Managing a Single View: Master Data Management

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IBM Information Solutions
Audience Questions
Market Forces

Organic Revenue Growth
- Cross-sell & up-sell with complete understanding of consumer
- Bundling opportunities to increase wallet share and customer profitability

Demanding Customers
- Other industries are setting a high standard
- Deliver consistently high quality consumer experience across all touch points

Efficiencies Required by Shareholders and Customers
- “Once & done” enterprise-wide services for key consumer processes such as account changes (name, address)
- Business executives demanding projects with high ROI

Privacy & Regulatory Compliance Pressures
- Central location for consistent rules of visibility & entitlements
- Basel II requires a 360 degree view of credit relationships and exposure

M&A Infrastructure Projected to Increase
- Shortening M&A completion timeframes
- Extract customer value faster from M&A investments

Infrastructure to Support Business Change
- Flexibility to address new business requirements and capabilities
- Make IT an enabler, rather than an inhibitor
The Simple Story
Trusted Information Delivers Business Success

- Mergers & Acquisitions
- Competitive Pressures
- Regulatory Compliance
- Consumer Transformation
- Innovation & Growth

Market Dynamics

Customer Centricity | Enterprise Intelligence | Product/Service Optimization | Risk & Compliance

Legacy System Consolidations | Data Warehousing | Master Data Management | ERP/CRM Deployments

Business Initiatives

Major IT Projects

Governance | Quality | Consolidation | Integration

Transformation | Stewardship | Entitlement

Enterprise Data

Inconsistent Data Across Enterprise Sources

Today most companies have multiple repositories for key business data like customers, partners, products, locations, and accounts

- **Data values** that uniquely describe a business entity used to tell one from another (customer name, address, date of birth...)
- **Identifiers** assigned to each unique instance of a business entity
- **Relationships** between business entities (two customers “householded” together at the same location)
- **Hierarchies** among business entities (parent company owns other companies)
- Inability to understand the value of the customer
- Inconsistency in product data across systems
- Discrete and often contradictory functionality to manage data (business process, operational functions, collaboration, analytics)
- Inconsistent customer service across channels
- Missed revenue opportunity due to slow product introduction process and offers
What Is Master Data?

High Value Information that a Company Uses Across their Business
For Example: Customers, Products, Employees
What is Master Data Management (MDM)?

- Decouples master information from individual applications
What is Master Data Management (MDM)?

- Decouples master information from individual applications
- Becomes a central, application independent resource
- Simplifies ongoing integration tasks and new solution development
- Ensures consistent master information across transactional and analytical systems
- Addresses key issues proactively such as data quality and consistency rather than “after the fact” in the data warehouse
- Current MDM solutions in market concentrate on domains such as:
  - *Customer Data Integration (CDI)*
  - *Product Information Management (PIM)*
Master Data Management
Defining Domains

Party can reflect any legal entity, whether individual or organisation

Product encompasses both physical goods and services

Account includes associated relationships

Location may serve as a primary or secondary domain

...Not only must these domains be managed but also the relationships amongst them...
Many organisations begin their MDM journey with a single narrowly scoped project.
Master Data Management

The Single Domain Project Approach

In addition to a primary domain, often secondary domains are managed for a complete understanding.

Data is replicated in these isolated projects.
Requirements grow over time and necessitate the need to manage relationships.
An MDM application must manage deep data on a single primary data domain: Party, Product, Account.

An MDM Application must manage complex relationships among data domains to gain understanding of master data.
Multiform Master Data Management

Defining MDM Function

Operational Business Applications

- Operational Data Function
  - Real-time SOA data access

Collaborative Data Function

- Collaborate
  - Define, create and synchronize Master Information
  - Data Creators e.g., Administrators, trading partners, etc.

Analytical Data Function

- Analyze
  - Drive real-time business insight
  - Reporting & Analytics
  - Analyze master data

Multiform Master Data Management

- Application-unique Functionality & Data
- Common Functionality & Data

- Party (customer, citizen, prospect, organization, supplier, distributor, etc.)
- Product (good, service, product bundle, catalogue, product component, etc.)
- Account (Agreement, financial account, reward program, etc.)

