

TEC206 – Architecture and Components of SAP S/4HANA

Speakers

Las Vegas, Oct 19 - 23

- Rudolf Hois

Barcelona, Nov 10 – 12

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Agenda

- SAP S/4HANA – Main architecture principles
- Cloud first is a must
- Relation between SAP ERP and SAP S/4HANA
- Extensibility capabilities of SAP S/4HANA
- Major simplifications and its management

SAP S/4HANA – Main architecture principles

Principle of ONE – The key driver for simplification

Many of **redundant frameworks, data models, user interfaces** and its derived **complexity** is based on the fact that in former times **similar solutions** have been build based on **different technologies**. One prominent example is the **Dual Stack** of **AS ABAP** and **AS JAVA** where at the beginning a lot of synergies where planned but have never been realized. As a result we got **different development languages** and **environments**, **different software production processes**, **software lifecycle mechanisms**, **software qualities/standards**, and **user managements**, etc.

It is the clear goal of SAP S/4HANA to avoid any of such divergent and redundant development from the beginning.

This Principle has no limitations and is valid on each level - from the bottom of the stack (the HANA Database) to the top of the user interface (Fiori UIs).

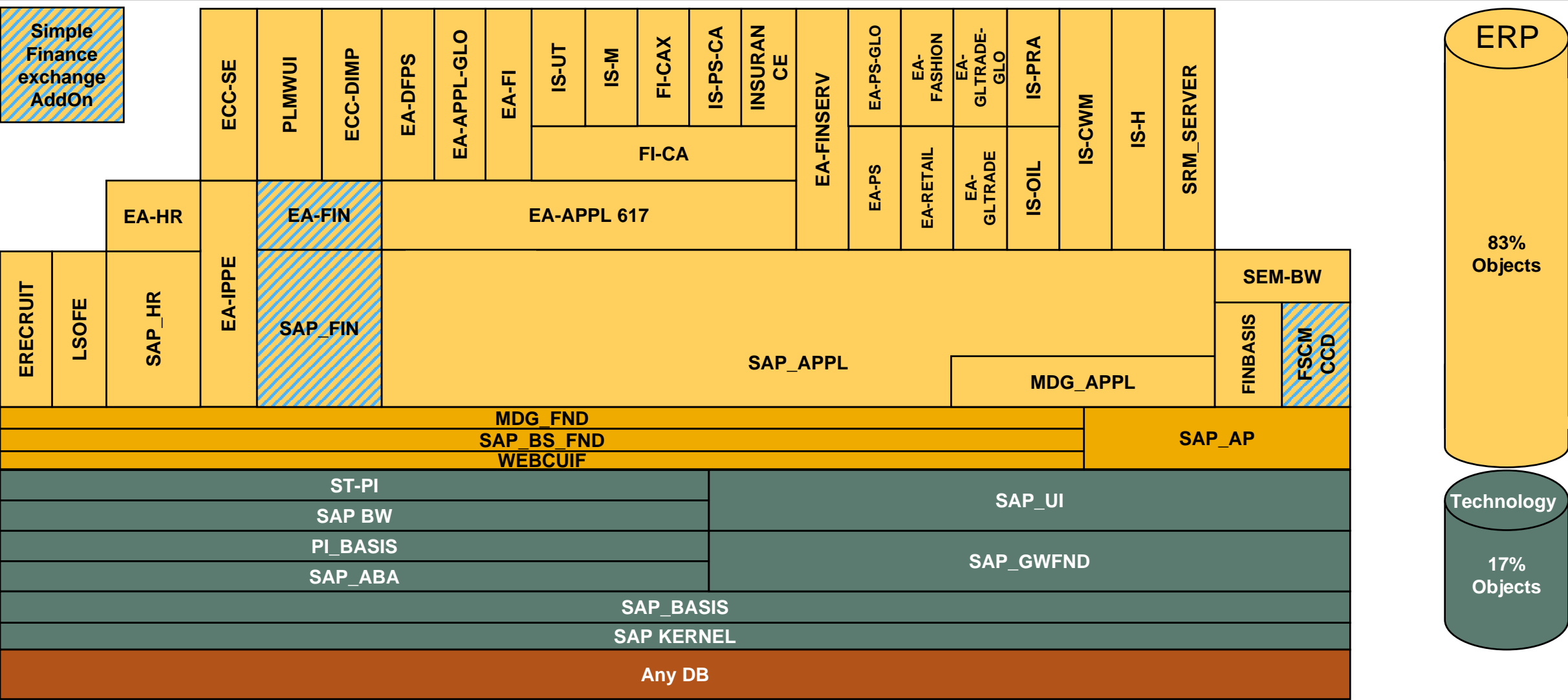
Each deviation has to be evaluated for its negative long term aspects in simplification and generated costs out of that.

