DATA GOVERNANCE AND MASTER DATA MANAGEMENT CONFERENCE EUROPE

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IRMUK

A PRAGMATIC APPROACH TO IMPLEMENTING MDM AND RDM

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SETTING THE SCENE

Master Data Management (MDM) is a very misunderstood data management term that has been around since the early days of CRM. It waxes and wanes in popularity and tends to be at the impossible end of implementation. Reference Data Management (RDM) is another elephant in the data strategy room, and is as equally misunderstood and often confused with MDM.

Let's start with accepting we need both – and we will check on that. Now that we have agreed on this, let's get pragmatic and practical and do the necessary up-front work to make sure we can implement these "oh so important" Data Management Capabilities.

Let Tony and Sue share their many years of experience with you and help you get ready to get moving along the journey. You will learn to ask the right questions, of the right people, at the right time and provide the right "solution(s)" to the "problem(s)". Be ready for great content, amazing knowledge, and some sensible take homes.

AGENDA

Section 1: MDM/ RDM – back to basics

- Group Activity

Section 2: The Value

Section 3: The People

- Group Activity

Section 4: How

- Group Activity

Section 5: Mopping Up

WHAT DO YOU WANT TO TAKE HOME TODAY?

SECTION 1

MDM & RDM – BACK TO BASICS

What is Master Data Management?

Master data management (MDM) is a technology-enabled discipline in which business and IT work together to ensure the uniformity, accuracy, stewardship, semantic consistency and accountability of the enterprise's official shared master data assets. Master data is the consistent and uniform set of identifiers and extended attributes that describes the core entities of the enterprise including customers, prospects, citizens, suppliers, sites, hierarchies and chart of accounts.

Thank you, Gartner for this very tech focused definition

Remember: The people we are doing this for!!!

Not to be confused with Master Data

I don't have to worry about information before I use it!!

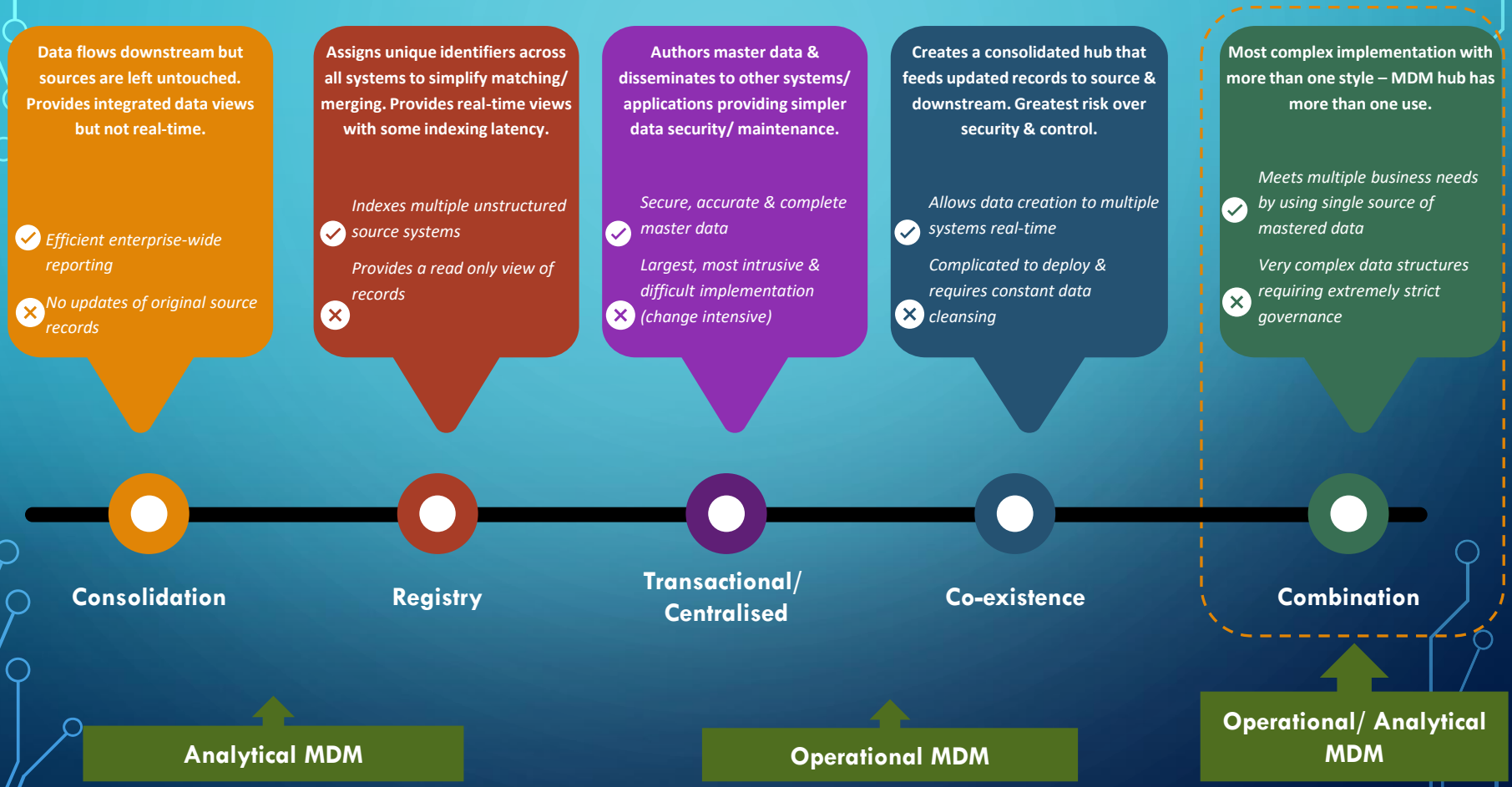
WHAT TYPES OF MDM EXIST?

