SAP Planning in Combination with SAP Business Warehouse
SAP Planning and Consolidation 11.1 for SAP BW/4HANA
SAP Analytics Cloud for Planning
Hybrid Planning

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Background
Same Tools. Different Times.

Most organizations still use spreadsheets…

43% of the senior finance executives surveyed don’t even know how many business critical spreadsheets are in use.

48% of participants said that spreadsheets make it difficult to manage the planning processes.

Planning & Analysis Challenges in the Digital Economy

• Inconsistent modeling and planning processes across the organization

• Not able to respond quickly to market disruptions, competition, and actual performance

• Inability to harvest insights from Big Data

• Unable to augment financial analysis with artificial intelligence to create a more accurate forecast

• Lack of confidence in plans and forecasts leading to time wasted validating and reworking data

• Inability to discover true costs and key drivers of profitability to make better data-driven decisions
SAP facilitates **Collaborative Enterprise Planning**

- Respond quickly to market disruptions, competition, and actual performance ✓
- Have clear visibility into cost and revenue drivers ✓
- Utilize consistent modelling and planning processes across the organization ✓
- Can harvest insights from Big Data and plan at any level ✓
- Augment financial analysis with artificial intelligence to create a more accurate forecast ✓
- Align financial and operational plans across the enterprise to enable better business outcomes ✓
Find the balance between flexibility and integration

SAP BPC and SAP SAC covers a wide range of capabilities, allowing freedom for end users alongside possibility of high degree of integration.

“Freedom” for end users

Flexibility
Integration

Tool coverage

Spreadsheets
ERP
BW-IP/PAK
BPC Standard
BPC Embedded
SAC
Planning tools

Planning in SAP BW

Integrated Planning Platform
- Common planning platform
- re-use of information
- Common security concept
- Integration with ERP systems – bring information to action

Overall planning concept and deep IT involvement are mandatory.

LoB Planning
- Stand-alone planning solution
- Decoupled from other applications
- Adapted security concept
- More reachable flexibility
- Freedom for end user
- IT involvement on demand

SAC for Planning

LoB Planning
- Stand-alone planning solution
- Decoupled from other applications
- Adapted security concept
- More reachable flexibility
- Freedom for end user
- No SAP BW required
SAP BPC 11.0, version for SAP BW/4HANA and SAP Analytics Cloud
The Next Generation Planning Application

- 2007: BPC 7.0 MS, BPC 7.0 NW
- 2010: BPC 7.5 MS, BPC 7.0 NW
- 2012: BPC 10.0 NW
- 2014: BPC 10.1 NW, Standard & Embedded & BW-IP/PAK
- 2015: BPC 10.1 MS
- 2017: SAP BPC 11.0 version for SAP BW/4HANA1.0
- 2019: SAP BPC 11.1 version for SAP BW/4HANA2.0
- 2005: BW-IP
- 2011: BW-IP
- 2012: BW-IP/PAK
- 2014: BPC optimized for S/4HANA Planning
- 2015: BW-IP in BW7.x
- 2016: BPC optimized for S/4HANA

Analytics Cloud for Planning
Built on SCP

Maintaining only

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SAP is committed to delivering innovative applications in the Cloud. SAP's strategic direction for planning aligns with the broader Analytics strategy.

- SAP Analytics Cloud is SAP's primary strategic Planning solution moving forward.
- The majority of new enhancements for planning will be delivered via SAP Analytics Cloud. This includes enhanced value for BPC via hybrid planning and analysis scenarios.
Overview of SAP Business Planning and Consolidation 11.1
SAP BPC 11.1, version for SAP BW/4HANA
Is a simplified planning offering

Simplicity

• ONE product for planning and consolidation
• Simplified offering with BPC Embedded substituting BW-IP and PAK

Openness

• Integrate data from cloud applications like SAP Analytics Cloud or third party data store into BPC
• Leverage Big Data to improve decision making

Modern Interface

• Connect modern analytics solutions to your BPC data
• New Homepage and navigation design
• Simplified planning models in BW/4HANA with BW modelling tools

High Performance

• Push down calculations to HANA for faster planning and closing cycles
• Improved scalability with BW/4HANA to plan with greater details
SAP BPC 11.1, version for SAP BW/4HANA
Perform real time analysis for planning and actual activities in one financial system

Agile
- Modern user experience and enhanced visualizations
- SAP HANA Optimized calculations to accelerate close or budgeting process
- Flexible on-premise or Cloud deployments available

