

Get Started with SAP S/4HANA Embedded Analytics

Dmitry Kuznetsov



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About the speaker

Dmitry Kuznetsov

Pioneer in SAP S/4HANA Embedded Analytics space and an author of a book “First Steps in SAP S/4HANA Embedded Analytics.”

Has a long track record implementing operational reporting systems and data warehouses based on SAP S/4HANA , SAP HANA-native, business warehouse and SAP Analytics Cloud technologies.

Has accumulated knowledge in the BI area

by completing most of the projects as hands-on modeler; therefore, any architectural and way- of-working advice comes from practical observations.

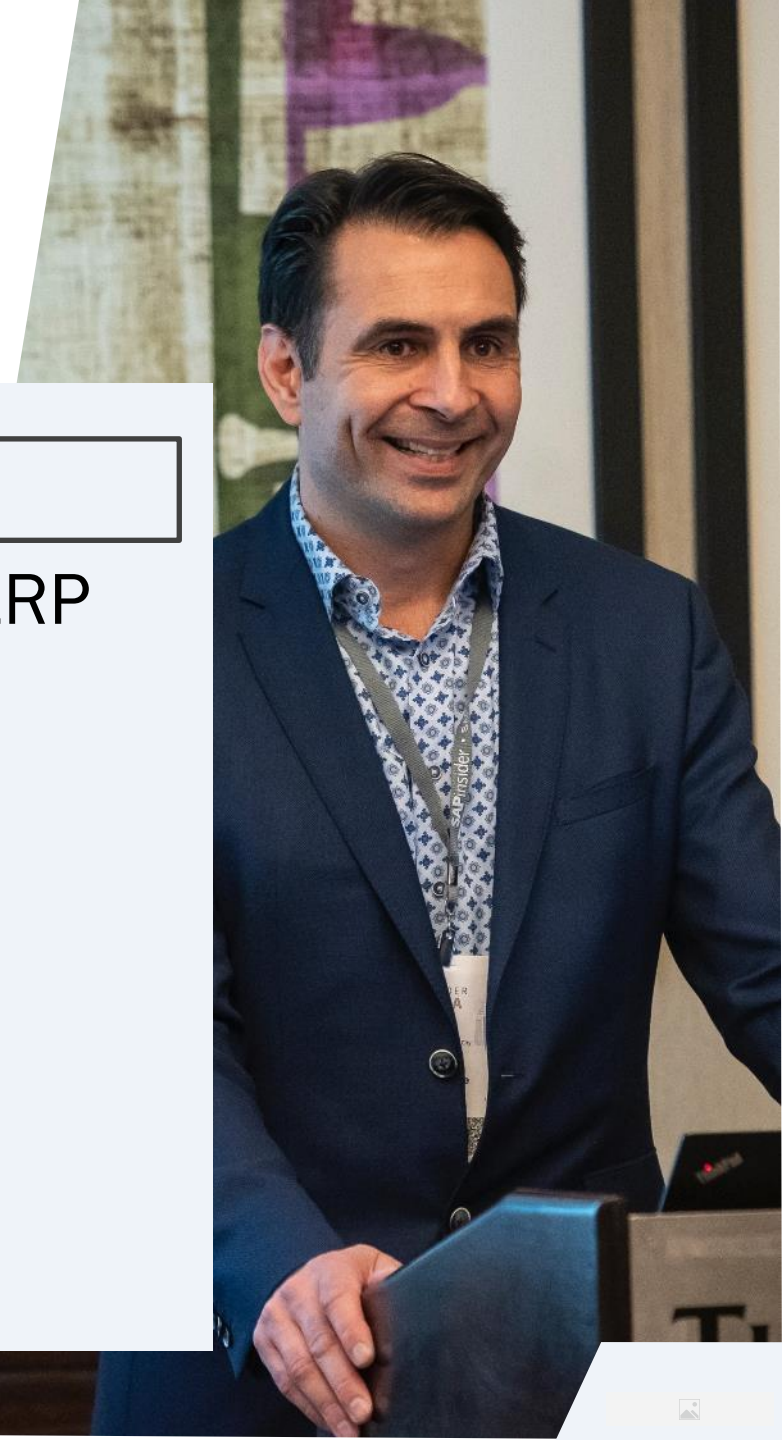


In This Session

- Get to know the embedded BI content delivered in SAP S/4HANA that you may not be aware of, such as analytic models and SAP Fiori tiles
- Explore their use cases, find out what SAP best practices are, and get tips on custom modeling
- Understand considerations for consuming SAP S/4HANA embedded analytics through
- SAP Fiori, SAP BusinessObjects tools and SAP BW
- Understand in which cases SAP BW is a necessity to cover
- your BI needs and when it is not necessary
- Learn how to extend SAP-delivered core data services (CDS)
- views and build your own