Analytical MDM: *enables data for BI, analytics & reporting. Data is ingested, cleansed, matched/ merged & mastered in a central hub The focus is on preparing the data to meet the needs of downstream applications. Simply, analytical MDM hubs create master records and master IDs that connect to analytics, reporting, or data science applications. There may be publishing back to data sources, but this is not a typical use case.* ***This type of MDM centres around the to support business decision making***

Operational MDM: *endeavours to create the* ***"Single View" of master data****. Data is sourced and leveraged from one or more core data systems in use through the business – Product & Customer hubs are generally the most popular starting points for MDM. Since operational MDM informs real-time operational processes, reliability, performance and accessibility are key focus areas. Operational MDM connects critical enterprise data systems through the master data, so quality and governance are mandatory for success.*

Multi-Domain MDM: *Multi-domain MDMs bring together customer, product, supply chain, asset, employee, location, and many other data domains from many sources – which may include MDM hubs. It connects these data domains to provide* ***an increased understanding of your customer*** *in a holistic manner. A couple of good examples are bringing supply chain and location information together for procurement officers or customer and product data together for marketers. Multi Domain MDM does not mean having multiple instances of single MDM hubs, but rather one hub with multiple data domains.*

WHAT MDM IMPLEMENTATION STYLE DO WE WANT?



What is Reference Data Management?

Reference Data Management (RDM) refers to the processes, policies, standards, and technologies involved in creating and managing reference (a type of) data that is used to organize or relate to other data, with predefined and standardized authorized values. External or internal standards may be applied for any set of enumerated values that classify or categorize other data.

Categories of Reference Data

- Common Data
- External Data
- Relationships

Types of Reference Data

- Type Codes
- Status Codes
- Constant Values
- Global Data
- Classification Schemes

Reference Data Examples

- Country Codes
- Currency Codes
- Securities Identifiers
- Marital Status
- Business Dimensions

AND PRODUCT DATA TOO!!!

