



# Solving the **Enterprise** **Data Dilemma**

Harmonizing Data Management  
and Data Governance to Accelerate  
Actionable Insights

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# Is Our Company Realizing Value from Our Data?

If your business is like most other enterprises, you collect and analyze some data from a subset of sources to make product improvements, enhance customer service, reduce expenses and inform other, mostly tactical decisions.

The real question is are you reaping **all** the value you can from **all** your data? Probably not.

Few organizations are truly data-driven. Most don't use all the data they're flooded with to reach deeper conclusions about how to drive revenue, achieve regulatory compliance or make other strategic decisions. They don't know exactly what data they have or even where some of it is, and they struggle to integrate known data in various formats and from numerous systems—especially if they don't have a way to automate those processes. And as recent statistics demonstrate, this problem is growing.

How does **your** business become more adept at wringing all the value it can from data? The answer lies in harmonizing data management with data governance. Data management drives the design, deployment and operation of systems that deliver operational data assets for analytics purposes. Data governance delivers these data assets within a business context, tracking their physical existence and lineage, and maximizing their security, quality and value. Together, they form a critical hub for data preparation, modeling and governance.

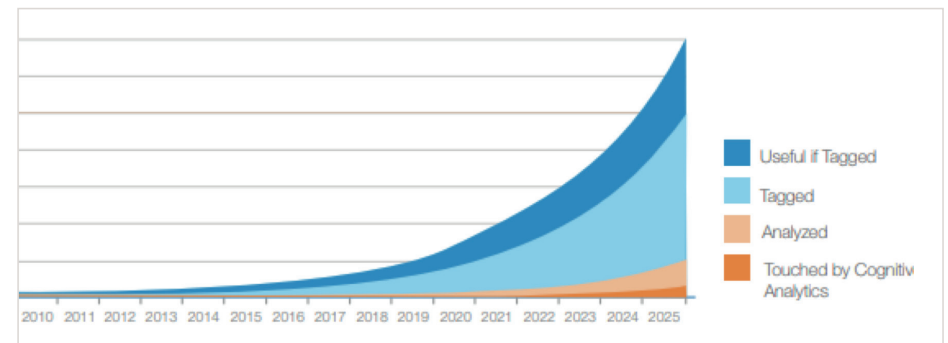
→ **163 ZB**  
Projected size of global datasphere in 2025.\*

→ **97%+**  
The percentage of data in the global datasphere that enterprises have the challenge of managing.\*

These are all obstacles to maximizing value. Some may hamper the ability to reach a single version of data truth that would make it easier to analyze big-picture issues without confusion and contradiction. Chances are that data also is not accessible to all constituents—business and IT—to collaborate in reaching insights to help direct business actions.

## DATA TAGGING

By the end of 2025, only 15% of the data in the global datasphere will be tagged and only one-fifth of that will actually be analyzed.\*



\*Data Age 2025, IDC report sponsored by Seagate

# Data Management and Data Governance Dependency

Let's look at why these two disciplines, which approach data from different perspectives (IT-driven and business-oriented), depend on each other and discuss how that dependency supports efforts to make the most of your data.

## **BUSINESS NEED**

Your organization requires a real-time, accurate picture of its data landscape, including “data at rest” in databases, data warehouses and data lakes and “data in motion” as it is integrated with and used by key applications. You also must control that landscape to facilitate collaboration and limit risk.

## **DATA MANAGEMENT**

Knowing what data you have and where it lives is complicated. You need to create and sustain an enterprise-wide view of and easy access to underlying metadata, but that's a tall order with numerous data types and data sources that were never designed to work together and data infrastructures that have been cobbled together over time with disparate technologies, poor documentation and little thought for downstream integration. So the applications and initiatives that depend on a solid data infrastructure may be compromised, and analysis of data can result in faulty insights. These issues can be addressed with a strong data management strategy and technology to enable the data quality required by the business, which encompasses data cataloging (integration of data sets from various sources), mapping, versioning, business rules and glossaries maintenance and metadata management (associations and lineage).

