Better Business Intelligence
with the SAP BusinessObjects Platform

ENABLED BY PERFORMANCE, VISUALIZATION AND FLEXIBILITY

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November 2009
User Demand’s to the NetWeaver BW Platform

- Flexibility
- Speed
- Control
- Performance
- Printing
- Transparency

Innovation
Standardization
QlikTech
Oracle/Hyperion

Performance
Visualization
Flexibility
Cognos/TM1

Demands from grassroots up to the tips needs to be enabled and governed on one central platform.
3 Success Factors For Today’s BW Solution

**Performance** for people to increase insight
Can your employees access the information they need when they need it – fast without frontiers?

**Visualization** that enables end user’s needs
Do you have a flexible software architecture that supports your business needs and reduces costs simultaneously?

**Flexibility** to respond to the pace of your business
Is your current BW solution capable of supporting the pace in your industry?
Accelerated Upgrade to Business Suite
first step into the SAP BusinessObjects BI Platform

Lower your TCO and time efforts by Managing your Upgrade with innovative tools

1. ASU toolbox (incl. BW Content)
   one single truth for all pre/post Upgrade Steps
   (Note 1000009)

2. CTC for BW-Java
   automatic connection between Abap and Java
   (Note 983156)

Complete Business Suite 7 connectivity (with EhP1):

- abap - java connection (available) for connection BW-IP, EP, ESS/MSS, etc.
- abap - abap (with EhP1) for backend connection e.g. ERP, CRM, BW, PI, etc.
- java - java (upcoming) for frontend connection e.g. FPM, etc.
- Note 1178800

Use the predefined content for:

- upgrade to NetWeaver 7.x BW
- upgrade to ERP 6.0 EhPx (upcoming)
- upgrade to any SAP Product based on the NetWeaver 7.x Platform (upcoming)
- create/modify own content (XML based)
Enhancements for the Enterprise Data Warehouse

Performance
Handling of large data volumes

- Near line Storage (7.0)
  Automatic aging of data to facilitate the management of large data warehouses

- Semantic Partitioning
  Partition warehouse data to handle large data volumes and global warehouses

- Hybrid Provider
  Merge warehouse data with transaction deltas for real time analysis

Data Loading (7.0)
Enhanced DTP providing write-enhanced DSO

TCO
Operational efficiency

- Change
  Business driven innovation (Agile BW/Data Federation)

- Implementation
  Script based configuration (CTC Templates)

- Administration
  Administration Cockpit for central administration (future integration with NetWeaver Administrator)

- Hardware/Software
  Blade architecture (commodity hardware)

Enterprise Information Management
EDW in Enterprise Information Management
Enterprise Information Management
Main Investment in EDW with NetWeaver 7.0

Complete ETL approach
- Classic ETL
  - Lean data flow concept
  - Improved load performance
- Real-time Data Warehousing
  - Direct Access
  - Real-time data acquisition

Visionary Concepts for high performance and large data volumes
- BW Accelerator (BWA)
  - A new transparent approach to boost BW query performance
  - Lower TCO due to reduced administration efforts
- Nearline Storage (NLS) Interface
  - Storage Management Optimization using NLS technologies based on column based indexing, grid computing and in-memory processing
  - High compression rates

Engaged Administration and Monitoring strategy
- BW Administration Cockpit
  - Central point of truth for administration needs
SAP NetWeaver BW - Key Differentiators

- Part of SAP NetWeaver Integration Platform
  - Composition Environment
  - Master Data Management
  - Process Integration

- Mature, proven, state-of-the-art data warehouse technology
  - 9,500 productive installations

- EDW Readiness
  - Built in best practice DW processes
  - Layered Scalable Architecture (LSA)
  - Flexible, model driven
  - Mass data capable (Load Performance, NLS concept)
  - High performance (BWA)
  - Robust data dissemination
  - Integrated development environment for Development, Testing, Production, and Transport

- Rich Business Content for SAP Business Suite
  - Reflecting the entire ERP business model
  - Industrial strength data provisioning
What does BW know about my business?

