



Why Analytic Leaders Deploy MDM

Presented by: William McKnight

"#1 Global Influencer in Big Data" Thinkers 360

President, McKnight Consulting Group **Inc 5000**

 @williammcknight

www.mcknightcg.com

(214) 514-1444

Robust MDM is half of the effort for Success

- Fraud Detection
- Call Center Chatbot
- Self-Driving/Transportation
- Predict Flight Delays
- Marketing – segmentation analysis, campaign effectiveness
- Smart Cities
- Retail, Manufacturing – Supply flow, Customer flow
- Oil and Gas Exploration

Enterprise Subject Areas

- Customer
- Employee
- Partner
- Patient
- Supplier
- Product
- Bill of Materials
- Assets
- Equipment
- Media
- Geography
- Citizen
- Agencies
- Branches
- Facilities
- Franchises
- Stores
- Account
- Certifications
- Contracts
- Financials
- Policies
- Weather

Master Data: Not an Option

You'll need master data but without a discrete focus on it, you will not get it well

Application Focus

Focus is on an Application's Master Data Needs First
Usually a work effort to get to 2nd, 3rd, etc. applications
Build to Scale!

Enterprise Focus

Focus is on a Subject Area First
Higher Chance of Creating New Organizational Possibilities!
Danger: Build it and They Will Come

Either Initial Focus Needs a Secondary Focus on the Other
It's the MDM Leadership Challenge!

Either Way

You'll need master data but without a discrete focus on it,
you will not get it well

Do it with data specialists

Data modeling, integration, quality

Use a Tool

It's Operational and Real-Time

Let the Hub create analytical/empowering elements

Make it a discrete project

With high touchpoints with applications

Focus on Total Cost of Ownership first for Justification

Build to Scale

It doesn't take much longer to consider all known requirements

The Real Decision Points

Roadmapping Around:

Sponsorship

Subject Area

Publishers or Workflow

Don't Forget Third-Party Data

Subscribers

AI Applications

Don't Forget "Common" Artifacts like Data Warehouse, Data Lake, and Operational

Communications

Data Governance/Stewardship

Enterprise Data is ready when it is...

- In a leverageable platform
- In an appropriate platform for its profile and usage
- With high non-functionals (Availability, performance, scalability, stability, durability, secure)
- Data is captured at the most granular level
- Data is at a data quality standard (as defined by Data Governance)