What We'll Cover

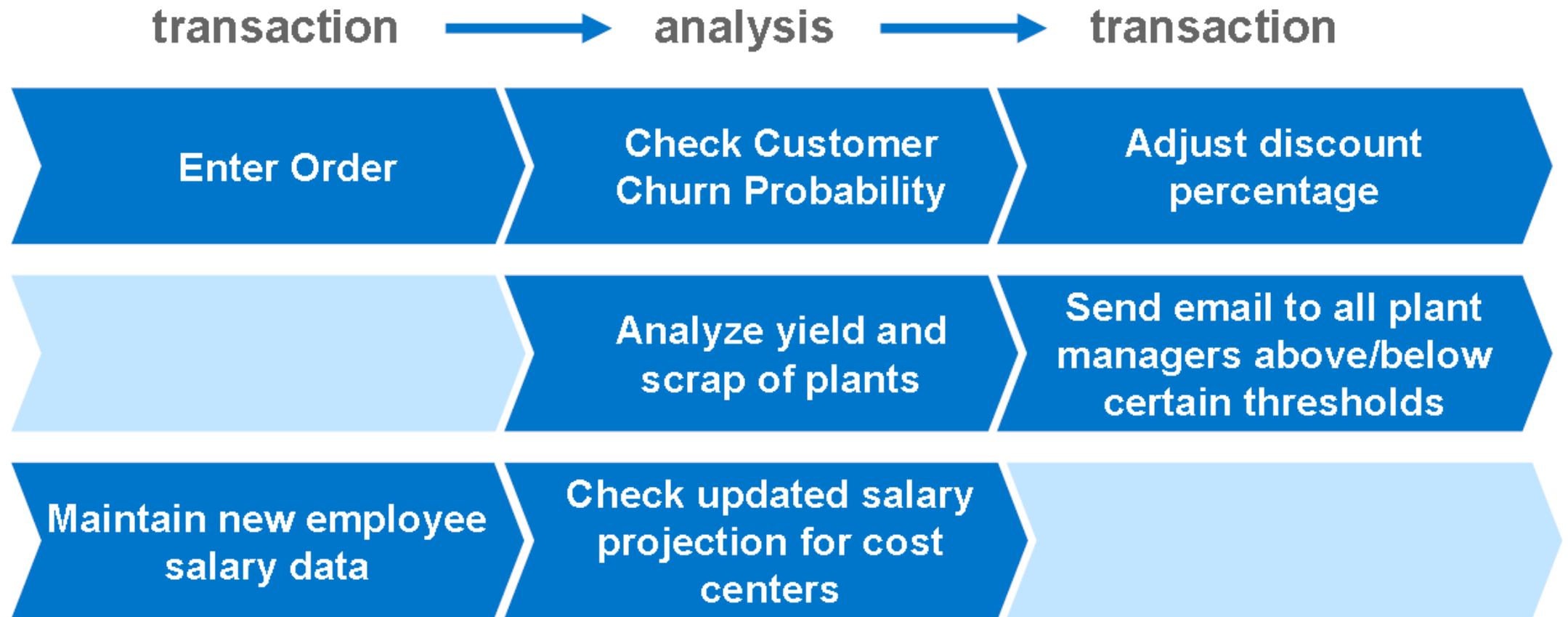
- The zoom-in on embedded
- How SAP S/4HANA is different from traditional SAP ERP
- What are embedded analytics really good for?
- The three flavors of BI on SAP S/4HANA
- How to discover the content
- How to extend and build
- Wrap-up



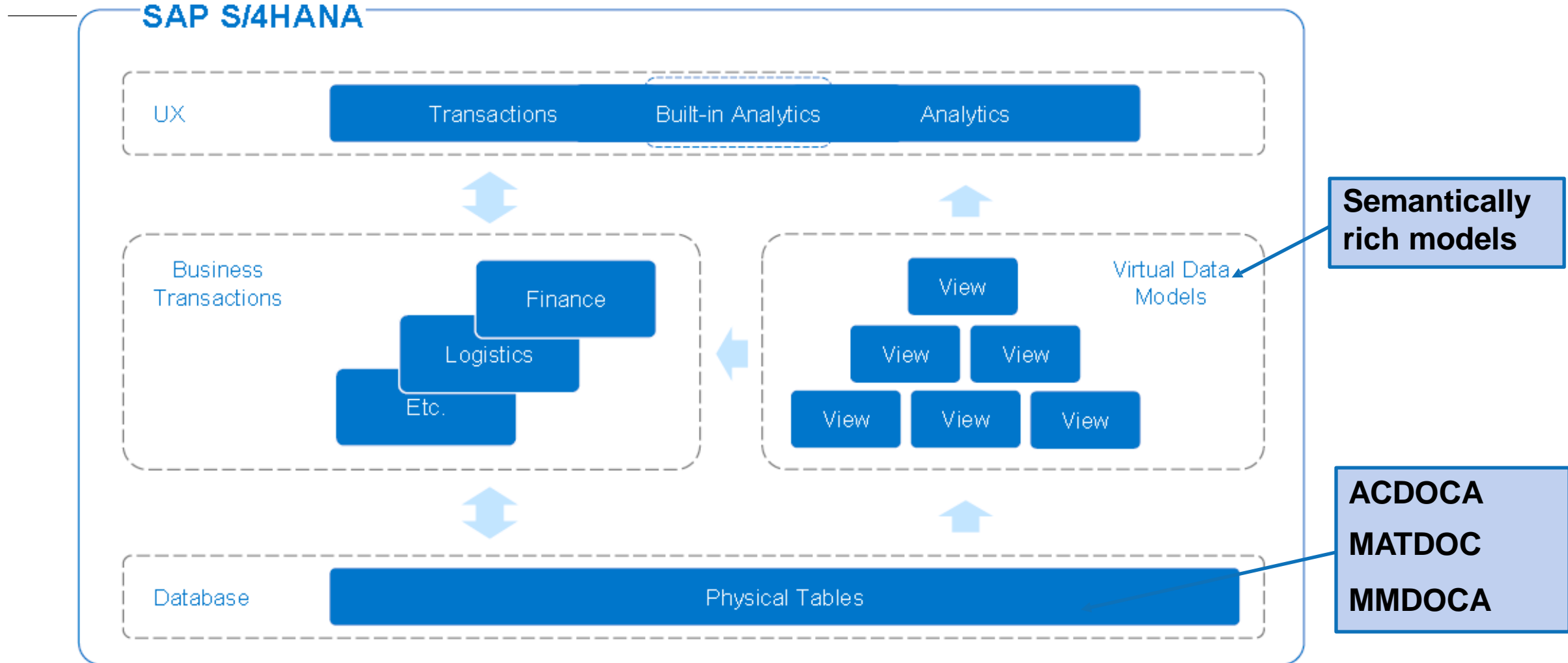
Zoom-In: Target

- **S/4HANA consultants, doing implementation of FI, CO, Logistics, etc.**
 - **Get an understanding of a CDS content already in place**
 - **See how reports can be done on the fly**
 - **Notice how visual a replacement for ALV and other ABAP reports is**
- **BI consultants, who must integrate with SAP S/4HANA**
 - **Understand how data structures have changed**
 - **Choose for the possible integration scenarios (SAP Fiori, SAP BusinessObjects, SAP BW)**
 - **See how certain changes can be implemented relatively quickly**

