Introduction to Master Data Management

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What is Master Data Management?

- Managing the reference data used to support applications and analysis
- Master data is the 15% or so of non-transactional data
- Sometimes carried out by using a data warehouse
  - DW has the drawback of being “downstream” and least likely to feed back to the source systems
- MDM tackles master data management in the operational area, managing it in the most appropriate place
- MDM is complementary to BI and can provide an excellent source of dimensional data
- Emphasis on data quality, integration, single version of the truth, data stewardship
- Enables master data to be treated as an “asset”
Types of Master Data Management

- **Synchronization**
  - All applications hold their own master data, the MDM tool synchronizes and merges data across applications with a central registry

- **Hub**
  - Master data moved into a central hub, all applications use that instead of their own master data, or get their master data from the hub via a hub and spoke approach

- **Data Warehouse**
  - More prevalent, but the DW is not necessarily the best place for operational master data
Oracle’s Approach to Master Data Management

- There are three types of business data that enterprises hold
  - Transactional data (supports applications)
  - Analytical data (supports decision making)
  - Master data: the business objects for transactions, and the dimensions for analysis

- MDM can be approached taking each area separately (operational MDM, analytical MDM etc) or it can be approached as “Enterprise MDM”
  - Manage both transactional and analytic master data

- MDM products now brought together into Oracle Master Data Management Suite
  - Customer Data Hub
  - Product Data Hub
  - Oracle Hyperion Data Relationship Management
Key MDM Processes

- Profile the master data
- Consolidate master data into a central repository and link to applications
- Govern the master data
- Share it through synchronisation
- Leverage single version of the truth
Master Data Management and Business Intelligence

- MDM’s primary purpose in a BI environment is to manage the dimensions
- MDM is a better place to cleanse and integrate reference data
  - Available to operational applications, better place to do this than “downstream” in DW
  - Also holds cross-referencing, duplication data etc
  - Management of hierarchies
- OWB can be used alongside MDM
  - Extract data from MDM data hubs
  - Data profiling
  - Populate MDM data hubs
- ODI also comes with data profiling options (10.1.3.4+)
Oracle Customer Data Hub

- Part of the E-Business Suite technology stack
- Pre-built extensible data model for customer data
- Single view of customer data
- Create a universal ID for each customer and build cross-reference to each source system
- Import workbench and UI for data stewards
- Track source of customer attributes and view historical profiles
- Embedded data quality tools (not OWB, ODI)
- Prebuilt integration with AIA and OBIEE (how?)
Oracle Product Data Hub

- Part of the E-Business Suite technology stack
- Used to centralize all product information from heterogenous systems
- PIM Data Librarian for importing, synchronizing, managing quality of and securely accessing data
- Create a universal UI for each product
- Create product hierarchies (bills of materials)
- Uses Data Lens for standardizing products
- SOA interfaces
Oracle Hyperion Data Relationship Management

- Part of Hyperion stack (and bought in by them previously)
- Data model, source agnostic
- Focused on managing BI/analytic master data but applies across all areas
- Financial MDM (chart of accounts, cost centers)
- Analytical MDM (dimensions, report structures)
- Application templates
- SOAP (SOA) APIs
- Business user interface
- Synchronization/Merge approach rather than hub
Oracle Data Integration Suite

- Oracle Data Integrator
- Oracle Data Distribution and Delivery (ESB, J2EE, BPEL etc)
- ODI Data Quality & Data Profiling
- Hyperion Data Relationship Manager
ODI and Hyperion Data Relationship Manager

- Oracle Hyperion Data Relationship Manager is being positioned alongside Oracle Data Integrator as the “source-system agnostic” Oracle MDM solution
  - PDH and CDH for e-Business Suite?
  - ODI and DRM for heterogeneous systems?
Gartner MDM Maturity Model

Unaware
- Problem? What problem?

Aware
- No vision, but yes, we do have a problem...

Reactive
- No vision. Firefighting is the answer!
- Isolated, bottom-up approaches

Proactive
- OK. Let’s do something (at the silo level)
- Silo-orientated solutions

Managed
- A unified vision emerges (with high level sponsorship)
- Enterprise-wide MDM program

Optimized
- MDM is the way we do things around here
- Managing master data as an asset
- Continuing to learn and improve

Level of MDM Maturity

Increasing Maturity of MDM
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