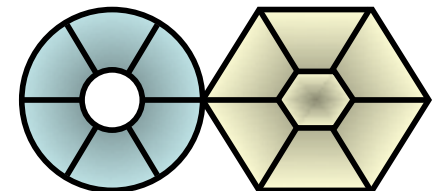


# **DAMA International's Data Management Body of Knowledge (DAMA-DMBOK®)**

## **Data Architecture Management**

*Susan Earley  
Assistant Editor – DAMA DMBOK  
DAMA International*





## *Susan Earley*

**Susan Earley is a Sr. Data Architect for Sears Holdings. She has spent the last 20 years working in data management in various ways, starting with application development, data warehouse development and management, data modeling, and now into data architecture.**

**Susan contributed to the DAMA-DMBOK as Assistant Editor, collecting all written chapters, applying revisions due to commentary, filling in a few missing pieces, organizing all chapters to show a consistent structure and voice, and proof-reading the entire manuscript multiple times.**

**Susan is the editor for the recently-released DAMA Dictionary.**



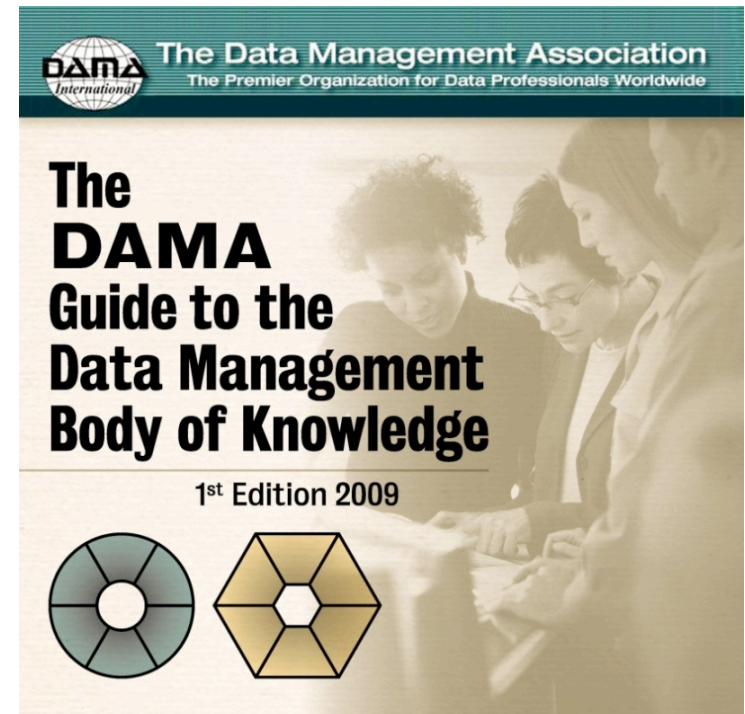
## *Agenda*

- DAMA-DMBOK® Guide Brief Overview**
- Chapter 4: Data Architecture Management**
  - **Chapter Contents**
  - **Context Diagram Contents**
- Discussion**



# *The DAMA-DMBOK® Guide*

- ❑ **A Guide to the Data Management Body of Knowledge (DAMA-DMBOK®)**
  - Published by DAMA International
  - Sponsored by The DAMA Foundation
  - Written and edited by DAMA members
- ❑ **An integrated primer –A “definitive introduction”**
- ❑ **Modeled after other BOK documents:**
  - PMBOK (Project Management BOK)
  - SWEBOK (Software Engineering BOK)
  - CITBOK (Canadian IT BOK)

