SAP Master Data Governance Workshop

Chicago, August 8
## Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 9:30 a.m. – 12:00 p.m. | **Successful Setup of a Data Governance Group in Your Organization**  
How to sell it to the executives, account for organizational culture, develop a strategy, and drive to a quick success |
| 12:00 – 1:00 p.m.   | **Working Lunch**  
The master data management (MDM) journey at The Andersons                                      |
| 1:00 – 1:30 p.m.   | **EIM Portfolio Overview**  
The tools and solutions to equip your business and IT for executing on strategy                |
| 1:30 – 2:30 p.m.   | **SAP Enterprise Master Data Management (SAP Enterprise MDM) Strategy**  
Solution rationale, vision, architecture, and road map                                            |
| 2:30 – 2:45 p.m.   | **Coffee Break**                                                                                  |
| 2:45 – 4:00 p.m.   | **Architectural Deep Dive**  
Modeling, user interface, search, and embedded data quality; we’ll also delve into workflow, replication, deployment options and extensibility |
| 4:00 – 5:00 p.m.   | **Customer Stories and Scenario Analysis**                                                       |
SAP’s EIM Portfolio
Data Issues Around Us
SAP EIM Solutions: Proven and Trusted
Powering the world’s leading global organizations with trusted information

11,000+
SAP EIM customers world wide

800+
New SAP Data Services Customers in 2012

103%
Growth of SAP Information Steward YoY in 2012

80%
SAP master data projects also include SAP Data Services
EIM Solutions from SAP
Remarkable customers
SAP Information Management Solutions
“Architect to Archive” End-to-end Solution Set

SAP Data Services:
Access, integrate, cleanse, match, and enhance data

SAP Sybase PowerDesigner:
Model data across the enterprise

SAP NW Information Lifecycle Management:
Manage entire lifecycle of information

SAP Information Steward:
Profile, monitor quality, metadata mgmt, track business impact

SAP Master Data Governance:
Centrally create, maintain, and replicate master data

SAP Extended ECM by OpenText:
Native access to relevant information in SAP Business Suite

SAP Data Services:
Access, integrate, cleanse, match, and enhance data

SAP Sybase PowerDesigner:
Model data across the enterprise

SAP NW Information Lifecycle Management:
Manage entire lifecycle of information

SAP Information Steward:
Profile, monitor quality, metadata mgmt, track business impact

SAP Master Data Governance:
Centrally create, maintain, and replicate master data

SAP Extended ECM by OpenText:
Native access to relevant information in SAP Business Suite
Information Governance
Confidence in data quality across business processes

Decrease COGS
Consolidate supplier data to optimize purchasing

Decrease days sales outstanding
Warehouses use bar code data to speed shipping

Increase promotion effectiveness
Social media data for segmentation, sentiment, behavior information

Decrease compliance issues
Plant operators use carbon input data to identify compliance

Decrease time-to-delivery
Geo spatial data identifies best routes/number of trucks/timing

End-to-end information governance

Suppliers
Plant
Warehouse
Distributor
Retailer
End Consumer
Simplicity: Quick to Deploy and Low Cost to Own
Pre-integrated with SAP & open for non-SAP applications

SAP Solutions for EIM

- EDW
- Business Suite
- Database
- On Demand
- Analytics
- HANA
- BI
SAP Data Services

Data integration, data quality, text analytics, data profiling and metadata mgmt

source, type, or domain) enabling greater business insights and operational effectiveness
# SAP Data Services: Enterprise-Wide Data Access

SAP Data Services has a long history for providing broad connectivity to databases, applications, legacy systems, file formats, …

<table>
<thead>
<tr>
<th>Databases</th>
<th>Applications</th>
<th>Files/Transport</th>
<th>Mainframe (with partner)</th>
<th>Unstructured Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>HANA</td>
<td>SAP Bus Suite Extractors</td>
<td>Text delimited</td>
<td>ADABAS</td>
<td>Any text file type</td>
</tr>
<tr>
<td>Oracle</td>
<td>ABAP</td>
<td>Text fixed width</td>
<td>ISAM</td>
<td>6 languages</td>
</tr>
<tr>
<td>DB2 (LUW, z-series, i-series)</td>
<td>BAPI</td>
<td>EBCDIC</td>
<td>VSAM</td>
<td>Extended to 31 languages.</td>
</tr>
<tr>
<td>Sybase ASE</td>
<td>Idoc</td>
<td>XML</td>
<td>Enscribe</td>
<td></td>
</tr>
<tr>
<td>Sybase IQ</td>
<td>SAP NW BW</td>
<td>Cobol</td>
<td>IMS/DB</td>
<td></td>
</tr>
<tr>
<td>SQL Server</td>
<td>JD Edwards</td>
<td>Excel</td>
<td>RMS</td>
<td></td>
</tr>
<tr>
<td>Informix</td>
<td>Oracle Apps</td>
<td>HTTP</td>
<td>Both direct and changed data</td>
<td></td>
</tr>
<tr>
<td>MySQL</td>
<td>PeopleSoft</td>
<td>JMS</td>
<td>HADOOP</td>
<td></td>
</tr>
<tr>
<td>Teradata</td>
<td>Siebel</td>
<td>SOAP (Web Services)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ODBC</td>
<td>Salesforce.com</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HP NeoView</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netezza</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

© 2011 SAP AG. All rights reserved.
SAP Data Services

SAP ERP, SAP CRM, SAP Master Data Management (MDM), SAP NetWeaver BW, …and non-SAP systems too!