- End to End Business Content
  - Business terminology available
    - SAP Business Suite
    - SAP Industry Solutions
  - Predefined data model
    - From extraction to web application
  - BCT Lifecycle Management
    - choose what you like
    - remodel what is not sufficient
  - Plug and play

- Sophisticated SAP ERP Extraction Technology
  - Application based change data capturing
  - Extractors are application based and take the data out of the context of the application session
  - Extraction is event and process driven and leads into publishing of new or changed data in ERP based Delta Queues for subscribed parties (connected BW systems)
  - Extractors provide all kinds of Delta capabilities
  - Extract structures can be easily enhanced using append structures and Business Add Ins (BADIs)
  - Business Object related Extract Structures
  - Asynchronous, mass data capable extraction
SAP NetWeaver BW and Business Objects Data Management

SAP NetWeaver 7.0 EhP1

**Business Intelligence**
- Reporting Layer (Architected Data Marts)
- Business Transformation Layer
- Data Propagation Layer
- Harmonization Layer
- Data Acquisition Layer

**Operational Data Store**

**Master Data Management (optional)**
- Data Manager
- Syndicator
- Enrichment Controller
- Import Manager

**Data Quality**
- Address Cleaning
  1. Library
  2. Matching
  3. Corrections

**SAP ERP**
- Sales Order Management

**Data Acquisition Layer**
- SAP ERP
- Sales Order Management

**Harmonization Layer**
- Corp.ate Memory

**Operational Data Store**
- SAP ERP
- Business Intelligence

**Data Propagation Layer**
- Data Quality
- Master Data Management

**Master Data Management**
- Order Management
- Data Management

**Business Intelligence**
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**Master Data Management**
- Order Management
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So what in there for me?
NetWeaver EhP1 as THE foundation for all new BI Solutions

- The first shown integration Improvements between SAP and BusinessObjects Products are realized with the release of NetWeaver EhP1 and further
- NetWeaver EhP1 is the prerequisite for the following SAP BI Solutions:
  - **BPC** based on NetWeaver 7.0 EhP1
  - Inverse Formulas, contribution of percentage Values and Cell locking for **BI-IP from EhP2**
  - **SAP BusinessObjects Explorer**
    - Version 1.0 and 2.0
  - Native access of SAP BusinessObjects **Xcelsius via BICS** without BusinessObjects Enterprise Platform XI 3.1
  - Better Support for WebI via **Universes**
  - Improved **MDX** Interface
  - Direct Access to BW 7.01 via **SAP BusinessObjects Data Federator**
  - Improved/enhanced **CTC** templates for connectivity/initialization with BW (Note 1178800)
How Does Data Quality Fit Within the Enterprise Datawarehouse?

Data Quality Service Hub

- Ensure data is correct, consistent, and complete
- Create an accurate, single view across the enterprise
- Point of contact data quality
- House-holding – citizen centered services
- Fraud Detection

Business Impact

- Merger & Acquisitions
- Compliance reporting
- Regulatory Agencies

For applications

- MDM and Enterprise DWH
- for ETL / BW
- for migrations
- Legacy to new systems (DB or Apps)

Module for SAP ERP / CRM
- for applications
- for ETL / BW
- for Mergers & Acquisitions
- for Compliance reporting
- for Regulatory Agencies
Key Points
- From raw data to corporate models
- Business aware analytics
- Closed loop intelligence

Existing Solution
- BusinessObjects Data Integrator for 3rd Party application access (e.g. Oracle) via 3.x InfoSource
- BusinessObjects Data Quality for 3rd party access
- SAP NetWeaver BW for best-in-class data warehousing
- SAP NetWeaver BW ETL

2009/2010
- Data Services integrates with SAP NetWeaver BW Open Hub (2009)
- Data Federator connectivity to SAP NetWeaver BW (2009)
- SAP Metadata support in Metadata Management (2009)
- Data Quality for new domains (2009)
- Small footprint Data Services
- Data Services callable from SAP BW