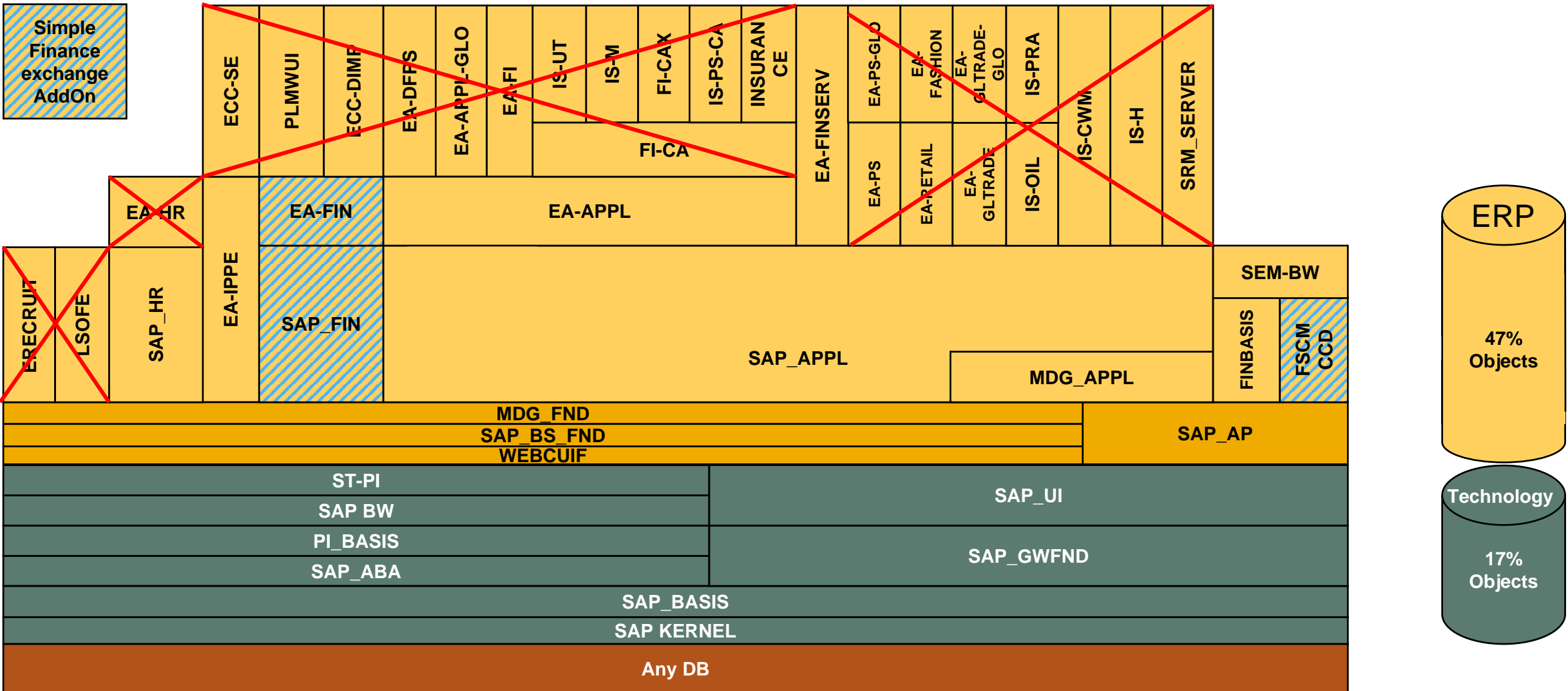
**Business Suite 7 Installation
Reference Library**

