Building the Bullet-Proof MDM Program

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Data Mastered. Value Unleashed.™

Building the Bullet-Proof MDM Program

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www.baseline-consulting.com

Agenda

- Understanding the critical components and prerequisites of your MDM program
- Identifying the critical and non-critical players on your MDM team
- Establishing success criteria and ensuring measurement to illustrate your project's success
- Determining the skills and experience you will need to jump-start MDM Q & A

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About Your Instructor

Evan Levy

- Leads Baseline's IT Consulting practice
- Presents at key industry conferences: DAMA, Data Governance, MDM/CDI, and TDWI
- Currently working on data integration issues and architecture programs with clients
- Judges industry best practice awards including TDWI Best Practice awards
- Columnist for DMReview's monthly "Ask the Experts" column
- Sample Clients: CheckFree, GlaxoSmithKline, Microsoft, Charles Schwab

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Data is a Moving Target

- New data is being introduced daily—from both internal and external sources
- The number of relationships our customers can have with us is increasing
- Households and companies may have multiple hierarchies
- Different operational systems see data in different ways
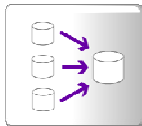- Data integration requirements transcend reporting
- There's more data than ever

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Different Types of Data Integration
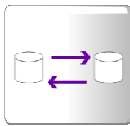
Synchronization

Data is shared between systems one another via custom code or specialized software

Data Warehouse

Data is transformed and loaded onto a specialized platform for business intelligence and analytics
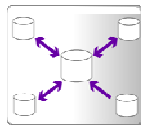
Master Data Management

Subject-area data is reconciled and integrated dynamically across diverse systems

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Master Data, Defined

Definition

Master Data Management Data (MDM) is the consolidation of methods, processes, controls, and automation necessary to standardize and integrate subject area data originating from different sources.

Customers

Assets

Products

Locations

Suppliers

Employees

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MDM In Context

How is company ID represented?

Is this the standard company name? Do they prefer this name?

Do we store this with or without dashes

Cust. Id	Company Name	Industry	Credit	Fed Id	Address
30391-244	Acme Federated	Retail	Net 55	010553452	123 Oak St., Eves, IL 30319

How do we deal with multiple customer IDs?

What happens if the name changes (acquisition, legal activity, etc.)?

Which address is this (HQ, Finance, ???) How many do we save?

MDM involves data standardization as well as data integration and identification

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The Golden Record

Legacy

Cust. Id	Company Name	Industry	Credit	Fed Id	Address
30391-244	Acme Federated	Retail	Net 55	010553452	123 Oak St., Eves, IL 30319

CRM

Cust. Id	Company Name	Industry	Cust Type	Fed Id	Address
14239	Acme Supplies	Mail Order	42	013491234	123 Oak St., Eves, IL 30319

Online

Cust. Id	Company Name	email	Fed Id	Address
14239	Acme Corp	John@acme.com	013491234	123-A Oak., Eves, IL 30320

ERP

Cust. Id	Company Name	Industry	Credit	Fed Id	Address
3721B	Acme Supplies	Mail Order	42		3224 Pkwy G, Los Osos

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The Golden Record

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1001	30391244	14239	14239	3721B	Acme Supplies	Mail Order	10553452	123-A Oak Street	Eves	IL	30321

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MDM is Infrastructure
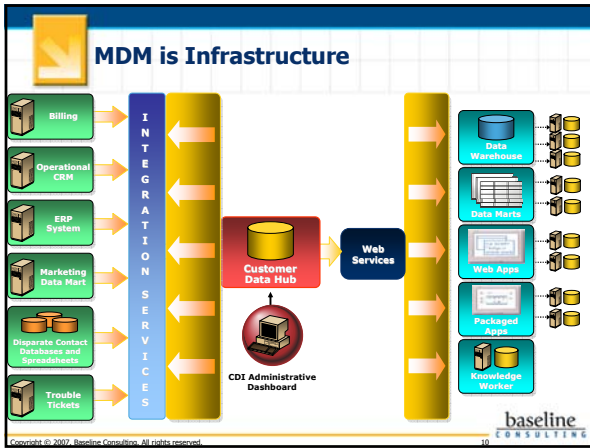
The Details of MDM