Accurate
- SAP HANA Predictive algorithms to forecast potential revenue or expense outcomes
- Flexible “What if?” simulations to drive consensus and collaboration
- Access enterprise wide data, master data and big data in the context of budgets, forecasts and plans for meaningful analysis

Integrated
- Single, integrated solution for planning and consolidations
- Improved access to master data and actuals in SAP S/4HANA and other SAP Sources
SAP BPC 11.1, version for SAP BW/4HANA
Agile and easy to use interfaces reduce learning curve and increase adoption

- Choice of Excel, Word, PowerPoint, and web interfaces
- Excel without “spreadsheet hell” - live access to central data repository creates a single version of truth, ensuring organizational alignment
- Work seamlessly with key data set with instant access from MS Office
SAP BPC 11.1, version for SAP BW/4HANA

Leverage visualization to drive business decisions

- Charts and graphs embedded inside of SAP BPC driven and designed by business users
- Visualize real time Actual and Plan data
- Pin charts and graphs to home screen
- Further visualizations leveraging SAP Analytics Cloud and SAP Digital Boardroom to complete the finance story from MS Excel to full breadth Analytics
SAP BPC 11.1, version for SAP BW/4HANA
Leverage Big Data as part of the Planning Process

- Plan in the moment by leveraging data sources from SAP application data, third-party data, geo-spatial data, Hadoop data, and more
- Make better decisions incorporating both structured and unstructured data as part of the planning process
- Move beyond traditional budgeting metrics and transform the business using next generation business drivers
SAP BPC 11.1, version for SAP BW/4HANA
Save time and reduce errors with a single, integrated application

- Speed up the time to value with a single deployment for planning, budgeting, forecasting and consolidations (management and statutory)
- Achieve a consistent user experience across planning and consolidation processes
- Integration reduces the risk of errors by moving data between multiple financial applications
  - SAP BPC
  - BW/4HANA
  - S/4HANA
  - SAP Analytics Cloud
SAP BPC 11.1, version for SAP BW/4HANA

Modelling – Simplified Data Structures in BW/4HANA

- Number of Modelling object types reduced from 10 to 4
- No complex data structures (extended star schema)
- Field or InfoObject based Modelling
- Greater control of data persistency and virtualization
- Support for external, structured and unstructured data
Unified
Completely integrated with SAP BW/4HANA, SAP S/4HANA and other SAP Systems

Save time and reduce cost of ownership by leveraging existing data warehouse objects
- Reduce ETL requirements
- Deploy easier using existing data models
- Leverage standard SAP BW/4HANA functions such as security, information broadcasting, BI Content and more
- Integrate with SAP S4/HANA for access to data and master data

SAP BPC for SAP BW/4HANA

HANA Source System

ODP Source System

SAP HANA

EIM – Smart Data Integration (SDI)

Sources

Adapter
- ASE, ECC, HANA
- 3rd Party RDBMS

Extractors
- RDBMS /Hadoop
- Text

SLT
- Structured

ABAP
- Social Media

CDS
- Email

ODQ

full/ delta load/ real-time replication

direct access

real-time replication

BPC for SAP BW/4HANA

HANA Source System

ODP Source System

EIM – Smart Data Integration (SDI)

Sources

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ODQ
SAP BPC 11.1, version for SAP BW/4HANA with
SAP S/4HANA & SAP BW/4HANA

- SAP S/4HANA has **BW 7.5x** Embedded as analytics engine which includes BPC 10.1 NW
- SAP BPC 11.0, version for SAP BW/4HANA 1.0 is an **ADD-ON** of BW/4HANA 1.0
- SAP BPC 11.1, version for SAP BW/4HANA 2.0 is an **ADD-ON** of BW/4HANA 2.0
- SAP S/4HANA is on a **DIFFERENT** application platform (SAP NetWeaver) than SAP BW/4HANA
- SAP BPC 10.1, add-on for S/4HANA is for embedded (in S/4HANA) **FINANICAL PLANNING**
- SAP BPC, version for SAP BW/4HANA is for **GENERIC PLANNING** with standalone deployment

SAP Clients

- SAP S/4HANA
- SAP BW 7.5x
- SAP BPC 10.1, add-on for S/4HANA
- SAP BW/4HANA
- SAP HANA PLATFORM
SAP BPC, versions for SAP BW on HANA and SAP BW/4HANA