MASTER AND REFERENCE DATA IN ACTION

Master Record

CID	FullName	Email	PhoneNo	Address1	City	StateCd	CountryCd	DOB	CreatedDate	StatusCd	TypeCd
001	Alice Johnson	AJ@example.com	+1-555-0100	123 Elm St	Utica	NY	US	1985-04-12	2020-01-15	Active	VIP

Persistent Identifier

Identity Attributes (Mastered Data)

Reference Data

Identity attributes support entity resolution and the creation of a persistent identifier in MDM

Reference data in identity attributes improves matching

RDM IMPLEMENTATION

Subscribe to External Reference Data

Standardize Internal Reference Data

Data Governance	Metadata Management	Centralize RDM Architecture	Data Quality Management	Training & Awareness
• Policy & Standards • Ownership & Stewardship	• Catalog • Lineage • Usage	• Central Repository • Integration Patterns	• Quality Standards • Validation Controls • Audits	• Education • Change Management

Collaboration

WHAT IS DIFFERENT BETWEEN MDM & RDM?

AND WHAT IS THE SAME?

MDM/ RDM DIFFERENCES

- RDM can be an MDM solution, but MDM cannot be an RDM Solution
- There are multiple flavours of MDM and each one has pro's & con's. You MUST know what you want your outcome to be before you make your selection
- RDM is much simpler and regardless of the technology there are limited structures that work for centralised/ federated RDM
- MDM is a multi-year, high-cost & resource intensive programme that must have governance, quality and metadata as core DM capabilities
- RDM can be managed with a small budget and existing technology with straightforward development
- You may already have an RDM tool in your currently existing landscape

MDM/ RDM SIMILARITIES

- Both MDM and RDM are technology-based programmes but are “owned” by business
- MDM and RDM provide a structure for improvements in data quality
- Without strong Data Governance practices in place, they will fail – and most likely fail spectacularly
- Every organisation has a proliferation of data that needs mastering – RDM is almost a domain of MDM when thought of in this way
- Context is a critical imperative – if you don’t know what something is, you cannot be sure if it is correct or not ….

GROUP ACTIVITIES: DATA IN CONTEXT

GROUP ACTIVITIES

What 2 data elements never change?

Answers on sticky notes please!

SECTION 2

VALUE, BENEFITS & REASONS

WHAT USE CASES COULD WE DEFINE?

We have 4 different CRM systems in the organisation all dealing with the same bucket of **customers**

- We are not able to send invoices to the correct address with 100% accuracy *(more like 40%)*
- Customer names are so different in each system dependent on who captured them, so we can't roll-up our revenue by major customer

Drop down lists in each of our customer facing systems are unstandardised/ inaccurate/ out of date and unsynchronised

- We find it almost impossible to align these across systems, or know if they are current and valid
- Reporting is always skewed by the inability to roll-up by categories or other **reference data**

We have too many **products** in our catalogue and they often appear to be identical

- Nobody owns the Product Catalogue so everyone just uses it as they want
- There are so many different prices I don't know which one to select when I am selling to a client

Standardised address structures are non-existent in our systems

- Address formats are all free text, so the volume of typo's/ spelling mistakes and rubbish data is enormous
- We should be doing revenue reports by geographic **location** for our OpCo's, but we can't without real standards

BUILDING YOUR BUSINESS CASE

Assess the current state and Identify the pain points/opportunities
e.g., we have seven teams maintaining their own product list in spreadsheets for their business processes

Quantify the benefits
e.g., how much value-added work could those employees be doing if they weren't all doing the same thing?

Or the risk
What if we have seven different versions of the truth?
Engage stakeholders and find champions ***some do this after $, has worked better for me focusing on the immediate problem and logic
Define the objectives and scope
Cost-Benefit Analysis

WHAT'S THE STORY?

"When our sales reps walk into our large customers, its embarrassing that we don't know the products and services they've already purchased from our other business lines!"

"Did you know that product development, operations, marketing, and business development all have their own systems and people to manage their own product inventory? How much is this costing us?

"This ODS is driving us crazy. Did you know last month we sent regulatory mailings to a client VP's country club, a Starbucks near another's office, and worst of all the home of another clients CISO?!"