Zoom-In: Target

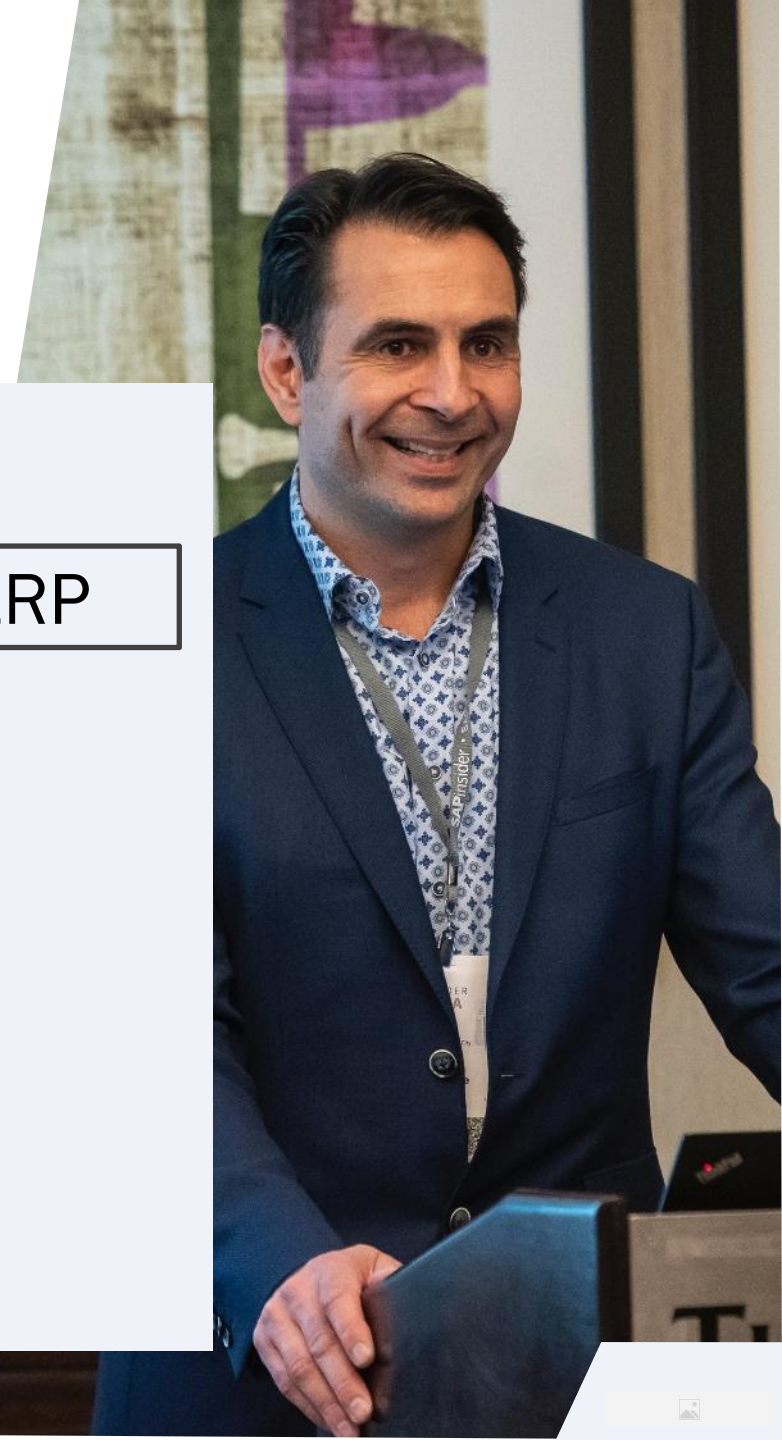


Zoom-In: Target



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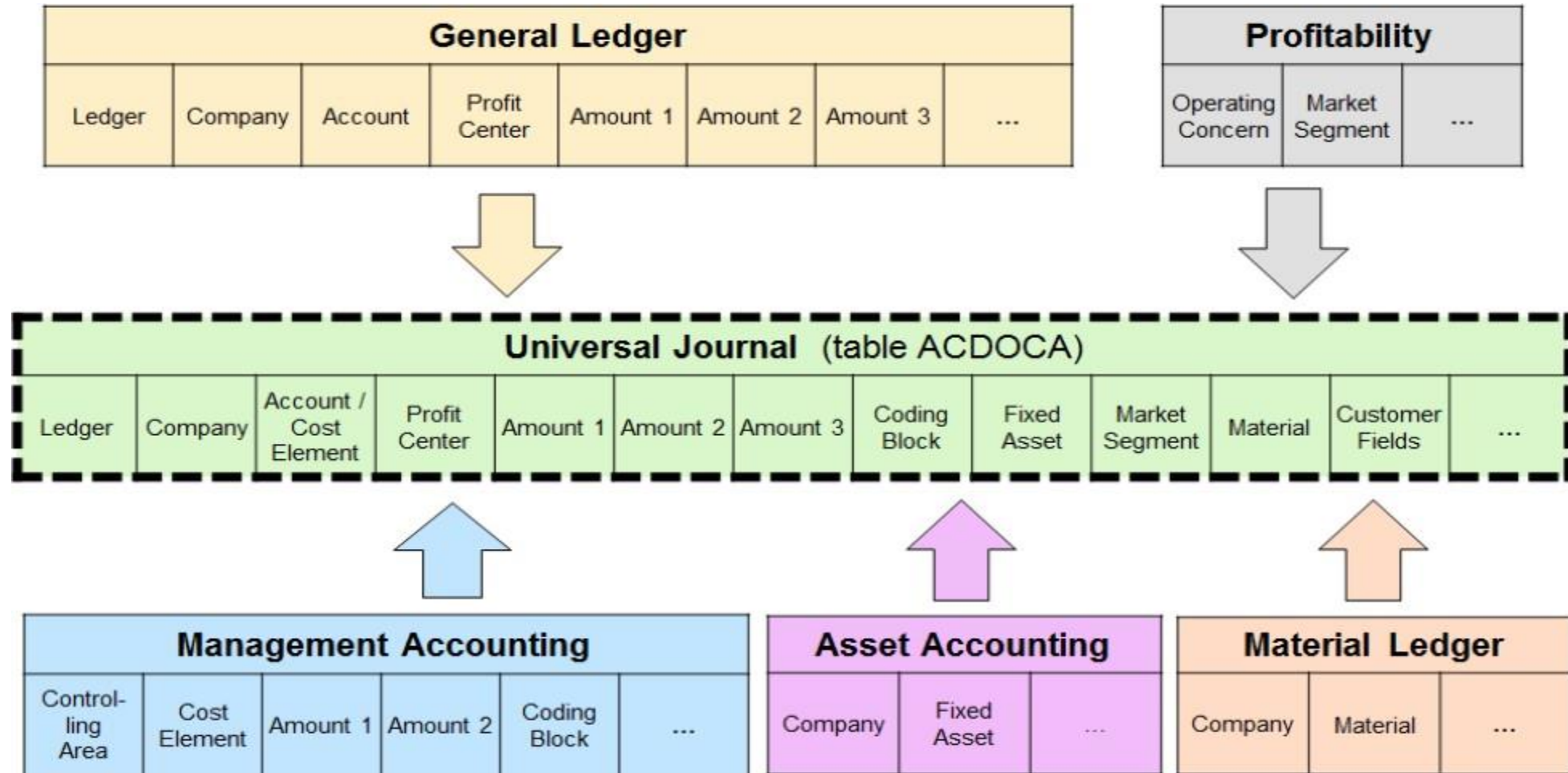
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