Projects are a series of subject area mastery

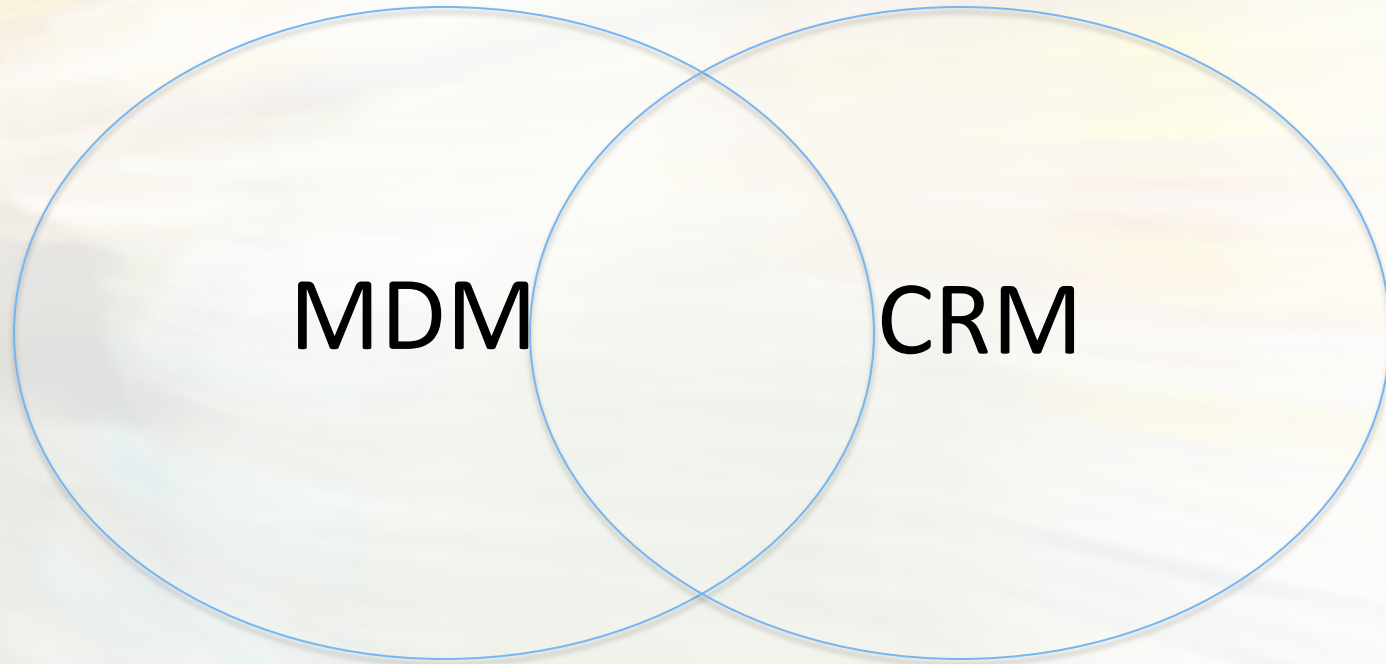
MDM Uses Circa 2023

- Customer deduplication
- Name/Business matching
- Customer profiling for marketing/operations
- Product catalogs
- Supply Chain Management
- Network Management/Identity Management

MDM Futures

- Add (Analytical/Empowering) Attributes to Model
 - Calculate those attributes @ MDM
- Add Subscribers
 - Data Lake
 - Edge
- More Attention in the Organization

MDM and CRM



Sample Applications Improved with MDM

Industry	Subject Areas	Applications	Objectives with MDM
Retail	Customers, locations, Menu items, ingredients, store locations	Improve customer list management and make real-time AI-based recommendations, Speed up new menu item introduction and ensure consistency across stores	Improve average order size, Foundation for loyalty program, CCPA compliance, enable online ordering, Fraud detection, real-time recommendations
Healthcare	Patients, providers, locations, supplies, donors, reference data	Enable best clinical practices	Enable data sharing for research and operational efficiency
Manufacturing	Ingredients and recipes, Financial hierarchies	Manage multiple large rollup hierarchies, Manage ingredients and variations to control the manufacturing process	Understand margin and pricing across regions; enable and expand ecommerce, Improve business processes and service while eliminating clerical errors (order fulfilment, billing, etc.), Enable nimbler FP&A (what-if scenarios, tax optimization, etc.), supply chain management
Financial	Customer, product, channel	Customer management, risk management, audit support, regulatory compliance	Anti money laundering

Customer Fraud Detection

- Most FD is transaction heavy
- Sync MDM to Edge
- Customer Attributes to include
 - Last n "transactions"
 - Avg/hi/low txn profiles
 - Customer State
 - Customer Financial profile

Enterprise Data Domains

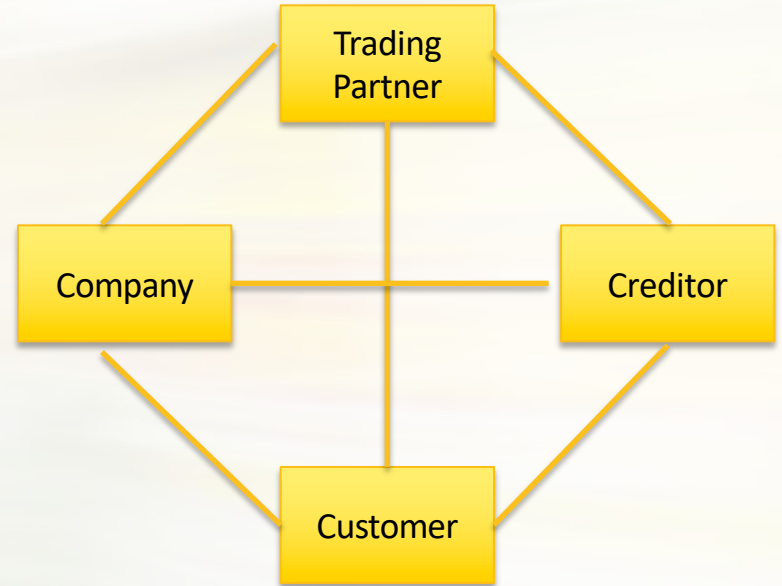
- Customer
- Employee
- Partner
- Patient
- Supplier
- Product
- Bill of Materials
- Assets
- Equipment
- Media
- Geography
- Citizen
- Agencies
- Branches
- Facilities
- Franchises
- Stores
- Account
- Certifications
- Contracts
- Financials
- Policies
- Weather

