Positioning SAP BW/4HANA and SAP S/4HANA

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Overview of Positioning and Architecture of SAP Analytics and SAP S/4HANA

Integration of SAP S/4HANA with SAP BW/4HANA

What to consider on your route to Analytics with SAP S/4HANA?

Summary
Overview of Positioning and Architecture of SAP Analytics and SAP S/4HANA
Analytics in the context of SAP S/4HANA
The complete portfolio

- Big data
  - SAP Data Hub
  - SAP SQL Data Warehousing with SAP HANA 2.0
  - Simplify the provisioning of timely business insights
  - Capitalize on the full value of all your data
  - Innovate with one trusted source for all insights

- Intelligent Suite
  - Modern Architecture for Instant Insight
  - Intuitive User Experience
  - Intelligent ERP Next Generation Business Processes

- SAP S/4HANA
  - Complete - From data to intelligence, everything you need
  - Contextual - Insight to action where you work
  - Confident - Faster, more confident decisions with delivered AI-driven insights

- SAP BW/4HANA
- SAP Analytics

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**Modern Architecture for Instant Insight**

- Easy modeling on simple data models
  - Real-time data availability
  - Easy drill down
  - Best possible performance
  - Custom data model extensions (in SAP Fiori)

**Intuitive User Experience**

- Enablement of fact-driven process handling
  - Combined screens with transactional and analytical information
  - Proper prioritization in transactional process steps
  - Decision support where it is needed (inside the transactional screen)

**Intelligent ERP Next Generation Business Processes**

- Integrate intelligent technologies in processes
  - Integration of Predictive and ML data inside analytical data models
  - Embedded decision support
  - Allow process automation where needed
SAP Analytics Cloud – Make Intelligent Decisions

Complete - from data to intelligence

All in one platform built for SaaS
• Get everything you need from data to decisions
• Analyze, plan, and predict all in one place
• Scale to meet the needs of diverse users and all types of decisions (strategic, operational, and tactical)

Planning, analysis, and execution in one UX
• Plan, analyze, and collaborate in one UX/system for instant insight to action
• Increase engagement, accountability, and accuracy with collaboration embedded in context
• Access to on-prem data & apps without having to replicate in the cloud

Contextual insight to action

Augmented analytics for business users
• Augment manual insights with embedded intelligence that explains results
• Ask questions in natural language to get the answers you seek
• Detect causes and take the next best action using automated ML
• Predict potential outcomes with the push of a button

Confident decisions with delivered AI-driven insights
SAP BW/4HANA - the Guiding Principles

Simplify the provisioning of timely business insights

Impactful reduction of modeling and source objects; choice of field- or InfoObject-based modeling, no data replication between layers needed.

Data tiering for allocating best storage for hot, warm, cold data by partition.

Data processing pushed to SAP HANA from the application server.

Deploy on HEC, AWS, Azure, and GCP.

Capitalize on the full value of all your data

Leverages SAP HANA EIM to provide new data provisioning opportunities, like virtual data access, real-time replication, or optimized data load.

Dedicated big data connector to leverage Big Data landscapes for data onboarding and ingestion for various types of data and files.

Deep integration with SAP Data Hub, including SAP Vora, as orchestration and refinery application to address end to end processes with SAP HANA and SAP BW/4HANA.

Innovate with one trusted source for all insights

Unique native data access for real-time analytics without replication into the cloud; one platform for enterprise planning & consolidation, Predictive Analytics.

Extend managed DW and native SQL approach for the full power of HANA with mixed scenario and analytical apps.

Establish the corporate memory for the Intelligent Enterprise by leveraging the Cloud Platform Integration API framework.
Lower your TCO: Unique transaction-to-insight process

“Where is the business data I need for insight, and how is it structured?”

“How can I easily combine data from this and other sources to depict my business?”

“What does my business look like and what actions can I take to improve it?”

