Data Governance by "Stealth" – How to Right-Size your Data Governance Effort

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Donna is a recognised industry expert in information management with over 20 years of experience in data strategy, information management, data modeling, metadata management, and enterprise architecture. Her background is multi-faceted across consulting, product development, product management, brand strategy, marketing, and business leadership.

She is currently the Managing Director at Global Data Strategy, Ltd., an international information management consulting company that specialises in the alignment of business drivers with data-centric technology. In past roles, she has served in key brand strategy and product management roles at CA Technologies and Embarcadero Technologies for several of the leading data management products in the market.

As an active contributor to the data management community, she is a long time DAMA International member, Past President and Advisor to the DAMA Rocky Mountain chapter, and was recently awarded the Excellence in Data Management Award from DAMA International in 2016. She was also on the review committee for the Object Management Group’s Information Management Metamodel (IMM) and a member of the OMG’s Finalization Taskforce for the Business Process Modeling Notation (BPMN).

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 two books: *Data Modeling for the Business* and *Data Modeling Made Simple with ERwin Data Modeler* and is a regular contributor to industry publications. She can be reached at donna.burbank@globaldatastrategy.com

Donna is based in Boulder, Colorado, USA.

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Who Are You? Survey

How Would You Describe Your Role?

- Businessperson or Business Analyst
- Data Governance Lead
- Data Steward or Owner
- Business Intelligence Analyst or Developer
- Data Architect, Data Modeler, or Data Analyst
- DBA or Technical IT
- A combination of the above
- Other
Data Governance

Are you actively involved in a data governance project currently?

- Yes
- No
- Sort Of / Indirectly
- What is Data Governance?
Abstract
Data Governance by Stealth: How to Right-Size your Data Governance Effort

• This session covers how to best align a data governance initiative with business motivations & drivers, how to "sell" to management, and how to quantify success.
• It’s often difficult to get funding and buy-in for new data governance initiatives.
• Why is it that, even when there is support from the highest levels in the organization, often at the CEO and/or CIO level, data governance initiatives fail to gain traction within the organization?
• This session will cover effective ways to gain buy-in and support for Data Governance in your organization.
Agenda

What we’ll cover today

• Aligning with Business Drivers & Motivation
• How to "Sell" Data Governance
• "Right-sizing" data governance to align with the organization’s ways of working
• Concrete Processes & Best Practices for Implementation
• Case Studies from Successful Organizations
DATA GOVERNANCE

What my friends think I do

What my mom thinks I do

What society thinks I do

What my coworkers think I do

What I think I do

What I actually do

Driving the Success of the Business
Data Governance
Data is Critical to your Business - Govern it Effectively

• Like financial assets, data must be closely managed and governed in order to ensure that it is managed and used correctly throughout the organization.

• Implement a data governance program that’s fit-for-purpose for your organization’s unique needs and goals by:
  • Aligning data governance with key business goals & drivers
  • Identifying critical data to be governed (and what to leave alone)
  • Defining roles & responsibilities
  • Creating policies & procedures for each business area
  • Identifying technologies & tools required
Data Governance – A Basic Framework
Aligning Business Goals with Data Governance Best Practices

Vision & Strategy

- Business Goals & Objectives
- Data Issues & Challenges

Organization & People
Process & Workflows
Data Management & Measures
Culture & Communication

Tools & Technology
Building an Enterprise Data Strategy
A Successful Data Strategy links Business Goals with Technology Solutions

| “Top-Down” alignment with business priorities | Business Strategy |
| Managing the people, process, policies & culture around data | Data Strategy |
| Leveraging & managing data for strategic advantage | Data Governance |
| Coordinating & integrating disparate data sources | People |
| “Bottom-Up” management & inventory of data sources | Process |

Data Governance:
- People
- Process
- Policy
- Culture

Data Asset Planning & Inventory:
- Master Data Management
- Data Warehousing
- Business Intelligence
- Big Data Analytics
- Data Quality
- Data Architecture & Modeling

Data Integration:
- Metadata Management

Metadata Management:
- Databases
- Big Data
- Unstructured Data
- Semi-Structured Data
- Document & Content Mgt.
From Cruise Ship to Life Raft

With a common motivation, disparate skills, personalities and roles become an asset, not an annoyance.
The Motivation Model

Common Set of Goals & Guidelines

• There is benefit in formally documenting the motivations for the project.
  • Commonly-agreed upon guidelines for project tasks & deliverables
  • Reminder of “why we’re doing this” - Neutral arbitrator for disagreements

