Agenda

Introduction to SAP Data Migration
Data migration step-by-step
Rapid data migration content in detail
SAP Data Services beyond data migration
Wrap up with a 5 minutes demo
Introduction to SAP Data Migration
Issues with Data Migration are Costly

Lower PROFITS

Poor data quality or lack of visibility into data quality issues was the main contributor (53.4%) to project overruns

_Bloor Research_

Low PRODUCTIVITY

80% of organizations… will underestimate the costs related to the data acquisition tasks by an average of 50 percent”

_Gartner_

High COSTS
Issues with Data Migration are Pervasive & Persistent

Business Disruption

Limit User Adoption

Unmitigated project risk
Custom coding approaches don’t work

POOR QUALITY MASTER DATA UNABLE TO SUPPORT BUSINESS PROCESSES

LACK OF QUALITY DATA CAN MAKE NEW SYSTEM UNUSABLE

RETURN ON INVESTMENT IS AT RISK IF IMPLEMENTATION IS DELAYED
When you should use SAP’s Data Migration Solution

Implementing a new SAP application system
• Example: Project to implement ECC 6.0 or CRM 7.0

Adding new line of business
• Example: Adding new plants to existing system or adding new country to financials, requiring migration of data to SAP

Implementing new application within existing SAP application system
• Example: Implementing Service in addition to Sales on CRM
• Example: Implementing Materials Management on existing ERP

Reducing number of productive system as part of sustainability project
• Example: Moving from 20 different systems to 4 SAP production systems; data must be migrated from diverse source systems

Migration to SAP HANA or SAP BW
• Example: Migrating non-SAP data into SAP HANA or SAP BW
Approach combines technology & best practices
SAP Data Migration software with rapid-deployment solutions (RDS)

SAP DATA MIGRATION

1. ANALYSIS
2. EXTRACT
3. CLEAN
4. VALIDATE
5. LOAD
6. RECONCILE

Governance and Visualization

SAP Data Migration gives You what You need: A Solution You can Trust
Easy to use data migration solution to reduce project risks and speed implementation

- Reusable Tools for Ongoing Data Governance
- Pre-defined content and rules
- SAP & Partner Services
What you get with SAP’s Data Migration solution

- Reusable Tools for Ongoing Data Governance
- Pre-defined content and rules
- SAP & Partner Services

Reusable Tools is software
- SAP Data Services
- SAP BusinessObjects Business Intelligence platform

Pre-defined content and rules is migration content, reports, migration services based on best practices

Services are implementation services
Data Migration Step-by-Step
How SAP’s Data Migration solution works
Built on Data Services and Rapid Deployment Solutions

Legacy Data Environment

- Flat Files/Excel
- Databases
- Applications
- XML

Data Staging and Test Environment

- Extract & Profile
  - Name Parsing
  - Address Parsing & Correction
  - Material/Product Parsing
  - Matching
- Cleanse
  - Name Parsing
- Transform
  - Transform Data into SAP structure
  - Business Validation Rules
  - Automatic SAP Config Validation
- Validate & Load
  - Business Validation Rules
  - Automatic SAP Config Validation
- Staging Area
  - Performance Analysis
  - Dashboards and Business Reporting
  - Pre-Built load routines for SAP Objects

Loading

- Files / LSMW
- IDocs
- SAP Configuration Extraction

Target Environment

- Transparency, Communication and Governance

SAP
SAP Data Services
Data integration, data quality, text analytics, data profiling

Provides access to all critical business data (regardless of data source, type, or domain) enabling greater business insights and operational effectiveness.
SAP Data Migration Solution
Analysis & Data Profiling

- Profiling and inspecting the data
- Measuring the data defects
- Analyzing the cause and impact of those defects
- Reporting the results of the analysis to key stakeholders
Data analysis and profiling analyzes data content, quality, structure and relationships

Analysis of data beyond viewing
- Frequency distribution
- Distinct values
- Null values
- Minimum/Maximum values
- Data Patterns (e.g. Xxx Xxxx99, 99-Xxx)