Real-Time Recommendations

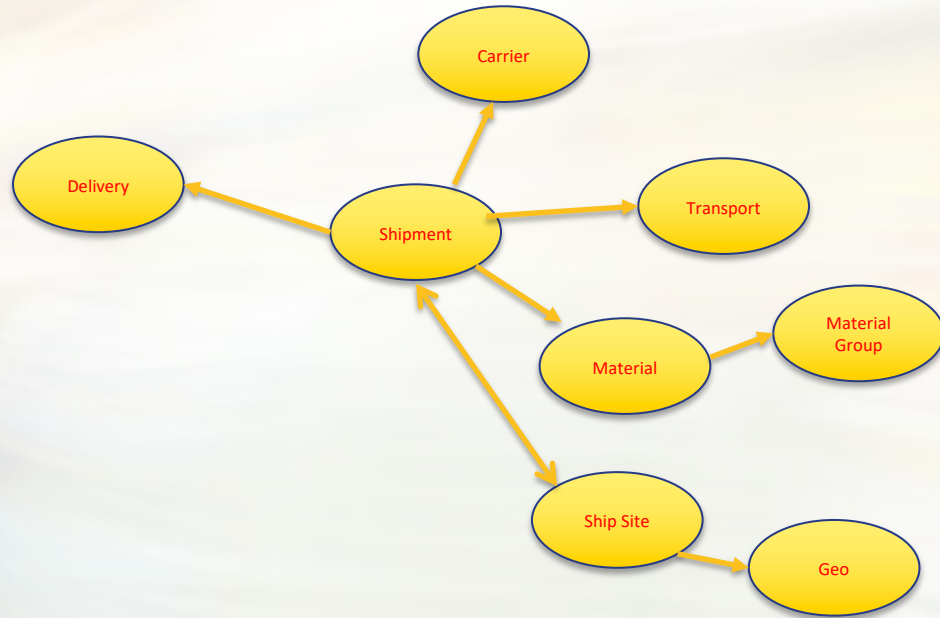
- Real-Time and Relevant
- Combine Customer Demographics, Purchase History and Activity
 - Match historical and session data
- Probabilistic Models
- Accuracy and Scope Increases with Data

Anti-Money Laundering

- Schemes are sophisticated
- Need to look at patterns
 - Transfers
 - Smurfing
- Must meet AML compliance
- Need to pursue cases faster



Supply Chain Management



Where to Look for MDM Opportunities



The **products** you make and the services you offer



The **supply chain** for those products and services



Business operations (hiring, procurement, after-sale service, etc.)

