Mastering Master Data Management (MDM)

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Master Data Overview
MDM – Problem Statement  (Gartner 2017)

In a typical enterprise in the manufacturing industry, it is quite common for the customer service department to have its own customer database, the accounting department have its own customer database and the sales department to have its own customer database. The problem is creating a single customer database that fulfills the diverse needs of all three of these departments, because usually these systems were created at different times and for different requirements, and they were paid for by different budgets. So it is typical for enterprises such as these to have multiple customer databases.

• Customer data is often inconsistent between these various customer databases.
• Customers might be identified by different customer numbers in each database
• Names might be spelled differently in each database
• Their mailing addresses might also differ in each database.

One customer is known by three different customer numbers, three different names and three different addresses.
MDM – Problem Statement  (Gartner 2017)

Further problems arise when the sales department needs information about a particular customer from the customer service database or the accounting database. The lack of semantic consistency between silos of customer data results in data fragmentation that prevents an organization from maximizing the value of that data.

Often, the customer records cannot be found in these databases because the customer data doesn't match the sales department's customer data. Or perhaps the customer information is inaccessible because the customer service database and the accounting database are not set up to allow access to information outside of the department.

The problems that result from inconsistency of enterprise data are not limited to customer data. Inconsistent and/or inaccessible data on such diverse topics such as products, assets, suppliers, employees, citizens, students, patients and locations are rampant. This inconsistency and inaccessibility of enterprise data cause countless business problems for enterprises of all types.

MDM can make data consistent between information silos. In other words, MDM can solve the business problems that result from inconsistent siloed data.

- Gartner 2017
From Gartner’s publication on Implementing a Technical Architecture for Master Data Management:

Key Finding #1 => ‘Ensuring that business data is of adequate quality is the responsibility of businesspeople, not IT people. Master data management (MDM) is a technology-enabled business discipline in which technical professionals implement technology in order to help businesspeople manage their data effectively.’
Master Data Management is ...
- Crucial to business success
- Common across businesses but unique to a company
- A collaboration across all business units and departments
- An on-going process (never ending)
- An iterative process
- Orchestration, enablement and facilitation, with control only as required to adhere to policy and benefit the company
Master Data Defined

Data Worth Managing

Nouns/entities that uniquely define your business
Non-transactional data
Describes transactions or other entities

Slowly changing (relative to transaction rate)
Relevant reference data
Attributes, properties, relationships about master data
What is a Master Data Domain

Multi-Domain MDM
MDM solutions that support multiple domains within a single solution. Multi-domain MDM benefits include:

- Consistent data stewardship experience
- Minimized technology footprint
- Sharing of reference data across domains
- Lower TCO and higher ROI
How We Approach Data Governance

Identify existing data quality issues and its impact on business but also provide strategic direction for deploying master data governance across the organization focusing business value

Data Governance Strategy
- Data Governance Policies, Procedures
- Data Governance Organization Structure with roles and responsibilities
- Definition of Data Stewardship and ownership across the organization for all key processes and domains

Data Profiling
- Define data profiling business rules to understand as-is structure and quality of the data
- Parse data through business rules to identify data anomalies and quantify the data quality
- Pre defined business rules and use cases for accelerated data profiling and key issues finding

Master Data Management
- Establish master data governance roadmap with prioritized data domains for implementation life cycle
- Develop technology and infrastructure processes for implementing a solution
- Define one global unique process for master data maintenance
- Develop a comprehensive deployment and change management strategy organization wide for master data governance processes

Data Quality Metrics
- Define metrics & Scorecards from technology and business perspectives to provide deep insights of data quality
- Data quality metrics from business perspectives focus in measuring master data compliance with transaction data
- Leverage tools to measure data quality across the organization for corrective actions
Challenges of Not Mastering Data

• Paying the same supplier different prices for the same product from different ERP applications.

• Incomplete view of customers due to duplicate records in a single system or multiple applications.
  • Incomplete view of total spend
  • Inconsistent product pricing and discounts

• Incomplete view of household for target marketing or leads in insurance, retail, financial services

• Picking and shipping errors from distribution centers due to invalid product information such as packing quantities, weight, height, length or invalid shipping addresses

• Inaccurate financial reporting due to incorrect G/L codes or accounts
What Does Dirty Data Cost Businesses?