Comparison of values between data sets to determine fit

Can drill down to view specific records
SAP Data Migration solution
Extraction

Governance and Visualization

- Connect to diverse source systems
- Extract data based on criteria (for example business partners, sales orders, etc)
- Extract master and transaction data
- Map data to SAP structures
Enterprise-Wide Data Access
Support for structured and unstructured data

**Broad connectivity to databases, applications, legacy, file formats, and unstructured data**

<table>
<thead>
<tr>
<th>Databases</th>
<th>Applications</th>
<th>Files/Transport</th>
<th>Mainframe</th>
<th>Unstructured Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP HANA</td>
<td>JD Edwards</td>
<td>Text delimited</td>
<td>ADABAS</td>
<td>Any text file type</td>
</tr>
<tr>
<td>IBM DB2</td>
<td>Oracle Apps</td>
<td>Text fixed width</td>
<td>ISAM</td>
<td>32 languages</td>
</tr>
<tr>
<td>Sybase ASE &amp; IQ</td>
<td>PeopleSoft</td>
<td>EBCDIC</td>
<td>VSAM</td>
<td></td>
</tr>
<tr>
<td>SQL Server</td>
<td>Siebel</td>
<td>XML</td>
<td>Enscribe</td>
<td></td>
</tr>
<tr>
<td>Informix</td>
<td>Salesforce.com</td>
<td>Cobol</td>
<td>IMS/DB</td>
<td></td>
</tr>
<tr>
<td>Teradata</td>
<td>SAP BI</td>
<td>Excel</td>
<td>RMS</td>
<td></td>
</tr>
<tr>
<td>ODBC</td>
<td>SAP ERP, CRM, SRM</td>
<td>HTTP</td>
<td>Both direct and change data</td>
<td></td>
</tr>
<tr>
<td>MySQL</td>
<td>ABAP</td>
<td>JMS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netezza</td>
<td>BAPI</td>
<td>SOAP (Web Services)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle</td>
<td>IDoc</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hadoop</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

- Databases:
  - SAP HANA
  - IBM DB2
  - Sybase ASE & IQ
  - SQL Server
  - Informix
  - Teradata
  - ODBC
  - MySQL
  - Netezza
  - Oracle
  - Hadoop

- Applications:
  - JD Edwards
  - Oracle Apps
  - PeopleSoft
  - Siebel
  - Salesforce.com
  - SAP BI
  - SAP ERP, CRM, SRM
    - ABAP
    - BAPI
    - IDoc

- Files/Transport:
  - Text delimited
  - Text fixed width
  - EBCDIC
  - XML
  - Cobol
  - Excel
  - HTTP
  - JMS
  - SOAP (Web Services)

- Mainframe:
  - ADABAS
  - ISAM
  - VSAM
  - Enscribe
  - IMS/DB
  - RMS
  - Both direct and change data

- Unstructured Data:
  - Any text file type
  - 32 languages
SAP Data Migration solution

Clean

- Cleanse data based on business rules
- Parse data
- Standardize data based on corporate standards
Data cleansing to ensure the right data gets migrated