BAPIs / IDocs / Web Services

Data Profiling

- Data Services Engine
  - Data Cleansing, Enrichment
  - Data Validation
  - Text Data Processing

Impact Analysis

Data Lineage

- Files, XML, HTML, Mainframe, Excel, text, etc.
- Sybase, HANA, Oracle, SQL, DB2, HADOOP
- PeopleSoft, Oracle Apps, Siebel, SFDC, etc.

Query, Reporting, Analysis, and Dashboards

Data Migration, Synchronization, Real-Time, …
SAP Data Services capabilities

Access

Cleanse

Validate

Deliver

Profile
2012 Toyota Highlander, 1G1JF27W8GJ178227. Policy #456-788-99. $500 deductible. Insured are William Thomas Snow and Christine W. Snow. On 1/09/13, received via text message "In accident! Need tow truck." and "Corner of Winter & Cross Rd". Dr. Snow slid through a stop on the snowy road and hit the stop sign. Significant damage to front of the car. He was unhappy at tow truck response time. Contact wtsnow@medicalcenter.com or 651.772.1234. Advance Appraisals Inc. to come out at 8:30am Monday to make further assessment.

Who, What, Where, When, How much, as well as Feelings
Text Data Processing on the Data Services Platform

Native Text Data Processing on the Data Services platform with the **Entity Extraction** transform to extract:

- Predefined entities (like company, person, firm, city, country, …)
- Sentiment Analysis (e.g., Strong positive, Weak positive, Neutral, Weak Negative, Strong Negative)
- Custom entities (customized via dictionaries)

Languages supported (for version 4.0)

- English
- German
- French
- Spanish
- Japanese
- Simplified Chinese

*Expanding to 31 languages in next releases*
Unlock Insights to Unstructured Text Data
Native Text Analytics enabled via SAP Data Services

Leverage text information to identify emerging trends, and proactively respond to opportunities or potential risks

- Sort through the noise of unstructured text data
- Automatically identify what your text content is “about”: Who, what, where, when, how much, etc.

Tap into sentiment from Twitter tweets to understand the trend of positive to negative feedback on your business using text analytics.
What is Data Quality?

1. **PARSE**
   - First Name: Bob
   - Last Name: Oldstead
   - AddressL1: 175 Rivington Ave
   - AddressL2: Suite 2
   - City: Manhattan
   - State: New York
   - Zip Code: 10002

2. **STANDARDIZE**
   - First Name: Robert
   - MiddleName: E
   - Last Name: Oldstead
   - AddressL1: 175 Rivington Ave
   - AddressL2: Suite 2
   - City: Manhattan
   - State: New York
   - Zip Code: 10002
   - Phone: (847) 442-5555
   - Email: robo@tcabuilders.com

3. **CORRECT**
   - First Name: Robert
   - MiddleName: E
   - Last Name: Oldstead
   - AddressL1: 175 Rivington Ave
   - AddressL2: Suite 2
   - City: Manhattan
   - State: New York
   - Zip Code: 10002
   - Phone: (847) 442-5555
   - Email: robo@tcabuilders.com

4. **MATCH**
   - Robert E. Oldstead
   - Manhattan, NY
   - 10002
   - robo@tcabuilders.com
   - 847 442-5555

5. **CONSOLIDATE**

6. **ENHANCE**
   - Zip Code: 10002-2517
   - Longitude: 40.7325525
   - Latitude: -74.004970
   - Phone: (847) 442-5555
   - Email: robo@tcabuilders.com
Enhanced Geocoding enables Location Awareness to make Better Business Decisions

Understand location factors relative to your opportunity, drive better business decisions:

- You need to determine the closest address based on input latitude and longitude values
- Identify Points of Interest within a specified range or based on the closest location
- Identify similar records based on their physical proximity to each other

Location awareness feeds the analysis process by integrating the context of location to help answer critical business questions, for example:

- Evaluate the suitability of a new business location
  - Number of customers within that area
  - Proximity of competing businesses
  - Distribution of complementary services

Example: Geocode data applied with a mapping solution
Regional and language coverage

- Basic Address Cleansing: All-World Directory includes Last Line Assignment and Address Line Parsing and Standardization
- Enhanced Address Cleansing: 36+ country-specific Address Directories, Address Line Assignment
SAP Data Services
Enable *relevant* and *trusted* data for business processes and decisions

**Access** All Information
- Access information from structured sources such as databases, applications, files
- Extract information from unstructured sources like documents and text fields
- Connect to both internal and external sources of data

**Integrate and Transform** Data
- Powerful built-in joining and transformation capabilities
- Simple to use unified design environment

**Improve** Data Quality
- Profile, cleanse and augment data
- Validate data to conform to business rules
- Eliminate duplicates using advanced matching capabilities

**Deliver** Data at the Right Time
- Deliver information in batch/real-time, physically/virtually, transaction/row-based

**Understand** Data Context
- Analyze metadata and understand data relationships
- Bring business context to the physical data
Data Services Is Your One-stop Solution
Data Integration, Data Quality, Information Stewardship, and Text Analytics

SAP BusinessObjects
Information Steward

Data Profiling
Metadata Management
Data Quality
Data Integration
Text Analytics

SAP Data Services

Information Platform Services
*SAP BusinessObjects BI platform*
Poorly Managed Information Leads to Gut-feel Decisions

"Gut Feel" Decisions

- All of the time: 3%
- 75% of the time: 15%
- 50% of the time: 42%
- 25% of the time: 36%
- Never: 3%

Base: 675 U.S. and European business executives and managers
Source: BusinessWeek Research Services

"Gut feel" used by
- >60% of people,
- >50% of the time

Information Available for Important Business Decisions

- Usually too little: 41%
- Always just the right amount (rare): 22%
- Usually too much: 38%

Aware of bad decisions managers have made due to insufficient information: 77%
Dealing with Known Data Quality Issues …

Source: Dilbert, May 2008
http://dilbert.com/strips/
... But How to Identify and Manage the Hidden Data Quality Problems?

