



A Holistic Framework for Enterprise Data Management

DAMA – NCR

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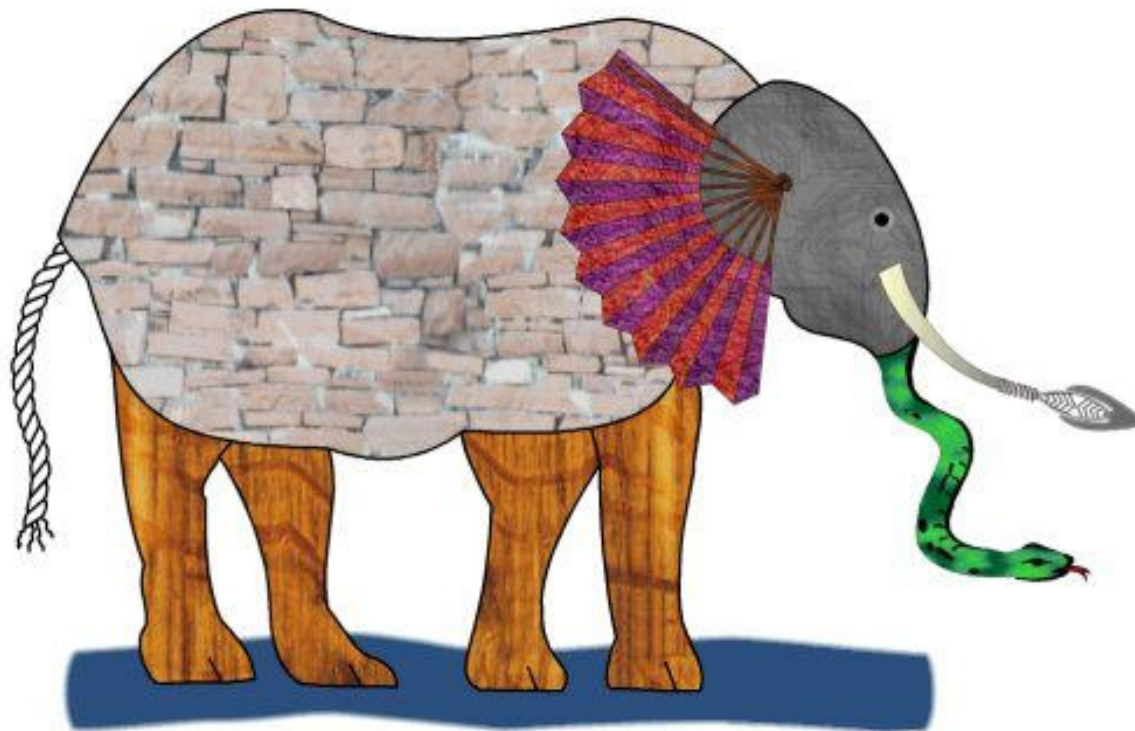


Agenda

- **What is Enterprise Data Management?**
- **Why an EDM Framework?**
- **EDM High-Level Framework**
- **EDM Framework Components**
- **EDM Framework – Activity View**
- **EDM Framework – Artifact View**
- **Conclusion**

What is Enterprise Data Management?

It's a lot like an elephant



(from the parable “The Six Blind Men and the Elephant”)



What is Enterprise Data Management?

It depends on what your perspective is:

- **Chief Information Officer**
- **Data Strategist**
- **Data Architect**
- **Data Analyst**
- **Data Administrator**
- **Database Administrator**
- **Data Owner / Steward**
- **Data Sharing Stakeholder**
- **Data Quality Specialist**



Why an EDM Framework?