**Data Input**

<table>
<thead>
<tr>
<th>ORIG_PRODUCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-year, $100,000 CD with a 7.10% interest rate</td>
</tr>
<tr>
<td>two-year CD 6.55% rate $50K minimum deposit Imperial Bank</td>
</tr>
<tr>
<td>CD at 5.25% and six months $50K @ Washington Mutual</td>
</tr>
<tr>
<td>WAMU 4.25% on five-year CDs $100,000 minimum deposit</td>
</tr>
<tr>
<td>Alliance Bank 4 yr jumbo CD $100,000 minimum deposit 5.55% for 1 month CD</td>
</tr>
<tr>
<td>$10K min. dep. 5.55% for 1 month CD</td>
</tr>
<tr>
<td>Security Savings Bank 5.51% APY for 2.5 yr jumbo CD</td>
</tr>
<tr>
<td>3 MONTH $25K CD 5.36% APY DANE COUNTY CREDIT Union</td>
</tr>
<tr>
<td>5.40% 3 MONTH $50K CD RIVER CITY COMMUNITY CREDIT UNION</td>
</tr>
<tr>
<td>$10,000 min. deposit 2.5 yr jumbo CD 5.48% AmtrustDirect.com</td>
</tr>
<tr>
<td>6.55% for 3 month CD $10,000 min. deposit</td>
</tr>
<tr>
<td>Countrywide Bank $50000 min. deposit 3-month CD</td>
</tr>
<tr>
<td>10-month CDs $10,000 min. deposit 5.51% APY</td>
</tr>
<tr>
<td>5.36% 4 yr jumbo CD $100,000 minimum deposit</td>
</tr>
<tr>
<td>1 month CD $10,000 min. deposit 5.87% APY 1st National</td>
</tr>
<tr>
<td>5.48% for 2.5 yr jumbo CD $100,000 minimum deposit</td>
</tr>
<tr>
<td>High Yield Rates 5.67% for 3 month @ Independent Bank</td>
</tr>
<tr>
<td>3 month $50K CD 5.48% Stearns Bank</td>
</tr>
<tr>
<td>5.67% 5-CD 5.55% NORTHERN WESTERN MUTUAL</td>
</tr>
</tbody>
</table>

**Standardized Output**

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>TERM</th>
<th>PRODUCT</th>
<th>YIELD</th>
<th>MIN_DEPOSIT</th>
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</thead>
<tbody>
<tr>
<td>&lt;Blank&gt;</td>
<td>10 Yr.</td>
<td>CD</td>
<td>7.10%</td>
<td>$100,000</td>
</tr>
<tr>
<td>Imperial Capital Bank</td>
<td>2 Yr.</td>
<td>CD</td>
<td>6.55%</td>
<td>$50,000</td>
</tr>
<tr>
<td>Washington Mutual</td>
<td>6 Mths</td>
<td>CD</td>
<td>5.25%</td>
<td>$50,000</td>
</tr>
<tr>
<td>Washington Mutual</td>
<td>5 Yr.</td>
<td>CD</td>
<td>4.25%</td>
<td>$100,000</td>
</tr>
<tr>
<td>Alliance Bank</td>
<td>4 Yr.</td>
<td>Jumbo CD</td>
<td>5.55%</td>
<td>$100,000</td>
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<tr>
<td>&lt;Blank&gt;</td>
<td>1 Month</td>
<td>CD</td>
<td>5.55%</td>
<td>$10,000</td>
</tr>
<tr>
<td>Security Savings Bank</td>
<td>2.5 Yr.</td>
<td>Jumbo CD</td>
<td>5.51%</td>
<td>$100,000</td>
</tr>
<tr>
<td>Dane County Credit Union</td>
<td>3 Mnth</td>
<td>CD</td>
<td>5.36%</td>
<td>$25,000</td>
</tr>
<tr>
<td>River City Community Credit Union</td>
<td>3 Mnth</td>
<td>CD</td>
<td>5.40%</td>
<td>$50,000</td>
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<tr>
<td>AmTrustDirect.com</td>
<td>2.5 Yr.</td>
<td>Jumbo CD</td>
<td>5.48%</td>
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<td>3 Mnth</td>
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<td>5.67%</td>
<td>$25,000</td>
</tr>
</tbody>
</table>
SAP Data Migration solution

Validate

- Data validation out-of-the-box content delivered with SAP Best Practices includes specific business rules for validating source data against SAP target system.