• Components of the Motivation Model include:
  • **Corporate Mission**: describes the aims, values and overall plan of an organization.
    • e.g. To be provide the most comprehensive, customer-driven online shopping experience in the market
  • **Corporate Vision**: describes the desired future state
    • e.g. To transform the way consumers purchase goods through social-media-driven connections.
  • **External Drivers**: What market forces are driving this initiative?
    • e.g. Cultural shift to online retail
  • **Internal Drivers**: What internal pressures or initiatives are key for this project?
    • e.g. Disparate systems require need for an integrated view of customer
  • **Project Goals**: high level statement of what the plan will achieve.
    • e.g. To improve customer satisfaction with over 90% satisfaction rating in 2 years.
  • **Project Objectives**: outcome of projects improving capabilities, process, assets, etc.
    • e.g. To link consumer purchase history with social media activity.
Sample Business Motivation Model

Artful Art Supplies

Corporate Mission
To provide a full service online retail experience for art supplies and craft products.

Corporate Vision
To be the respected source of art products worldwide, creating an online community of art enthusiasts.

External Drivers
- Digital Self-Service
- Increasing Regulation Pressures
- Online Community & Social Media
- Customer Demand for Instant Provision

Internal Drivers
- Targeted Marketing
- 360 View of Customer
- Revenue Growth
- Brand Reputation
- Community Building
- Cost Reduction

Goals & Objectives

Accountability
- Create a Data Governance Framework
- Define clear roles & responsibilities for both business & IT staff
- Publish a corporate information policy
- Document data standards
- Train all staff in data accountability

Quality
- Define measures & KPIs for key data items
- Report & monitor on data quality improvements
- Develop repeatable processes for data quality improvement
- Implement data quality checks as BAU business activities

Culture
- Ensure that all roles understand their contribution to data quality
- Promote business benefits of better data quality
- Engage in innovative ways to leverage data for strategic advantage
- Create data-centric communities of interest

- Corporate-level Mission & Vision
- May already be created or may need to create as part of project.

- Project-level, Data-Centric Drivers
- External Drivers are what you’re facing in the industry
- Internal Drivers reflect internal corporate initiatives.

- Project-level, Data-Centric Goals & Objectives
- Clear direction for the project
- Use marketing-style headings where possible
While many associate data governance with avoiding risk or complying with regulation, data governance is also an **opportunity driver**.
How can we Transform our Business through Data?

**Business Optimization**
Becoming a *Data-Driven Company*
- Making the Business More Efficient
  - Better Marketing Campaigns
    - Higher quality customer data, 360 view of customer, competitive info, etc.
- Better Products
  - Data-Driven product development, Customer usage monitoring, etc.
- Better Customer Support
  - Linking customer data with support logs, network outages, etc.
- Lower Costs
  - More efficient supply chain
  - Reduced redundancies & manual effort

**Business Transformation**
Becoming a *Data Company*
- Changing the Business Model via Data – data becomes the product
  - Monetization of Information: examples across multiple industries including:
    - **Telecommunications**: Location information, usage & search data, etc.
    - **Retail**: Click-stream data, purchasing patterns
    - **Social Media**: Social & family connections, purchasing trends & recommendations, etc.
    - **Energy**: Sensor data, consumer usage patterns, smart metering, etc.

How do we do what we do *better*?
How do we do something *different*?
Optimizing Restaurant Revenue through Menu Data
Managing the Data that Runs the Business

- An international restaurant chain realized through its digital strategy that:
  - While menus are the core product that drives their business...
  - They had little control or visibility over their menu data
  - Menu data was scattered across multiple systems in the organization from supply chain to kitchen prep to marketing, restaurant operations, etc.

- Menu data was consolidated & managed in a central hub:
  - **Master Data Management** created a “single view of menu” for business efficiency & quality control
  - **Data Governance** created the workflow & policies around managing menu data

- Process Models & Data Mappings were critical
  - **BPMN diagrams** to identify the flow of information
  - **CRUD Matrixes** to understand usage, stewardship & ownership
Consumer Energy Company’s Business Transformation

Business Transformation via Data

• For the consumer energy sector *Big Data and Smart Meters are transforming the ways of doing business and interacting with customers.*
  • Moving away from traditional data use cases of metering & billing.
  • Smart meters allow customers to be in control of their energy usage.
    • Control over energy usage with connected systems
    • Custom Energy Reports & Usage
    • Smart Billing based on usage times

• As energy usage declines, *data is becoming the true business asset for this energy company.*
  • Monetization of non-personal data is a future consideration.