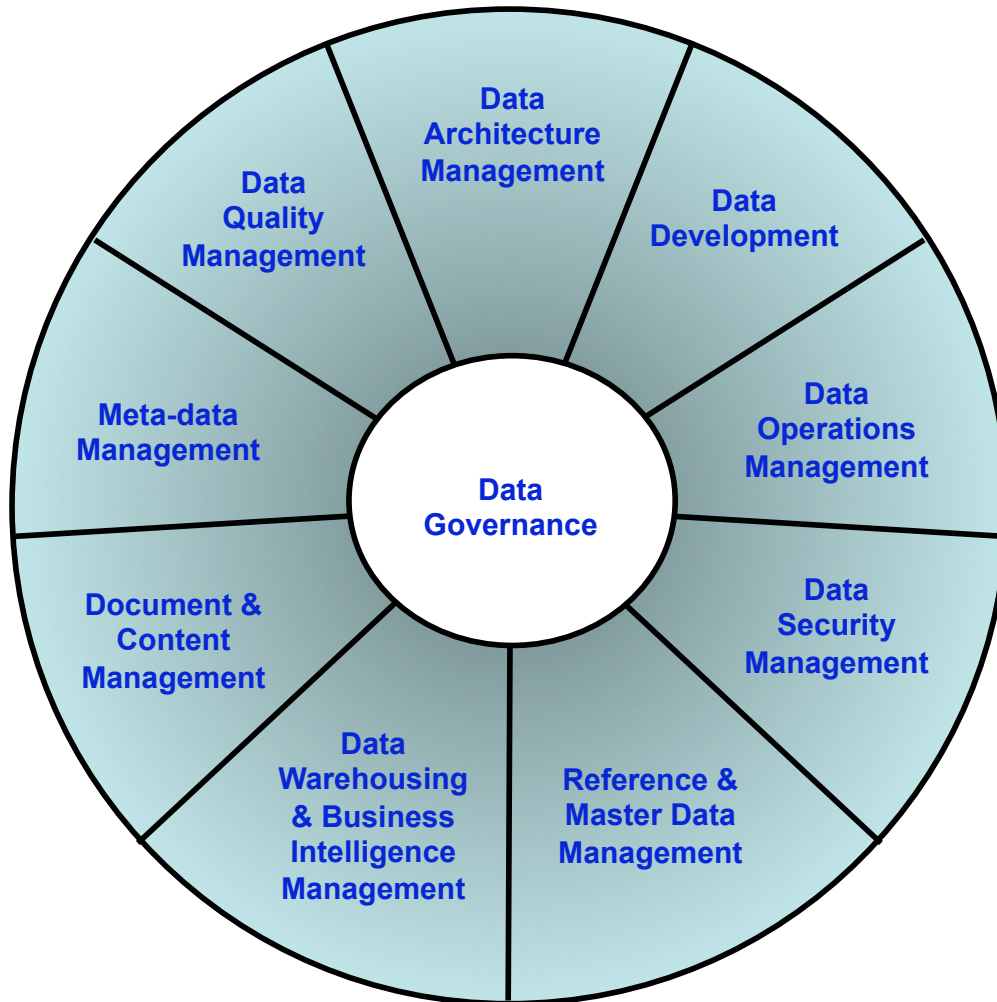


#### **Related documents:**

- ❑ **Download the DAMA-DMBOK Framework for free ([www.dama.org](http://www.dama.org))**
- ❑ **Purchase the new DAMA Dictionary of Data Management with over 2000 terms defined ([www.amazon.com](http://www.amazon.com))**