Data Management professionals need to take a holistic approach to Enterprise Data Management that encompasses all perspectives to:

- **Ensure that data is managed as an enterprise asset**
- **Ensure the definition and development of data solutions (transactional, analytical, portal) that are:**
 - Robust
 - Scalable
 - High-Performance
 - Interoperable
 - Secure
 - High-Quality



EDM High-Level Framework

DM Activities & Artifacts	Data Strategy & Planning		
	Data Architecture & Design	Data Engineering & Operations	Data Access & Exchange
	Data Governance		
DM Foundation	Metadata		
	Data Standards		
	Data Tools & Technologies		



EDM Framework Components

Data Strategy & Planning

Activities

- Vision Definition
- Strategy Planning
- Investment Planning
- Goals & Objectives Setting
- Scope Definition
- Resource Planning
- Transition Planning

Artifacts

- Vision Statement
- Data Management Strategy
- Investment Management Plan
- Goals & Objectives
- Scope
- Resource Plan
- Transition Plan



EDM Framework Components

Data Architecture & Design

Activities

- Data Requirements Definition
- Data Analysis
- Data Modeling
- Database Design
- Information Flow / Interface Definition
- Rule Definition

Artifacts

- Data Requirements
- Conceptual Data Model
- Logical Data Model
- Physical Data Model / Database Design
- Data Interface / Service Specification
- Data Conversion Specification
- Business Rules



EDM Framework Components

Data Engineering & Operations

Activities

- Database Implementation & Maintenance
- Data Conversion
- Backup & Recovery
- Archiving & Retention
- Logging & Audit
- Performance Tuning

Artifacts

- Production Database
- Data Management Plan
- Disaster Recovery Plan



EDM Framework Components

Data Access & Exchange

Activities

- Data Security
- Data Profiling
- Data Harmonization
- Data Integration
- Data Registration
- DB Connection Configuration

Artifacts

- Data Access Privileges
- Privacy Impact Assessment
- Data Quality Assessment
- Data Registry
- Database Connections



EDM Framework Components

Data Governance

Activities

- **Governance Establishment & Oversight**
- **Ownership & Stewardship**
- **Policy & Procedure Definition**
- **Service Level Agreements (SLA) & Metric Definition**
- **Education & Training**
- **Outreach**

Artifacts

- **Governance Framework**
- **Policy & Procedures**
- **Service Level Agreements (SLA) & Metrics**
- **Classes & Seminars**
- **Communications**



EDM Framework Components

Metadata

- **Name**
- **Definition & Semantics**
- **Domain**
- **Structure**
- **Lineage**
- **Rules**
- **Quality**
- **Security & Privacy**
- **Stakeholders / Community of Interest (COI)**
- **Owner & Steward**
- **Implementation**
- **Operations**



EDM Framework Components

Data Standards

- Modeling
- Metadata
- Documentation
- Data Access
- Data Exchange



EDM Framework Components

Data Tools & Technologies

- **Repository**
- **Modeling**
- **Registry**
- **Conversion**
- **DBMS & Utilities**
- **Profiling & Cleansing**
- **Data Integration**
- **Database Access**
- **Business Intelligence**
- **Data / Text Mining**
- **Decision Analytics**
- **Statistical Analysis**

EDM Framework – Activity View

DM Activities

Data Strategy & Planning <ul style="list-style-type: none"> • Vision Definition • Strategy Development • Investment Planning 		<ul style="list-style-type: none"> • Scope Definition • Goals & Objectives Setting • Resource Planning 		<ul style="list-style-type: none"> • Transition Planning
Data Architecture & Design <ul style="list-style-type: none"> • Data Requirements Definition • Data Analysis • Data Modeling • Database Design • Info. Flow/Interface Definition • Rule Definition 	Data Engineering & Operations <ul style="list-style-type: none"> • Database Impl. & Maintenance • Data Conversion • Backup & Recovery • Archiving & Retention • Logging & Audit • Performance Tuning 	Data Access & Exchange <ul style="list-style-type: none"> • Data Security • Data Profiling • Data Harmonization • Data Integration • Data Registration • DB Connection Configuration 		
Data Governance <ul style="list-style-type: none"> • Governance Establishment & Oversight • Ownership & Stewardship • Policy & Procedure Definition 		<ul style="list-style-type: none"> • SLA & Metric Definition • Education & Training • Outreach 		
Metadata <ul style="list-style-type: none"> • Name • Definition & Semantics • Domain 		<ul style="list-style-type: none"> • Structure • Lineage • Rules 	<ul style="list-style-type: none"> • Quality • Security & Privacy • Stakeholders/COI 	<ul style="list-style-type: none"> • Owner & Steward • Implementation • Operations
Data Standards <ul style="list-style-type: none"> • Modeling • Metadata • Documentation 		<ul style="list-style-type: none"> • Data Access • Data Exchange 		
Data Tools & Technologies <ul style="list-style-type: none"> • Repository • Modeling • Registry 		<ul style="list-style-type: none"> • DBMS & Utilities • Profiling & Cleansing • Conversion 	<ul style="list-style-type: none"> • Data Integration • Database Access • Data/Text Mining 	<ul style="list-style-type: none"> • Business Intelligence • Statistical Analysis • Decision Analytics