- **SAP S/4HANA Extractor or CDS Views**
  - Predefined data extraction content built to reflect the SAP S/4HANA data structure
  - Optimized data load with extensive delta handling capabilities to minimize data transport

- **SAP BW/4HANA DW application and Business**
  - Data Warehouse application delivering complex features as pre-built functionality
  - End-2-end data warehouse model built on SAP S/4HANA structures and meta data

- **SAP Analytics Cloud Predefined Stories**
  - Predefined SAP Analytics Cloud stories for business users
  - No data redundancies with live access to SAP BW/4HANA

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**Analytics with SAP S/4HANA – high level architecture**

| **Visualization** | SAP Fiori UI  
analytical apps, reports, KPIs,… delivered as part of SAP S/4HANA, extensible by the customer |
| **Access** | Odata services, Transient analytical queries |
| **Modelling** | ABAP-CDS-Models  
(for analytical and transactional purposes) |
| **Persistency** | Database tables on SAP HANA |

**Intelligent Technologies**

- **SAP Analytics**  
  access SAP S/4HANA data directly via Transient analytical queries

- **SAP BW/4HANA**  
  (for seamlessly extending transactions with data warehousing workflows)

- **Database tables on SAP HANA**
SAP Analytics Cloud is embedded in SAP S/4HANA!*
Integration of SAP S/4HANA with SAP BW/4HANA
"With SAP S/4HANA and SAP S/4HANA embedded analytics, do I still need my BW?“

"Yes!“
SAP BW/4HANA complements SAP S/4HANA

SAP S/4HANA is **not** an EDW

- SAP S/4HANA is the next generation intelligent ERP and part of an Intelligent Enterprise - sized, tuned, and maintained for optimal performance as transactional system
- A modern simplified architecture, the new user experience (SAP Fiori) and integrated intelligent technologies such as Machine Learning allow for new business processes and even automation
- SAP S/4HANA embedded analytics focuses on fact-driven process handling and embedded decision support inside of transactions - embedded BW only for support of transactional workflows

SAP BW/4HANA is an EDW

- Allows harmonization of all enterprise data (ERP + non-SAP, governance, corporate memory, big data, …)
- Delivers complete data warehouse tools (rich integrated toolset for data warehousing)
- Provides deep integration with SAP Analytics and SAP data management (SAP Data Hub, SAP HANA SQL DW, …)

Why is SAP BW/4HANA the perfect EDW for SAP S/4HANA?

- Extends seamlessly the business case of SAP S/4HANA including the integration with SAP Data Hub for Big Data and Internet of Things (IoT) use cases
- Availability of specific business content for SAP S/4HANA
- Allows best integration capabilities based on common architecture and terminology (e.g. analytical engine, currencies, user maintenance, ABAP, transports, governance, …)
SAP BW/4HANA Business Content: Overview as of SP07

- Supports SAP S/4HANA and SAP ECC systems
- Uses new SAP BW/4HANA features
- Follows the LSA++ architecture
- Delivered content offers more flexibility in data acquisition and reporting
- Provides higher level of detail (line items, …)
- Quarterly delivery pace
SAP BW/4HANA and SAP S/4HANA

Leveraging SAP BW/4HANA you can natively integrate the embedded analytics models and data in SAP S/4HANA with those of an EDW, e.g. to compare real-time actuals with historical snapshots, planning results (from SAP BPC), or external data. Please refer to the respective integration blog and How-to-Guide on www.sap.com for further details.

Examples for best-in-class integration are:

- Out-of-the-box connectivity
  - Visualize SAP S/4HANA data in SAP BW/4HANA without data structure creation in SAP BW/4HANA
  - Standard Extractors (ABAP CDS and ABAP via S-API), as well as open extensibility
- Fast time-to-value enterprise-wide Data Mashups using SAP BW/4HANA-native objects (composite providers etc.)
- Strong data historization capabilities (e.g. easy tracking of slowly changing dimensions)
- Integrated planning use cases based on all necessary existing and harmonized data

Embedded BW:
- SAP does not recommend using Embedded BW for data warehouse (EDW) use cases!
- For details, see SAP Community blog and SAP note 1661202, (e.g. Upgrades and patches, Resource allocation and capacity planning, Workload Management, Backup & Recovery, Lifecycle management, High Availability & Disaster Recovery, Security etc.)
- Best practice: The amount of data persisted in the Embedded BW should not exceed 20% of the overall data volume of the system.
- Embedded BW is not an SAP BW/4HANA
- More information here.
Extraction to SAP Business Warehouse

- For limitations on S-API DataSources (Extractors) in S/4HANA see [SAP Note 2500202](#)
- How to use ABAP CDS for Data Provisioning in BW
- For release of extractors for ODP see [SAP Note 2232584](#) ‘Release SAP Extractors for Operational Data Provisioning’ (> 95% are released)
Direct access to SQL views (generated by ABAP CDS) **not** recommended! See note 2511210 for further details.
What to consider on your route to Analytics with SAP S/4HANA?
Planning the migration from SAP ECC with SAP BW to SAP S/4HANA with BW/4HANA

- **Check SAP BW Status Quo**
- **Check Status quo BI/Analytics**
- **What to do where?**
- **Check SAP S/4HANA**
- **Rebuild and Extend**

*Prerequisite: SAP BW/4HANA Sandbox existing*
Planning the migration from SAP ECC with SAP BW to SAP S/4HANA with BW/4HANA

Check/test existing and used BW setup and extractors
What is still working (functional fit and/or SAP supported content)**?
Which frontends have been created using the BEx?
Do housekeeping! What is still necessary?

