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Overall Goals

- Identify landscape patterns associated with problems customers have today
- Showcase options for SAP BusinessObjects BI solutions and possible scenarios which can be applied to those landscapes
- Provide an end-to-end Business Intelligence Solution overview and architecture based on customer landscapes and use cases

Impact

- Customers can recognize the full potential of the SAP BusinessObjects BI portfolio
- Consistent approach of deploying SAP BusinessObjects Business Intelligence solutions based on best practices

Scope / customer segments

- Customers using SAP or non-SAP applications with or without DWH solutions
- SAP BusinessObjects XI 3.1 Business Intelligence product portfolio
SAP BusinessObjects BI Solution Architecture
Customer System Landscapes

<table>
<thead>
<tr>
<th>ERP System</th>
<th>Non-SAP ERP</th>
<th>SAP ERP</th>
<th>Non-SAP ERP &amp; SAP ERP</th>
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</thead>
<tbody>
<tr>
<td>No DWH</td>
<td>System Landscape Type 1</td>
<td>System Landscape Type 2</td>
<td>System Landscape Type 3</td>
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<tr>
<td>Non-SAP DWH</td>
<td>System Landscape Type 4</td>
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<tr>
<td>SAP NetWeaver BW</td>
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<td>System Landscape Type 5</td>
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<tr>
<td>SAP NetWeaver BW &amp; non-SAP DWH</td>
<td></td>
<td>System Landscape Type 6</td>
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<tr>
<td>Datawarehouse strategy</td>
<td>Non-SAP ERP</td>
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<td></td>
<td></td>
<td>System Landscape Type 6</td>
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</tbody>
</table>
Customer Segment Details
- Customer using SAP ERP combined with SAP NetWeaver BW
- Customer using SAP ERP and non-SAP ERP combined with SAP NetWeaver BW

SAP BusinessObjects offerings:
- SAP BusinessObjects Data Services
- Complete BusinessObjects stack for BI reporting
- SAP NetWeaver BWA with SAP BusinessObjects Data Services
System Landscape Type 5: ERP system (SAP / non SAP) with SAP NetWeaver BW

Data connectivity
System Landscape Type 5: ERP system (SAP / non SAP) with SAP NetWeaver BW

Product Versions

- Product Components and Versions
  - SAP BusinessObjects Explorer, accelerated version 2.0
    - SAP BusinessObjects Explorer XI 3.2
    - SAP NetWeaver BW Accelerator 7.20
  - SAP BusinessObjects Accelerator 1.0
    - SAP NetWeaver BW Accelerator 7.20
    - SAP BusinessObjects Data Services XI 3.2 SP1
      - index designer
  - SAP NetWeaver BW 7.0 EhP01, SPS05
    - Required release for acceleration of SAP NetWeaver BW data
  - SAP BusinessObjects Integration for SAP, Siebel, JD Edwards, PeopleSoft, Oracle XI 3.1 Service Pack 2
  - SAP BusinessObjects Enterprise XI 3.1 Service Pack 02
  - Crystal Reports 2008 Service Pack 02
  - Xcelsius 2008 Service Pack 02
  - Live Office XI 3.1 Service Pack 02
Recommended Approach

- Leverage the SAP BusinessObjects semantic layer (Universes) and your existing SAP NetWeaver BW queries to enable
  - Ad Hoc Reporting via Web Intelligence
  - Dashboarding via Xcelsius
  - Enterprise Reporting via Crystal Reports
  - Advanced Analysis via BusinessExplorer Analyzer and Web reporting (later on Advanced Analysis)

- Consider using SAP BusinessObjects Data Services to consolidate all ETL requirements across multiple data sources

- Use SAP BusinessObjects Data Services in combination with SAP NetWeaver BW Accelerator and add search and exploration capabilities using SAP BusinessObjects Explorer
  - Tip: For limited data volume you can enable data exploration via Universes or use SAP BusinessObjects Explorer on-demand
Pros

- SAP BusinessObjects Data Services can be used to consolidate all ETL requirements (SAP and non-SAP based) into a single tool.
- Using SAP NetWeaver BWA with SAP BusinessObjects Data Services provides a very simple, easy to deploy solution for SAP ERP and non-SAP data and SAP BusinessObjects Explorer.
- Investment into Data Services is “safe” as SAP BusinessObjects Data Services can work with SAP and non-SAP solutions (ERP and DWH).
### Overall Benefit

1. Customers can use the complete bandwidth of data connectivity and BI tools from the SAP BusinessObjects BI portfolio.
2. Customers can use SAP BusinessObjects Data Services to consolidate on a single ETL tool for SAP ERP and non-SAP sources.
3. Customers can leverage the investment into SAP BusinessObjects Data Service and extend the usage to accelerate the data using SAP NetWeaver BW Accelerator to enable data search and exploration with SAP BusinessObjects Explorer.