**First option for
to S/4HANA On**

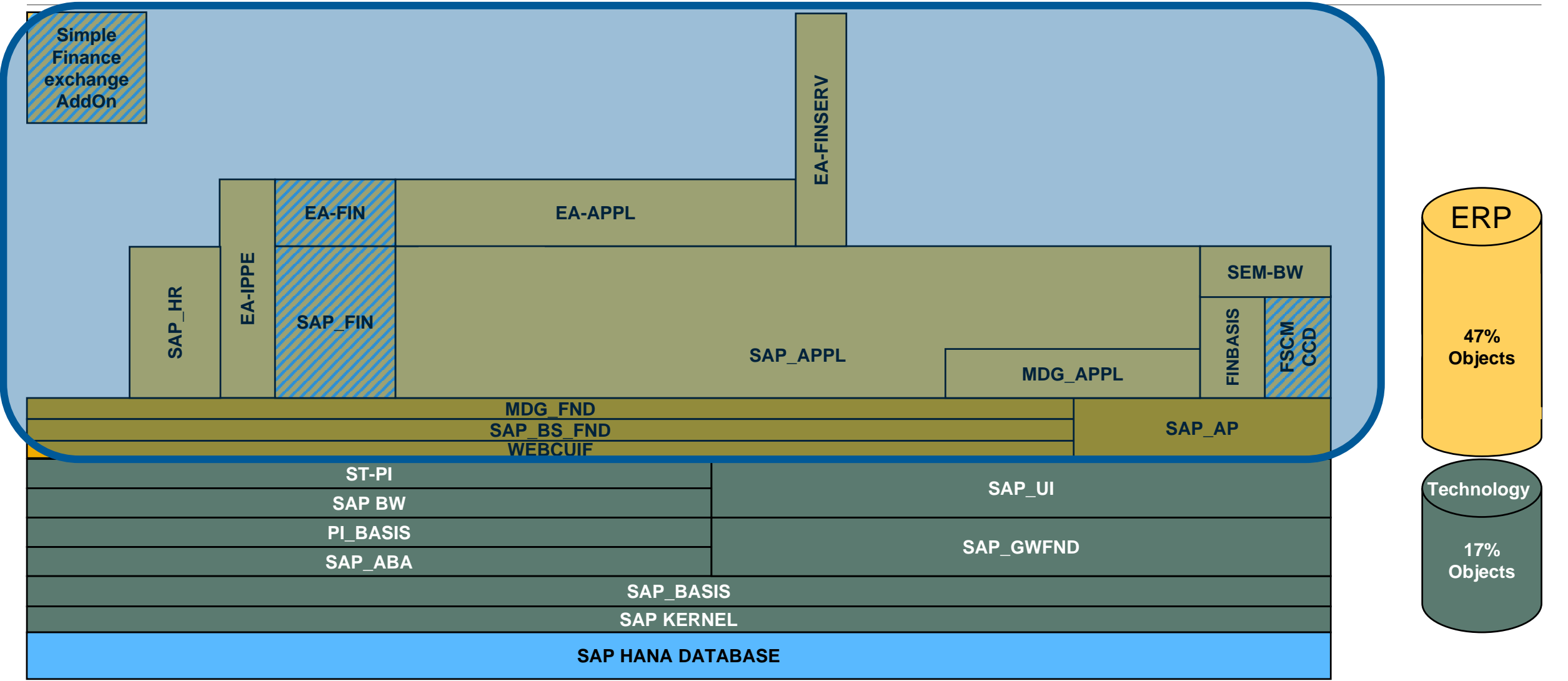


Business Suite on HANA: Current stack ERP EHP7 on-premise





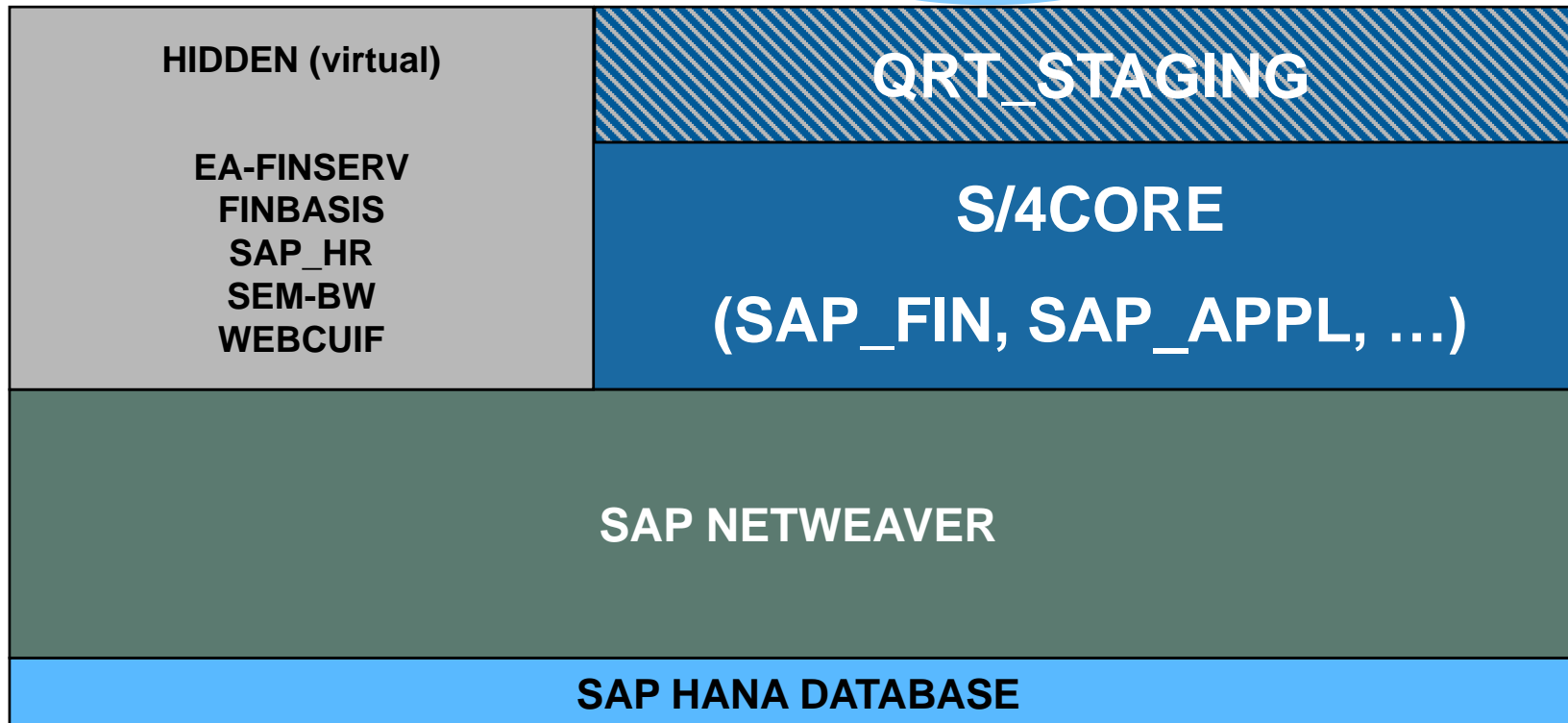
Reduced S/4HANA Core Stack → Merged to simple Components



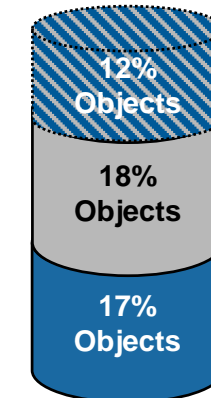
SAP S/4HANA Stack → 'Cloud first'

Simplification & Cloudification Layer

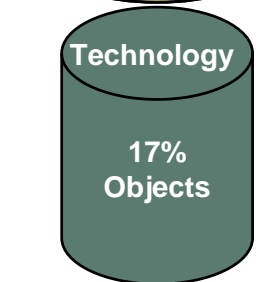
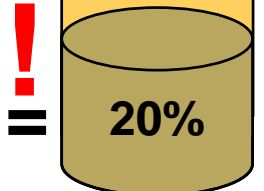
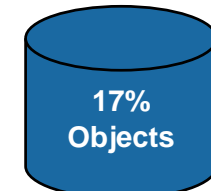
- OData + FIORI
- Simple Configuration
- Cloud Qualities
- Semantic Compatibility to SoH
- Principle of ONE
- Business Function Freeze