- Content provides extraction of check tables from the SAP target system for the value mapping.
Data validation from source data to target data structures

- Example of specific data validation for customer basic data. Validation includes lookup, mandatory fields, and formatting validation.
- Migration content includes extraction of check tables from the SAP target system for the value mapping.
SAP Data Migration solution

Load

- Load data into target systems
- SAP NetWeaver technology for loading data
- Out-of-the-box content to configure loading for data migration
- Auditing and reporting of load processes available with Governance and Visualization
Efficient loading of cleansed and validated source data to target system

Standard SAP NetWeaver loading mechanisms are used to load data into SAP target systems.
SAP Data Migration solution
Reconcile

- Reconcile data loaded in target against source data
- Provide metadata linkage between target object and source object
Reconcile to ensure the data was loaded correctly and completely

- Out-of-the-box reports to compare source and target data after the loading.
- Detailed reconciliation reports showing which records and fields have failed to reconcile between the staging area and the target SAP application.
Visualization the status of the data migration

- Visualization shows the status for the migration, providing:
  - Summary of records loaded
  - Details on success and failure of each record
  - Ability to go from summary to details of which fields failed

- Visualization enables process transparency
- Governance metrics start with the data migration metrics
Rapid data migration content in detail
RDS: Rapid data migration, delivered content
Rapid Data Migration – Key to success

SAP Data Migration gives You what You need: A Solution You can Trust
Easy to use data migration solution to reduce project risks and speed implementation

Reusable Tools for Ongoing Data Governance
Pre-defined content and rules
SAP & Partner Services
What’s in the RDS box…

A COMPLETE SOLUTION

**Software**
Preconfigured yet scalable applications support key business processes

**Content**
SAP best practices, templates, and tools accelerate solution adoption

**Enablement**
Knowledge transfer builds capacity for further refinement and expansion

**Service**
Fixed scope and price provides predictable outcomes and lowers risk

DEPLOYED IN WEEKS
Accelerate your implementation
RDS for Data Migration as key differentiator

Predefined **MIGRATION CONTENT**
to accelerate time-to-delivery

**Architecture & DESIGN**

**Integrated REPORTING & VISUALIZATION**

**Extensive DOCUMENTATION** to ease implementation

**Installation WIZARDS**

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RDS Content for Data Migration
Migration content provided in SAP Data Services & SAP BI platform

Key Features:

- **Predefined Migration Content delivered for Data Services**
  - *Data validation content* enables mapping of customer data to SAP data, including validation of key values. Content for ERP and CRM are included. Examples are:
    - Business partner content such as *customer and vendor masters*
    - Logistics content such as *material master, bills of material, purchasing documents, sales documents*
    - Financial content such as *receivables, payables, cost elements*
    - Sales content such as *activities, leads, opportunities, contracts*

- **Documentation**
  - *Quick Guide* on how to install the content.
  - *Business Process Document* for Data Migration is a process guide that provides a process flow and the sequence in which the objects need to be loaded into Data Services
  - *Extension Guide* provides the information you need to extend and modify the content according to your specific needs.
Migration content and SAP Best Practices

- Migration content has been provided via SAP Best Practices. This content was available for download at [http://service.sap.com/bp-datamigration](http://service.sap.com/bp-datamigration)

- Migration content is now provided via Rapid Deployment Solutions. Rapid Deployment Solutions (RDS) bundle software, content, and services.

- Today we offer the following RDS’s for data migration:
  - Rapid data migration to Utilities: [http://service.sap.com/rds-dm4u](http://service.sap.com/rds-dm4u)
  - Rapid data migration to Banking: [http://service.sap.com/rds-dm4lm](http://service.sap.com/rds-dm4lm)
  - Rapid data migration to CRM: [http://service.sap.com/rds-dm4crm](http://service.sap.com/rds-dm4crm)
  - Rapid data migration to ERP: [http://service.sap.com/rds-dm2erp](http://service.sap.com/rds-dm2erp) (migration content includes support for retail and HCM)

- Moving forward, all new migration content will be delivered as RDS’s - [http://service.sap.com/solutionpackages](http://service.sap.com/solutionpackages)
SAP Data Services benefits and uses beyond data migration
SAP Data Services use beyond data migration
SAP Data Services drives Business Intelligence