- Experian 2016 Report – respondents from U.S. businesses estimated 32% of their data was inaccurate
- Experian 2018 Report – respondents from companies across the globe feel that 26% of their data is dirty. It costs the average business 15% to 25% of revenue.
- Experian 2018 Report - 57% of businesses find out about dirty data when it’s reported by customers or prospects.
Scope
• What are the most critical domains for your organization to master?
• How do these domains impact your organization?
• What is the risk to your organization if you do not manage the data?
Master Data Management Scope

Key Components of Scope:
- Business Area
- Item (name)
- Short Description
- Implementation Style
- Managed At
- Data Steward Department
- Data Steward
- Secondary Data Steward
- Data Entry
- Change Frequency
- SLA (Service Level Agreement) from Request to Available
- Business Risk (if de-centralized)
- Business Impact (if centralized)
- Approval Workflow

**Business Area**

Agree on the key areas of business – example:
- Finance
- HR
- Marketing
- Sales
- Operations
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Items
Identify what data items need to be governed:
• Vendors
• Chart of Accounts
• Revenue Recognition Plans
• Employees
• Locations (Corporate and Customer)
• Regions (Sales, Marketing, Operational)
• Customer (Prospects, Active Customers, Prior Customers)
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Implementation Style
Four Common MDM Implementation Styles:
- Consolidation
  - Downstream MDM (in your DW for Analytics and Reporting)
- Registry
  - Cross-reference registry
- Centralized
  - Centrally authored and distributed
- Coexistence
  - De-centrally and centrally authored and integrated
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Managed At
Where is the data going to be mastered:
• Central (aka Global)
• Regional
• Local
• Unmanaged (handled with post-entry audits or other re-active Data Quality efforts)
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Data Steward
Who is the Data Steward:
• By Title or Individual Name
• Must have business expertise about the item
• Must be empowered to manage the item
• Requires on-going allocation commensurate with change frequency, SLA, and complexity of the data item
• Recommend Secondary
• Need to consider SOID
• May or may not be the same person actually entering the data
People
Sample Organization Chart

MDM Governance Council

MDM Core Team

Data Steward

Data Steward

Data Steward

Data Entry

Data Entry

Data Entry

IT Enabling Resources

Sponsorship and Executive Direction

Leadership, Framework, Workflows, and Management

Business Expertise and Stewardship

Data Entry

Technical Solutions enabling MDM
MDM Governance Council:
- Small group of company leaders
- Sponsor the MDM program
- Set direction for the MDM program
- Final Approval for MDM scope, org chart, and processes
- Set the tone across the company that MDM is critical and is a shared responsibility
MDM Governance Council

MDM Core Team
- MDM Leader
- Leadership, Framework, Workflows, and Management
- MDM Core Team:
  - Small group of key MDM team members tasked with creating the required MDM supporting structures and keeping them updated periodically
  - Leadership for other MDM team members
  - Typically includes lead Data Stewards and MDM Technical resources

Data Steward
- Data Steward

Data Entry
- Data Entry

IT Enabling Resources

MDM Leader:
- A single resource responsible for overall coordination of the MDM program
- Not a czar – this is a collaborative leadership position
MDM Governance Council

MDM Core Team
- MDM Leader
- Data Steward
- Data Steward
- Data Entry

IT Enabling Resources

MDM Data Stewards:
- May be both Central and Regional
- Business data SMEs with expertise in the associated MDM scope item
- Responsible for ensuring in scope data is of high quality

Business Expertise and Stewardship
Sample Organization Chart

MDM Governance Council

MDM Core Team
- MDM Leader
- Data Steward
- Data Entry

IT Enabling Resources

MDM Data Entry:
- May be both Central and Regional
- Business or IT resources with expertise in the associated systems used for MDM data entry
Sample Organization Chart

IT Enabling Resources:
- Some of these resources will also be part of the MDM Core Team
- Technical resources supporting the MDM program
- Includes Infrastructure
- Includes MDM Enterprise Software supporting resources (software administrator, configuration experts, etc.)
- Includes Data Analysts with expertise in MDM related Data Quality tasks like Profiling, Cleansing, Enriching, and Auditing data
Process
• Process discussions are system agnostic
• Drive scope of requirements with specific processes
• Drive understanding of business owner
• Tie process back to functional area in systems
• Identify gaps in existing processes to improve them
• Set up functional design process for detailed conversations
Technology
Fast Track Data Management
Enables any company to get started now, and become strategic tomorrow.

This requires a solution with these 3 things:

**Fast**
One platform, one technology.
Configuration, not coding.

**Affordable**
Simple Pricing Options
Self managed and owned.

**Scalable**
Manage 1B Records
Support 1K transaction/second.
The Daiquiri Bar
123 Main St.
Atlanta, GA
30076

Strategic Business Initiative:
Find shipping redundancies to decrease shipping costs.
- A tool designed for Sales and Marketing teams to build customer segments
- A Dynamics 365 offerings that can work in concert with other Dynamics products
  - The Power Platform can be used with Customer Insights
  - It can work with but is not dependent on other Dynamics products or the power platform.
- Very easy to deploy and use
  - Designed so that non-technical people can administer it
  - Can be a door opener for new customers
Good Morning, Scott

Everything you need in one place. Your latest insights are displayed for easy consumption. Your trending segments, frequencies, and receivables are close at hand. Click on watch video for learning opportunities to improve your Customer Insights experience.