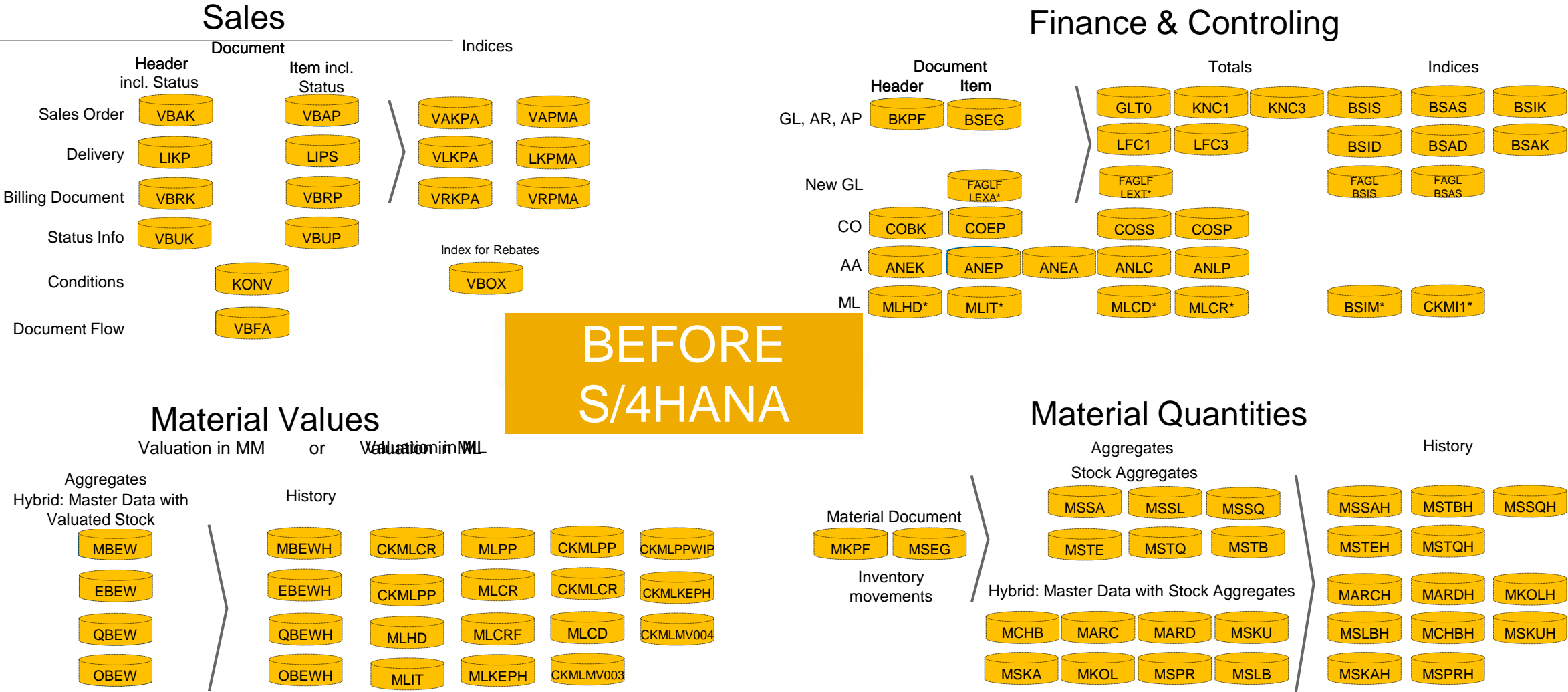
How SAP S/4HANA Is Different from Traditional SAP ERP

- Compressed storage and simplified areas
- Simplification example in FI
- Optimized for HANA-only