Real-Time BW: HybridProvider (2009)
- TCO Focus
- Administration & Monitoring
- Modelling
- Semantic Partitioning

Trusted Information

SAP NetWeaver BW - Roadmap for Enterprise Data Warehousing (EDW)
Business Objects + SAP
Helping Clients to Optimize Performance

#1 in Effectiveness + #1 in Efficiency = #1 in Performance

Strategy

Execution

Pioneer and #1 in Business Intelligence
Helping organizations make more intelligent decisions leading to better business Effectiveness

Pioneer and #1 in Enterprise Applications
Helping organizations improve business operations leading to better business Efficiency
The Portfolio from SAP Business Objects
Delivering Performance, Visualization And Flexibility

Any structured and unstructured data, any service

Business Objects
- Enterprise performance mgmt.
- Governance, risk, and compliance mgmt.
- Business intelligence
- Information management

SAP Business Suite
- Operational performance mgmt.
- Compliance mgmt.
- Embedded analytics

SAP NetWeaver
- Composition
- Integration, Data, Information, Foundation

Process analysis
Process improvement
The new intelligence platform
Value added within an SAP landscape

SAP NetWeaver Portal
Any Portal, Any Destination

Explorer
Crystal Reports
Web Intelligence
Xcelsius
SAP BusinessObjects Enterprise

SAP NetWeaver BW Accelerator
SAP NetWeaver MDM
SAP NetWeaver Business Warehouse

Data Integrator
Data Quality
SAP BusinessObjects Data Services

3rd-Party Databases and Applications

ERP
Financials
Operations
Human Resources
Corporate Services

CRM
SCM
SRM
PLM
SAP Business Suite
Business Objects BW Complement
SAP NetWeaver Value Proposition

**Broad User Adoption**
Best practices (business processes) across 26 industry solutions

**Adaptable Processes**
Integration is easier thanks to pre-integration with core processes
Composition of service-oriented business processes

**Optimize IT**
Consolidation of SAP and non-SAP into a single BPP
Governance of heterogeneous IT landscapes extended to the ecosystem

**With BW Beyond Reporting and Embedded Analytics**

**Trusted Information**
Harmonization of information with business processes
Analysis for performance and governance

**Information Quality & Unparalleled Datalineage**

**With Diverse User Experience**

**Standardization (#1 TCO)**
BW with SAP NetWeaver 7.0
One common platform for the business

- Performance
- Visualization
- Flexibility

Process Focused
(intra- / inter enterprise)

Analysis
Processes

Analytical Layer
Fast & Agile

EIM Infrastructure

Biz
BPX
BW COE
IT
SAP NetWeaver BW Accelerator for high performance BI
- A new transparent approach to boost BW query performance-
  - Performance speedup factor **between 10 and 100**
  - Without changing the BW user experience (transparent to users)
  - Boost performance for BusinessObjects clients
  - Pre-requisite: BW in SAP NetWeaver 7.0

**Calculation on the fly**
- Fast as Lightning
- Predictable query performance
- Any query

**Compressed and Column-based Optimized for Analysis**
- Agile
- Low TCO
- Fast to Upload

DBMS

Bypassed for queries

Calculation

SAP NetWeaver BW

Business Warehouse

BWA
**User Experience**
- Fast Query response times (also for BOBJ usage)
- Highly consistent response times
- Higher usage of BW and deeper analysis of company data or less time for BW interaction
- More flexibility in Query definition

**Maintenance**
- No more need for maintenance of aggregates
- Reduced time for data loading (up to 80%)
- Reduce time for change runs (Example: 30h down to 45min)
- Reduce times of SEM Consolidation runs

**Hardware**
- No more need for storage in aggregates
- Less Hardware needs on application and DB server level
- Possibility to consolidate different BW system landscapes
Near-line Storage and BW Accelerator

**BWA**
- Replication of the BW Star Schema including master data
- DB volume not affected
- Roll-Up and Change Run possible after data loads
- optimized for fast BW Query access