Where is data stored within the organization?

What content is really stored within the organization?

Who is using data within the organization?

How is data transferred within the organization?

What are user's requirements on the data?
Basics of Total Data Quality Management

You can only improve what you can measure!

- Manage data quality along the lifecycle of your data
- Understand the requirements of the information consumer
- Define ownership and responsibility for your data
- Define measurable data quality metrics
- Improve your data at the root cause
- Tie data to business value

Classic Project Framework

Define
- Common understanding and definition of DQ requirements

Measure
- Apply the DQ rules on your data and get a clear view of your actual data quality

Analyze
- Find out the reasons for DQ issues and the implication of possible measures for DQ improvement

Improve
- Implement solution to improve current and control future data quality for data or processes
What Is Information Governance?

**Information Governance**
A discipline that includes people, processes, policies, and metrics for the oversight of enterprise information to improve the business value.

**High Value Information:**
- Optimized Business Processes
- Smarter Business Analytics
- Timely Mergers and Acquisitions
- Compliance with Laws and Regulations
Business Challenges with Data Quality and Data Integration Projects Today

**IT**

- **No** environment for business users to collaborate with IT regarding data issues
- **No** consistent repeatable way to measure and score data quality
- **No** clear strategy and discipline for improving data quality
- **Minimal** reuse of data assets; lots of data duplication

**BUSINESS USER**

- **Not** sure what the business definition is
- **No** ability to analyze data dependencies across systems
- **Lack** of visibility to where the numbers or data is coming from
- and many more…
SAP Information Steward
Collaborative environment for your IT and business users

Discover
Understand and catalog enterprise data

Assess
Overall data quality

Define
Rules and ownership

Monitor
Quality continuously

Improve
Data quality and governance

Empower business and IT users with a single environment to manage the quality of their enterprise data assets
Single Solution with Integrated Data Stewardship Capabilities

- **Data Profiling**
  - Validation Rule for Business Process Centric Data Profiling, Advanced Data Profiling

- **Metadata Analysis**
  - System landscape and architecture metadata cataloging (Dependency analysis, lineage etc.)

- **Cleansing Rules**
  - DQM Functionality for party and non-party data (Maintaining Cleansing Packages)

- **Business Term Taxonomy**
  - Comprehensive Business Taxonomy (Search, tagging, Ownership etc.)
Business Benefits with SAP Information Steward

Reduced complexity of IT landscape by deploying a single solution

**Increased efficiency** and **reduced costs** of data quality projects via a collaborative environment

**Close the gap between IT and business users**

**Improved data management processes** using solutions that support better governance

**Enhanced data quality** via increased transparency of data quality, origins, and lineage

“We think that Information Steward is absolutely essential. CN Railway already has created communities within each line of business with joint accountability for data quality and analytics for a specific domain, whether customer or maintenance information. *There's a tremendous synergy between data quality and analytics because the first thing analytics tells you is where your data is screwed up. Once you fix the data, the analytics start to work.*” (23 Feb 2011 For: ComputerWorld Canada)

Alan Capes
rector of IT business development and strategic planning
Canadian National Railways
Use scenario phasing
Information Steward Enterprise Information Governance
Complements and Integrates with EIM tools in Information Governance Projects

**DISCOVER**

- Get transparency about your operational and master data system
  - Data profiling
  - Metadata integration
- Catalog all data assets centrally and their relationships
  - Metadata Explorer
  - Data Lineage/Impact Analysis

**DEFINE**

- Implement policies on data and metadata
  - Validation Rules,
  - Cleansing Package Builder
- Define and assign ownership for any asset
  - Business term glossary

**MONITOR & REMEDIATE**

- Ongoing Monitoring of data quality
  - DQ Dashboard and Scorecard
- Surface data quality score in business user applications
  - Expose DQ scorecard via URL
- Enable workflows to resolve data quality issues
  - Failed record database
Adds Information Governance Capabilities to Data Services
Share ONE central point for definition of Validation Rules

**Example Flow:**
1. Understand data issues from the profiling in Information Steward
2. Author validation rule on Information Steward to check for the data quality issue identified
3. Export validation rule to Data Services
4. Create real-time data flow on Data Services
5. Link authoring application (for example a portal application) to the data flow using WebServices
Adds more Information Governance Capabilities to MDG

Complementary Information Governance Platform

- Powerful Validation Rules enhance data cleansing and remediation capabilities within MDG
  - Easy impact assessment of changes in existing rules
  - Predictive assessment for new validation rules to be introduced
  - Implantation of validations which can not be implemented in MDG
- Data Insight into new additional data sources to be integrated into MDG (“fit for use”)
- Metadata lineage and impact provide context to core MDG Process and data
- Continuous monitoring and integration with MDG processes to remediate data issues

Embedded Integration in MDG

- Interactive drill-down in DQ Scorecard.
- One click launch of governance process to correct data based on DQ analysis.
- Enables cleansing of party and non-party data within single solution

© 2011 SAP AG. All rights reserved.
Why SAP Information Steward?

- **One place** for data stewards and business analysts to collaborate and govern their data asset

- **First and only integrated solution** - metadata management, business glossary, data quality assessment, data quality monitoring, and cleansing package builder solution

- **Various perspectives** to understand and analyze trustworthiness of data

- **Easy and secure** access to a rich set of metadata data sources
MDM Roadmap and Strategy
Common Data Vocabulary

Final Details for Order #105-6480627-5785065
Print this page for your records.