How SAP S/4HANA Is Different: Simplification Example in FI



How SAP S/4HANA Is Different: Simplified



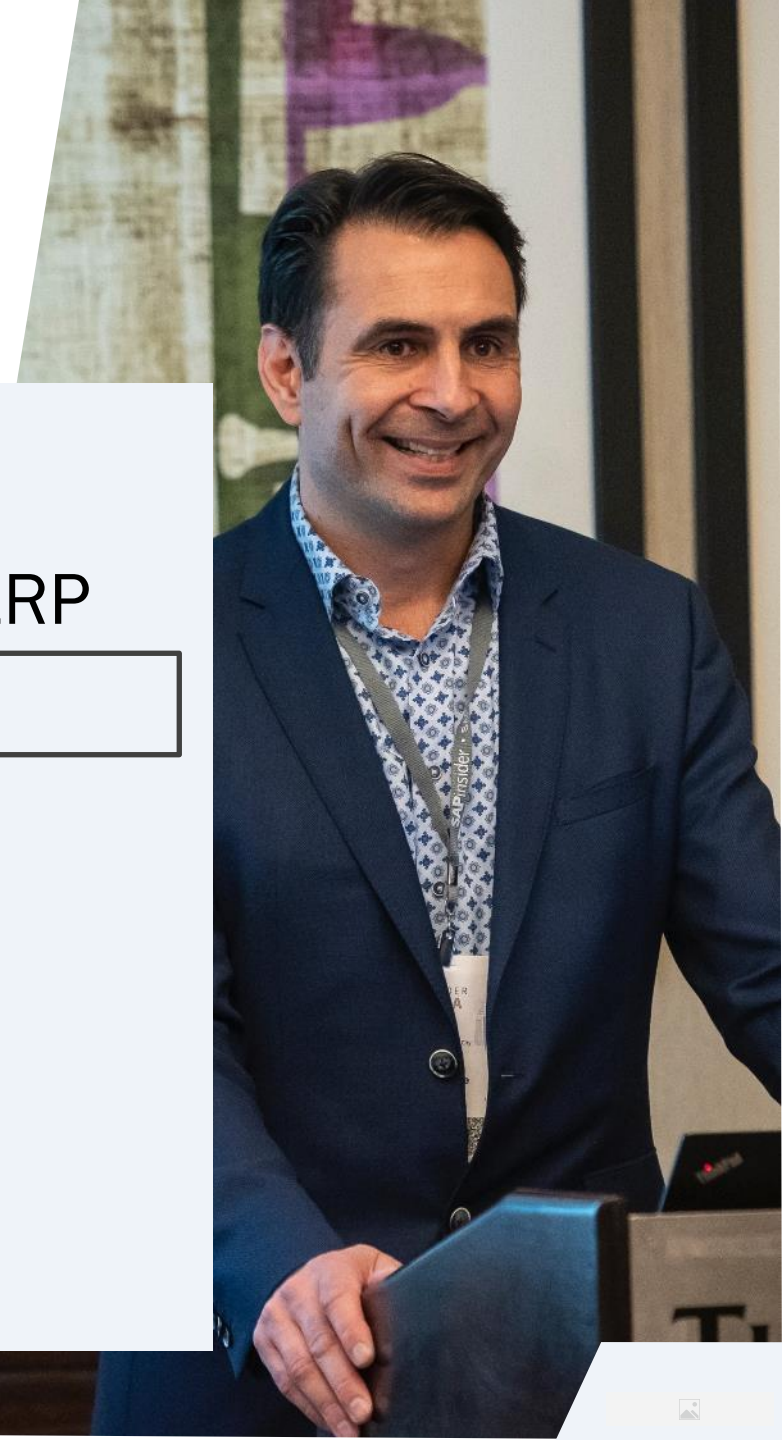
Source: SAP, TechEd'18 session by Florian Cazeres CNA244 – SAP S/4HANA 1709: Lessons Learned from VINCI Energies

How SAP S/4HANA Is Different: HANA-Only

- **Single point of fact storage (new tables ACDOCA, MATDOC, etc.)**
- **Modern UI – Fiori for everything**
- **Code optimized to run on a single DBMS**
- **Primary investment focus of all SAP future innovations**

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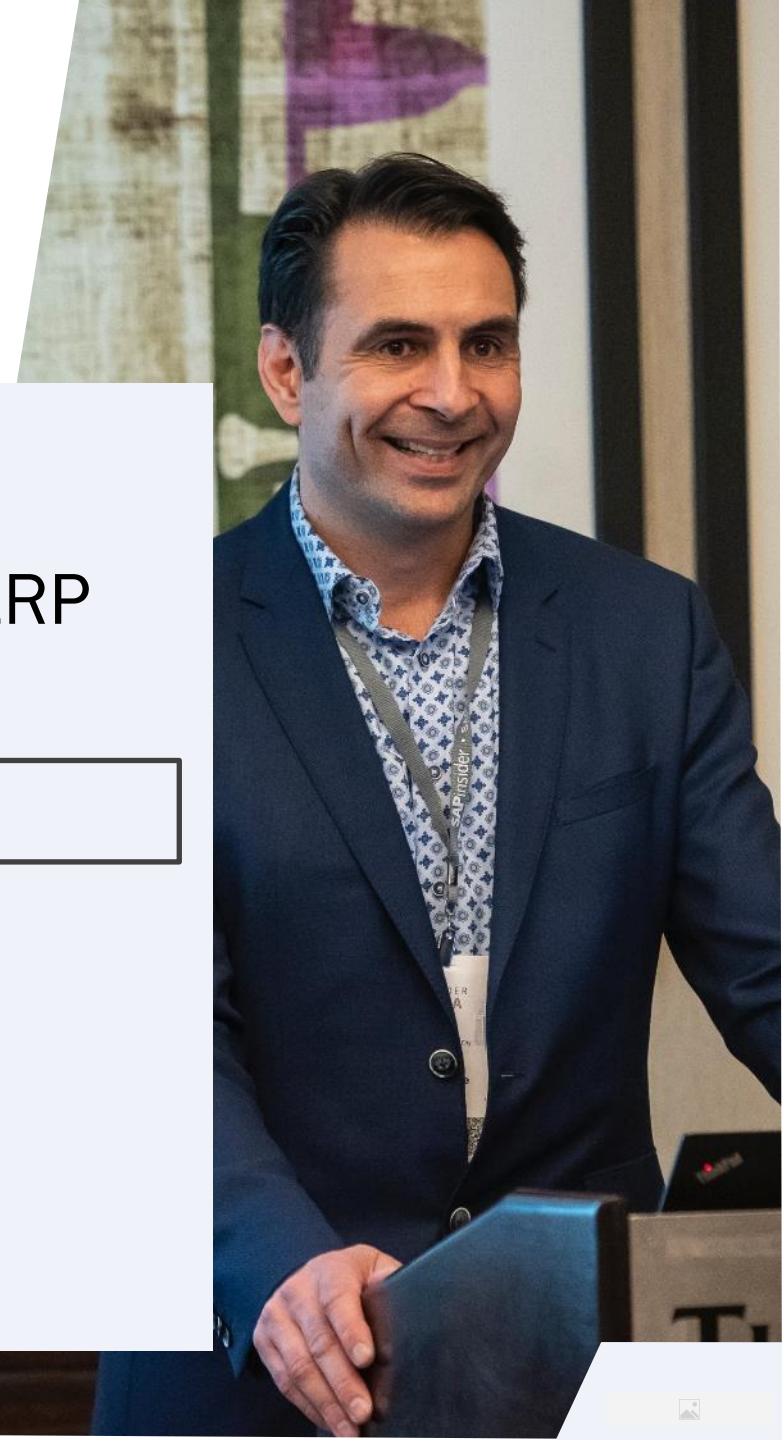


What Are Embedded Analytics Really Good For?