### Integration Point

<table>
<thead>
<tr>
<th>Integration Point</th>
<th>Technical Details</th>
<th>Technical Benefits to Customer</th>
</tr>
</thead>
</table>
| BusinessObjects Integration for SAP | BusinessObjects Integration Solution provides direct data connectivity to SAP ERP and SAP NetWeaver BW systems and authentication provider for the BI platform to achieve SSO | • Direct connectivity towards the ERP and BW system  
• Single Sign On based on SAP credentials  
• Re-use of SAP credentials on the BI platform |
| SAP NetWeaver BW Accelerator with Data Services | SAP NetWeaver BW Accelerator allow acceleration of any data source via Data Services | • SAP NetWeaver BW Accelerator allows indexing of any data source  
• SAP NetWeaver BW Accelerator provides high performing access to large data volumes |
| BusinessObjects Data Services      | BusinessObjects Data Services provide a single tool to extract, transform and load any data into the DWH solution | • Large set of data sources for extraction  
• Integration with SAP landscape for future growth  
• Fully integration with other tools like Data Quality, Meta Data Manager, … |
System Landscape Type 5:
ERP system (SAP / non SAP) with SAP NetWeaver BW
- Product Background Information -

<table>
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<th>Datawarehouse strategy</th>
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<td>System Landscape Type 6</td>
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</table>
The de facto standard for reporting

- Proven world standard for report design
- Ubiquitous reporting assets and expertise for fast implementation
- Chosen reporting solution by over 500 major independent software vendors

Deploy a common framework for all enterprise reporting needs

- Build any kind of report – such as business, financial, legal, and regulatory reports
- Sophisticated report formatting: create multi-page, multi-query, pixel-perfect reports
- Templates and wizards to speed up report creation
- Secure, large-scale distribution of reports over the web
- Connectivity to any data source
Empower business users with powerful, yet easy to use analysis
- Intuitive, web-based interface with offline capabilities
- Start from a blank slate or use an existing analysis or report
- Multi-source access
- Interactivity with filtering, ranking, sorting, calculations, etc
- Data lineage

Lighten IT workload
- Self-service analysis and reporting
- Controlled and secure access with tight BI platform integration
- Intuitive, business-centric view of information with universes
SAP BusinessObjects Xcelsius Enterprise
Create Interactive Analytics and Dashboards

Consume attractive, personalized dashboards online or offline
- Access to personalized, Flash-based dashboards
- Secure visualizations anywhere – portal, reports, PDF, Office documents

Empower business users with interactive information
- Powerful “what-if” analysis with sliders and other controls
- Ability to drill-down into details
- Pre-built components, skins, maps, charts, gauges, and selectors
SAP BusinessObjects Explorer, accelerated version brings together high-performance in-memory acceleration with intuitive search and exploration.

Users can search and explore large volumes of any enterprise data to answer ‘on the fly’ questions, discover relationships, and uncover root cause.

You can bring BI to all business users with immediate insight at the speed of thought without needing assistance from business analysts or IT.
SAP BusinessObjects Explorer
High-Level Architecture

Landscape Type 1  Landscape Type 2  Landscape Type 3  Landscape Type 4  Landscape Type 5  Landscape Type 6

Any Data Source → Gear → SAP NetWeaver BW

SAP NetWeaver BW Accelerator → Arrow → SAP BusinessObjects Explorer Accelerated Version → Arrow → EXCEL

Search & Exploration
SAP BusinessObjects Explorer
Architecture overview

Landscape Type 1  Landscape Type 2  Landscape Type 3  Landscape Type 4  Landscape Type 5  Landscape Type 6