Order Placed: May 17, 2013
Amazon.com order number: 105-6480627-5785065
Order Total: $26.56

Items Ordered

Condition: New
Sold by: Amazon.com LLC
1 of: How to Brew: Everything You Need To Know To Brew Beer Right The First Time, Palmer, John J.
Condition: New
Sold by: Amazon.com LLC

Shipping Address:
ROMAN RYTOV
270 LIRAC CT
ALPHARETTA, GA 30022
United States

Payment information

Payment Method:
American Express | Last digits: 1004
Billing address:
ROMAN RYTOV
270 LIRAC CT
ALPHARETTA, GA 30022

Shipping on May 17, 2013

Item(s) Subtotal: $26.56
Shipping & Handling: $0.00
Total before tax: $26.56
Sales Tax: $0.00
Total for This Shipment: $26.56

Logos
What is Master Data?

Infrequently changed
Shared across the enterprise

Frequency of changes

Meta
Reference
Master
Transactional
Reporting
Logs
Archived

Degree of sharing

Product/Article
Employees
Digital Assets
Suppliers
Customers

Materials
Contractors
Cost/Profit Center
Routes
Equipment
Charts of Accounts
Locations
Planes
All lines of business are impacted by master data quality

**Organizations & Roles**

- **Financials**
  - CFO

- **IT**
  - CIO

- **Sales**
  - VP of Sales
  - VP of Marketing

- **Supply Chain**
  - VP of Supply Chain
  - VP of Planning

**Challenges**

- Inconsistent financial master data across the enterprise
- Manual efforts to update financial master data in local financial systems
- Risk of non-compliance to IFRS, SOX etc.
- Slow group closes
- Lack of transparency about changes (Who, what, when, why?)
- High master data maintenance costs
- Need for multiple systems to manage master data in different domains
- Lack of flexibility in dynamic business environments
- Lack of consolidated view of customer data across all channels
- Customer transactions are compromised due to limited view of the facts
- Lack of transparency relating to suppliers and products
- High costs due to insufficient supplier selection and rationalization
- Loss of potential for benefit realization (i.e. discounts, conditions, central contracts)
- Limited availability of up-to-date master data in my business network
Master data challenges
Materialize across the organization

- **Reduced Sales Effectiveness**
  - Lack of consolidated view of customer data across all channels
  - Customer transactions are compromised due to limited view of the facts

- **Sub-optimal Procurement Decisions**
  - Lack of transparency relating to suppliers and products
  - High costs due to insufficient supplier selection and rationalization

- **Delayed Go-to-Market Process**
  - Failure to capitalize on market opportunity when introducing new products
  - Lack of real-time collaboration with front office, thus hindering customer services

- **Ineffective Business Decisions**
  - Lack of consistent information impedes to make critical decisions supporting innovation
  - Compromised business dynamics with negative impact on managing resources effectively
Getting master data right in this complex landscape requires better information governance
ASUG Data Governance Year-Round Community Meeting

Atlanta: October 7-9
Overview of SAP road map for Enterprise MDM solution

Solution today

Planned innovations

Future direction

Systems under central governance

Create

Systems not under central governance

SAP MDG, enterprise edition

SAP MDG

SAP NW MDM
Overview of SAP road map for Enterprise MDM solution

Solution today

Planned innovations

Future direction

- SAP MDG, enterprise edition
- SAP MDG
- SAP NW MDM

Consolidate
Create

Systems under central governance

Systems not under central governance
SAP offers solutions for the entire range of MDM problems

Systems under central governance

- LoB Customer
- LoB Procurement
- LoB Finance
- LoB PLM
- Other LoB

Consolidate

Create

Enterprise master data

Systems not under central governance

- Legacy systems
- Reporting and analytics
- Business partners
- Cloud
Gartner MDM Excellence Award Winners

Kraft

Lexmark

Swiss Re

“Unified master data is a critical component in Kraft’s global business transformation effort.”

Mark Johnson,
Senior Director Operations

“SAP is helping us get better visibility into our customers, respond to their needs much faster and service them a lot better.”

Joe Young,
Information Delivery Manager

“Swiss Re’s MDM Practice stood out amongst our competitors.”

Scott Cohanpour,
Senior VP

2009 2011 2013
SAP capitalizes on its unfair advantage
SAP capitalizes on its unfair advantage
SAP capitalizes on its unfair advantage
SAP Master Data Governance
Centrally govern master data on top of SAP Business Suite

SAP MDG is a natural extension of the business processes running in SAP Business Suite, providing out-of-the-box, domain-specific master data governance to centrally create, change and distribute master data.

<table>
<thead>
<tr>
<th><strong>Governance</strong></th>
<th>Enables governance, compliance and transparency through integrated staging, approval and central audit trail</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consistent Data</strong></td>
<td>Delivers consistent definition, authorization and replication of key master data entities for SAP. Eliminates error prone manual maintenance processes for master data in multiple systems</td>
</tr>
<tr>
<td><strong>Integration</strong></td>
<td>Native integration with SAP Business Suite and SAP ERP</td>
</tr>
<tr>
<td><strong>Re-use</strong></td>
<td>Re-use of SAP data model, UI and existing business logic and configuration for creation and validation of master data</td>
</tr>
<tr>
<td><strong>Data Quality</strong></td>
<td>Integrates with SAP BusinessObjects Data Services for data quality and data enrichment as well as SAP BusinessObjects Information Steward for data remediation</td>
</tr>
<tr>
<td><strong>NW MDM &amp; MDG</strong></td>
<td>Can complement and extend SAP NetWeaver MDM</td>
</tr>
</tbody>
</table>
Process Excellence with Master Data Governance

Request change

Approve change

Execute change

Distribution

Before

E-mail phone call

Collect information from various sources

Local application

Manual re-entry File upload custom interface
SAP Master Data Governance
Process flow archetype