**BW 7.4x, SAP BW 7.5x, BW/4HANA 1.0**

### Business Warehouse 7.4x
- **Client**
- **BPC 10.1 Add-On**
  - Standard Model and Embedded Planning Components
- **Business Warehouse 7.4x**
  - **Embedded Model**
    - BPC Embedded Planning Components
    - BW-IP
    - PAK
- **SAP HANA**
  - any DB

### Business Warehouse 7.5x
- **Client**
- **SAP BPC 10.1**
  - BPC Embedded Planning Components
  - BW-IP
  - PAK
- **SAP HANA**

### Upgrade
- Upgrade to **SAP BPC 10.1**
- BPC Embedded Planning Components
- BW-IP
- PAK

### Conversion
- Conversion to **BW/4HANA 1.0**
- **Embedded Model**
  - BPC Embedded Planning Components
  - BW-IP
  - PAK
- **Standard Model**
  - BPC Standard Planning Components

### Notes
- BW 7.40 and BW 7.50 contain the BW-BPS planning component. We strongly recommend to start NO new projects with BW-BPS.
- BW/4 product does not contain planning
- BPC add-on mandatory for planning
- BW-BPS is not longer supported. Manual migration

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SAP BPC, versions for SAP BW on HANA and SAP BW/4HANA

**BW/4HANA 1.0 to BW/4HANA 2.0**

- BW/4 product does not contain planning
- BPC add-on mandatory for planning
- BW-BPS is not longer supported. Manual migration
SAP BPC, versions for SAP ERP and SAP S/4HANA

SAP ERP and SAP S/4HANA

BW 7.40 and BW 7.50 contain the BW-BPS planning component. We strongly recommend to start NO new projects with BW-BPS.
Overview of SAP Analytics Cloud
SAP Analytics Cloud is a next-generation software-as-a-service (SaaS) solution built from the ground up that allows business users to plan, discover, predict, and collaborate.
# SAP Analytics Cloud Architecture

<table>
<thead>
<tr>
<th>Applications</th>
<th>Digital Boardroom</th>
<th>SAP Analytics Hub</th>
<th>Mobile Experience</th>
<th>SAP App Center</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analytic capabilities</strong></td>
<td>BI&lt;br&gt;Discovery&lt;br&gt;Charts and tables&lt;br&gt;Geospatial</td>
<td>Planning&lt;br&gt;Events and workflows&lt;br&gt;Allocation&lt;br&gt;Value driver tree simulation</td>
<td>Predictive&lt;br&gt;Smart Assist&lt;br&gt;Build &amp; deploy predictive models</td>
<td>Application Design&lt;br&gt;Scripting&lt;br&gt;Composites&lt;br&gt;UI theme &amp; stylesheet</td>
</tr>
<tr>
<td><strong>Core capabilities</strong></td>
<td>Data connectivity</td>
<td>Wrangling</td>
<td>Modeling</td>
<td>Administration Auditing</td>
</tr>
<tr>
<td><strong>PaaS</strong></td>
<td></td>
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<td>SAP Cloud Platform</td>
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</tbody>
</table>

## SAP Cloud Platform

- Amazon Web Services
- SAP Data Center

## Data Sources and Applications

- Cloud data sources and applications
- On-premise data sources and applications
Blend and query any data
Create end-to-end scenarios by blending on premise and cloud data

Cloud Data Sources
Google Drive & Sheets
SCP
SuccessFactors
Concur
Hybris Cloud for Customer
SAP Business ByDesign
OData

SAP Data Sources
SAP BPC NW & MS
SAP BW, Universes
SAP ECC, UNX, ERP

Other Data Sources
IBM, MS SQL Server,
MySQL 5, Oracle, CSV, XLSX

SAP SCP DBaaS**
SAP HANA S/4HANA
SAP BW

Acquire
Data is imported to cloud

Access All Data*
Apache Hive, AWS, Facebook,
Google+, HANA Vora***, IBM DB2,
MaxDB, MS SQL Server, MySQL,
Netezza, OData, Oracle, SAP Sybase ASE, IQ, ESP, SparkSQL,
Teradata, Twitter.