Content	Relationship	Processing	Admin
• Subject Area Details • Identification Attributes • Item Names • Definitions • Value Representation • Format Standardization	• Party Identity ("Like" Attributes) • Groupings (Rules/Logic) • Hierarchy (Parent/Child) • Relationship Rules / Situations	• Match and Identification • CRUD Processing • Data Correction • Data Change Logging • Survivorship Rules	• Data Mgmt Configuration • Data Change And Approval • Security / Access • Data Maintenance

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The Issues and Details

- Management is becoming more enlightened about data—they just don't know what to DO
- Most companies have multiple relationships with their customers
- The more valuable the customer, the more complex the relationship
- Product data is more complex than customer data, and the rules and algorithms are different
- MDM should be loosely-coupled from applications
- MDM should be tightly-coupled with data quality
- MDM is an effective way to move toward business terms and away from database terms

The Critical Components

- Data standards are necessary to enable identification, matching, cleansing, and integration
- Data quality improvement and accuracy is driven by business metrics and decision making. *Perfection is not accuracy*
- Data governance positions data tactics to support business policy. It's not optional for MDM
- Business needs and application requirements identify MDM function and process definition. Technology selection occurs last
- Improving data usability requires team members from both technology and business disciplines

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The MDM Development Habitat

Program Management

- Data Governance Council
- Data Management Team
- MDM Program Team
- IT Architecture
- Application Development

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Organizations in the MDM Habitat

- **Data Management**
  This team owns and supports data models, metadata management, and data requirements. They are typically strong and experienced in gathering data requirements
- **Data Governance**
  Many of the issues that aren't easily resolved through project methods (data quality problems, interface issues, etc.) can be addressed through the company's data governance process.
- **Application Development**
  Development stakeholders that will use and leverage the MDM hub to support their application requirements
- **IT Architecture**
  The enterprise IT architecture organization should participate in the design review processes to limit surprises. This ensures that MDM project conforms to company's development standards.

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The MDM Development Team
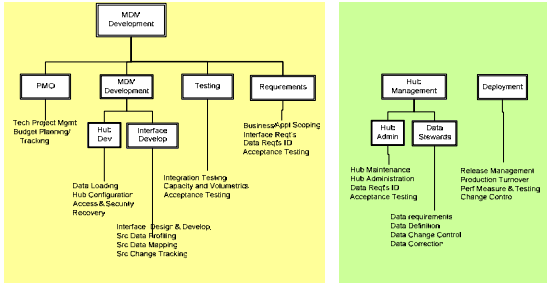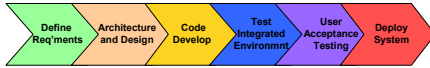
Other Organizations:
Data Management
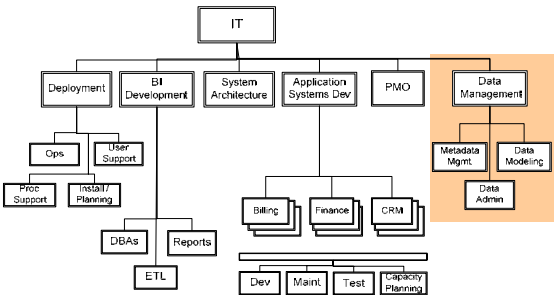
Identifying the Key Players

- **MDM Project Manager**
  The administrative and technical project lead. Participates in the requirements activities and ensures all stakeholders are held accountable for delivery
- **MDM Architect**
  An IT architect familiar with the company's standards that owns the roadmap for technical delivery. Participates in data analysis and design steps and supports integration and development activities.
- **MDM Developer**
  Technical team member focused on the two core development activities: application interface development and hub configuration. Typically team members will work on one area or the other.
- **MDM Data Steward**
  Team member supporting developer questions on accessing the hub and understanding the hub's various data elements.
- **MDM Administrator**
  The CDI Administrator configures the hub, working on data loading issues as well as ongoing data maintenance activities.