External Providers
- External Services

SAP Master Data Governance
- Re-Use existing business logic
- Integrate external services
- Data Enrichment, Address Cleansing, Duplicate Check
- Collaboration
- Adaptable Workflow
- Auditable Change Process

Central maintenance of master data in staging area
1

Maintain 2 Validate 3 Approve 4 Replicate
5

Automatic replication to non-SAP and SAP systems
4

Adapt
5

3rd party systems

Business Processes
- Business Suite systems
- Adaptation / Enrichment in local systems
Process Excellence with Master Data Governance

Request change
Approve change
Execute change
Distribution

Before
- E-mail phone call
- Collect information from various sources
- Local application
- Manual re-entry
  File upload
  custom interface

After
- MDG workflow
- One repository for insights about the impact of the change
- Audit trail
  Check against application logic
- Enterprise Services
  Down-/Upload
  ALE
User centered design
Work center provides work lists, search and applications

![SAP Business Client interface](image)
Creating a change request
Let the system check for business consistency and duplicates
SAP Master Data Governance capabilities
Facilitating utmost business process performance

Deliver Out-of-the-Box

Integrated Object Model

Re-Usability & Extensibility

Governance, Collaboration & Data Quality

Robust Data Replication

SAP Master Data Governance
Deliver out-of-the-box

- Low TCO
- Flexibility
- Ease of consumption
- Best Practice
- Process Transparency
- Integration

- Full Integration to SAP Systems as a client
  Offer integration services for non-SAP client systems

- Workflow flexibility closely integrated to
  a framework for defining business rules

- Deliver roles on a web based UI
  Deliver process-centric solution
  Deliver predefined Data Quality Services

- Deliver a Data Model proven by
  several applications & industries

- Reuse of existing processing logic

- Out-of-the-box data replication mechanisms,
  using stable mechanisms
Integrated object model

Out-of-the-box delivery of proven data models for operational and financial master data

Financials
- Chart of Accounts
- GL Account
- Consolidation Unit / Group
- Cost Element
- Org. Units: Company, Profit Center, Cost Center

Material
- General Data & Descriptions
- Units of Measure
- EAN, UPC
- Classification
- Sales Data
- Plant Data

Supplier & Customer
- Business Partner Attributes
  - Central Data
  - Bank Details
  - Tax Numbers
- Business Partner Relationships
  - Identification
- Industry Sectors
- Addresses with Usage and Versions
- Supplier Attributes
  - General Data
  - Comp. Code Data
  - Purchasing Data
- Customer Attributes
  - General Data
  - Comp. Code Data
  - Sales Area Data
  - Tax Indicators
Governance, collaboration...

Linear or distributed & workflow based

Possibility to extend the process by adding business logic and thereby bringing in data quality

Has roles and responsibilities and also task authority (e.g., create, change, approve)

Data in process stored in a separated repository, will be transferred to operational database after final approval

Can be adapted and tailored based on customer needs

Flexible enough to respect the distributed responsibilities existing in a company across various business units
...and data quality

**Prevent creation of duplicates for increased effectiveness and efficiency**
- Checked early and embedded in the process
- High detection quality of matching using Enterprise Search or SAP BusinessObjects Data Services

**Validations**
- Re-use of existing validation logic in SAP ERP
- Custom validations can be modeled and programmed (e.g. code lists, simple checks, or modeled rules via SAP BRF+)

**Address Enrichment**
- Simple check and selection lists
- Integration with content provided by SAP BusinessObjects Data Services
- Automatically adding Tax Jurisdiction Code re-using existing interfaces / providers
Robust data replication

**Replication**
- Automatic or manual replication to SAP & non-SAP
- Peer-to-peer or mediated

**Replication Techniques**
- DRF controlling replication mechanisms like
  - ALE for SAP ECC, R/3 and non-SAP systems
  - SOA service for SAP and non-SAP systems
  - RFC and File for SAP and non-SAP systems
- CIF for SAP SCM, and MW for SAP CRM & SRM

**Replication Features**
- Flexibility to replicate selected data only to a specific client system by defining filters (controlled by DRF)
- Support different object IDs or customizing keys in hub and client systems (mapping in MDG or NW PI)
- Monitoring and error handling
Reusability & extensibility

**Reuse standard content**
- Reuse existing data structures and functionality of SAP Business Suite

**Enhance functionality**
- Be able to enhance MDG functionality based on predefined content (e.g. plant or sales data) or customer-specific extensions

**Extend data structures**
- Provide easy-to-use extensibility capabilities for enhancing nodes and fields
  - data model
  - user interface
  - processes
  - data replication
SAP Master Data Governance
Summary of the key capabilities

**Master Data Governance for Financial Data**
- Create or change Chart of Accounts, GL Accounts, Companies, Profit and Cost Centers, Cost Elements and respective hierarchies
- Data distribution to operational systems via Services (SOA) or ALE

**Master Data Governance for Material Data**
- Create or change a broad range of material master data attributes, including governed classification
- Mass data upload and mass change capabilities
- Data quality services such as duplicate check
- Data distribution to operational systems via SOA or ALE

**Master Data Governance for Supplier and Customer Data**
- Create or change a broad range of supplier or customer master data attributes as well as the underlying business partner attributes
- Mass data upload and mass change capabilities
- Data quality services such as duplicate check and address validation
- Data distribution to operational systems via SOA or ALE

**Master Data Governance for Custom Objects**
- Framework for data modeling, UI configuration, validation, and distribution of custom-defined master data objects
Overview of SAP road map for Enterprise MDM solution