- **Operational analytics**
 - They replace ABAP reports ALV, FPM, etc.
 - Good for month-end close activities, forecasting current month, etc.
- **Tactical analytics**
 - Smaller clients can use Embedded for most of their analytics needs
 - Even larger data volumes can be processed efficiently on aggregated level
- **Real-time simulations: mixed analytical and non-analytical cases**
 - Mentioned in previous slides: Transaction → Analytics → Transaction type of process

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The Three Flavors of BI on SAP S/4HANA

- **“Super-light”** – only Fiori UI is being used as BI front end
- **“Light”** – BI Platform / SAP Analytics Cloud is needed for front end
- **“Strong”** – BW is needed as a Data Warehouse

The Three Flavors: “Super-Light” —Only Fiori UI

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



Key-User: Enable the End-User



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

CDS View maintenance:
ABAP for Eclipse

The Three Flavors: “Light” – BI Platform

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



Key-User: Enable the End-User



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

CDS View maintenance:
ABAP for Eclipse

SAP Analytics

SAP Analytics Cloud

SAP BusinessObjects Enterprise:

Examples: Analysis for Office, Design Studio

- separate products/services
- direct access to S/4HANA data
- Dashboards and Digital Boardrooms developed by S/4HANA, available for SAP Analytics Cloud

The Three Flavors: “Strong” Embedded and SAP BW

Question	Yes – 1 point for...	No – 1 point for...
Do you have a significant current BW investment?	SAP BW	SAP S/4HANA embedded analytics
Do you often consolidate data from multiple sources?	SAP BW	SAP S/4HANA embedded analytics
Are you loading data multiple times per day?	SAP S/4HANA embedded analytics	SAP BW
Do you load data on document level?	SAP S/4HANA embedded analytics	SAP BW
Do you need to cleanse the data before reporting?	SAP BW	SAP S/4HANA embedded analytics
Do you need to harmonize and transform the data before reporting?	SAP BW	SAP S/4HANA embedded analytics
Do compliance requirements apply?	SAP BW	SAP S/4HANA embedded analytics
Do you work with time-dependent master data?	SAP BW	SAP S/4HANA embedded analytics
Do you often need to take data “snapshots” to freeze data?	SAP BW	SAP S/4HANA embedded analytics
Do you perform long term trend analysis?	SAP BW	SAP S/4HANA embedded analytics
Do you need complex calculations beyond + - * /	SAP BW	SAP S/4HANA embedded analytics
Do you require planning capabilities	SAP BW	SAP S/4HANA embedded analytics
Are you reusing Business Suite authorizations for reporting?	SAP BW	SAP S/4HANA embedded analytics
Do you need to integrate data from 3 rd party solutions?	SAP BW	SAP S/4HANA embedded analytics

- Count the points for **SAP BW** and **S/4HANA embedded analytics** separately
- Your preferred option according to your answers is:

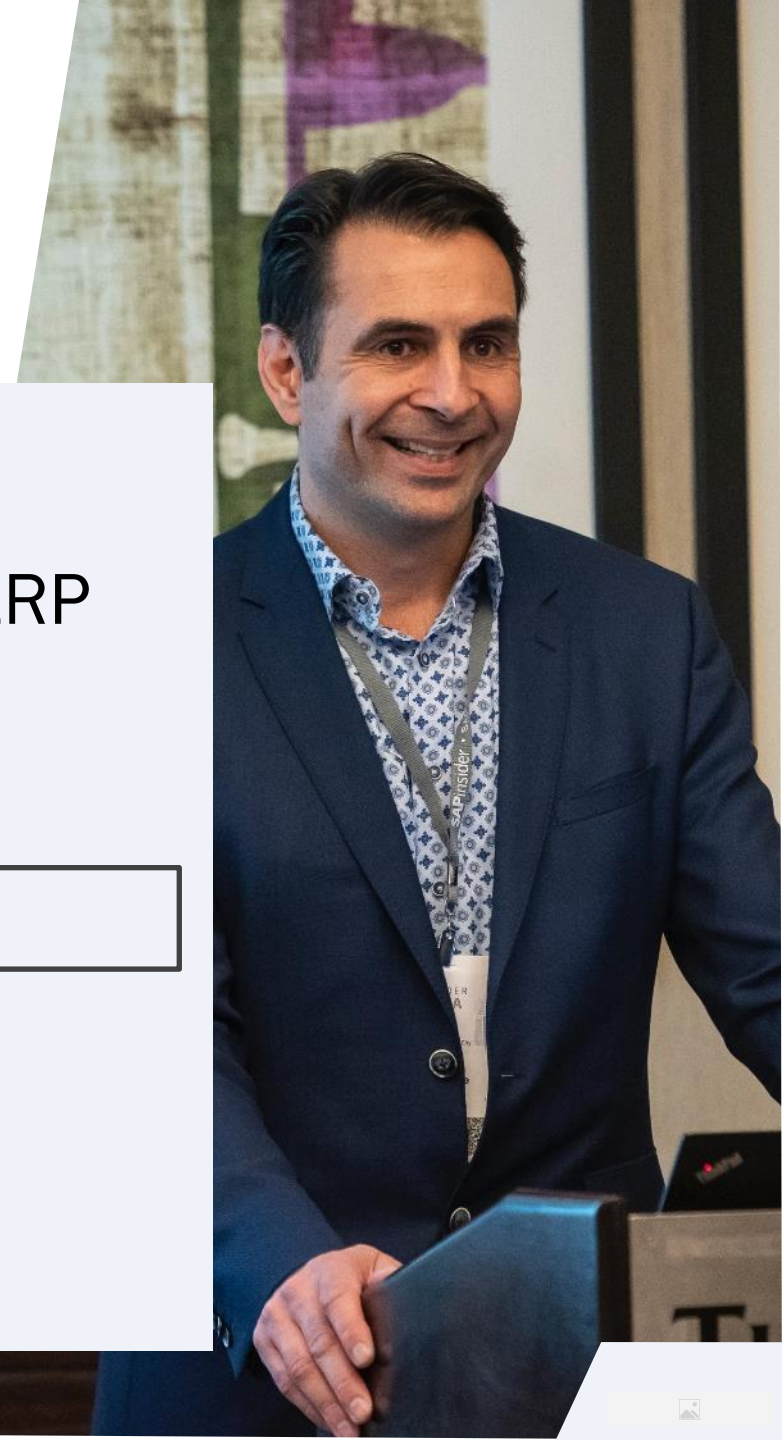
11-14 points SAP S/4HANA embedded analytics	5-10 points S/4HANA embedded analytics	0-3 points SAP S/4HANA embedded analytics
0-3 points SAP BW	5-10 points SAP BW	11-14 points SAP BW
Go for SAP S/4HANA embedded analytics	Go for the Hybrid Approach	Go for SAP BW

What components are required to do Analytics on S/4HANA?

