‘Data Governance And Modeling Best Practices’
Welcome!
Let Me Introduce Myself…

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Data Governance & Modeling Best Practices

The Big Picture - Data Governance in Modeling Environments
  - What Is It and Why Do We Need It?
  - Modeling Best Practices - They're Not Just A Pretty Face

Strategy First
  - Modeling Best Practices Goals
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Then Implementation
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      - Robust Jumpstart
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      - Easy To Customize
  - ‘DM SOS!'™ Brief Demonstration
The Big Picture – 
Data Governance in Modeling

“It’s astonishing, in this world, how things don’t turn out at all the way you expect them to.”

Agatha Christie

As in life, as in our IT and Modeling environments…

Enter Governance.

IT Governance, including Data Governance, is a philosophy of accountability, substantiated by a structured plan to guide IT processes towards accurate and accessible information.
Rarely do organizations work from the big picture, and as a result they ‘sub optimize’ solutions by allowing diverse standards, naming conventions, codes, etc.

This ‘silhouette’ approach to data and modeling efforts results in data inconsistencies which have a deleterious effect on the overall understanding, accessibility, integration and integrity of data.

Data Governance seeks to remedy these problems.
Data Governance – What Is It?

- Data Governance is a subset of IT governance that focuses on establishing processes and policies around managing data as a corporate asset.

  And:

- Data governance refers to the overall management of the availability, usability, integrity and security of the data employed in an enterprise.

  And:

- Data governance provides the infrastructure, resources and processes necessary to manage data with the ‘Big Picture’ in mind.
Data Governance – Why Do We Need It?

...Because generally speaking, the management and quality of our data is sorely lacking.

- The costs of managing disparate IT assets is expensive and the work efforts are cumbersome
- Data processes aren’t consistent and standardized, thus creating different report results
  - The decision to standardize and consolidate data assets is inevitable
- Regulatory compliance - Sarbanes-Oxley, etc.:
  - “Where management has outsourced functions to third party service provider(s), management maintains a responsibility to assess the controls over the outsourced operations.”
Data Governance – Why Do We Need It? (Cont.)

- The goal of data governance is to establish and maintain a corporate-wide agenda for data including:
  - Joint decision making and collaboration for the good of the corporation rather than individuals or departments
  - Balancing business innovation and flexibility with IT standards and efficiencies
  - Creating reliability, trust and accountability in data environments that frequently miss the mark
Data Governance & Modeling Goals

The goals of a data governance program are also reflected in the requirements for best practices in modeling:

- Define the owners or custodians of the data assets in the enterprise
- Develop policies that specify who is accountable for the various aspects of the data:
  - Accuracy, accessibility, consistency, completeness and change control
- Develop procedures regarding how models are to be created, organized, stored, changed, archived, backed up, versioned and migrated through a model development life cycle
Data Governance & Modeling Goals (Cont.)

- Develop audit procedures that ensure ongoing compliance with business rules and/or government regulations

- Develop standards that define:
  - Model and model object naming
  - Model development requirements
  - User permissions required to make development efficient while protecting the work in progress

- Define roles & responsibilities for:
  - Developing data models
  - Administering model management best practices
  - Interfacing with business data stewards and those who implement governance policies
Modeling Best Practices

Data and process modeling best practices support the objectives of data governance as well as ‘good modeling techniques.’

Let’s face it - metadata’s not new; we used to call it documentation. But now we have a more critical need to have robust, effective documentation, and the model is one logical place to house it.

- Because inadequate documentation and audit practices can result in bad business (as well as jail sentences), we need to:
  - Understand the meaning of critical business data
  - Trust the accuracy of the data
  - Know its source
  - Use it correctly
  - Value & engage the data stewards (both business and technical)
Modeling best practices can only be as successful as the strategy they support -

- Strategies will vary depending upon the organization’s current & future needs
- Strategies are determined by clarifying where you are, and determining where you want to be
- Strategies are not ‘one size fits all’, but they do share valuable goals of communication, metadata integrity, reusability and non-redundancy…
Communication

Communication is the single most important aspect of a successful data governance and modeling program.

- Education, when combined with ongoing communication, can strengthen awareness of both data governance & modeling best practices
- Inadequate communication of model requirements & system changes is a common cause of deliverable failures
- Data governance & model management represent a continuous process rather than periodic decision-making
- Monitoring and enforcing standards and procedures is critical and should be communicated & understood as a ‘business need’ as well as a technical requirement
Metadata Integrity – Who Can You Trust?

“The naked truth is always better than the best-dressed lie.”

Ann Landers

Your models represent important business (logical) & technical (physical) metadata, & these model structures truly support your business processes.

If you have varying answers when reviewing similarly named, but different metadata descriptions, how can you trust the models or the data they represent?

Modeling best practices assist in finding (and keeping) a way to the truth of the metadata...
Reusability – Saving Time & Money

Modeling best practices should include a commitment to the reuse of model objects, bringing consistency to model structures - their definitions, formats, properties & values.

Consistency leads to:

- Trust (in the metadata)
- Less time spent on analysis & fixing unnecessary problems
- Less money spent on rework
- The ability to create models which are ‘jump started’ by previously used & approved logical & physical model objects
Reduce Redundancy – “Haven’t We Done This Already?”