S/4HANA Core delivered



S/4HANA Core used

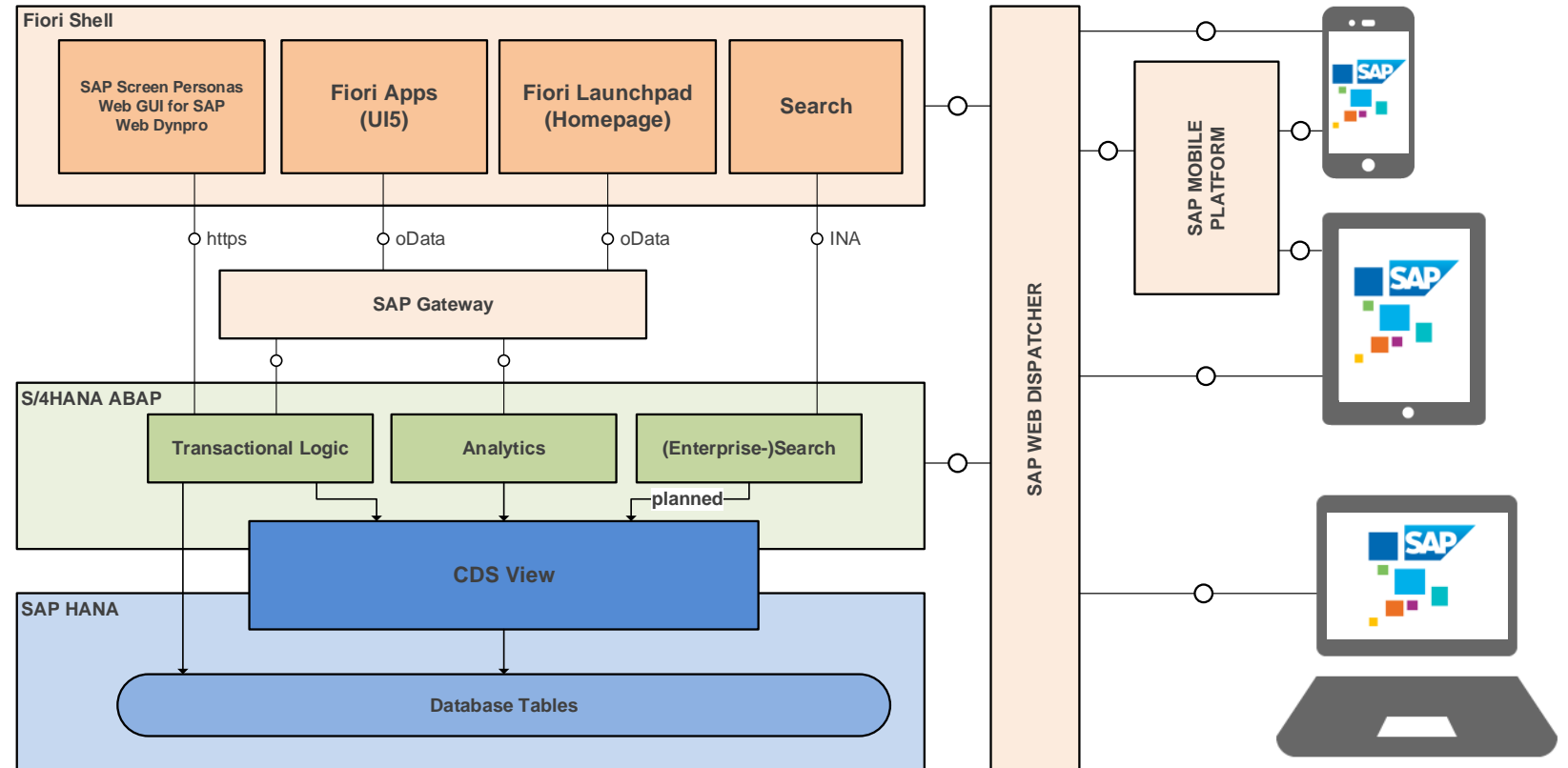


High-level stack architecture SAP S/4HANA

Logical view

SAP S/4HANA Architecture is much simpler as the classical Business Suite architecture