- BI Platform
- BW
- All of the above
- None of the above

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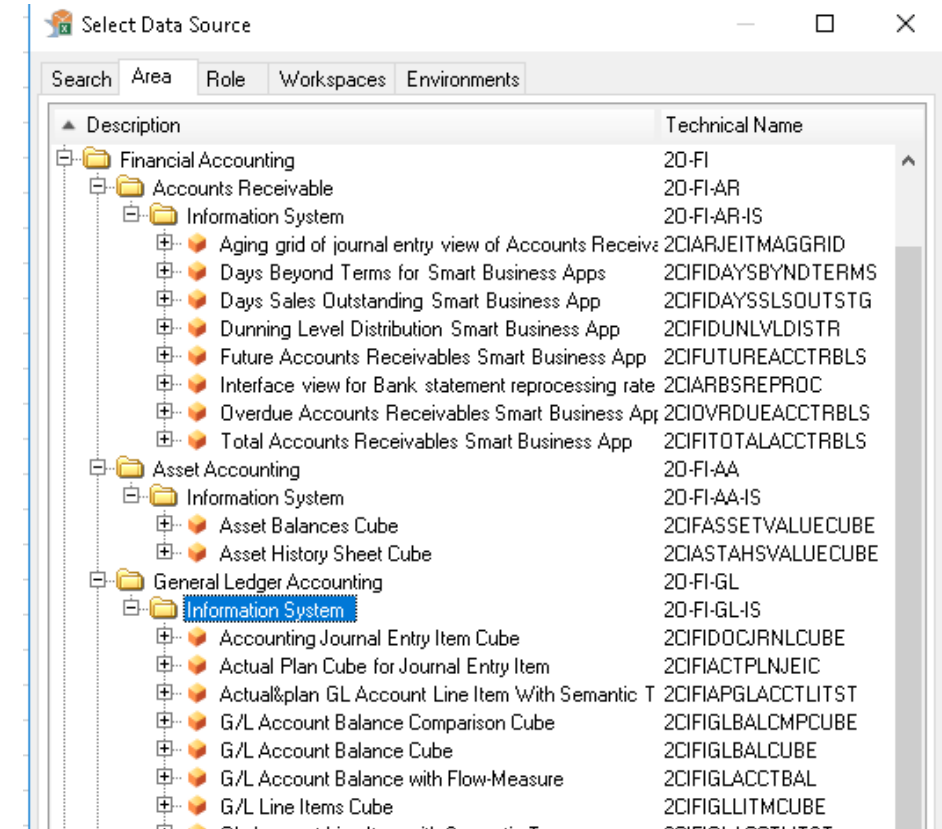
How to Discover the Content: Analysis for Office

 Check if you have SAP S/4HANA in your SAP Logon

 Open Analysis for Excel

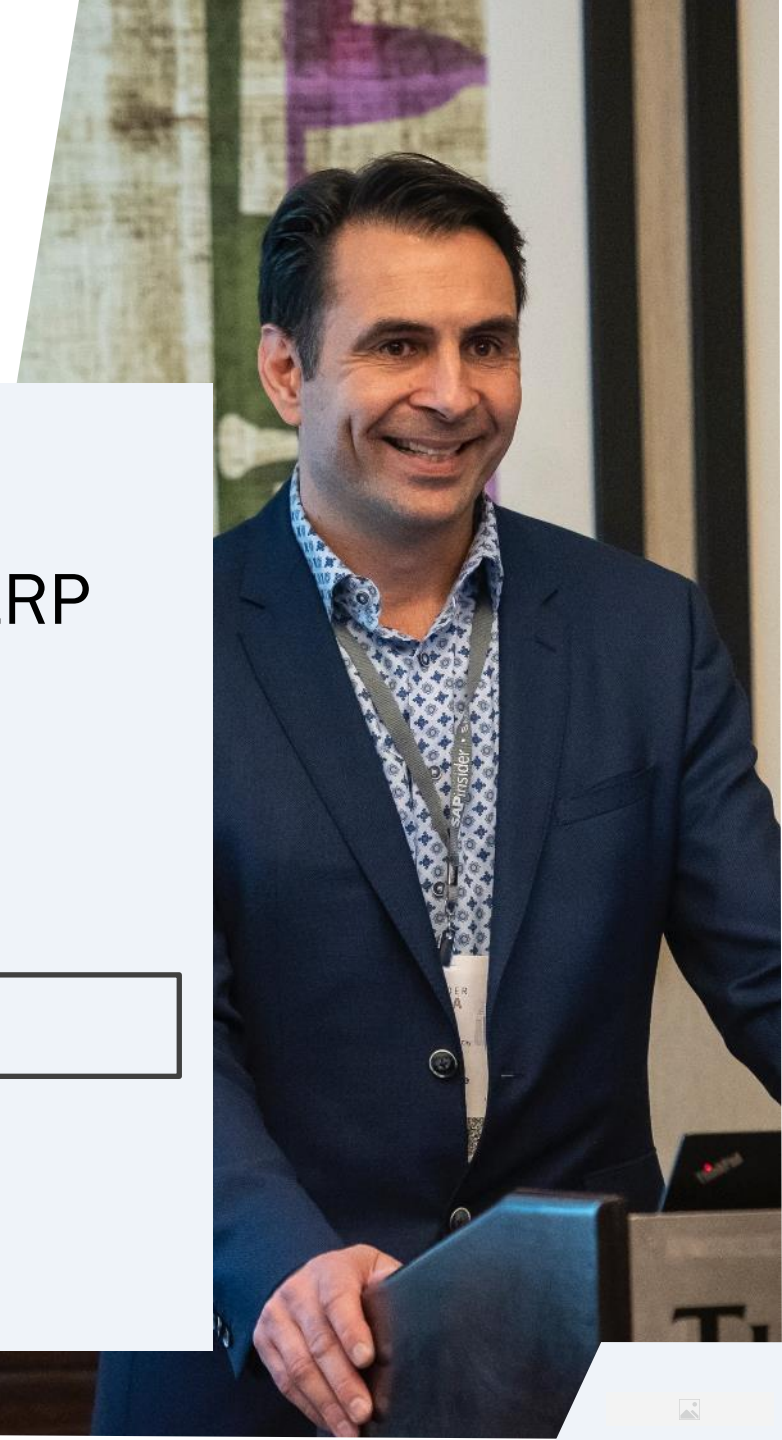
- Connect and explore the queries*

*there are at least ~60,000 of CDS views delivered by SAP in S/4HANA 2022



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How to Extend and Build

- Simple extensions on front end
- Simple extensions on back end
- Learning to build



```
[ERP] ZI_COSTCENTER
1 @AbapCatalog.sqlViewAppendName: 'ZICC'
2 @EndUserText.label: 'fdlvnewq'
3 extend view I_CostCenter with ZI_Costcenter {
4   csks.spras as LanguageCode
5 }
```