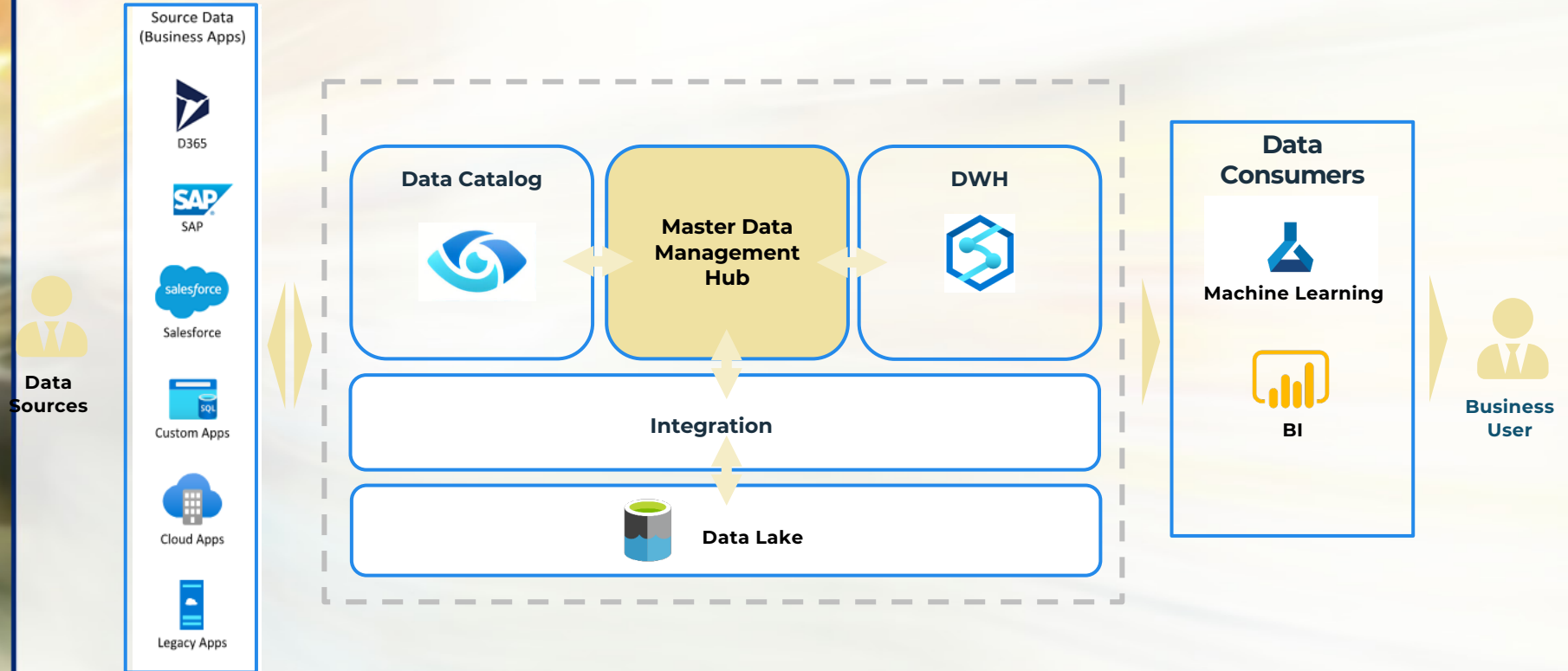


The intelligence used in **designing** your **product and service** set



The intelligence used in the **marketing/ approval funnel** for your products and services