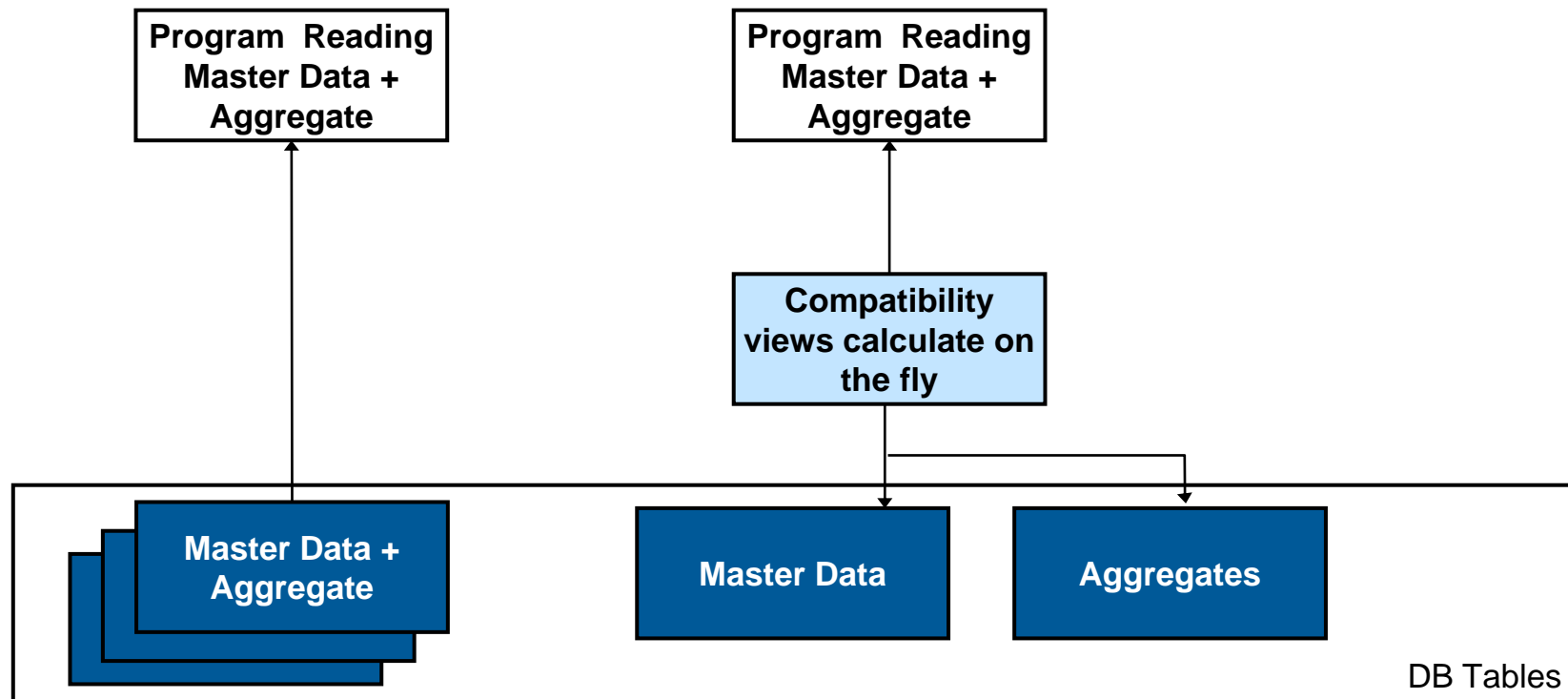
- Data structures
(Compatibility provided through Core Data Services)
- Application engines
- Launchpad / Fiori
(SAPGUI for Windows still available for compatibility reasons On Premise)



This is the current state of planning and may be changed by SAP at any time.