**Requires SCP DBaaS license
***Requires the Vora 1.3 release which is not out yet (currently planned for end of year)
Act in the Moment
- Analyze, plan, predict, and report all in one place to save time and better support the business
- Plan and analyze directly within your enterprise application for instant insight to action
- Visualize KPI metrics and adjust drivers on screen to simulate the impact of decisions

Continuously Collaborate
- Discuss plans in context for increased accountability
- Create and share private versions to model and socialize what-if scenarios prior to publishing
- Crowdsourced plans and budgets across the business to improve alignment and accuracy

Become an Intelligent Enterprise
- Discover top influencers of performance without having to look and automatically predict future values to improve results
- Augment manual insights with embedded intelligence, including smart insights for variances, for better data-driven decisions
- Answer the tough questions with natural language questions
SAP Analytics Cloud – Planning Capability

- Simplified Excel like UI allows easy access to dimensions with powerful sorting/filtering
- Predefined dimension types with specific properties and capabilities
- Rich formula language to support driver based planning, and KPI reporting
- Visual drag and drop hierarchy management
SAP Analytics Cloud – Planning Capability

Stories

Stories are an organized representation of data, comprising multidimensional data views for the purpose of analysis, reporting, and planning.

Version Management

- Create and copy versions of data and define access rights

Formatting

- Create, personalize fixed reports and visualizations

Visualization

- Context-specific visualization proposals
Report/Template Calculations
Augment powerful model based calculations with out-of-the-box in-grid calculations

- Easily insert out of the box formulas on row/column selection
- Automatic, context sensitive, predefined calculation library based on column/row selection

<table>
<thead>
<tr>
<th>Single Selection</th>
<th>Multiple Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Accumulative Sum</td>
<td>• Sum</td>
</tr>
<tr>
<td>• Accumulative Sum Rounded Values</td>
<td>• Multiply</td>
</tr>
<tr>
<td>• Accumulative Count of All Detailed Values</td>
<td>• Divide</td>
</tr>
<tr>
<td>• Accumulative Count of All Detailed Values that are Not Zero/Null/Error</td>
<td>• Percentage Difference</td>
</tr>
<tr>
<td>• Moving Average</td>
<td>• Percentage Share</td>
</tr>
<tr>
<td>• Moving Average that are Not Zero/Null/Error</td>
<td>• Olympic Rank Number</td>
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<tr>
<td>• Rank Number</td>
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<td></td>
</tr>
<tr>
<td>• Comment</td>
<td></td>
</tr>
</tbody>
</table>
SAP Analytics Cloud – Planning Capability

Calculated Members

Feature
Create formulas on the account dimension

Benefit
Formulas will be applied to all versions

Example
General Manager would like to track some key KPI’s calculations to track his team’s performance. He can create a formula to track value like operating profit %, sales per headcount, and other metrics to help manage the business across various regions and in this case product groups.
Advanced Formulas
Robust calculation engine to solve complex planning scenarios

- Rich logic capabilities including:
  - simple filtering for relevant members
  - robust looping
  - persistent calculation results
- Consistent syntax with native modelling formula editor
- Easily chained with other advanced formulas or data processing via inclusion as distinct steps within a Data Action
Data Actions
Create, orchestrate, and execute complex multi-step planning operations

- Multi-step process management and execution engine
- Chain as may steps together as necessary to achieve your objective
- Execute processes based on action button included in a story
SAP Analytics Cloud – Planning Capability

Private Versions

Feature
Planning done in private versions for individuals or teams and then published as a public version for everyone to view.

Benefit
Changes can be made to private version and then easily discarded or shared (i.e., publish) as needed.

Example
Analyst wants to model some sales promotion scenarios using private model prior to sharing with his colleagues.
Feature
Adjust value in a report view by directly entering this value at parent or base level or by adding by %

Benefit
Can directly enter plan change at various levels or change them by a certain % to streamline plan adjustments

Example
Purchasing manager wants to estimate cost saving by switching vendors to lower raw material costs
SAP Analytics Cloud – Planning Capability

Distribution and Spreading

**Feature**
Distribution and spreading allows users to quickly extend a plan to other dimensions such as time, products or regions.

**Benefit**
Simple dialogs guide the user through the distribution and spreading process and preview adjusted amounts for maximum efficiency.

**Example**
Analyst may want to distribute some internal costs to other regions manually to refine an allocation that was previous performed.
SAP Analytics Cloud – Planning Capability
Calculations - Asymmetric reporting

Feature
Using restricted, calculated measure or forecast to create asymmetric report or seed forecast.

