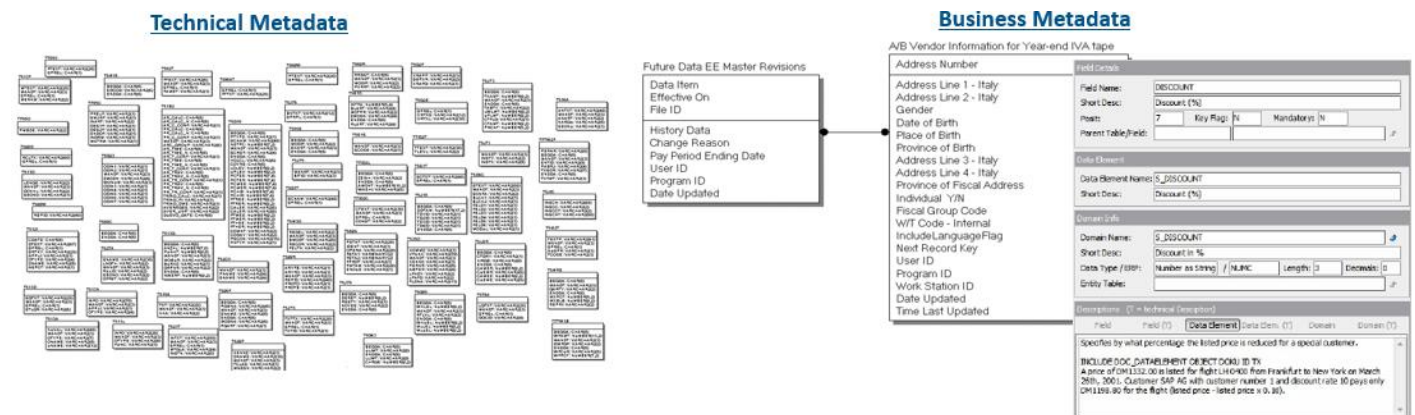


Figure 3 Gaining an Understanding CRM & ERP System Architecture

With this combined architectural and business view, we are able to achieve a holistic view of the core data assets of the organization, and ERP systems can be more effectively integrated with other data systems. As a result, data governance programs can be more effective since they are linked with the actual systems that are running the organization. For example, a data governance policy might direct that personally identifiable customer information (PII or PCI) can be viewed and managed only by certain individuals. To actually implement this policy, it is critical to know which systems store this

information, and specifically which tables and columns. By creating an architectural diagram that links business and technical data, core data governance policies can be made actionable within the core operational and reporting systems driving the organization. This combination of business and organizational change combined with technical metadata and lineage is what drives a truly successful data governance program.

Data as a Roadmap to Innovation

With an integrated and governed view of data assets, organizations are able to think strategically about their data. Data lineage can be a roadmap to new business models and innovation, as new relationships between key data areas are discovered and understood. Are there ways to link customer data with product usage for better marketing campaigns? Or ways to target products by location for better penetration rates? The list is endless, and is only limited by the data in your organization and your understanding of it. Rather than seeing architectural models and metadata as academic artifacts, think of them as enablers to business innovation. With metadata lineage linked to the systems and applications that drive the business, insights can be made actionable to drive true business growth and profitability.

About the Author

Donna Burbank is a recognized industry expert in information management with over 20 years of experience helping organizations enrich their business opportunities through data and information. She currently is the Managing Director of Global Data Strategy Ltd, where she assists organizations around the globe in driving value from their data. She has worked with dozens of Fortune 500 companies worldwide in the Americas, Europe, Asia, and Africa and speaks regularly at industry conferences. She has co-authored several books on data management and is a regular contributor to industry publications. She can be reached at donna.burbank@globaldatastrategy.com and you can follow her on Twitter @donnaburbank.

About Silwood Technology Limited

Safyr® from Silwood Technology Limited enables organizations to access, understand and exploit the metadata in their ERP and CRM packages in a unique business focused way that drives faster, more economical and accurate delivery of Data and Information Management projects and initiatives.

The complexity, level of customization, amount and opaque nature of the metadata in SAP, Oracle, Microsoft and Salesforce packages means that its discovery and use is challenging, time consuming and expensive when using traditional methods and tools.

Safyr provides a rapid and easy way for the data professional to isolate the metadata they need from these applications and to share and use it with other tools and technologies.

For more information please visit www.silwoodtechnology.com