Investment protection

Non-disruptive with CDS Compatibility Views

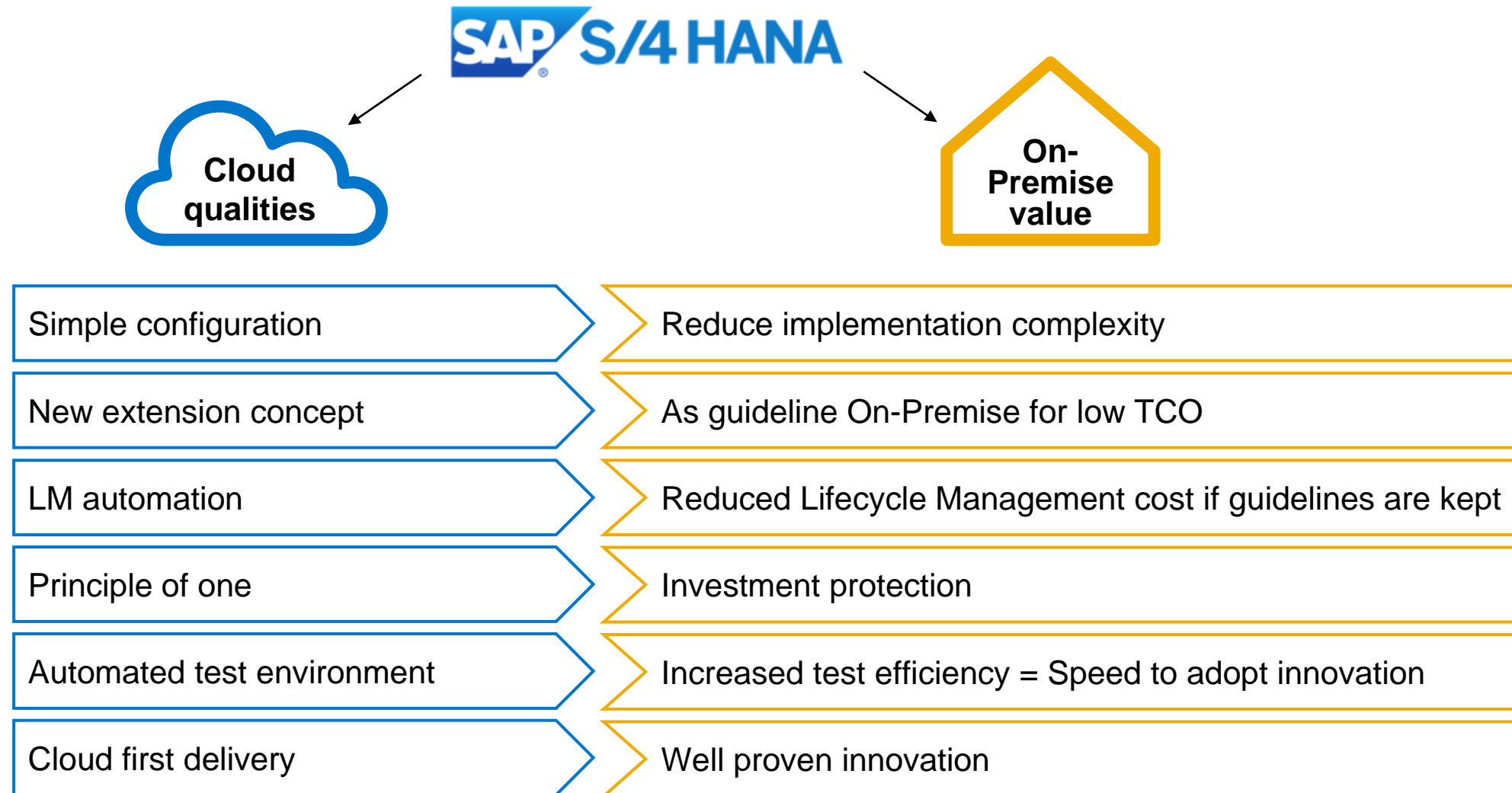


Suite on HANA

SAP S/4HANA

Cloud first is a must

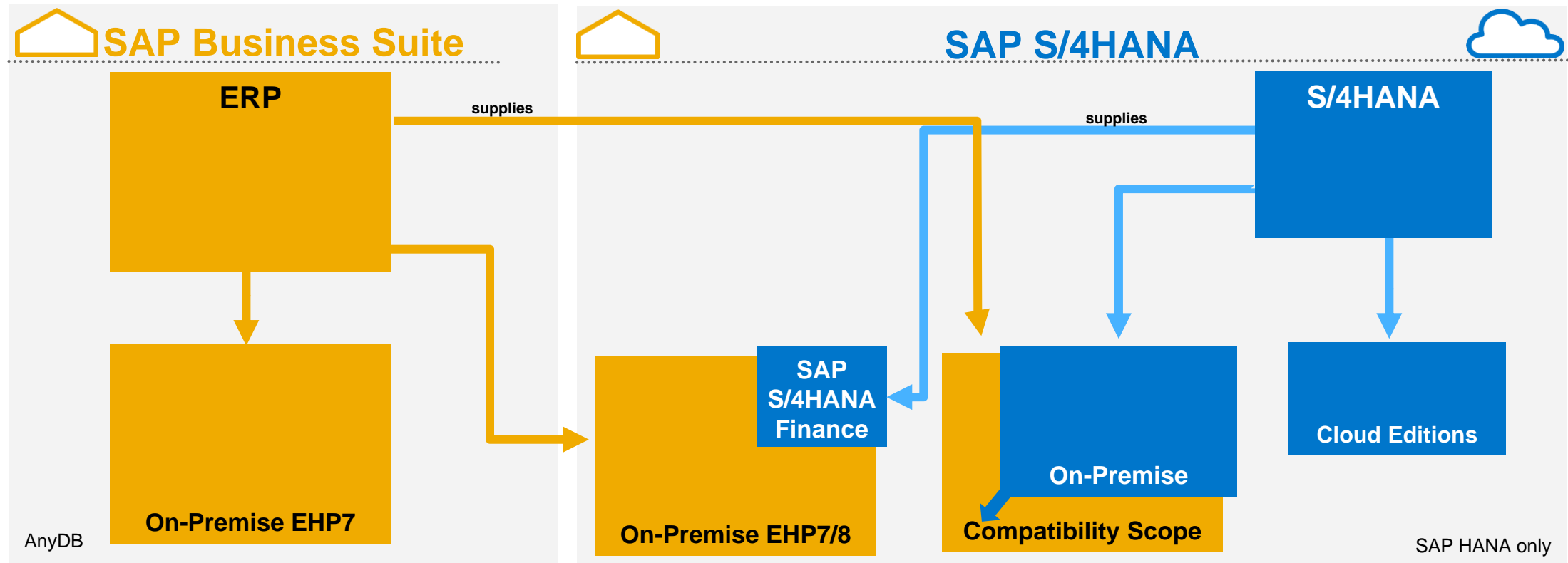
Cloud qualities do benefit also for on-premise → Cloud first



Relation between SAP ERP and SAP S/4HANA

Relation between SAP ERP and SAP S/4HANA

Lab Preview



**Classical ERP on any
DB incl. HANA**

**SAP S/4 HANA
Finance**
as innovation package

**SAP S/4 HANA On-
Premise Edition**
*Compatibility scope to
support system conversion*

**SAP S/4 HANA
Cloud Editions**
*Cloud Qualities also
available On-Premise*

Extensibility Capabilities of SAP S/4HANA

Overview of the extensibility capabilities of SAP S/4HANA

SAP S/4HANA

In-app extensibility:
Context-aware extensions, focus on tight integration

Side-by-side extensibility with SAP HANA Cloud Platform:

Learn from the outside, weave external content
into your solutions



Key User Extensibility



- Custom fields and tables, analytics and forms extensibility
- Change or add business rules and business logic (cloud ABAP Web editor)

Managed Extensibility



- Designed with ABAP programming language to be cloud lifecycle-stable

Classic Extensibility



- Full access to ABAP (for example, Eclipse)

Extensibility based on SAP HANA Cloud Platform



- Enable an SAP Fiori® and mobile user experience
- Integrate with other cloud solutions (for example, from SuccessFactors and Ariba, both SAP companies) and third-party solutions
- Take advantage of application services for SAP HANA Cloud Platform (cloud portal, mobile documents, output management, etc.)
- Use a full-fledged development platform to build extension applications (Java, SAP HANA native development)