COMMUNICATING TO THE BUSINESS TO GET THE RIGHT RESPONSE

DO	DON'T
• Keep it simple • Use *"Saturday afternoon speak"* • Know your audience, and relate • Focus on the business opportunity	• Boil the ocean • Use technical jargon • Assert your perspective • Focus on the technical solution
Be a Human	Be a Geek

I think we can do some fun dialogue examples

Tony: "Hey Sue, we need to get you people to stop pulling the reports from the DB2 customer ods database. Imagine this: a data mesh built on a lakehouse architecture with a semantic layer, supported by an MDM tool that will use fuzzy logic algorithms based on string comparators like Jaro-winkler to handle the entity resolution. Deterministic approaches are sooo 2010. We'll run parallel operations at first, then move all of our reporting tools to the semantic layer, and we can clone the output to extadata for low latency. Then voilà! You have your reports!" Sue: "Um, the same reports though?" Tony: "Yes… but better"

WHY DOES MDM MATTER?

The Data

Helps to combat conflicting, redundant & **out-of-sync** information

The 360 View

Maintains a central view of **mission-critical** data

The Tech

Acts a bit like the **audit function**: source, check, match, merge, improve publish

Faster Decision Making

Teams **TRUST** what they see without hesitation – latest & best data

Customer Experience

Fewer bad customer experiences – data is **right first time**!

WHY DOES RDM MATTER?

Improved Decision Making

Teams **TRUST** what they see - valid values with consistent meaning

Reduces Risk

Supports **compliance** with regulatory reporting requirements

Improves Data Quality

Ensures only **authorized values** are passed to consumers

Enables Scalability

Provides a framework for new data, geography, or business lines as **organisations grow**

Enhanced Interoperability

Standards make it easier to **share data** with internal and external consumers

SO WHAT?

Commentary

Commentary

Commentary

Commentary

Commentary

SECTION 3

THE PEOPLE

SKILLS NEEDED

People – what skills are needed? Bus knowledge/ operations – not just tech

Technical

- Data Modeling
- Database Management
- Data Analysis
- MDM Platforms
- Programming
- APIs and Webservices

Business

- Business Analysis and Requirements
- Entity Definition
- Entity Characteristics and relationships
- Business Process
- Business Rules

Communication

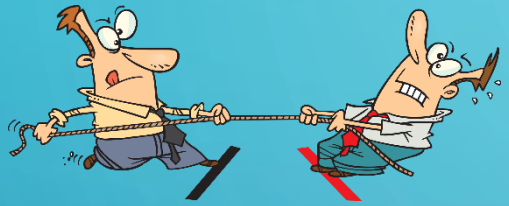
WHAT ARE THE ROLES & PERSONAS LET'S DISCUSS

R & R

DO?

WHERE?

THIS IS A TEAM SPORT – WHAT DOES THAT MEAN?



DATA KNOWLEDGE

SHOW WHAT YOU KNOW!