# ***DAMA-DMBOK® Guide*** ***Data Management Functions***



✚ **10 Functions**

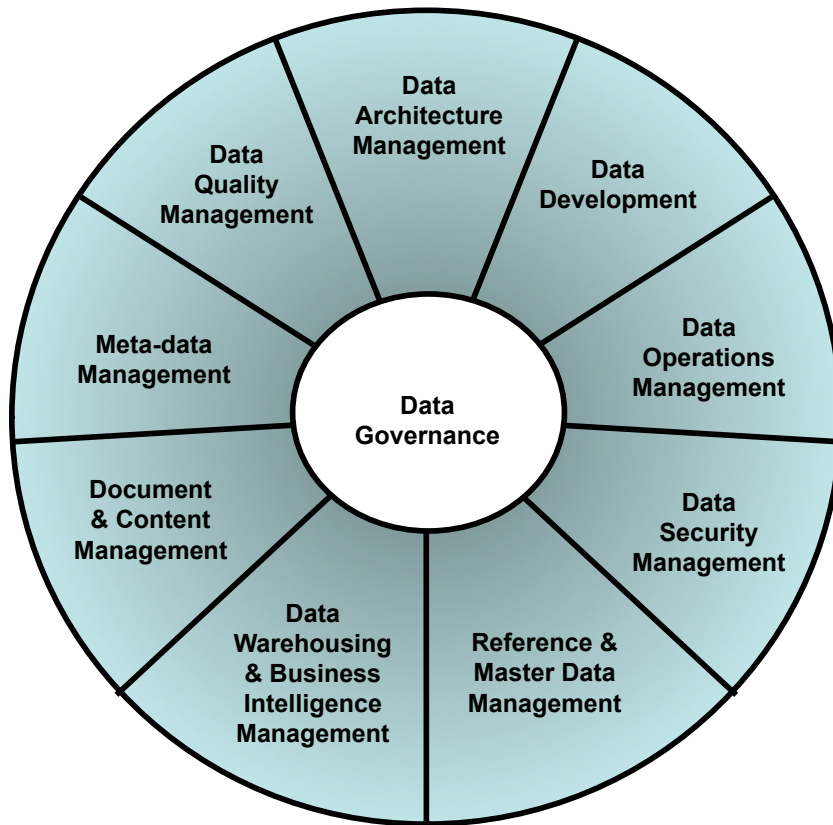
✚ **100+ Activities**

- ✚ **Planning Activities**
- ✚ **Control Activities**
- ✚ **Development Activities**
- ✚ **Operations Activities**



# ***DAMA-DMBOK® Guide Functions & Environment***

## ***Data Management Functions***



## ***Environmental Elements***





# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Chapter Contents***

- Introduction – What is the function?**
- Context Diagram – What is the scope of the function?**
- Concepts – What concepts are necessary to understand in order to understand the activities?**
- Activities – What are the function’s tasks? How does the function work?**
- Guiding Principles – What are the main points about this function?**
- Process Summary with Roles – For each activity, what is the primary deliverable, what roles are responsible, approving, and contributing to those deliverables?**
- Organizational Impacts – How is an organization impacted by this function?**
- Recommended Reading – What other publications reference this function?**
- What else should be included in the next version?**



# ***DAMA-DMBOK<sup>®</sup> Guide Context Diagram Contents***

- Definition – What is the function?**
- Goals – What does the function accomplish? Why does the function exist?**
- Activities – What are the function’s tasks? How does the function work?**
- Inputs – What do the function’s tasks use?**
- Suppliers – Who provides the inputs to the function’s tasks?**
- Participants – Who is impacted by the function?**
- Tools – What tools do the function’s tasks use?**
- Primary Deliverables – What does the function deliver?**
- Consumers – Who uses the primary deliverables?**
- Metrics – How is the function is measured?**
  
- Note – no where, how, when**



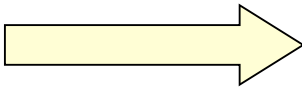
# DAMA-DMBOK® Guide

## Data Architecture Management Context Diagram

**Definition:** Defining the data needs of the enterprise and designing the master blueprints to meet those needs.

**Goals:**

1. To plan with vision and foresight to provide high quality data.
2. To identify and define common data requirements.
3. To design conceptual structures and plans to meet the current and long-term data requirements of the enterprise.