Consolidate

Create

Systems under central governance

Systems not under central governance

Solution today

Planned innovations

Future direction

SAP MDG, enterprise edition

SAP MDG

SAP NW MDM

Overview of SAP road map for Enterprise MDM solution

Consolidate

Create

Systems under central governance

Systems not under central governance

Solution today

Planned innovations

Future direction

SAP MDG, enterprise edition

SAP MDG

SAP NW MDM

Overview of SAP road map for Enterprise MDM solution

Consolidate

Create

Systems under central governance

Systems not under central governance

Solution today

Planned innovations

Future direction

SAP MDG, enterprise edition

SAP MDG

SAP NW MDM
Master data is the “DNA” of the enterprise
Enterprise MDM must cross the chasm of multiple domains and co-existent scenarios for creation and high volume consolidation of master data

Planned innovations
SAP MDG, enterprise edition overview

SAP MDG, enterprise edition

Governance and stewardship processes and business logic

Consolidate → Create → Distributed Create

SAP HANA

Master data services

Data Standardization → Best Record Calculation → Enrichment

Multi domain Repository

Planned innovations
Integrate, enrich, govern single customer view

Integrate, enrich, and govern a single customer view throughout the entire customer lifecycle to grow a profitable and loyal customer base.

<table>
<thead>
<tr>
<th>Chief Customer Officer</th>
<th>Head of Marketing</th>
<th>Head of Sales &amp; Service Operations</th>
<th>Head of Marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCO</td>
<td>Customer Acquisition</td>
<td>Sales &amp; Service Operations</td>
<td>Customer Retention &amp; Development</td>
</tr>
</tbody>
</table>

Marketing

- Customer Acquisition
- Analyze 360 View
- Customer Analytics
- Customer Loyalty Management

SAP MDG, enterprise edition

Create, maintain, distribute

Channels/Logistics/Finance

- Offer
- Sell
- Deliver
- Bill

Integrate, enrich, govern single customer view
Comprehensive consolidation
Master Data Governance, enterprise edition

Consolidation

- Data modeling: Flexible modeling capability
- Extensible Business Partner data model with nested structures
- De-duplication and X-ref
- Integration with SAP and non-SAP sources
- Match on flat data and sub-tables eg. Multiple addresses
- Match within the data and with the existing repository
- Configurable survivorship rules for calculating best records
- Survivorship rules allows data collection e.g. Unique addresses are collected
- Best Record creation aka auto merging, identification
- Data stewardship for search/explore, view record cluster, rematch, promote best records…
Consolidation: Detail view

- Extract data from source systems
- Map
- Transform data
- Load data to MDS

- Name and Address cleanse and validation
- Data standardization
- Best in class DQ engine
- Global address directories

- Find duplicates
- Fuzzy matching
- Exact string matching
- Cascade match
- Match with external data

- Create business rules to define best record
- Configurable survivorship rules
- Define rules at record and field level

- Refine best records
- Merge and un-merge best records
- Review matches
- Bulk edit best records
- Search and explore data
Consolidation: Example

**Extract & Load**
- **Name:** Barb Rymes
- **Address:** 123 Main Street
- **City:** Edison
- **Zip:**
- **Phone:** 7327320001
- **Gender:** Female
- **System:** ERP 1

**Cleanse & Standardize**
- **First Name:** Barb
- **Family Name:** Rhymes
- **House ID:** 123
- **Street Name:** Main street
- **City:** Edison
- **Zip:** 07001
- **State:** New Jersey
- **Phone:** 732 – 732 – 0001
- **Gender:** Female

**Match**
- **First Name:** Barbara
- **Family Name:** Rhymes
- **House ID:** 123
- **Street Name:** Main street
- **City:** Edison
- **Zip:** 07001
- **State:** New Jersey
- **Phone:** 732 – 732 – 0001
- **Gender:** Female

**Create Best Record**
- **First Name:** Barbie
- **Family Name:** Rhymes
- **House ID:** 123
- **Street Name:** Main street
- **City:** Edison
- **Zip:** 07001
- **State:** New Jersey
- **Phone:** 201 – 732 – 0001
- **Acct. Status:** Active

**Stewardship**
Best record calculated based on the survivorship strategy. Every field’s value is inherited from one of the source records. The best record is eligible for final approval or “unmerge” of the data steward.
Total Spending

Series "Total" Point "BARBARA ANN RHYMES" Value: 110235.5

Roll up the amount sold to the consolidated view for this business.
Customer B2C landscape – create/distribute

- Create
- SaaS
- Social Networks/Enrichment Services
- Information Bureaus/Marketing Lists
- Customer Single View
- Match/Survive/Best Record/Key Mappings
- SAP Analytics
- Sentiment Analysis
- SAP ERP
- Non-SAP ERP
- Mobile
- SAP CRM
Comprehensive consolidation delivery schedule: MDGee 7.0 and beyond

Cross-Enterprise Scenarios

- Standards compliance: security, software lifecycle, performance and others
- APIs/Web-services for CRUD
  - Fuzzy Search WS – Ability to search for records based on combination of exact and HANA Fuzzy Search
  - Upsert WS – Ability to insert or update a source record in the hub via a real-time web service call
  - Retrieve Cluster WS – Ability to obtain additional information about a cluster based on source or best record ID
  - Retrieve Enrichment WS – ability to obtain enrichment information for a Best Record
- Low TCO solution on SAP HANA
Customer B2C landscape – create/distribute: Detail view

- Local Search
- Lookup service
- Local create
- Enrich
- Relate/Connect
- Actively govern
- Distribute

Remote Client  MDGee
Customer B2C landscape – create/distribute: Detail view

- Trying to create a new entity
- Calls “search before create” to avoid duplications