## **DATA GOVERNANCE**

Being able to pinpoint what data exists and where must be accompanied by an agreed-upon business understanding of what it all means in common terms that are adopted across the enterprise. Having that consistency is the only way to assure that insights generated by analyses are useful and actionable, regardless of business department or user exploring a question. Additionally, policies, processes and tools that define and control access to data by roles and across workflows are critical for security purposes. These issues can be addressed with a comprehensive data governance strategy and technology to determine master data sets, discover the impact of potential glossary changes across the enterprise, audit and score adherence to rules, discover risks, and appropriately and cost-effectively apply security to data flows, as well as publish data to people/roles in ways that are meaningful to them.

## **DESIRED RESULT**

An automated, real-time, high-quality data pipeline is established for all your stakeholders, and it serves as a key element for standing up data governance in agile, efficient and cost-effective ways. Data scientists, data stewards, ETL developers, enterprise architects, business analysts, compliance officers, CDOs and CEOs can access the data they're authorized to use and base strategic decisions on what is now a full inventory of reliable information.



# Automating Data Management

The reality is there's not enough time, people and money for true data management using manual processes.

Your organization won't be able to take complete advantage of analytics tools to become data-driven unless you establish a foundation for agile and complete data management.

**What:** Data cataloging and mapping through the integration lifecycle process, inclusive of data at rest and data in motion, is automated.

**Why:** A metadata-driven automated framework for cataloging data assets and their flows across the business provides an efficient, agile and dynamic way to generate data lineage from operational source systems (databases, data models, file-based systems, unstructured files and more) across the information management architecture; construct business glossaries; assess what data aligns with specific business rules and policies; and inform how that data is transformed, integrated and federated throughout business processes—complete with full documentation.



Without this automation, business transformation will be stymied. Companies, especially large ones with thousands of systems, files and processes, will be particularly challenged by taking a manual approach. Outsourcing these data management efforts to professional services firms only delays schedules and increases costs.

With automation, data quality is systemically assured. The data pipeline is seamlessly governed and operationalized to the benefit of all stakeholders.



The **Enterprise Data Management** market accounted for a value of **\$68.60 billion in 2016** and is projected to reach **\$142.67 billion at the end of 2023**.

*Global Enterprise Data Management Market Report, Orbis Research*



**20%** of CEOs will fail to act on digital transformation, putting their firms at risk.

*Forrester Predictions 2018: A Year of Reckoning*

# A Look at Data Management

The following are processes that define data management in service to a data governance initiative.

- 1 BUSINESS GLOSSARY**  
Captures business and technical definitions, establishing relationships and defining process workflow.
- 2 DATA CATALOG**  
Integrates data sets from various sources and provides access to all underlying metadata for easy entry to enterprise data.
- 3 DATA LINEAGE**  
A way to track data from its origin to destination across processes. Managed metadata captures enterprise data flow and presents data lineage.
- 4 DATA MAPPING**  
The mapping of source-to-target columns with the associated transformations. Natural language mappings can be automated to discover and document data movement and automatically generate code components across multiple platforms to deploy data movement.
- 5 DATA QUALITY**  
Automated data validation, data remediation, monitoring of data rules, discovery and mapping of sensitive data for compliance audit standards.



# The Data Governance Connection

Your stakeholders encompass both IT and business users in collaborative relationships, so that makes data governance everyone's business.

Automating the ability to integrate and expose a consistent and dependable data landscape to all parties matters to data governance processes and policies. And authorizing how individuals in various roles access the data matters to analytics processes.

**What:** Data Mapping & Data Governance

**Why:** The automated generation of the physical embodiment of data lineage—the creation, movement and transformation of transactional and operational data for harmonization and aggregation—provides the best route for enabling stakeholders to understand their data, trust it as a well-governed asset and use it effectively. Being able to quickly document lineage for a standardized, non-technical environment brings business alignment and agility to the task of building and maintaining analytics platforms.