**Inputs:**

- Business Goals
- Business Strategies
- Business Architecture
- Process Architecture
- IT Objectives
- IT Strategies
- Data Strategies
- Data Needs
- Data Issues
- Technical Architecture

**Suppliers:**

- Executives
- Data Stewards
- Data Producers
- Information Consumers

**Activities:**

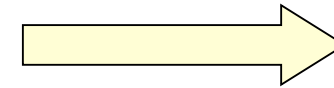
1. Understand Enterprise Information Needs (P)
3. Develop and Maintain the Enterprise Data Model (P)
4. Analyze and Align with Other Business Models (P)
5. Define and Maintain the Data Technology Architecture (P)
6. Define and Maintain the Data Integration Architecture (P)
7. Define and Maintain the DW/BI Architecture (P)
8. Define and Maintain Enterprise Taxonomies and Namespaces (P)
9. Define and Maintain the Meta-data Architecture (P)

**Participants:**

- Data Stewards
- Subject Matter Experts (SMEs)
- Data Architects
- Data Analysts and Modelers
- Other Enterprise Architects
- DM Executives and Managers
- CIO and Other Executives
- Database Administrators
- Data Model Administrators

**Tools:**

- Data Modeling Tools
- Model Management Tool
- Meta-data Repository
- Office Productivity Tools



**Primary Deliverables:**

- Enterprise Data Model
- Information Value Chain Analysis
- Data Technology Architecture
- Data Integration/MDM Architecture
- DW/BI Architecture
- Meta-data Architecture
- Enterprise Taxonomies and Namespaces
- Document Management Architecture
- Meta-data

**Consumers:**

- Data Stewards
- Data Architects
- Data Analysts
- Database Administrators
- Software Developers
- Project Managers
- Data Producers
- Knowledge Workers
- Managers and Executives

**Metrics**

- ?????

Activities: (P) – Planning (C) – Control (D) – Development (O) - Operational



## ***DAMA-DMBOK<sup>®</sup> Guide***

### ***Context Diagram: Definition & Goals***

#### **Definition:**

**Defining the data needs of the enterprise and designing the master blueprints to meet those needs.**

#### **Goals:**

- 1. To plan with vision and foresight to provide high quality data.**
- 2. To identify and define common data requirements.**
- 3. To design conceptual structures and plans to meet the current and long-term data requirements of the enterprise.**



# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Chapter: Concepts***

- **Architecture**
- **Enterprise Architecture**
- **Architectural Frameworks**
  - **Classification Frameworks**
  - **Process Frameworks**
- **Zachman Framework for Enterprise Architecture**
- **Zachman Framework and Enterprise Data Architecture**



# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Context Diagram: Activities***

- 1. Understand Enterprise Information Needs (P)**
- 3. Develop and Maintain the Enterprise Data Model (P)**
- 4. Analyze and Align with Other Business Models (P)**
- 5. Define and Maintain the Data Technology Architecture (P)**
- 6. Define and Maintain the Data Integration Architecture (P)**
- 7. Define and Maintain the DW/BI Architecture (P)**
- 8. Define and Maintain Enterprise Taxonomies and Namespaces (P)**
- 9. Define and Maintain the Meta-data Architecture (P)**

**Activities: (P) – Planning (C) – Control (D) – Development (O) - Operational**



# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Context Diagram: Inputs***

- **Business Goals**
- **Business Strategies**
- **Business Architecture**
- **Process Architecture**
- **IT Objectives**
- **IT Strategies**
- **Data Strategies**
- **Data Needs**
- **Data Issues**
- **Technical Architecture**



# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Context Diagram: Suppliers***

- **Executives**
- **Data Stewards**
- **Data Producers**
- **Information Consumers**



## ***DAMA-DMBOK<sup>®</sup> Guide*** ***Context Diagram: Participants***

- **Data Stewards**
- **Subject Matter Experts (SMEs)**
- **Data Architects**
- **Data Analysts and Modelers**
- **Other Enterprise Architects**
- **DM Executives and Managers**
- **CIO and Other Executives**
- **Database Administrators**
- **Data Model Administrators**



# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Context Diagram: Tools/Technology***

- **Data Modeling Tools**
- **Model Management Tool**
- **Meta-data Repository**
- **Office Productivity Tools**



# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Context Diagram: Primary Deliverables***

- **Enterprise Data Model**
- **Information Value Chain Analysis**
- **Data Technology Architecture**
- **Data Integration/MDM Architecture**
- **DW/BI Architecture**
- **Meta-data Architecture**
- **Enterprise Taxonomies and Namespaces**
- **Document Management Architecture**
- **Meta-data**



## ***DAMA-DMBOK<sup>®</sup> Guide*** ***Context Diagram: Consumers***

- **Data Stewards**
- **Data Architects**
- **Data Analysts**
- **Database Administrators**
- **Software Developers**
- **Project Managers**
- **Data Producers**
- **Knowledge Workers**
- **Managers and Executives**



# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Context Diagram: Metrics***

**•?????**



# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Chapter: Guiding Principles***

- 1. Everyone in an organization has a role to play in protecting its future. Everyone must create, use, retrieve, and dispose of records in accordance with the established policies and procedures.**
- 2. Enterprise data architecture is part of the overall enterprise architecture, along with process architecture, business architecture, systems architecture, and technology architecture.**
- 3. Enterprise data architecture includes three major categories of specifications: the enterprise data model, information value chain analysis, and data delivery architecture.**
- 4. Enterprise data architecture is about more than just data. It helps establish the semantics of an enterprise, using a common business vocabulary.**



# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Chapter: Guiding Principles***

- 5. An enterprise data model is an integrated subject-oriented data model defining the essential data used across an entire organization. Build an enterprise data model in layers: a subject area overview, conceptual views of entities and relationships for each subject area, and more detailed, partially attributed views of the same subject areas.**
- 6. Information value-chain analysis defines the critical relationships between data, processes, roles and organizations, and other enterprise elements.**
- 7. Data delivery architecture defines the master blueprint for how data flows across databases and applications. This ensures data quality and integrity to support both transactional business processes and business intelligence reporting and analysis.**
- 8. Architectural frameworks like TOGAF and The Zachman Framework help organize collective thinking about architecture. This allows different people with different objectives and perspectives to work together to meet common interests.**



# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Chapter: Process Summary***

- Any we missed?**
- Any we should remove?**
- Any we should emphasize over others?**
- Any other roles we should list?**



# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Chapter: Organizational and Cultural Issues***

- Any we missed?**
- Any we should remove?**
- Any we should emphasize over others?**
- Any other impacts we should list?**
- Is the Q&A format effective?**



# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Chapter: Recommended Reading***

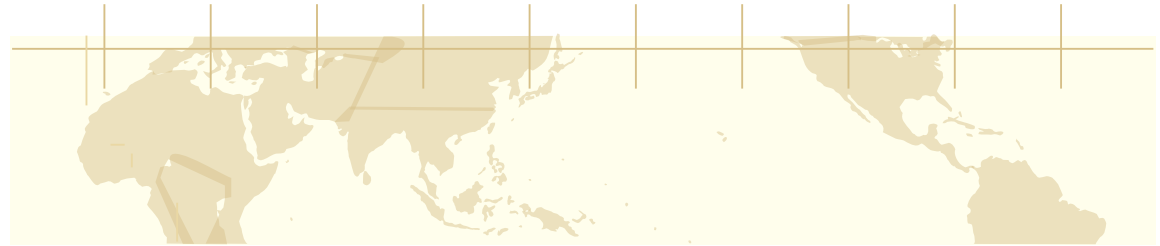
- Any we missed?**
- Any we should remove?**
- Any we should emphasize over others?**



# ***DAMA-DMBOK<sup>®</sup> Guide***

## ***Chapter: Practices & Techniques***

- Are there any specific to Data Architecture Management?**
- Any we should emphasize over others?**



**Thank you for your  
feedback!**