Consolidated View of Business
- Access and integrate disparate data from virtually any data source (structured and unstructured)
- Build a data warehouse or data mart to provide historical trending and analysis

Trusteed Information
- Cleanse data to improve data quality for more accurate decision-making
- Understand information context (data lineage) to make more confident decisions

Integration with BI
- Out of box integration with BI Platform for lower TCO
- Metadata integration with BI platform and BW for data lineage and impact analysis
- Load SAP and non-SAP data into BW
SAP Data Services use beyond data migration
Drives ongoing governance, integration, and data quality management

- Move legacy data from any application into new SAP Business Suite deployment
- Ensure data quality and format meets the needs of the target application
- Ensure safe ongoing integration

Data Migration

- Cleanse data to improve data quality for more effective business processes
- Improve data quality at point of entry or over the life of the ERP or CRM application

Data Quality Management

- Move disparate data into a consolidated master data location
- Cleanse data in preparation for reconciliation to define a single version of data entities (customer, product, etc.)

Master Data Governance
Data Services beyond Data Migration
Long term benefits of Data Services

- Legacy data never goes away: SAP Data Services for ongoing transformation and data quality
  - Continued transformation of non-SAP data
  - Ongoing data quality improvements
  - Delivered blue prints for data quality and integration

- Data constantly changes: Data Governance to manage the changes
  - Data migration projects enable data governance as key to best run business processes

- Reduce TCO and support Green IT: System Decommissioning and Information Lifecycle Management
  - Decommission legacy systems no longer required for productive use, while preserving business context required for auditing and reporting

- Fix data problems at moment of data entry: Data Quality Management for SAP Solutions
  - Data Services enables address and duplicate checks upon data entry in SAP ERP and CRM systems
If you’re wondering what you need to know about SAP’s enterprise information management (EIM) solutions, look no further.

This book:

- Explains what EIM is, how SAP supports EIM, what solutions SAP offers, how they work together, and how to get started using them

- Offers EIM use cases written by SAP EIM customers including National Vision, Belgian Railways, and others

- Discusses the role EIM plays within the context of big data, data migration, information governance, and master data projects

- The book has a foreword by Bridgette Chambers, CEO of ASUG and all royalties of the book go to Doctors Without Borders
Resources for data migration

- Blogs on SCN: http://scn.sap.com/people/frank.densborn/blog/2012/05/25/a-better-way-to-migrate-your-sap-data-with-rapid-deployment-solutions
- Data migration in 5 minutes demo on SCN: http://scn.sap.com/docs/DOC-3968
- EIM use case wiki: http://wiki.sdn.sap.com/wiki/display/EIM/Enterprise+Information+Management+Use+Case+Wiki
- Rapid data migration to Utilities: http://service.sap.com/rds-dm4u
- Rapid data migration to Banking: http://service.sap.com/rds-dm4lm
- Rapid data migration to CRM: http://service.sap.com/rds-dm4crm
- Rapid data migration to ERP: http://service.sap.com/rds-dm2erp
Comprehensive solution to deliver worry free data migration projects

1. Approach combines technology & Best Practices
2. Reduce risk and cost overruns
3. Opens doors for strategic ongoing data governance
Nordmann, Rassmann Uses State-of-the-Art Tool to Jump-Start Data Migration

QUICK FACTS

Nordmann, Rassmann GmbH (NRC)
- Industry: Chemicals
- Products and services: Distribution and wholesale of a range of chemical products
- Revenue: €270 million
- Employees: 260
- Website: www.nrc.de
- SAP solutions and services: An SAP Business All-in-One solution, SAP BusinessObjects™ Data Services software, and the SAP Best Practices for Data Migration package
- Implementation partner: ITML GmbH

Challenges and Opportunities
- Ensure smooth, reliable data transfer
- Eliminate error-prone, time-consuming manual processes

Objectives
- Replace legacy enterprise resource planning (ERP) software with an SAP® Business All-in-One solution
- Extract data from existing ERP software using state-of-the-art data migration tool, and transfer it to the SAP solution

