

Competitive Advantage through Consolidated Enterprise Information

Applies to:

SAP NetWeaver Master Data Management

Summary

This article provides an overview of the master data challenge in heterogeneous IT landscapes, and shows how SAP NetWeaver is set up to tackle this by streamlining master data on a sustained basis.

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Created on: 03 January 2007

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Introduction

In today's business world, which is strongly affected by the increasing pressure of costs and competitors, it is becoming more and more important for companies to base their business processes on consolidated enterprise information. The current international trend toward company takeovers provides an additional reason to act.

Knowledge is power – today this is truer than ever in the business world. In many large companies as well as in midmarket companies, managers are becoming increasingly conscious of the fact that enterprise information in the form of master data is a decisive company asset with enormous cost-saving potential.

Since the most varying business processes refer to master data across the entire company, the quality of this data is of paramount importance. Quality gaps and error-prone business processes are a tiresome topic, also in stable company structures with a heterogeneous IT structure. Company mergers and takeovers further aggravate the problem. Process quality depends directly on the data quality throughout the entire company context – this is true for company structures that have evolved over time as well as for dynamic company structures. You must therefore be sure that you have consistent data in the most varied scenarios, and this requires a well planned master data strategy.

Because of the multilayered uses within companies, specific, single-purpose solutions are not normally sufficient to get a grip on redundant data in heterogeneous system landscapes. ETL or PIM solutions tackle the problems of master data, but at best focus on certain detailed aspects within this context, and do not cover the entire span.

We therefore need an overall view of things. With its solution for master data management (SAP NetWeaver MDM), SAP NetWeaver satisfies this requirement. The holistic approach of this product centers on the fact that different master data objects can be processed, predefined business content can also be delivered, and new master data objects can be modeled.

Solution Using Scenarios

Depending on the degree to which a company would like to consolidate its data, SAP NetWeaver MDM provides the corresponding scenario. The tool basically supports three generic IT scenarios as well as predefined application scenarios for specific business processes.

The generic IT scenarios include:

- Master data consolidation
- Master data harmonization and
- Central master data management

The specific business scenarios include:

- Rich product content management
- Customer data integration and
- Global data synchronization.

Master data consolidation: This scenario collects master data from a number of different systems at a central location, and detects and cleans up identical objects, while managing the local object keys for cross-system communication. After consolidation, different kinds of information can be accessed in order to perform company-wide analyses.

Master data harmonization: This scenario enhances the master data consolidation scenario described above by sending the consolidated master data information to the connected client systems using a distribution framework, providing unified high quality in heterogeneous system landscapes.

Central master data management: Whereas the emphasis in master data harmonization is on local data maintenance, in central data management the focus is on the central data repository. Constant data cleansing processes as well as the distribution of the cleansed data to the connected application systems are also part of this scenario.

Rich product content management: This scenario is intended for the PIM market. SAP NetWeaver MDM offers a large number of functions for managing product data and the corresponding image files centrally as well as for preparing the publishing of product catalogs – either as electronic Web catalogs or in print.

Customer data integration: With this scenario you can harmonize customer master data records across heterogeneous systems.

Global data synchronization: With this scenario, unified object information is synchronized with data pools such as UCCnet and Transora in a standard industrial format and provided to trading partners.

Flexible Verticalization

The problems of master data are not specific to an industry, but of course there are always different aspects for a specific industry. SAP NetWeaver MDM can be flexibly streamlined to specific industry requirements using the described scenarios. You can find any number of concrete applications in wholesale and retail as well as in the consumer goods industry (beyond the described global data synchronization), for example when consolidating product and vendor data. Other possible applications can be found in the area of health care, when harmonizing patient data with hospitals, health insurances, and doctors' practices, in the public service sector when consolidating the management of residents' data across multiple administrations and administrative instances, or in the automobile industry when consolidating and structuring product data according to standard classifications.

The list of industry-specific applications could be extended endlessly. SAP NetWeaver provides the necessary base for ensuring communicative business processes across the different industries.

Functions in Detail: Example for Data Consolidation

SAP NetWeaver offers important functions for loading, consolidating and distributing different kinds of master data information. These aspects are relevant when working in heterogeneous system contexts. However, the actual data consolidation, that is the ability to recognize and eliminate possible duplicates while at the same time defining the data quality level for the individual master records, is of paramount interest. What features does SAP NetWeaver MDM offer here? In addition to the ability to search for specific master data records, to compare them interactively, and to check them for redundancy in order to merge real duplicates to a central master record, the current version of SAP NetWeaver MDM enables you to define transformations and matching rules, and to bundle matching strategies so that you can find large numbers of identical object records within a master data repository using matching scores, and possibly to merge them.

An open data enrichment architecture also enables you to seamlessly integrate services of third-party business information providers for optimizing the quality of data.

Broad Scope of Use through Extensibility

SAP NetWeaver MDM is extremely flexible, both from the point of view of architecture and in its concrete use. This is shown by the fact that, depending on your needs, the tool can be used on a standalone basis or connected with other SAP NetWeaver components, such as the Exchange Infrastructure, Portal or Business Intelligence.

Integrated Application Programming Interfaces (APIs), with which SAP NetWeaver MDM connects other systems to MDM data and functions, guarantee additional functional flexibility. The Composite Application Framework (CAF) within SAP NetWeaver also enables you to easily enhance functions without modifications by using Guided Procedures (GP).

Relevance for Service-Oriented Architecture (SOA)

There is no doubt about the enormous significance of specific master data strategies in dynamic IT environments. All the more so since these IT landscapes are moving fast in the direction of a service-oriented architecture (SOA). Business processes can only be processed successfully using dynamic services if they are based on well-founded information – in other words consistent reference data. This makes master data management the heart of every SOA.

Summary

In summary, we can say:

- Data unification is a strategic enterprise goal that will provide an enormous competitive advantage. By using consistent master data, business processes become more efficient and company decisions can rely on a consolidated database.
- With its functional features (such as ease of processing, modeling of different master data objects, as well as definition and application of matching strategies), its scenario-driven approach, its industry-specific streamlining, its extensibility, and its many applications, SAP NetWeaver MDM provides the necessary tools to take advantage of this potential.

Data unification and the related master data harmonization are necessary prerequisites in order to introduce a service-oriented architecture.

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