**BW**
- Indexing
- Archiving

**InfoCube**

**Near-line Storage**

**NLS**
- alternative storage types with direct access capabilities for reporting and loading
- extraction of non-frequently used, read-only InfoProvider data partitions
- extracted partitions are deleted in RDBMS
- NLS storage and Online Storage together consistently reflect the BW data persistency of an InfoProvider
- NLS data is read-only
- NLS partitioned portions of an InfoProvider are write-protected

**BWA**
- Replication of the BW Star Schema including master data
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**Access** - very frequently --> frequently --> not frequently --> rarely
SAP BusinessObjects Explorer
High-level Architecture for next Innovation’s by Q1/2010

- Explorer
- Web Intelligence
- Crystal Reports
- Xcelsius

SAP BusinessObjects XI 3.1

- Calculation
- Business Warehouse

SAP NetWeaver BW 7.0x

BWA

- MultiProvider Queries
- Universe
- SAP BusinessObjects Data Services
- Any Data Source

NW BW Accelerator 7.20
NW 7.01 SP05
SBO Explorer XI 3.2
SBO Enterprise XI 3.1 SP2
SBO Data Services XI 3.2 SP1

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SAP Open Accelerator (BWA 7.20) and SAP BusinessObjects Explorer 2.0 Integration

- Excel
- Universe
- SAP BusinessObjects Enterprise
- Index Designer
- SAP BusinessObjects Data Services
- External Data
- SAP NetWeaver BW
- SAP BusinessObjects Explorer
  - Non-Acc.
  - Accelerated Version
- SAP NetWeaver BW

Flexibility
Performance
BI Working Your User’s Way
Personalized and secure
Making it All Work Together - Vision

Embedded BW
(Modeled with SAP NetWeaver CE/VC)

Standard Reports
(Crystal, BEx Reports)

Dashboards
(Xcelsius, BEx Web Apps)

Analysis Clients
(BEx Web Analyzer, Analyzer, Pioneer)
SAP’s Multi-Channel UI Strategy
BI Frontend is part of the Portal Infrastructure

“Yesterday/Today”
SAP GUI Family
- SAP GUI for Java
- SAP GUI for Win
- SAP GUI for HTML

SAP NetWeaver Portal
- Browser
- BW
- BO Portfolio
- NW Business Client
- Web Dynpro Islands
- Adobe Forms
- Mobile & Voice
- Duet & Alloy

UI Clients & Access Channels
- NW Business Client
- Web Browser

UI Services
- Roles
- Navigation
- Personalization
- Document
- Page Building
- Collaboration
- Search

UI Infrastructure
- Portal Runtime
- Web Dynpro
- Visual Composer

SAP Business Suite
- SAP Business Suite
- ERP
- CRM
- PLM
- SCM
- SRM

Non SAP Enterprise Application
SAP NetWeaver Foundation
Planned product directions for BI Solutions
Richest offering for all business users

Discovery & Exploration

Enterprise Reporting

Ad-hoc Reporting & Analysis

Dashboards, Visualization

Advanced Analysis

Enterprise Data Warehousing & BI Platform

Visualization

- Explorer
- Report Designer
- Crystal Reports
- Web Intelligence
- Web App Designer
- Xcelsius
- Voyager
- SAP BEx Analyzer
- SAP NetWeaver BW and BWA
- BusinessObjects Enterprise
Planned product directions for BI Solutions
Richest offering for all business users

Discovery & Exploration

Enterprise Reporting

Ad-hoc Reporting & Analysis

Dashboards, Visualization

Advanced Analysis

Enterprise Data Warehousing & BI Platform

SAP NetWeaver BW and BWA

Report Designer

Web App Designer

SAP BEx Analyzer

Explorer

Crystal Reports

Web Intelligence

Xcelsius

Voyager

BusinessObjects Enterprise
Planned product directions for BI Solutions
Richest offering for all business users