Dictionary: Display View

DDL SQL View: IFICOSTCENTER Active

Short Description: Cost Center

DDL Source: I_COSTCENTER

Attributes | Table/Join Conditions | **View Fields** | Selection Cond

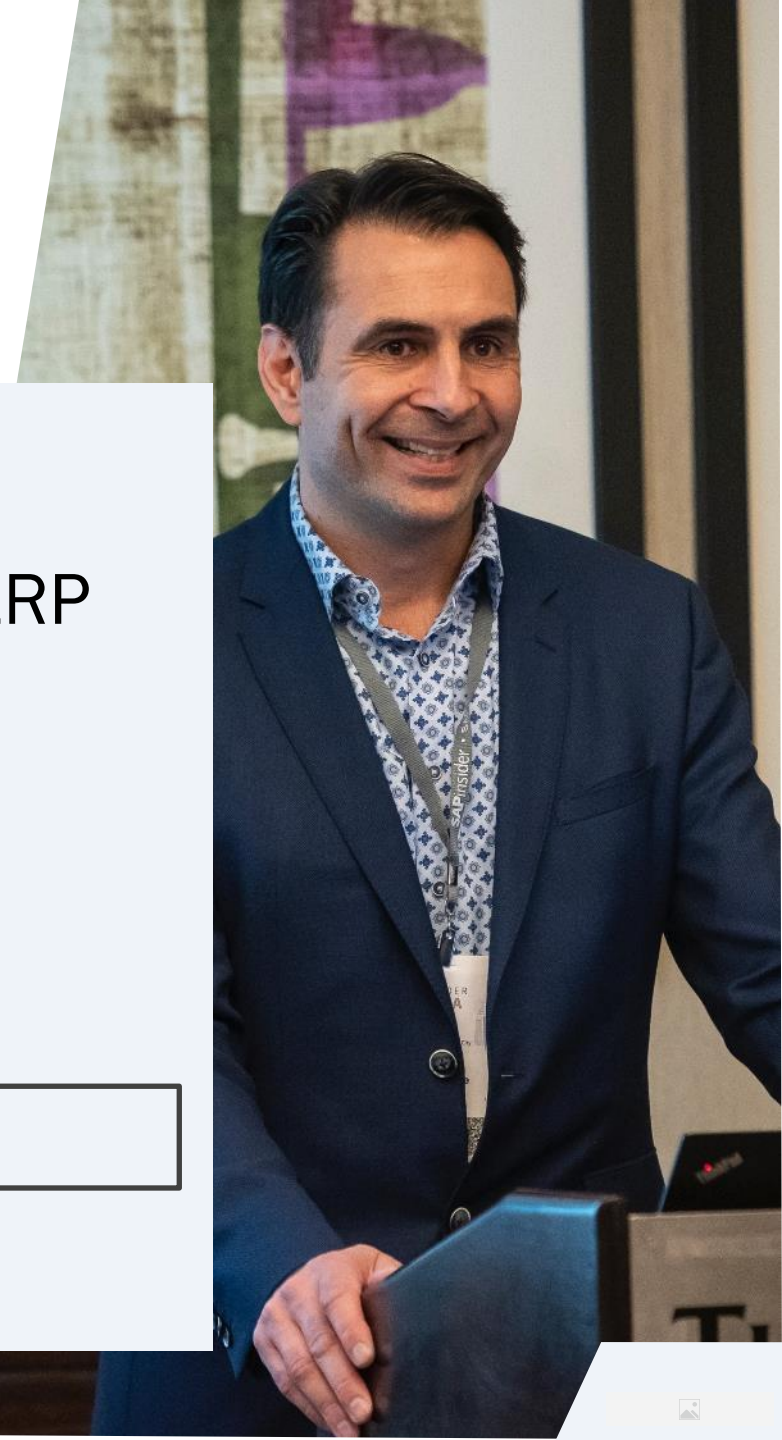
View field	Table	Field
.APPEND	<u>ZICC</u>	
LANGUAGECODE	<u>CSKS</u>	<u>SPRAS</u>

How to: Learn to Build

- SAP Courses
 - S4H400 S/4HANA embedded analytics: Overview
 - <https://training.sap.com/course/s4h400>
 - S4F07 Financial Reporting in SAP S/4HANA
 - <https://training.sap.com/course/s4f07>
 - S4D430 Building Views in Core Data Services ABAP (CDS ABAP)
 - <https://training.sap.com/course/s4d430>
- OpenSAP course *SAP S/4HANA Embedded Analytics*
 - <https://open.sap.com/courses/s4h27>

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Where to Find More Information

- *First Steps in SAP S/4HANA Embedded Analytics* (Espresso Tutorials, 2020) by Dmitry Kuznetsov
 - <https://www.amazon.de/dp/396012886X>
- *SAP S/4HANA Embedded Analytics: The Comprehensive Guide* (SAP PRESS, 2021) by Jürgen Butsmann, Thomas Fleckenstein, and Anirban Kundu
 - <https://www.sap-press.com/5226>
- *Core Data Services for ABAP* (SAP PRESS, 2022) by Renzo Colle, Ralf Dentzer, Jan Hrastnik
 - <https://www.sap-press.com/5294>

Key Points to Take Home

- *SAP S/4HANA is significantly simplified in terms of data model, which is advantageous for BI*
- *There is a lot of standard analytics content delivered by SAP*
- *Three “flavors” are available depending on a particular customer situation*
- *SAP BW and/or SAP BusinessObjects and/or SAP Analytics Cloud are not prerequisites of SAP S/4HANA Embedded Analytics*
- *Most existing BI front-end tools are very well integrated with CDS views*
- *Time-to-market for majority of requirements is significantly reduced*
- *Courses and online training materials are already available*

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your session evaluation.



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