Benefit
Flexibility to create reports:
- Seed forecast combining actual and forecast months
- Arrange columns in the required order
- Create calculations
- Create restricted member

Example
Create a seeded forecast with 6 months of actual (Jan – Jun) and 6 months of forecast (Jul – Dec) and arrange columns in any specify order.
SAP Analytics Cloud – Planning Capability
Currency Conversion

**Feature**
Ability to plan in local currency, default currency and additional currencies.

**Benefit**
- Ability to plan in multiple currencies
- Conversion rate can be dynamic or fixed

**Example**
Allow each region to plan their gross sales in local currencies. Once they rolled up, corporate can see the values in default (USD) currency or secondary group currency (CAD).
Feature
The allocation functionality allows users to define rules for source and target data spreading

Benefit
Create allocation rules within the application without the requirement for complex script-based modeling

Example
Analyst wants to spread shared services costs across other cost centers based on user defined rules
Data Locking

Ensure the right people have write access at the right time

- Lock data entry to any combination of dimensions and specific dimension elements
- Changes in lock state automatically propagate up or down the hierarchy
- Restricted entry state limits updates only to the element owner or the owner of an ascendant node
Calendar

Easily track, manage, or participate in multi-process and multi-step planning scenarios

- Add tasks and assign ownership and approval responsibility
- Provides process and responsibility owners the ability to visually track key milestones and task progress either in calendar view or Gantt view
- Allows administrators to easily shift the range and dates of key events or tasks via drag and drop
Input Tasks
Create and track specific data entry scenarios and cycles

- Use existing stories to generate a specific managed contribution process on-the-fly
- Selectively control which models, and ownership dimensions within models are part of the Input Task
- In-process ability to reassign or forward responsibility to other users
- Submit, Approve, and track the plan via a hierarchical workflow process
Collaboration
Come together to make better decisions

- Create discussion threads and invite colleagues
- Share stories, story based models, and private versions with other users
- Leave comments for other users on stories or widgets
- Enter and track specific data points comments within a table
  - Date, time, and data value tracking with each comment
  - Multiple comment threads available per cell
  - Bubble-up indicator to highlight relevant comments which may not be visible based on current filters
Data Entry

Empower users with top down, bottom up, and middle out plan entry capabilities

- Automatic data spread at any level including advanced capabilities to control to derive weightings
- Adjust plan by +/- % or absolute values
- Lock cells and spread around locks
- Data entry available to calculated cells with controlled application to underlying drivers
- Shortcut scaling characters to simplify input
- Automatic highlights of impacted and related cells
Private Versions
Create sandbox versions to enable scenario and what-if analysis

- Create personal sandbox versions via drag and drop
- Replicate entire versions or specific slices
- Share versions with specific users for additional contribution/feedback
- Easily handle on-the-fly comparison of public to public and public to private versions
- Publish private versions to back to existing public versions, or to new public versions
Predictive Forecasting
In-line predictive capabilities allow users to easily forecast key values

- Review visual indicators of expected best case/worst case forecast
- See forecasted projections change in real-time with underlying source data updates
- Determine target time horizon for projections, and source time used for projections
In-Plan Master-Data Creation
Generate new members on-the-fly to expedite the planning process

- Insert newly added elements into appropriate hierarchies
- Add required attribute information for newly created members
- Automatically infer data access rights based on surrounding elements
Multi-Currency Planning & Reporting
Flexible currency capabilities to capture and report plan numbers

- Segregate out specific plan values by input currency across any number of dimensions
- On-the-fly conversion of local currency or transaction currency plan values to multiple reporting currencies
- Report plan numbers based on different Fx rate versions to facilitate common currency reporting
Value Driver Tree
Change the way you visualize the financial impact of key drivers and assumptions

- Automatically generate VDTs based on existing models
- Augment existing model data nodes with VDT specific Year on Year growth or other driver based nodes
- Enter data at any level easily see the impact of your changes
Hybrid Planning
Hybrid Planning with BPC
Connect SAP Analytics Cloud to existing BPC solutions

Modern Interface  |  High Performance  |  Simplicity  |  Openness

Corporate Planning

Departmental Planning

Agile Planning

SAP Business Planning and Consolidation

- SAP Analytics Cloud
- SAP Digital Boardroom

- SAP Analytics Cloud
- Smart Insights

BPC Standard and Embedded models are supported for bi-directional integration. Details can be found HERE.
Integration of Planning Scenarios with SAC

S/4HANA on premise
- Client
- Engine
- Model

S/4 HANA Cloud
- Model

BPC Embedded
- Client
- Engine
- Model

BPC Standard
- Client
- Engine
- Model

SAC
- Client
- Engine
- Model

Import/Export

Live Connection

Import/Write-Back
Additional Information
Key links for more information
For customers and partners

Key links

- sapanalytics.cloud
- 30-day trial
- Pre-built business content
- Community
- Help and technical specs
- How to get support
- Blogs
- What’s New series
Thank you.

Contact information:

F name L name
Title
Address
Phone number