SAP S/4HANA

ABAP Custom Code has to be adapted

	Technical Requirements for Custom Code	Driver	Classic Extensibility (On-Premise)	Managed Extensibility (Cloud)
General Migration Topics for Custom Objects	Unicode enablement, in scope of SAP S/4HANA, adapt to simplification change (e.g. deletion of index/aggregate tables), HANA enabled (mandatory changes, e.g. order by, ...)	Simplification	Must	Must
	Blacklisted technology that is not allowed according to SAP S/4HANA architecture guidelines (no batch input, no workflow technology besides SAP Business Workflow)	Simplification	Should	Must
	Check that custom code is still required (not unused, not in standard)	Effort Reduction	Should	Should
Reduce Operation Cost for Custom Code	No modifications	Cost of Operations, Security, Separation of Concerns	Should	Must
	Only allowed extension techniques (clearly modification free: no implicit enhancement spots)			
	No blacklisted techniques that prevent scannable code (no dynamic programming, no code generation)			Must
	Only SAP objects used that are whitelisted		Should	Must
Quality Standards	SAP S/4HANA product (security) and quality standards	Product Quality	Should	Must
	Optimized for HANA (recommended changes)			
Fiori	Fiori user interfaces (no Dynpro, WebDynpro)	Simplification	Should	Should

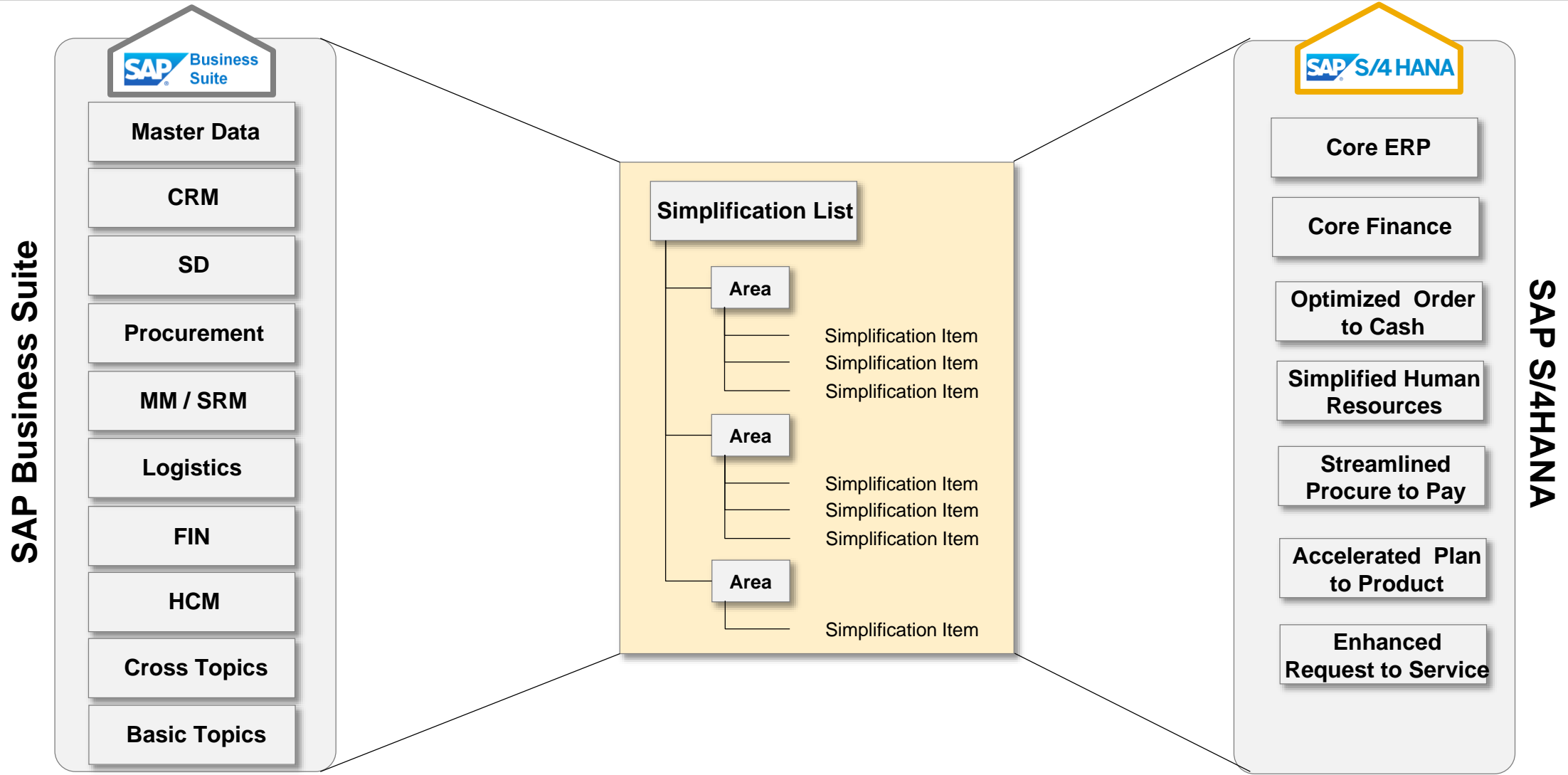
Major Simplifications and its management

Major simplifications of SAP S/4HANA as of today

- **Data model simplification of financials and inventory management**
- **One single valuation → Material Ledger (no moving average price on MBEW)**
- **Business Partner is Leading → Customer Vendor Integration (CVI) mandatory**
- **Discrete Industry Mill Products (DIMP) back to Core Application Layer**
- **Simplification of LAMA → Long Material Number MATNR**
- **Deprecation of embedded BW based on redundant data**
- **Planned Deprecation of Logistic Information System (LIS)**
- **General Deprecation process ~ 70.000 Main Repository Objects**
 - E.g. Deprecation of Foreign Trade (SD-FT)
 - E.g. Remaining Beverage Solution (SD-SLS-PLL)