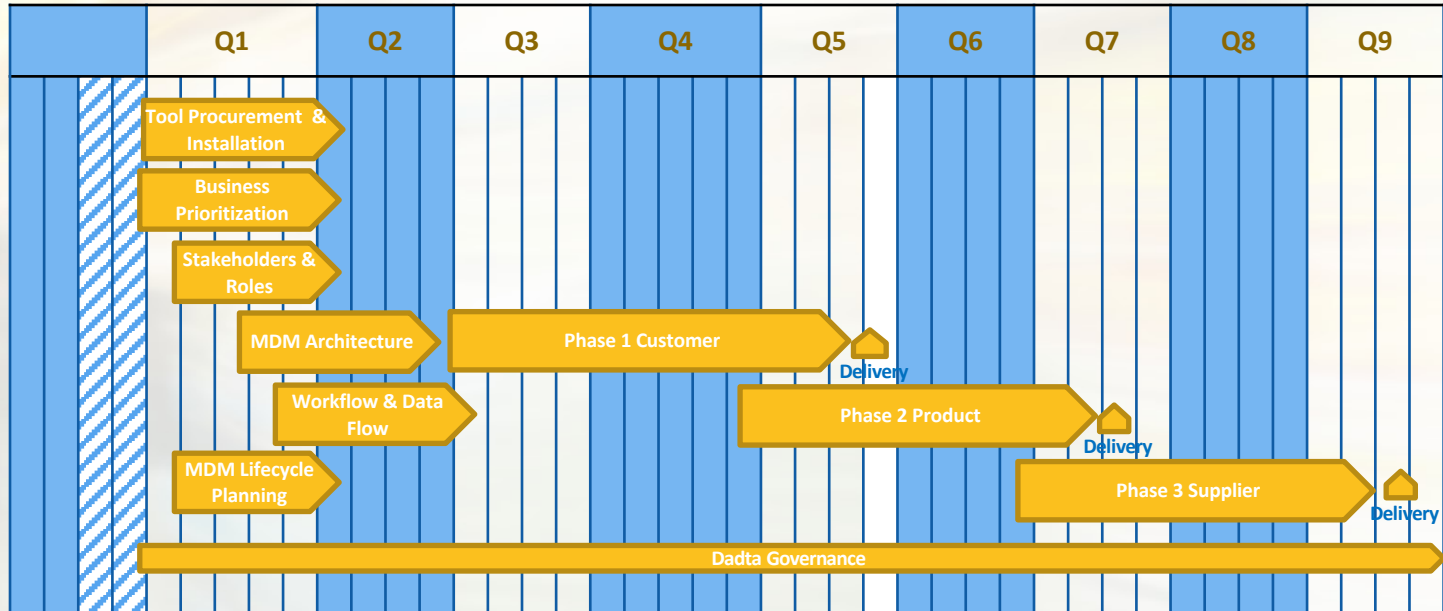
MDM Reference Architecture



Is an MDM Tool Needed?

- Is there an existing system in our organization that can serve the need?
- Are our data management processes and governance established and effective?
- Do we have clear and reliable data stewards we can depend on?
- Is it worth replicating the functionality of an MDM tool when we are close to meeting the needs without one?
- Is there great centralization in place?

MDM Roadmap



DaaS SLAs

How Far Does the Build Team Go?

- Build an SLA for the Master Data
 - MDM Communication and COE
 - Integration Planning?
 - Hub Model and Rule Expansion
 - Mapping elements from Hub to Subscriber?
 - Customization of elements and DQ rules for Subscriber?
- Every new integration will have some!



MDM data ...

- Is Relatively Small
- Is Nimble
 - Suitable for the Edge
- Is Accessible
- Is Sharable
- Is High Quality
- Hub is a Touchstone
 - Including to the Data Lake
- Eliminates Point-to-Point

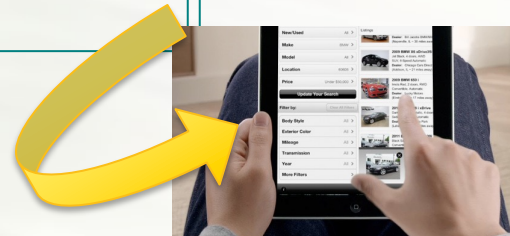
Empowering Attributes

dob_id
cust_status_id
marital_status_id
gender_id
mailable_addr_id
cust_type_id
mail_allowed_id
returned_mail.id
cust_title
first_name
middle_inits
last_name
name_suffix_1
name_suffix_2
date_of_birth
area_code
full_phone_nbr
email_address
city_name
...

Core

last_channel_used_id
last_visit_date
most_used_channel_id
lifetime value
lifetime_txns
lifetime_spend
lifetime_margin
lifetime_markdown
satisfaction
segment
cats purchased from
Propensity churn
Propensity buy prod
Propensity social
...

Empowering



Why Analytic Leaders Deploy MDM? The Future of MDM

- In Situ Data Matching
- Integration with Data Catalogs & Governance Platforms
- Third-Party Data Sharing on the Blockchain
- Multi-Dimensional Hierarchies
- AI-Supported & Decentralized Stewardship
- Adaptive Data Governance and Modelling



Why Analytic Leaders Deploy MDM

Presented by: William McKnight

"#1 Global Influencer in Big Data" Thinkers360

President, McKnight Consulting Group **Inc 5000**

 @williammcknight

www.mcknightcg.com

(214) 514-1444