DG, DQ, METADATA – THE IMPERATIVE FOR THESE

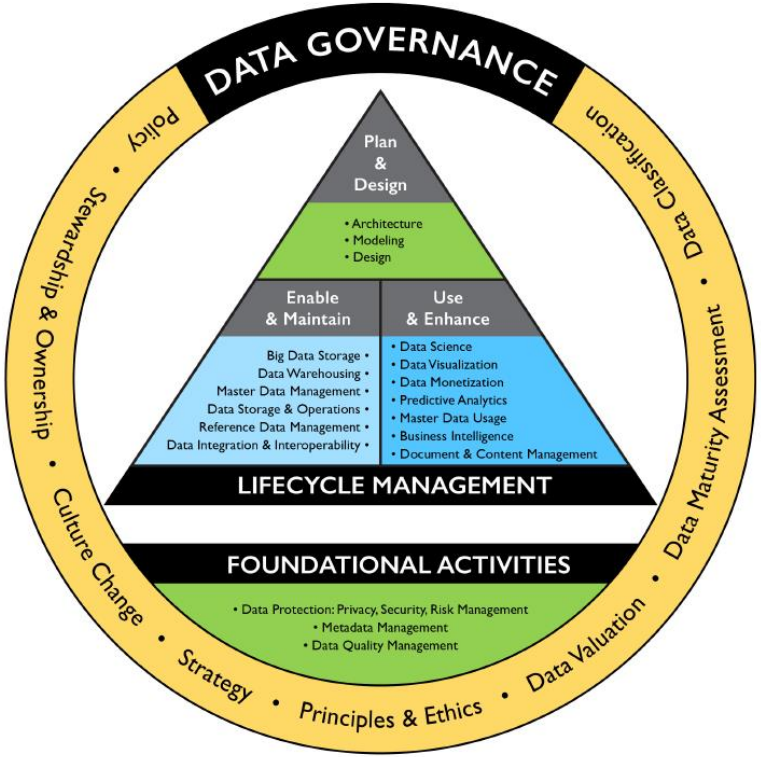


Figure 11 DAMA Wheel Evolved

GROUP ACTIVITIES

Who do you match with?

SECTION 4

HOW

BE PRAGMATIC

Roadmap

Clear Vision

Don’t boil the ocean, etc

Right people at the highest level

Pick your battles wisely

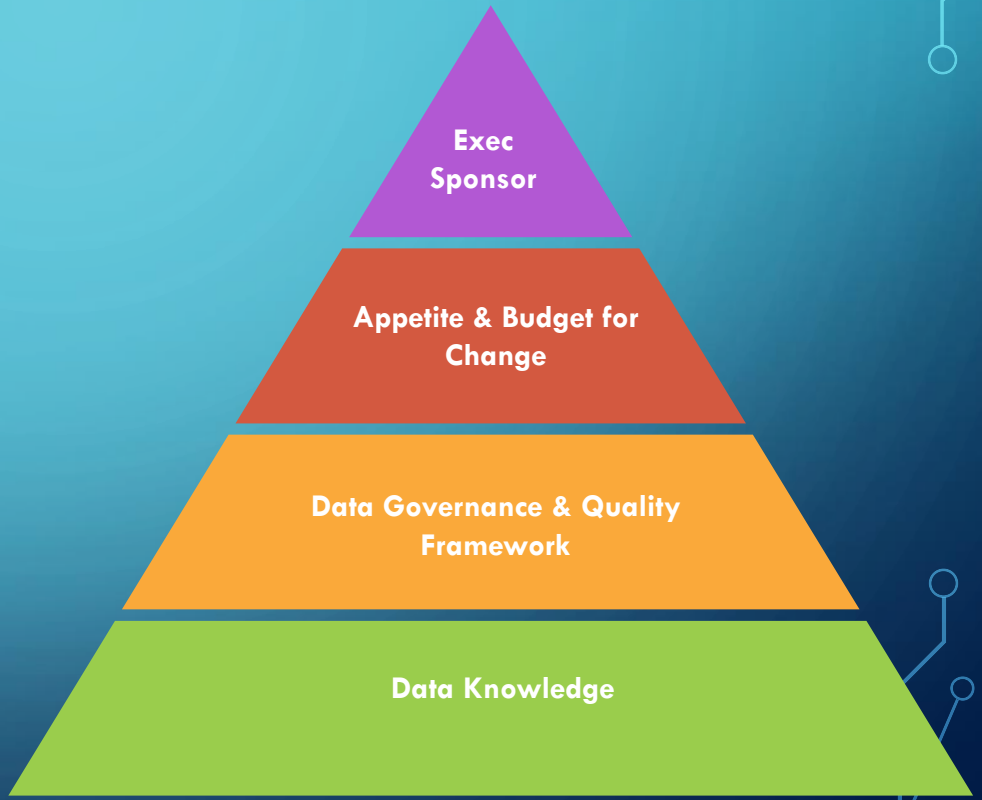
WHAT IS NEEDED TO MAKE MDM/ RDM HAPPEN?