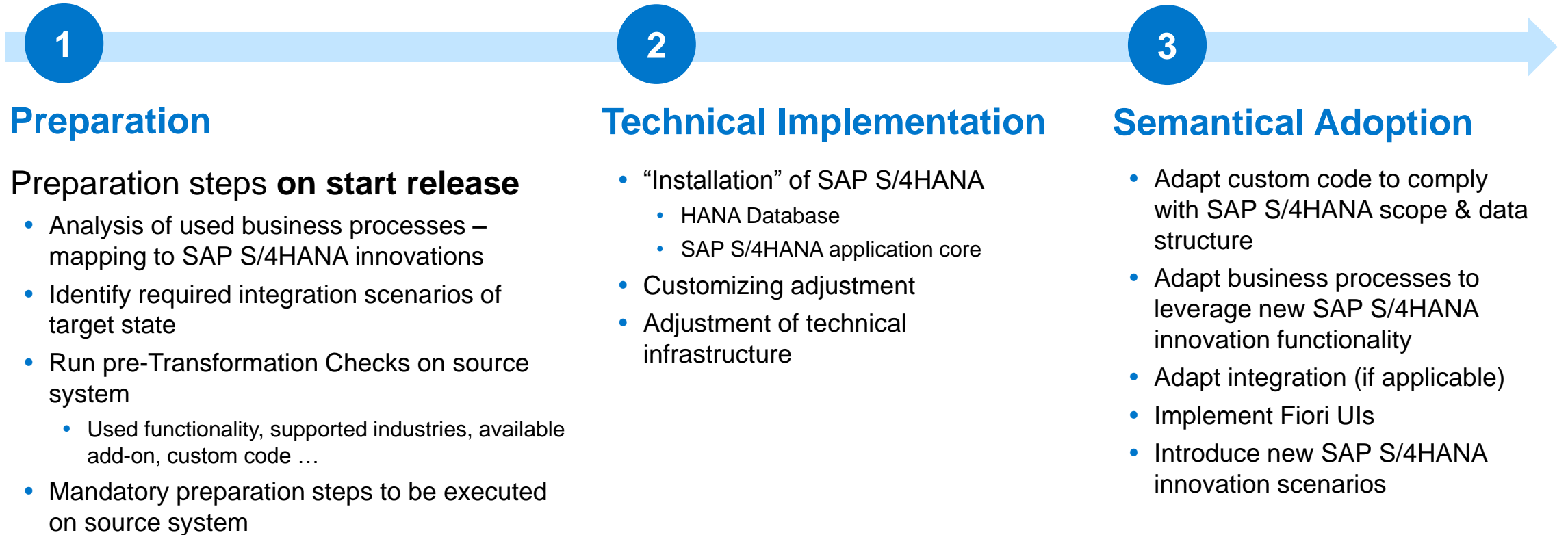
SAP S/4HANA

Simplification list



Transition to SAP S/4HANA

Major elements of deploy phase in transition process



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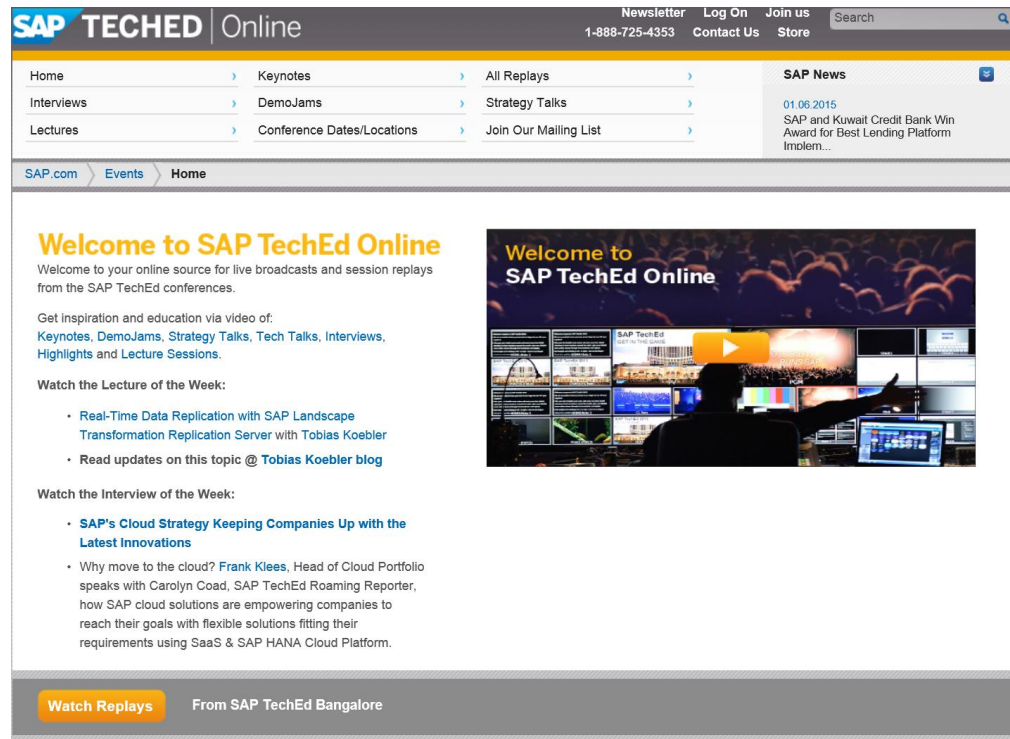
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Thank you



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