Establish the status quo of BI/Analytics
Have data sources changed?
Does Big Data play a role?
Do housekeeping! What is still necessary?

Separate analytical requirements (along the business processes) between the operational system, the BI/Analytics layer and the EDW.
Explore how a target architecture would look like ideally using SAP S/4HANA, SAP BW/4HANA, and SAP Analytics BI/PA/Planning.

For pure operational analytical requirements:
Check existing content, applications and capabilities in SAP S/4HANA embedded analytics. See what you can do out-of-the-box.
For all analytical requirements, check Business Content in SAP Analytics and SAP BW/4HANA.

Plan detailed steps to implement all remaining analytical requirements (e.g. by extending SAP S/4HANA, or by exceptional usage of SAP Analytics Cloud and SAP BW/4HANA for operational reporting) - your choices need to be based on project realities (e.g. individual preferences, strategy, efforts, available functionality)

*Prerequisite: SAP BW/4HANA Sandbox existing
### SAP BW/4HANA – Core EDW functions
- Data replication (for Snapshots, Performance enhancements)
- Enterprise-wide data harmonization
- Data governance
- Data federation/mashing (EDW)
- LSA modeling
- SAP and non-SAP data
- Planning
- Archiving (for delta comparison)

### SAP Analytics Cloud
- Best visualization
- Focus on cloud-based source systems (e.g. SAP S/4HANA Cloud, MTE)
- Data federation/mashing (without EDW harmonization)
- SAP and non-SAP data
- Planning
- Self Service BI

### SAP S/4HANA embedded analytics
- Operational data
- Real-time data access
- Transactional decision support
- KPI-driven process handling

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**Exceptions (related to visualization preferences, cost, time, …)**
Summary
Analytics in the context of SAP S/4HANA
The complete portfolio
Demo (Full Integration)

https://www.youtube.com/watch?v=nuc29Zy4U6Y&feature=youtu.be

Connect Live to SAP S/4HANA and SAP BW/4HANA with SAP Analytics Cloud
What is SAP S/4HANA embedded analytics? How does it add value?
http://bit.ly/2cPkeqF

How do I get started with embedded analytics?
http://scn.sap.com/community/s4hana/blog/2016/05/27/getting-started-with-s4-hana-embedded-analytics

How does the SAP S/4HANA embedded analytics architecture look like?

SAP S/4HANA Extensibility
https://blogs.sap.com/2017/03/01/scn-s4hana-extensibility-scenario-diagrams/

Embedding Predictive Analytics into SAP S/4HANA Cloud
https://blogs.sap.com/2017/05/16/embedding-predictive-analytics-into-sap-s4hana/

SAP S/4HANA and SAP BW/4HANA positioning
Customize and use SAP S/4HANA embedded analytics!

- Configure SAP S/4HANA embedded analytics for your landscape
- Use embedded analytics for operational reporting and process analytics
- Integrate with other SAP tools for data warehousing, business intelligence, and predictive analytics

Purchase the print or e-book at sap-press.com/4690

SAP S/4HANA Embedded Analytics: The Comprehensive Guide
Written by: Jürgen Butsmann, Thomas Fleckenstein, Anirban Kundu
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SAP S/4HANA Embedded Analytics: The Comprehensive Guide
Written by: Jürgen Butsmann, Thomas Fleckenstein, Anirban Kundu
SAP S/4HANA Embedded Analytics: Operatives Reporting in Echtzeit

Von Jürgen Buttmann (Autor), Manfred Crumback (Autor), Jörg Franke (Autor), Benjamin Köhler (Autor), Jan Mokrý (Autor)

SAP S/4HANA Embedded Analytics: Architektur, Funktionen, Anwendung

Echte Daten-Auswertung direkt in SAP S/4HANA

Buch ca. € 79,90
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Sie möchten Ihre Geschäftsdaten einfach und schnell auswerten? Dann lesen Sie in diesem Buch, wie Sie das operative Reporting mit SAP S/4HANA Embedded Analytics ganz neu angehen können. Untersuchen Sie relevante Kennzahlen in SAP Fiori Apps, nutzen Sie den vordefinierten analytischen Content, oder erstellen Sie individuelle Berichte auf Basis eigener CDS Views. Mit den so gewonnenen Erkenntnissen sind Sie der Konkurrenz immer einen Schritt voraus!