Redundancy in the modeling world is one of the most common causes of inefficiency & data inaccuracy.

Best practices should include procedures which enable you to avoid:

- Duplication of analysis efforts
- Inconsistent model content
- Conflicting property definitions and values
- Wasting time & money by not sharing knowledge, resulting in redundantly creating similar metadata
When an organization manages its data as a corporate asset, and makes modeling best practices a part of its data governance efforts, the focus turns towards the business value of the data, not just the IT requirements.

The **business drivers** for managing data as a corporate asset are:

- Competitiveness
- Regulatory compliance
- Realizing the benefit of investments in BI and other information-based initiatives
Then Implementation (Cont.)

- The keys to successful best practices modeling implementation are:
  - Management support of a data governance program, including an integral best practices approach to modeling
  - Development of a **modeling strategy** with data governance goals in mind
  - Involvement by both the business side as well as IT
  - Resistance to creating or accepting silos of standards and procedures
  - Development of a ‘**model management infrastructure**’ to support the modeling strategy
What Is Model Management?

Model management is the method by which data and process models are developed, maintained, used & reused within a model development life cycle.

And a Model Management infrastructure is the establishment & formal documentation of the standards & procedures used to apply model management.
Model Management Components

Model management for an effective multi-user modeling environment includes the following infrastructure components:

- Standardized tools
- Establishment of a modeling strategy which includes:
  - A formal model management life cycle
  - Reusability of approved logical & physical model objects
  - Reduction of unnecessary redundancy via standards for all model objects
  - Procedures which facilitate development & maintenance
  - Metadata integrity via consistency of definitions, documentation & model reviews
A Modeling Infrastructure

“We know we need it, but who has the time?”

Organizations generally understand the need for modeling standards and procedures, but face several obstacles in getting the job done:

- There isn’t a plan for developing an infrastructure
- In-house resources are already working full time
- Resources may not have infrastructure knowledge or writing skills
- Internal politics or ‘silo groups’ can’t agree on what should be implemented
And So...

Organizations build most of their models from scratch, instead of creating an infrastructure which facilitates the use of previously developed & defined model objects.

A ‘Best Practices’ modeling environment which supports data governance goals is directly affected by the commitment to a modeling strategy, and putting in place the infrastructure to support it.

But who has the time?

Am I being redundant?
Let’s Make This Easier…

“It’s much easier to edit and delete than it is to create from a blank page.”

Marcie Barkin Goodwin

Starting with a robust, complete set of standards and procedures, and customizing them to meet your specific requirements is the solution to quickly creating or enhancing your modeling infrastructure.

Introducing ‘DM SOS!’ (Data Modeling Set of Standards)…
Effective Model Management With ‘DM SOS!’™

‘DM SOS!’™ (Data Modeling Set of Standards) is a unique infrastructure product that helps companies implement an effective, customized modeling infrastructure.

- A Brief History
- Benefits of ‘DM SOS!’™
  - Robust Jumpstart – 30 critical standards, procedures, templates and forms
  - Saves Time & Money – customize rather than create
  - Expert Baseline – written by an infrastructure expert
  - Easy To Customize – Word docs and HTML
- ‘DM SOS!’™ Demonstration
<table>
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<tr>
<th>Step #</th>
<th>Activity</th>
<th>Associated Infrastructure Best Practices</th>
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| 1.     | Create a model diagram and determine existence of required entities/attributes | • Modeling Strategy – (Design Layer Architecture)  
  • DiagramNaming  
  • Model Creation & Population (Templates, Derive, Split) |
| 2.     | Develop Entities/Attributes | • Logical/Physical Data Model Object Naming (NSM, DSM)  
  • Class Word List (Logical Domains, NSM)  
  • Logical Domain List (Class words)  
  • Stewardship (UDPs)* |
| 3.     | Reconcile Model Object Differences | • Model Change Control (Complete Compare)  
  • Notification & Update (Report Template Builder)  
  • Stewardship (UDPs)*  
  • Change Control Form – Logical Shared Objects |
| 4.     | Resolve Issues | • Issue Resolution |
| 5.     | Model Review & Approval | • Logical/Physical Model Submission & Deliverables (Data Browser, RTB)  
  • Non-Conformance (Complete Compare)  
  • Logical/Physical Model Review Form  
  • Logical/Physical Model Submission Checklist |
| 6.     | Model Maintenance | • Administrative Change Control (Templates)  
  • Backup  
  • Model Merge (Complete Compare, Add Model Source)  
  • Versioning (Model Manager) |
Products & Services

Axis Services
✓ Model Management Consulting & Assessments
✓ Modeling Standards & Procedures Consulting

Axis Products
✓ Data Modeling (DM) SOS!™ - a critical Set of Standards & Procedures
✓ Business Process Modeling (BPM) SOS!™ - also available

Axis Customized Education & Mentoring
✓ Data Modeling Concepts
✓ Data Modeling with AllFusion® ERwin® DM
✓ Process Modeling with AllFusion® Process Modeler
✓ Process Modeling Overview for Business Users & Managers

Call us at 303-415-1090 or visit our website at: www.axisboulder.com