A Typical IT SDLC

Define Req'ments → Architecture and Design → Code Develop → Test Integrated Environmnt → User Acceptance Testing → Deploy System

- System Development Lifecycle
  - Exists to support a repeatable, consistent development process
  - Includes participation from all stakeholders (management, development, and end users)
- Most SDLCs are IT-built and focused on application processing
  - Typically lacks data rigor details (data testing, data acceptance, data certification)
  - Can easily master data management activities with minor adjustment

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An MDM-Specific Framework

1 IDENTIFY DATA REQUIREMENTS → 2 DATA ANALYSIS → 3 INTEGRATION DESIGN → 4 INTEGRATION DEVELOPMENT → 5 VERIFY AND VALIDATE CDI OUTPUT → 6 DEPLOY CDI SOLUTION
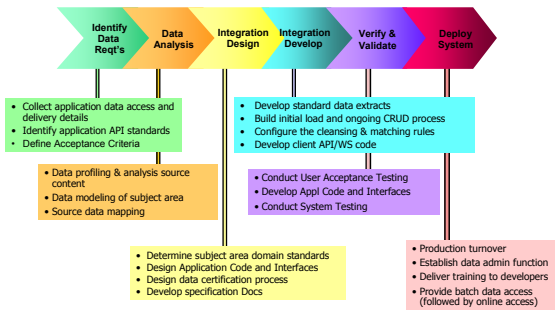
Six Steps Connecting Idea to Delivery
- Data Requirements
- Data Analysis
- Integration Design
- Integration Development
- Data Validation
- Deploy Solution

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Incorporating MDM

Identify Data Reqt's → Data Analysis → Integration Design → Integration Develop → Verify & Validate → Deploy System

- Collect application data access and delivery details
- Identify application API standards
- Define Acceptance Criteria

- Develop standard data extracts
- Build initial load and ongoing CRUD process
- Configure the cleansing & matching rules
- Develop client API/WS code

- Data profiling & analysis source content
- Data modeling of subject area
- Source data mapping

- Conduct User Acceptance Testing
- Develop Appl Code and Interfaces
- Conduct System Testing

- Determine subject area domain standards
- Design Application Code and Interfaces
- Design data certification process
- Develop specification Docs

- Production turnover
- Establish data admin function
- Deliver training to developers
- Provide batch data access (followed by online access)

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MDM Success Criteria

Establishing a set of critical success metrics allows your project to expand MDM from a project-centric activity to an enterprise-oriented value creator

- Data policy ownership positioned with the business stakeholder organizations (and not IT)
- The existence of a data management standards to support the data quality and integration function delivered by MDM.
- Establishing a subject area data master independent of an individual application
- Identifying MDM/application onboarding criteria (for all systems)
- Operational and analytics systems being responsible for MDM adoption
- Publishing data quality details to illustrate data improvement (not perfection)

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Do You Need MDM?
Some Key Indicators

- "We've gotta stop having the 'who owns the data?' conversation."
- "Fixing the data in a single system is pointless; no one owns data across all of the systems."
- "The CRM identifies customers differently than the billing system. We spend too much time reconciling the differences"
- "The owners of the operational systems won't even speak to me anymore."
- "Everyone agrees data quality is poor, but no one can agree on how to fix it"
- "Are you kidding? We have multiple versions of the single-version-of-the truth."
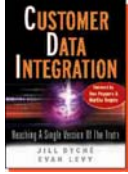
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Your Call to Action

- Leverage the *data management* skills and practices you've established for your EDW team.
- Adjust your *SDLC* and expand the details relating to data requirements, profiling, and analysis.
- Plan on providing *training and education* to your CDI development team
- Position MDM as a *infrastructure* project that enables business programs—not as an end-user system
- MDM development is different: think *functional requirements* and business rules
- Use MDM/CDI as a pretext to begin the *data governance* conversation
- Be ready to claim a "*bigger slice of the pie*"

Analytic Data

Operational Data

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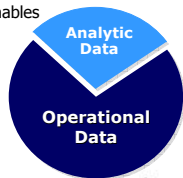
Thank You!

For More Information, Please Contact Baseline:

www.baseline-consulting.com

See the MDM/Data Governance Channel on BI Network!

www.b-eye-network.com