- Aussagekräftige Analysen von Echtzeitdaten direkt in SAP S/4HANA
- Kennzahlen und analytische Fiori-Apps nutzen, anpassen und erweitern
- Integration mit SAP BI, Reportingwerkzeugen und Predictive Analytics

Gebundenes Buch
EUR 79,90 - Prime

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Entdecken Sie unsere Auswahl an Büchern, die aufrütteln, berühren und zum Nachdenken anregen.

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Hinweise und Aktionen
- Sie suchen preisreduzierte Fachbücher von Amazon Warehouse Deals? Hier klicken.
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SAP S/4HANA embedded analytics – Overview of current Offering per Type of User

End-User: Analyze the Data and act according to Insights

- Multi-dimensional reports
- SAP Smart Business KPIs / APF
- Query Browser
- Analytical List Pages
- Overview Pages
- Analytical Fiori Apps

Key-User: Enable the End-User

- CDS Key User Tooling (e.g. Query Designer)
- KPI and Report Modelling Apps

SAP Analytics

- SAP Analytics Cloud

SAP BusinessObjects Enterprise:
Examples: Analysis for Office, Design Studio

IT-User: Provide the single source of truth in one semantic layer

- CDS View maintenance: ABAP for Eclipse

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SAP S/4HANA Embedded Analytics Overview – Business User

**Smart Business KPIs**
Smart Business KPIs deliver KPI monitoring on the Fiori Launchpad and drill-down capabilities into further analytical or transactional Fiori apps, save personal variants.

**Overview Pages**
Get a consolidated view on a certain domain, e.g., Purchasing. Information presented in analytical tables and charts, take action in the same place or navigate to more details, save personal variants.

**Analytical List Pages**
Generic approach to visualize and analyze data. Switch display from table to chart or a combined table-chart-display. Take action directly in the same app or navigate to other apps for more details and actions, save personal variants.

**Analysis Path Framework**
Interactive drill-down to explore KPIs and their influencing factors by creating sequences of analytics steps which consist of charts or tables, save personal variants.

**Multidimensional Reports**
Generic approach to analyze data and visualize results for multidimensional analysis. Switch the display from pivot-table to chart and to a combined table chart display, save personal variants.
Smart Business KPI & Report Design

Smart Business KPI & Report Modeler enables your company to define, manage, and leverage consistent KPIs and Reports across all your business functions.

View Browser

Search, browse and tag analytical and non-analytical queries. This application displays all the views that are created and released by SAP as well as the customer-created SAP views.

Custom Views

If you need access to data in your system in a way the system does not offer so far, you can create your own data access by making use of a Custom Core Data Services view.

Custom Analytical Queries

Custom Analytical Queries transforms and organizes raw data delivered from business documents into a meaningful multidimensional report.

Custom Catalog Extensions

With this app you assign your apps, such as new multidimensional reports or KPIs to the required business catalogs and thus to the user roles.

Transport Management (Administrator)

Creating software collections, add extension items to your software collections, export your software collection to transport extension items from quality system to productive system.
Integration with SAP Fiori Launchpad

- Open SAP Analytics Cloud Stories from Fiori Launchpad
- Easily create custom Fiori tiles to launch a Story using OAUTH-enabled Story Catalog Service
- Integrate available pre-defined SAP Analytics Cloud Best Practices content with configured Fiori tiles
SAP Analytics Cloud + SAP S/4HANA = High-performing Analytics

BI, Predictive & Planning based on SAP S/4HANA business logic in Real-Time – data changes and modifications reflected instantly

Unique deep integration with Live Connection to CDS Views, Business Content (models, stories, dashboards), Fiori tile integration, Jump-to-transaction

Leverage existing SAP S/4HANA Security & Authorizations Plug & Play without any back-end modifications

Enrich SAP S/4HANA data by adding your own calculations (formulas, exception aggregations) and delegate processing to SAP S/4HANA

Use the Analytics Hub to bring all your information together and accelerate adoption of analytics in your business user community

Explore SAP Digital Boardroom for a real-time view of your critical business metrics in one place, supporting steering excellence of your Intelligent Enterprise