Data Warehouses

Define and approve master data
Multiform Master Data Management

Multiple Users + Multiple Usages = Multiple Functions

- Data is dynamic, not static
- Applications that use master data play different roles …
  - … the same application may create data, consume it, and require analysis of it
- One Functional style can trigger another
- An MDM System must be able to
  1. Provide mechanisms for consistent use of master data across the organisation
  2. Integrate the functional styles to manage data lifecycle processes
Multiform Master Data Management
Domain, Usage and Implementation

A MDM system must

1. Support all usage requirements for different applications

2. Provide a consistent understanding and trust of master data entities and relationships

However....it must also support multiple Implementation Approaches
Gartner recognizes the Transaction Hub Style approach to MDM as providing the greatest level of transaction performance capabilities. IBM MDM Server has the flexibility to be implemented in multiple MDM styles including Consolidation, Registry, Coexistence and Transaction.
Multiform Master Data Management
Implementation Styles

Consolidation
Batch import and export capabilities
Data stewardship and governance functionality

Registry
Index (cross-reference) capabilities
Virtual consolidated view (federated queries)
Search and inquiry services

Co-existence
Full data model across multiple data domains
Message notification capabilities
Search and inquiry SOA services

Transaction
System of record
Add and update SOA transactions with full business logic
Full audit logging and history
Rules of visibility to control data access
IBM InfoSphere MDM Server Environment

Real-time/Near-Real-Time Connectivity Services (ESB, EAI, Web Services, MQ, etc.)

- Web
- Phone
- Call Center
- Sales
- Management
- Vendor & Other Business Partners

IBM InfoSphere MDM Server

- Understanding
- Cleansing
- Transforming
- Delivering

Enterprise Data Integration (InfoServer)

- Corporate
- Service
- Other

New Systems (e.g., SOA-based)

Order

Billing/Provisioning

Customer Product Account Others

Security, Mail, etc

Content Management

External Data Providers (e.g., D&B, ACXIOM, Experian)

Enterprise Data Warehouse/Data Mart

Master Data Batch Load
# IBM InfoSphere MDM Server Components Overview

## IBM InfoSphere MDM Server

### Transaction Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Level Services</strong></td>
<td>Fulfilling Business Process Requests</td>
</tr>
<tr>
<td><strong>Security &amp; Visibility</strong></td>
<td>Data access &amp; visibility rules</td>
</tr>
<tr>
<td><strong>Events</strong></td>
<td>Proactive &amp; reactive event processing</td>
</tr>
<tr>
<td><strong>Data Optimization</strong></td>
<td>Continuous data quality improvement</td>
</tr>
<tr>
<td><strong>Adaptive</strong></td>
<td>Support diverse business processes</td>
</tr>
</tbody>
</table>

### Foundation Features

<table>
<thead>
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<th>Feature</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>User interfaces</strong></td>
<td>Data stewardship, Administration</td>
</tr>
<tr>
<td><strong>Data quality control</strong></td>
<td>Accuracy &amp; consistency</td>
</tr>
<tr>
<td><strong>Integration</strong></td>
<td>New and Existing Technology</td>
</tr>
</tbody>
</table>

### Knowledge

<table>
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<th>Feature</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>Master data services &amp; Database</strong></td>
<td></td>
</tr>
</tbody>
</table>
MDM Server Services (Total 700+)

**Party Demographic Services**
- Party
- Basic Demographics
- Definable Demographics
- Party Names
- Party Values
- Party Search
- Delete Party
- Delete Party History

**Roles-related Services**
- Party Macro Roles
- Contract Party Roles
- Rebate/Claim Party Roles
- Grouping Party Roles
- Hierarchy Part Roles
- Relationship Party Roles
- Search by Party Role

**Customer Service and Sales Services**
- Interaction History
- Campaigns
- Privacy
- Customer Preferences
- Party Values (Value Profile)
- Notes/Alerts

**Account Services**
- Contract
- Contract Component
- Contract Party Role
- Contract Details
- Contract Location
- Contract Terms & Conditions
- Contract & C Override
- Contract-Product Relationships
- Contract Note/Alert
- Contract Search
- Contract Relationship
- Value Package Management

**Product Services**
- Product
- Product Type Hierarchy
- Product Values
- Product Search
- Product Terms & Conditions
- Product Relationship T&C
- Product Category Hierarchy
- Product Identification
- Product Equivalency ID
- Product Content Mgmt Ref
- Product Relationships
- Category Hierarchy Equivalency
- Category Hierarchy Search
- Category Hierarchy Values
- Terms & Conditions
- Terms & Conditions Parameters