• While the Big Data Opportunity is crucial, equally important are the traditional data sources
  • Data Governance Program analyzing data in relation to business processes & roles
  • Business-critical data elements identified and definitions created
  • New Data Quality Tools in place for operational and data warehouse data
Financial Institution: Creating the 360 View of Customer

- A NY Financial Institution was looking to create a 360 View of its High Net Worth Customers
- A Big Data Analytics project performed exploratory analysis on external data sources, social media, internal unstructured data, etc.

Agency

Works for

Agent

Interacts with

Policy

Buys a Commercial Policy

Commerical Client

Sells

Buy a Personal Policy

Managing Partner of Krugel Law Firm

Customer

Owns 2 Yachts

Aspen home has wildfire risk

Location

Owes 5 Homes, One International

External Data

Established a Family Trust

Household

Claim

External Data

Includes: Creating the 360 View of Customer

- A NY Financial Institution was looking to create a 360 View of its High Net Worth Customers
- A Big Data Analytics project performed exploratory analysis on external data sources, social media, internal unstructured data, etc.
The Risk of Bad Data

- But when they tried to match this with their Customer database, they had duplicate customers – which one was the high net worth individual?

- Errors in Customer information can cause disastrous results. The “360 View of Customer” can be hampered by:
  - **Duplicate Data**: Are “Martin G. Stykes, Phd” and “Martin Stykes” the same person?
  - **Erroneous Data**: Is Martin Stikes a misspelling?
  - **Ambiguous Data**: Is M. Stykes a woman married to Homer Stykes or a man married to Dr. Amber Wentworth?
  - **Poor Relationships between Data**: Does Martin have a good credit rating, or did he recently file for bankruptcy?
  - **Accessibility of Data**: The information about Mr. Styke’s Argentinian coverage can’t be accessed in North America.
  - **Timeliness of Data**: Is Martin Stykes who’s single with no children just an old record for the currently married with children Martin Stykes?
  - **Completeness of Data**: We’re missing information about Mr. Styke’s date of birth.
  - And the list goes on...

**Family Relationships**
- Married to Dr. Amber Wentworth
- Married to Homer Stykes
- Father of James P. Stykes
- Single, No Children

**Community Relationships**
- Board Member of Schools for Safety

**Commercial Links**
- Owner of Krugel Law Firm
- Owner of Mart’s Fish & Chips

**SEC & Credit Data**
- Excellent Credit Rating
- Filed for Bankruptcy in 2014

High Net Worth Individual?
Data Governance – A Basic Framework
Aligning Business Goals with Data Governance Best Practices

Vision & Strategy

- Business Goals & Objectives
- Data Issues & Challenges

Organization & People
Process & Workflows
Data Management & Measures
Culture & Communication

Tools & Technology
## Ask the Right Questions

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<thead>
<tr>
<th>Vision &amp; Strategy</th>
<th>Organization &amp; People</th>
<th>Processes &amp; Workflows</th>
<th>Data Management &amp; Measures</th>
<th>Culture &amp; Communications</th>
<th>Tools &amp; Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there a clear understanding of the strategic goals of your organization &amp; the need for enterprise data governance?</td>
<td>Who are the key data stakeholders within and outside your organization?</td>
<td>Do business process design and operations management take data needs into account?</td>
<td>Has key data been identified, defined and analyzed?</td>
<td>Has the importance of data been communicated across the organization? Is there a data communications plan?</td>
<td>Is there a coherent data architecture in place to define and guide how data is captured, processed, stored and used?</td>
</tr>
<tr>
<td>How does your organization rely on data – now and in the future?</td>
<td>Who are the primary data producers, consumers &amp; modifiers?</td>
<td>Are there any specific data management / improvement processes in place?</td>
<td>Have data models been built – conceptual / logical / physical?</td>
<td>Is the value of good data management understood and championed by senior managers?</td>
<td>What primary IT systems and platforms are used to store and process key data?</td>
</tr>
<tr>
<td>What impact are data problems currently having on your organization?</td>
<td>Are individuals formally accountable for data ownership?</td>
<td>Are there issue and workflow management processes to address data problems?</td>
<td>Has the relationship between business processes and data been mapped?</td>
<td>Do all employees and third parties receive data awareness and improvement education and training?</td>
<td>Do design gateways exist to ensure data needs are taken into account in new &amp; modified platforms?</td>
</tr>
<tr>
<td>Do you have a data governance policy?</td>
<td>Are employees trained in good data management practices?</td>
<td>Has there been any analysis of the efficiency and effectiveness of how data is managed within operational business processes?</td>
<td>Are data shortcomings known, measured &amp; recorded?</td>
<td>Are there communication channels for communicating best practice in data management?</td>
<td>What specialist data management tools are currently in use?</td>
</tr>
<tr>
<td>What are the overall expected benefits of better data governance?</td>
<td>Are there any channels through which data shortcomings can be highlighted and investigated?</td>
<td>How does the business and IT interact to manage data improvement?</td>
<td>Are there formal standards &amp; rules specifying how data should be managed and improved?</td>
<td>Are there internal success stories that could be used to promote better data management across the organization?</td>
<td>What metadata is captured and stored?</td>
</tr>
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Perception is Important