- Someone in the organisation must be the “face of MDM/ RDM”
- Someone in the organisation must own the budget accountability
- It would be great if they were an MDM cheerleader too!!!

- There WILL be a cost (a fairly high one)
- Defined Business Use cases showing the current pain and value to be obtained
- Change Communication is key to MDM/ RDM success

- Data Governance Structures are in place and active
- Policies, procedures, standards & processes are adopted and practiced
- Data Quality is being monitored and measured

- What data is in use (CRUD) (how much, when, how often, by whom)
- What does the architecture landscape look like
- Are our business processes well documented and understood



DO WE NEED A TOOL?

- Is there anything already in our organisation *(e.g.: one & only one customer system, RDM Database)*?
- Is our data tech landscape mature/ advanced enough that we can master the relevant domains without "extra tools"?
- Are we standardised and governed actively in a managed & effected model?
- Do we have strong, dedicated and diligent data owners/ data stewards who we can rely on?
- Do we want to replicate the work that a tool already has embedded *(80/20 rule)*?

If you can't tick ALL these boxes, then the answer is probably yes, you do!

WHAT KIND OF TECH DO YOU NEED?

MDM and RDM Software Platforms

Data Integration Tools

Data Quality Tools

Metadata Management Tools

BI and Analytics Tools

API Management Platforms

PICK THE RIGHT APPLICATION

- Build or Buy?
- Self-hosted or SaaS?
- Linking Methods?
- Localization?
- Workflows?
- GUI?
- Integrations?
- Non-functional requirements?

GROUP ACTIVITY

4 rules that you would use to keep your data in shape

Add to the whiteboard & group

GROUP ACTIVITY

Cleansing Team vs Mastering Rules

Form groups & discuss the rules shared by the presenters

SECTION 5

MOPPING UP

MEASURING SUCCESS

What does 'success' mean to you?

- If we can provide our sales teams with information about common clients across CRM systems, we anticipate a 10% increase in revenue
- If we reduce duplicate records in our Client ODS, it will reduce SSO user authentication issues by 90%
- I really want to make that grumpy data governance guy smile for once

KPIs AND METRICS

- Levels
  - Data (Business) Strategy
  - Program/Project level
  - Management level
- Types
  - Business Performance Measures
  - Business and Data Ops Measures
  - Data Governance KPIs - Includes DM & MDM program measures
  - IT Performance

IMPORTANT

- MDM & RDM are technology-driven ***business*** *capabilities* that require ***business*** *operations. Who defines success?*
- *Investment and recurring costs go well beyond technology and application support*
- Enterprise-level implementations are a strategic investment that requires re-use and compounding to be sustainable and to realize potential ROI

HOW TO MOVE FORWARD

- One step at a time
- Make sure your Stakeholders are on board
- Don't over-commit – that will lead to under-delivery
- Ensure your prospective vendors have truly understood your requirements and have demonstrated their capabilities
- Have a very well documented plan & roadmap
- Take your business case to the "money" person and get written confirmation
- Bullet-proof communication

LEARNINGS

"GARTNER, THE RENOWNED ANALYST FIRM, HAS NOTED THAT AROUND **90%** OF BUSINESSES FAIL WHEN FIRST ATTEMPTING TO IMPLEMENT AND MAINTAIN AN MDM PROJECT."

"A RECENT STUDY BY STIBO SYSTEMS AND THE ABERDEEN GROUP NOTED THAT 45% OF BUSINESSES ARE UNABLE TO LOCATE THEIR MASTER DATA EFFECTIVELY."

"THE GOAL IS TO TURN DATA INTO INFORMATION, AND INFORMATION INTO INSIGHT." – CARLY FIORINA, FORMER EXECUTIVE, PRESIDENT, AND CHAIR OF HEWLETT-PACKARD CO."

QUESTIONS?

DID WE MEET YOUR EXPECTATIONS?