**Data Stewardship Services**
- Duplicate Suspect Management
- Collapse/Split Parties
- Aggregate View Duplicates
- Collapse with Rules
- Source System Data
- Data Decay Metadata
- Suspect Search
- Create Search

**Party Relationship Services**
- Party Relationships
- Party Grouping
- Hierarchy Management
- Role Relationships
- Line of Business

**Location Services**
- Address
- Contact Method
- Household
- Location Group
- Role Location
- Address Standardization
- Address Demographics

**Party Identification & Directory Services**
- Bank Account
- Credit Cards
- Payroll Deduction
- Income Source
- Party Identification Registration
- Party Equivalency ID
- Search Party Equivalency ID
- System Key ID
- Acxiom Abilitec KeyRetrieval

**Events & Customer Insight Services**
- Party Events
- Events
- Customer Value Profile
- Corruption Management
- Needs Analysis
- KYC Questionnaire

**Contract Services**
- Contract
- Contract Component
- Contract Party Role
- Contract Location
- Billing
- Rebate/Claim
- Contract Note/Alert
- Contract Search
- Contract Relationship
- Holding

**History & Audit Services**
- Party History Audit Trail
- Account History Audit Trail
- Product History Audit Trail
- Transaction Audit Log
- Delete Party History
## MDM Impacts Business Processes Example

<table>
<thead>
<tr>
<th>Business Function</th>
<th>Process</th>
<th>Example</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales and Relationship Management</td>
<td>Account Opening</td>
<td>Optimize the AO process with pre-population of account data available through an enterprise customer view</td>
<td>Increase revenue and customer satisfaction through process optimization</td>
</tr>
<tr>
<td>Product Management</td>
<td>New Product</td>
<td>Create personalized baskets of products for customers based upon customer analytics</td>
<td>Differentiate in the marketplace and increase revenue</td>
</tr>
<tr>
<td>Customer Service</td>
<td>Call Center Complaints</td>
<td>Understand customer complaints and sentiment through analysis of unstructured interaction data such as notes and transcripts of conversations</td>
<td>Increase customer satisfaction and retention</td>
</tr>
<tr>
<td>Marketing</td>
<td>Campaign Management</td>
<td>Implement targeted cross channel campaigns with accurate customer information from across the enterprise</td>
<td>Increase campaign effectiveness</td>
</tr>
<tr>
<td>Risk and Compliance</td>
<td>AML</td>
<td>Increase the effectiveness and accuracy of the AML process through customer entity analysis and global name recognition</td>
<td>Increase compliance and reduce regulatory penalties</td>
</tr>
</tbody>
</table>
## Enterprise Business Benefits Example

<table>
<thead>
<tr>
<th>Solution Capabilities</th>
<th>Targeted Marketing</th>
<th>Sales and Profitability</th>
<th>Customer Service</th>
<th>Enterprise Information Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a Customer-centric View</td>
<td>High Impact</td>
<td>High Impact</td>
<td>High Impact</td>
<td>High Impact</td>
</tr>
<tr>
<td>Streamline Party Data Collection</td>
<td>Med. Impact</td>
<td>Low Impact</td>
<td>Low Impact</td>
<td>Low Impact</td>
</tr>
<tr>
<td>Improve the Management of Party Profile Data</td>
<td>High Impact</td>
<td>Med. Impact</td>
<td>High Impact</td>
<td>Low Impact</td>
</tr>
<tr>
<td>Leverage Analytic Insights to Increase Effectiveness</td>
<td>High Impact</td>
<td>High Impact</td>
<td>High Impact</td>
<td>High Impact</td>
</tr>
<tr>
<td>Recognize &amp; Act on Customer Events</td>
<td>High Impact</td>
<td>Med. Impact</td>
<td>Low Impact</td>
<td>Low Impact</td>
</tr>
<tr>
<td>Create a Centrally Managed Employee Hierarchy</td>
<td>Low Impact</td>
<td>Low Impact</td>
<td>Low Impact</td>
<td>Low Impact</td>
</tr>
<tr>
<td>Reduce Underwriting Issues &amp; Potential Errors; Reduce Risk</td>
<td>Low Impact</td>
<td>Low Impact</td>
<td>Low Impact</td>
<td>Low Impact</td>
</tr>
<tr>
<td>Improve Relationship Management for Multi-line Customers</td>
<td>Low Impact</td>
<td>Med. Impact</td>
<td>High Impact</td>
<td>High Impact</td>
</tr>
<tr>
<td>Use Household Information to Drive New Business</td>
<td>High Impact</td>
<td>High Impact</td>
<td>High Impact</td>
<td>High Impact</td>
</tr>
<tr>
<td>Improve Customer Satisfaction through Self-service</td>
<td>Low Impact</td>
<td>Low Impact</td>
<td>Low Impact</td>
<td>Low Impact</td>
</tr>
<tr>
<td>Optimize Claims Processing &amp; Improve Fraud Management</td>
<td>Low Impact</td>
<td>Low Impact</td>
<td>Low Impact</td>
<td>Low Impact</td>
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</tbody>
</table>
Trends in Customer Data Management