• In both cases below, skill, best practice, and rigor are important
  • In the first example, you are annoyed by it, or at best indifferent
  • In the second, you are relieved, confident, thankful for it.
The “Elevator Pitch”
How Would you Describe Your Project to the CEO in 2 minutes?

I’m working on a project to rationalize metadata across data sources to ensure consistency...

Zzzzzzzz...

I’m working on a project to get a more complete view of customers for the big online marketing campaign...

Interesting!

VS.
Implement “Just Enough” Data Governance

• Each type of data has its own type of governance model & sharing paradigm
• As a general rule, the more the data is shared across & beyond the organization, the more formal governance needs to be

- **Master & Reference Data**
  - Common data elements used by multiple stakeholders across functional areas, applications, etc.
  - Highly governed
  - Highly published & shared

- **Core Enterprise Data**
  - Common data elements used by multiple stakeholders across Bus, LOBs, functional areas, applications, etc.
  - Highly governed
  - Highly published & shared

- **Functional & Operational Data**
  - Lightly modeled & prepared data for limited sharing & reuse
  - Collaboration-based governance
  - May be future candidates for core data

- **Exploratory Data**
  - Raw or lightly prepped data for exploratory analysis
  - Mainly ad hoc, one-off analysis
  - Light touch governance

- **Examples**
  - **Reference Data**: Procedure codes, Country Codes, etc
  - **Master Data**: Location, Customer, Product

- **Examples**
  - **Common Financial Metrics**: for Financial & Regulatory Reporting
  - **Common Attributes**: Core attributes reused across multiple areas (e.g. Customer name, Account ID, Address)

- **Examples**
  - **Operational Reporting**
  - **Non-productionized analytical model data**
  - **Ad hoc reporting & discovery**

- **Examples**
  - **Raw data sets for exploratory analytics**
  - **External & Open data sources**
Identify What Data Needs to Be Governed
And What to Leave Alone

**Why?**
- Identify Key Business Driver
- Filter Data Elements Aligned with Business Driver
- Focus Governance Efforts on Key Data

**What?**
- **Launch of New Product** – Marketing Campaign requires better customer information

**How?**
- **Exploratory Analytics & Discovery**
  - Lightly governed
  - Social Media Sentiment Analysis
- **Structured Warehouse for Financial Reporting**
  - Highly governed

Customer Region
Product
Partner
Vendor
# Finding the Right Balance

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<th><strong>Reactive Business Management</strong></th>
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<td>• Business Process Change</td>
<td>• Data Quality Working Groups</td>
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<td>• Policies &amp; Procedures</td>
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<td>• Governance Steering Committees</td>
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<td>• End User Training</td>
<td>• Data Stewardship</td>
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<td>• Industry Advisory Councils</td>
<td>• “Conscious Disregard”</td>
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<td>• Data definition &amp; glossary</td>
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<tr>
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<th><strong>Reactive Technical Management</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Application-Driven Data Entry &amp; Workflow</td>
<td>• Data Cleansing Tools and/or SQL</td>
</tr>
<tr>
<td>• Application-level data validation</td>
<td>• ETL (Data Warehouse)</td>
</tr>
<tr>
<td>• Database-level data validation &amp; integrity (data models)</td>
<td>• Data Audit &amp; Dashboards</td>
</tr>
<tr>
<td>• Data Quality tool validation at source</td>
<td>• External Data Sources</td>
</tr>
</tbody>
</table>

## Resolve at Source vs. Resolve via Post-Processing

- **Resolve at Source**: Proactive Business Management and Proactive Technical Management
  - Business Process Change
  - Policies & Procedures
  - Governance Steering Committees
  - End User Training
  - Industry Advisory Councils
  - Data definition & glossary
  - Application-Driven Data Entry & Workflow
  - Application-level data validation
  - Database-level data validation & integrity (data models)
  - Data Quality tool validation at source

- **Resolve via Post-Processing**: Reactive Business Management and Reactive Technical Management
  - Data Quality Working Groups
  - Data Stewardship
  - “Conscious Disregard”
Data Governance can be Agile

• Integrating Data Governance checkpoints & activities into the **Agile development lifecycle helps proactively manage data-related issues** before and during development, rather than reactively after the fact.