Implementation Highlights
- Successful teamwork between NRC and the implementation partner
- Regular exchange between ITML and SAP to help ensure the implementation partner had up-to-date knowledge

Why SAP
- Aim of harmonizing core ERP software across the company and its subsidiaries
- Single, integrated application providing high degree of visibility
- Data migration expertise

Benefits
- Faster, straightforward data migration
- Results that are based on proven best practices
- Greater standardization of processes
- Improved access to data
- More transparency

“I would definitely recommend deploying the accelerated data migration tool. It saved time and alleviated a lot of the stress a large-scale project can cause.”

Peter Lüers
SAP In-House Consultant
Nordmann, Rassmann GmbH
ExxonMobil Taking on the world’s toughest energy challenges with SAP Data Migration

Quick Facts
- Over 125 years old
- Largest Publicly integrated petroleum and natural gas company
- Upstream holds exploration and production acreages in 38 countries
- Downstream has interests in 37 refineries
- Over the past 5 years has invested more than 5 billion in technology
- Cash flow from operations and assets sales was 30 million in 2009
- Lead the industry worldwide in performance earning $19 billion in 2009
- Over the next 5 years continue to invest more than $125 billion

Key Challenges
- Migration of Canada and Lower 48 SAP ERP systems and non-SAP systems into one consolidated SAP environment
- Data Quality issues across the enterprise
- Empower employees to trust information with ERP system

Implementation Best Practices
- Enabled out-of-the-box migration content and solution methodology
- Successfully instituted Data Quality standards and migration project consistency with SAP ECC

Financial and Strategic Benefits
- Solved challenges with software and single platform from a single vendor
- Enhanced user satisfaction and enablement
- Solved Data Quality issues and integration with multiple systems

Why SAP Was Selected
- Expertise in Migrations and owning the platform
- Migration Methodology and Best Practices on data movement
- Pre-built content for faster implementation
- Information Governance and Dashboards for managing the Migration

Low total Cost of Ownership
- Eliminated reliance on multiple systems and tools for DQ metrics
- Saved on development, implementation, and modeling costs

Operational Benefits
- Reduced support time for Business Intelligence tasks
- Reduced Business User involvement
- Decreased overall implementation

"ExxonMobil has a steadfast commitment to the business principles that have proven successful for over 125 years. Underpinning success across all of our businesses is our commitment to technology. “
Rex W Tillerson
Chairman and Chief Executive Officer
ExxonMobil
USIS, an Altegrity company, specializes in providing information and security services to government agencies and commercial enterprises. Headquartered in Virginia, US, USIS delivers background screening and risk management solutions that not only protect national security, but also support and help empower decision-makers the world over. http://www.usis.com

- Implemented SAP ECC 6.0.
- **Retiring 14 core legacy systems including ADP, Cost point and numerous peripheral systems.**
- Consolidated all data to 1 set of Master Data. Total of 42 objects for migration.
- Total project duration – 8 months.
- Initial trial conversion had an 80% pass rate (typical pass rates are around 50%).
- Large ROI for customer.
- Plans to use Data Services as an Enterprise IM Platform across the organization.
Goodrich Corporation, a Fortune 500 company, is a global supplier of systems and services to the aerospace, defense and homeland security markets. With annual revenues of $5.9 billion, Goodrich is headquartered in Charlotte, North Carolina, and employs more than 23,000 people worldwide in over 90 facilities across 16 countries. [http://www.goodrich.com](http://www.goodrich.com)

- They needed to **migrate all 30 different ERP systems into their primary SAP ERP environment**. They realized loading all pertinent information from various ERP systems into SAP would be a difficult task.

- They began evaluating ETL and Data Quality tools and selected SAP enterprise information management solutions for data migration.

- SAP Data Services is used for all their one shot conversions (pick up data, use match merge to convert data, profile & cleanse and plug it into SAP).
Thank you

Mfanafuthi Dube
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