Discovery & Exploration

Enterprise Reporting

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Dashboards, Visualization

Advanced Analysis

Enterprise Data Warehousing & BI Platform

Visualization

Explorer

Crystal Reports

Web Intelligence

Xcelsius

Voyager

SAP NetWeaver BW and BWA

BusinessObjects Enterprise
Planned product directions for BI Solutions
Richest offering for all business users

Discovery & Exploration
Enterprise Reporting
Ad-hoc Reporting & Analysis
Dashboards, Visualization
Advanced Analysis
Enterprise Data Warehousing & BI Platform

Visualization

Explorer
Crystal Reports
Web Intelligence
Xcelsius
Ad. Analytics
SAP NetWeaver BW and BWA
BusinessObjects Enterprise

Planned release for 2010
Advanced Analytics Key Features & Benefits

- Tailored Support for multiple user roles
- Focus on the Business Analysts (Excel/Web) but also extend the footprint of advanced analysis through ease-of-use & tool interoperability
- Easy migration for existing SAP NetWeaver & Voyager customers
- Openness: Can run either with BOE or SAP NetWeaver
- Ability to fully leverage SAP in-memory analytic engine capabilities
- Basis for next generation SAP embedded analytics & POA offerings
- Lower TCO - Single architecture
Advanced Analysis 1.0 MS Office Edition:
next Generation with BICS and XI 4.0 - High Level Architecture

- Leverages BOE platform services
  - LCM, persistency, authentication etc.
- Stores Advanced Analysis query views & workbooks
- The Advanced Analysis Web Server component can be optionally installed on
  - NW J2EE 7.1 or on
  - Any J2EE supported by BOE

- *SAP BusinessObjects Strategy Management, Profitability and Cost Management, Planning and Consolidation
- **for testing & supportability only, functional restrictions apply, not recommended for live deployments
- *** planned for future SAP BusinessObjects Advanced Analysis, Microsoft Office edition release

SAP Sources

- SAP NetWeaver BW 7.x (BEx Queries, views, InfoProviders)
- SAP NetWeaver BW Accelerator
- SAP BusinessObjects POA Providers *, ***

3rd Party OLAP Sources ***

e.g. MS Analysis Server ***

Visualization
SAP BusinessObjects Business Content
Delivered in SAP Business Suite for enhanced BI

Pre-defined and delivered Crystal Reports and Xcelsius dashboards
embedded in all SAP Business Suite Applications

- SAP Business Suite customers have access to new Business Content
- Embedded within the standard business processes of the SAP Business Suite
- Across all SAP Business Suite applications: ERP, CRM, SCM, PLM and SRM

Low TCO with deep integration to SAP Business Process Platform

- Direct access to transaction data and metadata in the SAP Business Suite
- Unified life cycle management to deploy reports and dashboards
- Integrated design experience to build/embed within business processes

Customers need to explore investing further in SAP BusinessObjects

- To leverage pre-defined reports and dashboards outside of standard business processes
- To modify pre-defined dashboards, or design new reports or dashboards

Currently planned availability with SAP Business Suite EhP 5 in later 2009

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SAP NetWeaver BW Integrated Planning (BW-IP)

A planning framework in SAP NetWeaver BW

SAP NetWeaver BW Integrated Planning is especially suitable for the following scenarios:

- Supports high volume operational and centrally administrated planning with unique features
- Tight integration into EDW
- Utilization of available industry solutions
- Mainly IT-focused, fixed planning processes
- Zero-footprint applications
- This may also count for customers already running SAP SEM BPS / SAP NetWeaver BW BPS
**SAP NetWeaver BW Integrated Planning (BW-IP)**