• Below is a high-level overview of the types of metadata-related questions that can be asked by team members along the various phases of the Agile development lifecycle.

• **Small changes & questions as part of the process can have a large effect.**

![Diagram illustrating the Agile development lifecycle with Data Governance checkpoints and questions]

- Are there any new data requirements for this concept?
- Are key business concepts & terms clearly understood?
- Are there any Privacy concerns?
- Etc.

- What are our agreed definitions for core concepts (e.g. Active Customer)?
- How will we implement our core data requirements?
- How will we resolve any Privacy concerns?
- Etc.

- Are there common standards that can be reused?
- How do I publish & share my work with others?
- Etc.

- Are there overlaps or conflicts in data usage or design?
- Are other teams defining & using terms differently?
- Etc.
In a recent DATAVERSITY survey, over 60% of respondents stated that: Data Governance is a key driver for their use of Metadata.

1 Available for download on www.globaldatastrategy.com/resources/white-papers
Metadata Makes Data Governance Actionable

- Metadata can help take the business rules & definitions defined in policies and make them actionable in physical systems, maintaining a lineage & audit trail.
### Key Steps to Creating a Data Governance Program

#### Steps to Success

- The following steps should be included when creating a data governance program. The order is less important than ensuring that they are completed.

<table>
<thead>
<tr>
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<tr>
<td><strong>Secure Senior Executive Support</strong></td>
<td>Identify a Data Champion among senior leadership.</td>
</tr>
<tr>
<td><strong>Define Vision, Drivers &amp; Motivations</strong></td>
<td>Define business-driven vision for the program.</td>
</tr>
<tr>
<td><strong>Identify &amp; Interview Stakeholders</strong></td>
<td>Elicit feedback from key stakeholders – listen &amp; communicate.</td>
</tr>
<tr>
<td><strong>Build the Business Case</strong></td>
<td>Outline key benefits of data program &amp; risks of not doing so</td>
</tr>
<tr>
<td><strong>Identify Business-Critical Data</strong></td>
<td>Focus on the data that has the highest impact on the business.</td>
</tr>
<tr>
<td><strong>Assess Data Maturity</strong></td>
<td>Assess the data maturity of the organization across all aspects of data management.</td>
</tr>
<tr>
<td><strong>Map Priorities to Capabilities</strong></td>
<td>Create a realistic “heat map” aligning business goals with data management capabilities.</td>
</tr>
<tr>
<td><strong>Create Organization</strong></td>
<td>Define an organizational structure that aligns with your way of working.</td>
</tr>
<tr>
<td><strong>Deliver “Quick” Wins</strong></td>
<td>Short, iterative, business-driven projects deliver short-term value, building towards long-term gain.</td>
</tr>
<tr>
<td><strong>Communicate</strong></td>
<td>Build a communication plan from initial feedback phase throughout all phases of the program.</td>
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</tbody>
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Balancing Opportunity with Risk

For Success in Data-Driven Business Transformation, it’s Important to Balance Digital Innovation with Foundational Governance

Data-Driven Transformation
• New Business Models
• 360 View of Customer
• Big Data
• IoT
• Etc.

Foundational Governance
• Data Governance Organization
• Master Data Management
• Data Quality
• Architecture & Design
• Etc.
Summary

• Data Governance can both **generate opportunities & protect from risk**.
• Focus on the **business value of data governance** where possible – **find opportunities**
• Implement “**just enough**” **data governance** for the business use case & technology.
• Build a **robust framework** for managing data assets
  • Vision & Strategy – built around business goals & challenges
  • People & Process
  • Communication & Culture
  • Technology
• For Success in Data-Driven Business Transformation, it’s Important to Balance **Business Innovation with Foundational Governance**.
About Global Data Strategy, Ltd
Data-Driven Business Transformation

• Global Data Strategy is an international information management consulting company that specializes in the alignment of business drivers with data-centric technology.

• Our passion is data, and helping organizations enrich their business opportunities through data and information.

• Our core values center around providing solutions that are:
  • **Business-Driven:** We put the needs of your business first, before we look at any technology solution.
  • **Clear & Relevant:** We provide clear explanations using real-world examples.
  • **Customized & Right-Sized:** Our implementations are based on the unique needs of your organization’s size, corporate culture, and geography.
  • **High Quality & Technically Precise:** We pride ourselves in excellence of execution, with years of technical expertise in the industry.

Visit [www.globaldatastrategy.com](http://www.globaldatastrategy.com) for more information
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Thoughts? Ideas?