Operational efficiency
- Simplifying and standardising processes
- Enabling automation of the end-to-end process, reducing on-boarding times
- Reducing manual data enrichment
- Reducing remediation projects
- Improved distribution of trusted data

Regulatory compliance through “golden source” for customer data
- Simplification, lowering the cost and accelerating adherence
- Leading to a lower capital requirement

CRM
- Customer satisfaction and retention
- Increases in wallet share and customer penetration

Customer Data Management is the foundation upon which strategic projects are built.
IBM Has Invested To Meet These Trends
Proven Best of Breed Technology Assets

Create new business value and innovation from information

- Integrated tooling
- Built for business & IT collaboration
- Easily customized & incrementally deployed

Define and synchronize critical information for operations and business insight

- Recognised leader in all aspects of Master Data Management
- Complete operational master data management cross-domains
- Full Product Information Management capabilities

Deliver trusted information as a service

- Auditable data quality
- Model-driven, metadata-assisted integration
- Endless parallel scalability
Evolution Not Revolution, And Flexibility

- **Entry-level Project**
  - (Index or Reference)

- **Transaction MDM Services**

- **Information Server**
  - New Projects

- **IBM MDM Server**
  - (Transaction Hub)
  - (Additional Records)
  - (Additional Domains)

- **Increase in Data Volumes**

- **Records**

- **New Entities - Account / Product**

- **Less invasive initial deployment**

- **Project expansion over time**

- **IBM MDM Server**
  - (Foundation)
  - (DataStage, QualityStage)

- **3rd Party ETL or DQ**

- **Evolution Not Revolution, And Flexibility**

*IBM Information On Demand 2008***
Major Global Financial Services
Building A Customer-centric Operational Model

**Challenge**

- Fundamentally change the core of its operations to be customer-centric by eliminating product-centric silos of customer data.
- Reduce costs through improved operational efficiencies
- Improve net credit loss via customer level risk profile management
- Increase marketing lift by sharing customer insight and campaign information with all operational channels
- Manage privacy and Homeland Security risk & compliance

**Solution**

- IBM MDM implemented as a real-time service within a service oriented architecture
- CDI Hub for the enterprise provides a complete 360 degree view of the customer and all of their accounts
- IBM Entity Analytic Services highlights potential financial and security risks

**Business Benefits**

- Payback period of approximately 6 months
- Able to reduce maintenance costs of legacy customer information files (CIF)
- Improved accuracy and completeness of the customer data vs. existing CIF’s (96% vs. 85%)
- Improved customer matching for customers with multiple risk-bearing products provides improved risk management and assessment
Nationwide Financial Services
Enabling A 360-degree View Of The Business

Challenge

• No integration with existing customer service and self-service applications
• Difficult to drive additional revenue opportunities across lines of business
• Reduce costs and improve operational efficiencies

Solution

• Enterprise Customer Information Broker provides a single point of access to an enterprise-wide 360 degree view of customer data
• Integration over P&C, Mortgage and Investment lines of business provides a thin line over back office systems
• “Thin” layer across legacy systems with pointers back to systems of records

Business Benefits

• Better understanding of customers leads to improved customer service
• Visibility of customer base down to the brand level
• Scalability to meet increased demand
• Real time visibility into sales and service
The Simpler Story
*If you only remember three things*

1. **MDM manages high value, frequently used information and relationships**

2. **Multiform MDM describes the broad set of capabilities required to address MDM**

3. **IBM has achieved a position of leadership in delivering this broad set of capabilities**
Thank you