SAP BusinessObjects Explorer
- Non-accelerated
- Accelerated version

Excel
Universe
SAP BusinessObjects Enterprise
External Data
Index Designer
SAP BusinessObjects Data Services
BW Accelerator
SAP ERP
SAP NetWeaver BW
Business Warehouse
Data Integrator: Enterprise-class Data Integration platform

Explore, transform, and move data anywhere, at any frequency

- Deliver trusted information
  - Market leading data quality functionality within the data integration environment
  - Built-in features for validating data against business rules and auditing data movement execution
  - End-to-end metadata impact analysis and lineage

- Agility and ease-of-use
  - Single easy to use development interface to build, test, and deploy
  - Web-based administration and management
  - Collaboration features for team development

- Deliver extreme ETL scalability
  - Parallelized processing down to the transform level
  - Grid computing for high availability and throughput
  - Services-based architecture enabling right-time data delivery
  - Powerful prepackaged transformations
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>Oracle</td>
<td>JD Edwards</td>
<td>Text delimited</td>
<td>ADABAS</td>
<td>Any text file type</td>
</tr>
<tr>
<td>DB2</td>
<td>Oracle Apps</td>
<td>Text fixed width</td>
<td>ISAM</td>
<td></td>
</tr>
<tr>
<td>Sybase &amp; IQ</td>
<td>PeopleSoft</td>
<td>EBCDIC</td>
<td>VSAM</td>
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<tr>
<td>SQL Server</td>
<td>Siebel</td>
<td>XML</td>
<td>Enscribe</td>
<td></td>
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<tr>
<td>Informix</td>
<td>Salesforce.com</td>
<td>Cobol</td>
<td>IMS/DB</td>
<td></td>
</tr>
<tr>
<td>Teradata</td>
<td>SAP NetWeaver BI</td>
<td>Excel</td>
<td>RMS</td>
<td></td>
</tr>
<tr>
<td>ODBC</td>
<td>SAP ERP</td>
<td>HTTP</td>
<td>Both direct and change data</td>
<td></td>
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<tr>
<td>MySQL</td>
<td>– ABAP</td>
<td>JMS</td>
<td></td>
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<tr>
<td>Netezza</td>
<td>– BAPI</td>
<td>SOAP (Web Services)</td>
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<td></td>
<td>– IDoc</td>
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</table>
Data Federator is used to build ‘virtual’ data warehouses and marts. It appears to other applications as regular DW, but the data is not pre-fetched; it is retrieved from the source systems on demand and provided to the BI tools.

Benefits of Data Federator

- Build BI apps across multiple systems
- Real-time access to distributed data
- Data integration without physical movement of data, quickly integrate data sources together before enhancing the physical DW
- Non invasive, safe technology – low impact on source systems
- Optimized performance while joining together data from multiple systems
- Wide source support - RDBMS, XML, SAS, Web Services
Deliver Trusted Data for SAP NetWeaver BW

Use Data Services for loading SAP and non-SAP data into SAP NetWeaver BW

- Easier configuration and operation of Data Services to load SAP NetWeaver BW
- Launch SAP NetWeaver BW jobs directly through Data Services
- Use Data Services to easily distribute data out of SAP NetWeaver BW using Open Hub Services
- Ability to load SAP Business suite data via the **standard extractors** not available today, planned for 2010

One platform for all data providing end-to-end data services

- Leverage Data Quality capabilities for profiling, cleansing, and enriching any data
- Enrich SAP Business Content and streamline data loading process
- Replace data integration point solutions and consolidate to one platform

![Diagram showing data flow from SAP Business Suite, SAP Extractors, Data Access Profiling, Data Cleansing, and SAP BusinessObjects Data Services to SAP NetWeaver BW](image)
New integration between SAP BusinessObjects Metadata Management and SAP NetWeaver BW

- End-user access to data lineage information for trusted SAP NetWeaver BW deployment
- Change impact analysis between SAP NetWeaver BW objects such as DataStore Objects, InfoSets, BEx Queries, and InfoCubes
- End-to-end capabilities for all data sources through SAP BusinessObjects Data Services
Further Information

SAP BusinessObjects Community

SAP BusinessObjects BI Solution Architecture
http://www.sdn.sap.com/irj/boc/bi-solution-architecture
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