**What:** Data Modeling & Data Governance

**Why:** Data modeling discovers and harvests data schema, and analyzes, represents and communicates data requirements. It synthesizes and standardizes data sources for clarity and

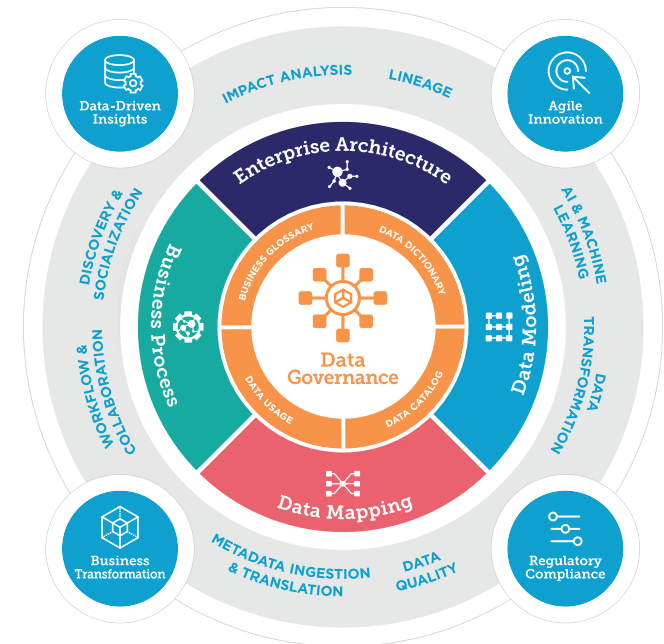
consistency to back up governance requirements to use only controlled data. It benefits from the ability to automatically map integrated and cataloged data to and from models, where they can be stored in a central repository for re-use across the organization.

**What:** Business Process Modeling & Data Governance

**Why:** Business process modeling reveals the workflows, business capabilities and applications that use particular data elements. That requires that these assets be appropriately governed components of an integrated data pipeline that rests on automated data lineage and business glossary creation.

**What:** Enterprise Architecture & Data Governance

**Why:** Data flows and architectural diagrams within enterprise architecture benefit from the ability to automatically assess and document the current data architecture. Automatically providing and continuously maintaining business glossary ontologies and integrated data catalogs inform a key part of the governance process.



Data governance builds on data mapping, data modeling, enterprise architecture, and business process modeling.



# Step Into Integrated Data Management and Data Governance

Integrating data management and data governance is still a new concept for many organizations, but the advantages are clear.

Here's a summary of what you can achieve when IT-driven data management and business-led data governance work in concert.

- 1 DISCOVER DATA**  
Identify and integrate metadata from various data management silos.
- 2 HARVEST DATA**  
Automate the collection of metadata from various data management silos and consolidate it into a single source.
- 3 STRUCTURE AND DEPLOY DATA SOURCES**  
Connect physical metadata to specific business terms and definitions and reusable design standards.
- 4 ANALYZE METADATA**  
Understand how data relates to the business and what attributes it has.
- 5 MAP DATA FLOWS**  
Identify where to integrate data and track how it moves and transforms.
- 6 GOVERN DATA**  
Develop a governance model to manage standards and policies and set best practices.
- 7 SOCIALIZE DATA**  
Enable stakeholders to see data in one place and in the context of their roles.

# A Regulatory Rationale for Integrating Data Management and Data Governance

In addition to promoting data-driven insights and business transformation by knowing what data exists in your business, where and its value potential, the integration of data management and governance capabilities supports industry needs to fulfill regulatory and compliance mandates.