DM Foundation



EDM Framework – Artifact View

DM Artifacts

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- Investment Management Plan
- Goals & Objectives
- Scope
- Resource Plan
- Transition Plan

Data Architecture & Design

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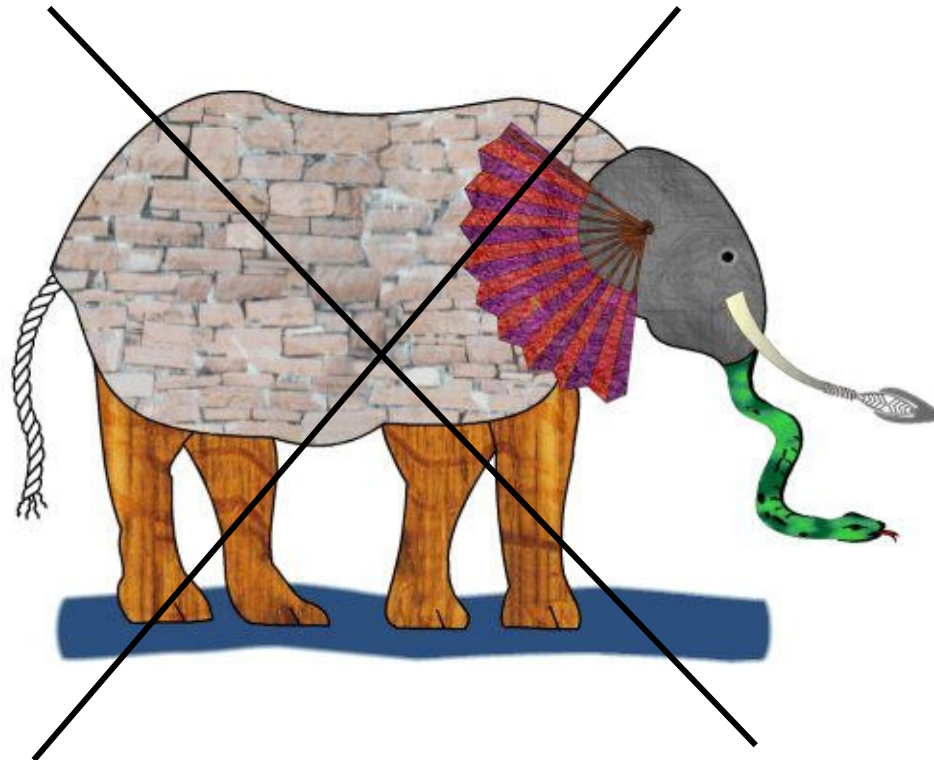


Conclusion

- **The scope of Enterprise Data Management is both broad and deep, requiring a holistic, disciplined approach to ensure the definition and development of robust, scalable, high-performance, interoperable, secure and high-quality data solutions and the management of data as an enterprise asset.**
- **Metadata, Data Standards and Data Tools and Technologies form the underlying foundation for all Data Management Activities and Artifacts.**

Conclusion

- **Don't be one of the 6 blind men. There are many perspectives other than your own that comprise Enterprise Data Management, so remember to take a holistic view when working on a data-related initiative.**





Questions

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