Features available with Release 7.01 SP6 - downport from 7.20

- BW-IP: statistic data gathered for BI-IP events are integrated to AdminCockpit
- Individual locking of cells in a planning layout
- Calculation Engine
  - Inverse Formulas
    - Inverse formulas allow the user to enter values for each component of the equation, even the calculated keyfigure (price in this case).
    - System automatically calculates values for the missing operands by taking the respective formula (customized in the planning layout definition) into consideration.
  - Contribution of percentage values
    - The percentage contribution of a particular product to the overall sales. (Entering a percentage value, defined as the percentage contribution of some other key figure with respect to the overall sum)
- Cell checks will be grouped by higher granular selections and the checks applied on this granularity
  - Today cell checks are done on cell level. Thus checks semantically bound to rows, columns or other selections are executed redundantly.
- Reduce redundant execution of planning functions
  - Today planning functions are executed completely whenever they are called, regardless whether the execution will impact the data or not.
  - A design time option is introduced to deliver only those cells to a planning function, that are changed since the last planning function execution.
Setup by IT - owned and managed by business users

**IT Responsibility**
- Hardware
- Security and Authentication
  - Users
  - Roles
  - Privileges
- Data and Application Infrastructure
  - Database Server
  - Application Server
  - OLAP Structure

**Business User Responsibility**
- Application Security
  - Users
  - Roles
  - Privileges
- Hierarchies and Roll Ups
- Report Templates
- Excel, Word, PowerPoint Templates
- Create and Modify Metrics and Measures

- Self-service financial reporting ensures any user can create information on the fly
- Wizard-driven interfaces simplify content creation and administration processes
Familiar and easy to use
- Increase user adoption and reduce reliance on IT with a solution that is designed to be owned and maintained by business users

Agile
- Rapidly adapt to changing market conditions with an application that allows you to quickly model different scenarios and reforecast

Unified
- Save time and reduce errors with a single, integrated solution for planning and consolidation
Key Differences BPC and BW-IP
Complementary Positioning

The Alignment, Extension & Augmentation of two leading, complementary Planning solutions

SAP Business Planning and Consolidation 7.0

- Application-based approach
- Unified planning and consolidation capabilities
- Agile planning processes driven by end users
- Self-service reporting and analysis with complete Microsoft Office Integration
- Owned and managed by the Business

SAP NetWeaver BW-Integrated Planning

- Engine-based approach
- Data warehouse-centric
- Standardized hierarchical planning processes governed by IT
- Web/Excel based analysis capabilities
- Owned and managed by IT

Flexibility
Solid Information Foundation
Scalable, robust and trustworthy

Information Quality with MDM
- Cleanse data
- Enrich master data

Information Life Cycle Mgmt.
- Highly scalable
- Cost-effective choice of medium

Integrating SAP- & non-SAP data
- JDBC, XML, DB-C, file
- app. Specific, via partners
The Business Network with Trusted Ubiquitous Information

- End-to-end BW solutions combining the strengths of data warehousing and data marts
- Agnostic and flexible deployment options via extensive data acquisition and distribution options
- Data profiling and cleansing for MDM, BW, marts to deliver trusted information
- Empowering the next generation of information driven applications through embeddable analytics

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* planned
This is the current state of planning and may be changed by SAP at any time for any reason without notice. (Nov. 2009)
Summary

**Performance**
- Enabling business driven innovation
- Analyzing information at the speed of thought
- Closed-loop Business planning based on live data

**Visualization**
- Web 2.0 user experience to broaden business intelligence adoption
- Easy self-service access to corporate information for end users
- Embedded intelligence within the business process context

**Flexibility**
- BW and DWH in Enterprise Information Management
- Creating trust in corporate Information
- Enabling Enterprise-SOA
Start your NetWeaver BW Transformation - today
Use The Power Of Performance, Visualization And Flexibility

SAP NETWEAVER DELIVERS CONTINUOUS Performance, Visualization And Flexibility WITHIN ONE INTEGRATED OPEN PLATFORM

PERFORMANCE
- BWA
- Explorer
- NetWeaver BW
- Red. TCO with CTC

FLEXIBILITY
- SOA Platform (CE)
- SBO Portfolio
- Explorer
- Pioneer/WebI

VISUALIZATION
- Visual Composer (SOA)
- Xcelsius Dashboards
- BEx/WebI/CR
- Enterprise Portal
Thank you!

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