Insights

Median lifetime spend

$4,320

Average churn score

0.23

Brand affinities

Interests

Segments

DoNotCall

-- members

Promotes

63877 members

CustomersHighChurn

2186 members

PotentialRepeatCustomersInUSA

7216 members
Build the Customer 360 Entity

- Configure the data entities
  - Map – Map data entities to common data schema entities
  - Match – Match members between data entities to align the different customer entities
  - Merge – merge the matched members into a single entity
  - Enrich – Add interesting data points to the merged members
  - Activities – Add data entities that show a time element
  - Relationships – Add data entities that have a one to many relationship
Data8 Data Enrichment for CRM

- Address autocompletion for fast, accurate address entry
- **Address Autocomplete** - just start typing your address details in the normal fields and get instant autocomplete suggestions.
- **International** - coverage of 251 countries
- **Authoritative** - uses official postal service or government data wherever possible
- **Fuzzy Matching** - advanced fuzzy matching techniques help you find the correct address even with inaccurate input
- **Address Validation** - verifies the address is valid at point of capture, reducing the need to cleanse once in CRM
- **Address Standardization** - ensure addresses are entered in standardized format, making finding the right record easier and improving analytics results
Data8 – Within D365

[Image of Dynamics 365 interface]

**Deduplication Rule: Information**

**General**

- **Rule Name**: Account Sample
- **Base Record Type**: Account
- **Matching Record Type**: Account
- **Real Time Enabled**: Yes

**Conditions**

- **And**
  - Only match records where **Status** equals **Active**
  - A non-conflicting match from **Main Phone**
- **Or**
  - Fuzzy company name match from **Address 2**: Name
  - Fuzzy person name match from **Address 1**: Primary Contact Name
  - Account Name

**Active**
Where Do You Start
Challenges of Not Mastering Data

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Where Does Bad Data Start?

- Experian Report from 2018
  - Human error influences over 60% of dirty data
  - Poor interdepartmental communication is involved in about 35% of inaccurate data records
  - Inadequate data strategy also impacts 28% of inaccurate data
Time Allocation

• Consider the time you spend in your organization in each area
  • Preparing Data
  • Cleaning Data
  • Analyzing Data
  • Discussing Data
  • Rework on Operational Tasks and Outputs due to Incorrect Data
Next Steps

• Workshop
• Master Data Assessment / Health Check
• Executive Briefing
# Workshop Example

<table>
<thead>
<tr>
<th>Activities</th>
<th>Preparation</th>
<th>Workshop 1</th>
<th>Workshop 2</th>
<th>Workshop 3</th>
<th>Workshop 4</th>
<th>Executive Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Organize and Plan Workshop</td>
<td>Develop a Vision for the Data Governance Program</td>
<td>Assess Data Flow in the Business</td>
<td>Analyze Gaps and Develop Initiatives</td>
<td>Design Roadmap and Plan Implementation</td>
<td>Data Governance and Business Case</td>
</tr>
<tr>
<td></td>
<td>• Finalize workshop itinerary and scope</td>
<td>• Establish business context and value of data governance in the organization</td>
<td>• Understand Data Flow:</td>
<td>• Evaluate performance gaps for remediation</td>
<td>• Develop a plan of action</td>
<td>• Evaluate strategy</td>
</tr>
<tr>
<td></td>
<td>• Identify workshop participants</td>
<td>• Assess the value, benefits, challenges, and opportunities associated with data governance</td>
<td>• Map and understand the flow of data within the business</td>
<td>• Develop alignment of initiatives to strategies</td>
<td>• Prioritize actions</td>
<td>• Review outcomes</td>
</tr>
<tr>
<td></td>
<td>• Gather strategic documentation</td>
<td>• Develop the vision, purpose, and scope of data governance</td>
<td>• Identify data sources and users</td>
<td>• Consolidate data governance initiatives and strategies</td>
<td>• Build a data governance roadmap (short and long term)</td>
<td>• Solution alternatives</td>
</tr>
<tr>
<td></td>
<td>• Engage necessary stakeholders</td>
<td>• Educate on benefits of data governance</td>
<td>• Assess current Data Governance capabilities</td>
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</tr>
<tr>
<td></td>
<td>• Book interviews</td>
<td>• Interview business stakeholders</td>
<td>• Set target Data Governance capabilities</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>2. Workshop Participant List</td>
<td>2. IT and Business Leadership Alignment</td>
<td>2. Data Governance Maturity Assessment</td>
<td>Initiative Plan and Timeline</td>
<td>Roadmap</td>
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