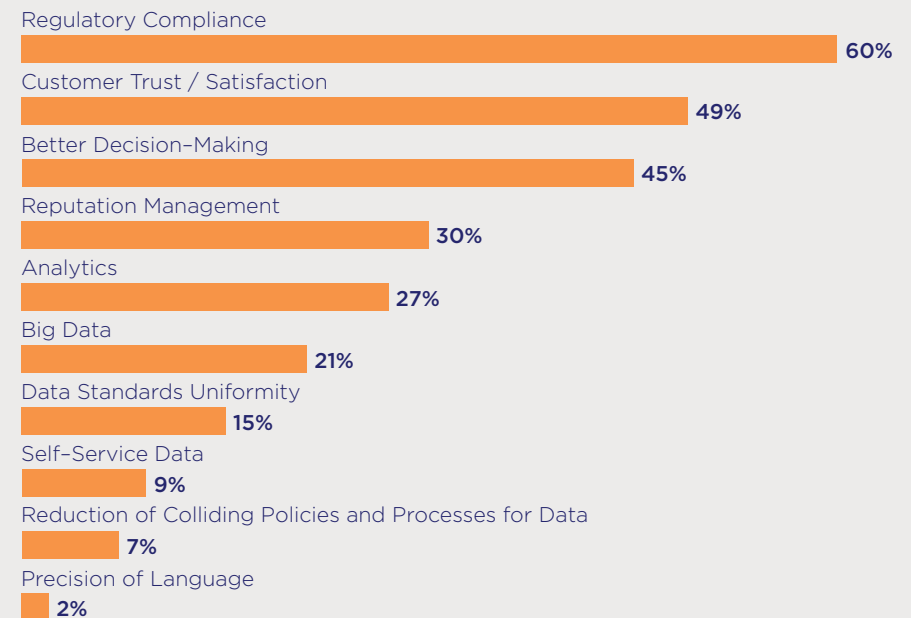
**What:** Regulations such as GDPR, HIPAA, PII and BCBS particularly affect sectors such as finance, retail, pharmaceutical/life sciences and healthcare.

**Why:** When key data isn't discovered, harvested, cataloged, defined and standardized as part of integration processes, audits may be flawed. Sensitive data—at rest or in motion—that exists across multiple systems must be automatically tagged, its lineage automatically documented, and its flows depicted so that it is easily found and its usage across workflows easily traced.

**Regulatory compliance** is the top reason companies embark on data governance initiatives.

They must consider how successful—or even achievable—these initiatives will be without automated data management being part of them.

## What's Driving Your Data Governance Initiative?



Note: Maximum of three responses allowed.

Data: UBM survey of 118 business technology professionals at organizations with 1,000 or more employees, November 2017



# Conclusion: Ready to Use *All Your Data Assets?*

A focus on the intersection between data management and data governance will position your organization to achieve the main goal you've been aiming for: getting more value out of your data—all your data—for all your needs.

When approaching the issue, it's important to review the entire spectrum of a vendor's offerings. Some may boast of a strong business glossary, for example, but lack functionality for maintaining business rules and processes. Others may not provide data quality features that specifically target compliance requirements. Some may boast of automation but actually require that enterprises turn to professional services to generate lineage.

However, you can have it all by using a single solution that checks every box. The erwin EDGE Platform delivers an "enterprise data governance experience" by combining data governance, enterprise architecture, business process modeling, data modeling and data mapping. With the broadest set of metadata connectors and automated code generation, mapping and cataloging tools, the erwin EDGE helps to simplify the entire data management and data governance lifecycle. That means every stakeholder can accelerate the transformation of data into accurate, actionable insights to drive regulatory compliance, innovation and business transformation initiatives. These integrated capabilities bring together both IT and business users, giving them the technical management and business data savvy required for realizing maximum data value.



Let us guide your organization in driving the fastest returns on your data.

Start by requesting **a demo of erwin DG**, the most-connected and role-based data governance solution on the market.



### About erwin, Inc.

erwin provides the most comprehensive data management and governance solutions to automate and accelerate the transformation of data into accurate and actionable insights. The erwin EDGE platform combines data governance, enterprise architecture, business process, data modeling and data mapping. Thanks to the broadest set of connectors for data preparation, modeling and governance, government agencies, financial institutions, healthcare companies and other enterprises around the world can use data to fuel their compliance, innovation and transformation initiatives.

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