- Creates a record
- This record is out of sync and isolated

- Updates the hub
- This initializes the cross-record enrichment standardization
- Standardizes via enrichment service
- Matches inside the hub
- Establishes internal cross-record relationships
- Takes over governance
- Controls via MDG change management requests
- Prioritizes survivorship
- Distributes to the enterprise
- Updates the local client

Local Search → Lookup service → Local create → Enrich → Relate/Connect → Actively govern → Distribute

Company: Panorama Holdings Inc
Address: 90 Harddrive drive, NY, USA

Company: Panorama Supplies
Country: Mexico

Company: Panorama Distribution
Address: 400 Summit Blvd, Atlanta, US

Company: Panera Distribution
Country: Canada

Company: Compass Utilities
Address: 10 Panorama Pkwy, US

- MDGee
- Remote Client
Overview of SAP road map for Enterprise MDM solution

Solution today

Planned innovations

Future direction

Systems under central governance

Create

Master data

Consolidate

Systems not under central governance

SAP MDG, enterprise edition* (New)

SAP MDG

SAP NW MDM

* Not yet officially named
Enterprise master data management trends

- Bridge insight from social and enterprise master data
- Bridge master data across cloud and on-premise applications and services
- Multi-vector master data management capabilities
- Governance of master data integrated into Line of Business processes and Big Data analytics
- Trusted master data for mobile apps
- Seamless exchange of trusted master data with business partners
- bridge insight from social and enterprise master data

Co-existence

Enterprise business applications

Cloud

Business Networks

Mobile

Social Networks

Enterprise Master Data Management

Consolidation

Central creation

Enterprise business analytics

Procurement

Supply Chain

Customer

Finance

Manufacturing

PLM
Customer Co-Innovation Streams

- Enterprise Master Data Management on HANA
- Data Enrichment with Third Party
- Hierarchies and Relationship Management
- Parts360 and FFF (Fit Form Factor)
MDG deployment options and the hub configuration
We’ve got MDG. Now what?

**Financials**
- Chart of Accounts
- GL Account
- Consolidation Unit / Group
- Cost Element
- Org. Units: Company, Profit Center, Cost Center

**Material**
- General Data & Descriptions
- Units of Measure
- EAN, UPC
- Classification
- Sales Data
- Plant Data
- Valuation & Costing

**Supplier & Customer**
- Business Partner Attributes
  - Central Data
  - Bank Details
  - Tax Numbers
  - Industry Sectors
  - Addresses with Usage and Versions
  - Business Partner Relationships
- Supplier Attributes
  - General Data
  - Comp. Code Data
  - Purchasing Data
- Customer Attributes
  - General Data
  - Comp. Code Data
  - Sales Area Data
  - Tax Indicators
We’ve got MDG. Now what?

- How do I install and configure MDG?
- What are the deployment options?
- If I go with the standalone deployment how do I set it up?
- If I put it on the operational ERP how does it affect my upgrade strategy?
- How do you handle configuration data sync?
- Can MDG syndicate to multiple ECCs? And if yes can those be on lower Enhancement packs that MDG?
- Can I virtualize my MDG environment?
- How to implement MDG if there are multiple non harmonized ERP systems?
- If there are different number ranges in the downstream systems how MDG handles it in the HUB scenario?
- Does our installed industry solution affect MDG deployment options?
- We have multiple ERP instances on different EhP versions. What are the options to roll out MDG?
Planning MDG journey

Where we want to be?
How to get there?
How to plan it right?
SAP MDG deployment options
Consciously decide for a central hub or co-deployment

Deploy SAP MDG…

… as standalone system / master data hub

SAP MDG

SAP ERP

SAP SCM

…

3rd party, NWAs

SAP SRM

SAP ERP, SCM, CRM, SRM …

3rd party, NWAs

… on top of an operational ERP

SAP MDG & SAP ERP
Where we want to be: two options to deploy MDG

Co-deployment

Hub
Two options to deploy MDG

Co-deployment

Hub
Two options to deploy MDG

**Co-deployment**
- CPG / Food
- 2 SAP ERPs
- Phased roll out
- CPG / Food
- 1 SAP ERP
- Global/all LoB

**Hub**
- Pharma
- 5+ ERP
- Phased roll out
- High tech
- 1 SAP ERP
- Global roll out
Planning MDG journey

- Number of ERPs and the SoR
- LoB/Internal Businesses
- Control areas of data governance
- Global/regional phases of roll out
- Business Strategy/Priority
- ERP upgrade strategy
- Industry and add-on solutions
Things to take into account with the co-deployment option

- MDG shares ERP(s) object schema
- MDG shares ERP(s) objects
- MDG shares ERP patch level and release strategy
- MDG is bound to the ERP roadmap (future functionality, HANA)
- ERP confines future landscape changes (M&D, reorgs, spin-offs)
Things to take into account with the hub options

- MDG is on its own 3-tier environment (N+1, N+2, etc. on the project schedule)
- TCO impact
- Customizing and reference data synchronization
- “Clean” data approach
- Future flexibility
## Big picture: Hub vs. Co-existence

<table>
<thead>
<tr>
<th>Factor</th>
<th>Hub</th>
<th>Co-existence</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCO</td>
<td>Extra hardware cost</td>
<td>Hardware reuse</td>
</tr>
<tr>
<td>Industry solutions/add-ons</td>
<td>Flexible</td>
<td>Limited</td>
</tr>
<tr>
<td>Schema/Object ERP/MDG unification</td>
<td>Not applicable</td>
<td>Object/Values Superset</td>
</tr>
<tr>
<td>Upgrade flexibility</td>
<td>Decoupled/independent</td>
<td>Linked/dependent</td>
</tr>
<tr>
<td>Data distribution</td>
<td>Required</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Cross-domain management</td>
<td>All objects are in one place</td>
<td>Integration is necessary</td>
</tr>
<tr>
<td>Customizing/configuration</td>
<td>Required</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
How to plan MDG journey right?
How to plan MDG journey right?

Co-deployment

Hub
Reference and Customizing data is not maintained in MDG but in ECC. How to make it available for the maintenance process?
Customizing synchronization
<table>
<thead>
<tr>
<th>Category</th>
<th>Code</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Groups</td>
<td>V023</td>
<td>MARA</td>
</tr>
<tr>
<td>Material Groups: Default for Non-Stock Items in Purchasing</td>
<td>V023_E</td>
<td>MARA</td>
</tr>
<tr>
<td>Material Groups</td>
<td>V_T023</td>
<td>MARA</td>
</tr>
<tr>
<td>Default Asset Class</td>
<td>V_T023_A</td>
<td>MARA</td>
</tr>
<tr>
<td>Purchasing Groups</td>
<td>V_024</td>
<td>MARA</td>
</tr>
<tr>
<td>Printer for Messages</td>
<td>V_024_N</td>
<td>MARA</td>
</tr>
<tr>
<td>MRP Controllers</td>
<td>V_T024D</td>
<td>Plant (MARC)</td>
</tr>
<tr>
<td>Production Scheduler</td>
<td>V_T024F</td>
<td>Plant (MARC)</td>
</tr>
<tr>
<td>Laboratory/Office</td>
<td>V_024L</td>
<td>MARA</td>
</tr>
<tr>
<td>Valuation Classes</td>
<td>V025</td>
<td>Valuation (MBEW)</td>
</tr>
<tr>
<td>Maintain material types</td>
<td>MTART</td>
<td>MARA</td>
</tr>
<tr>
<td>Maintenance of version fields in T134</td>
<td>MGVEDITT13</td>
<td></td>
</tr>
<tr>
<td>Define Attributes of Material Types</td>
<td>OMS2</td>
<td>MARA</td>
</tr>
</tbody>
</table>
Use naming convention

<PROJECT>:<FUNCTIONAL AREA/APPLICATION AREA>:<FRICEW/CONFIG ID>:<DESCRIPTION>

Example: **NA:CC:MMI001:MDG**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Business Information Warehouse</td>
</tr>
<tr>
<td>F</td>
<td>Financial Accounting</td>
</tr>
<tr>
<td>H</td>
<td>Human Resource</td>
</tr>
<tr>
<td>I</td>
<td>Plant maintenance</td>
</tr>
<tr>
<td>K</td>
<td>Cost Accounting</td>
</tr>
<tr>
<td>T</td>
<td>Treasury</td>
</tr>
<tr>
<td>S</td>
<td>Basis</td>
</tr>
<tr>
<td>U</td>
<td>Enterprise Data Model</td>
</tr>
<tr>
<td>V</td>
<td>Sales and Distribution</td>
</tr>
<tr>
<td>Y</td>
<td>Cross Functional</td>
</tr>
<tr>
<td>Q</td>
<td>Quality Management</td>
</tr>
<tr>
<td>M</td>
<td>Materials Management</td>
</tr>
<tr>
<td>W</td>
<td>Warehouse Management</td>
</tr>
<tr>
<td>L</td>
<td>Legacy System</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Application Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP</td>
<td>Accounts Payable</td>
</tr>
<tr>
<td>AR</td>
<td>Account Receivable</td>
</tr>
<tr>
<td>AA</td>
<td>Asset Accounting</td>
</tr>
<tr>
<td>CO</td>
<td>Controlling</td>
</tr>
<tr>
<td>PS</td>
<td>Project Systems</td>
</tr>
<tr>
<td>FA</td>
<td>Fixed Assets</td>
</tr>
<tr>
<td>CR</td>
<td>Closing and Reporting</td>
</tr>
<tr>
<td>EB</td>
<td>Electronic Bank Statement</td>
</tr>
<tr>
<td>FI</td>
<td>Financial Information</td>
</tr>
<tr>
<td>GL</td>
<td>General Ledger</td>
</tr>
<tr>
<td>PC</td>
<td>Preparation for Consolidation</td>
</tr>
<tr>
<td>SA</td>
<td>System Administration</td>
</tr>
<tr>
<td>SL</td>
<td>Special Purpose Ledger</td>
</tr>
<tr>
<td>PA</td>
<td>Personnel Administration – Employees</td>
</tr>
<tr>
<td>PB</td>
<td>Personnel Administration – Applicants</td>
</tr>
<tr>
<td>PY</td>
<td>Payroll</td>
</tr>
<tr>
<td>PD</td>
<td>Personnel Development</td>
</tr>
<tr>
<td>TR</td>
<td>Training</td>
</tr>
<tr>
<td>CM</td>
<td>Compensation Management</td>
</tr>
<tr>
<td>BF</td>
<td>Benefits</td>
</tr>
<tr>
<td>TR</td>
<td>Travel</td>
</tr>
<tr>
<td>AB</td>
<td>Activity Based Costing</td>
</tr>
<tr>
<td>CC</td>
<td>Cost Center Accounting</td>
</tr>
<tr>
<td>CO</td>
<td>Cost Object Controlling</td>
</tr>
<tr>
<td>CR</td>
<td>Cost &amp; Rev Element Acct.</td>
</tr>
</tbody>
</table>
Transport mechanisms: spectrum of options

Scripts/RFC

ALE

Solution Manager

MDG-X
Two options to deploy MDG

Co-deployment

CPG/ Food
2 SAP ERPs
Phased roll out

CPG /Food
1 SAP ERP
Global/all LoB

Hub

Pharma
5+ ERP
Phased roll out

High tech
1 SAP ERP
Global roll out
Thank you!