

Introduction to SAP S/4HANA

Next Generation Business Suite

Curriculum Information



Curriculum Version

- Global Bike 4.1
- Last Update: June 2022
- Software used
 - S/4HANA 2020
 - Fiori 3.0
- Prerequisites
 - none

Module Information



Authors

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Target Audience

- Beginner to Advanced

Module Information



Learning Objectives

At the completion of this module, you will:

- Describe the SAP vision of the Intelligent Enterprise
- Be able explain the basic concepts of an Enterprise Resource Planning solution based on the SAP S/4HANA system.
- Explain how to use the SAP Fiori User Interface to interact with the S/4HANA system

Agenda



SAP – The Intelligent Enterprise



Fast Facts about SAP S/4HANA



What's New?



Transition to SAP S/4HANA

SAP – The Intelligent Enterprise

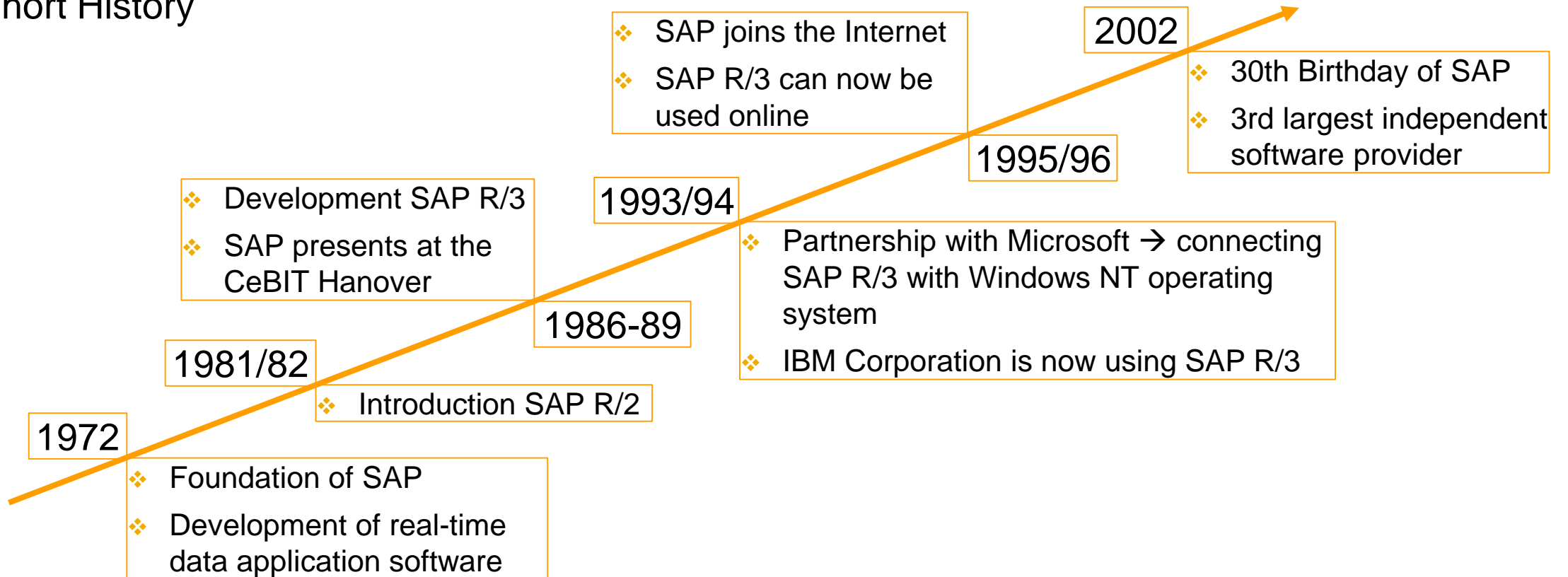
- Market leader in enterprise application software
- One of the world largest independent software manufacturer
- 400,000 satisfied Customers in 190 countries
- SAP enables companies to
 - Streamline processes
 - Use live data
 - Predict customer trends
 - Connect entire businesses

**Intelligence will reinvent industries and
change business forever**

**Best-run technologies and solutions
deployed end-to-end for your industry.**

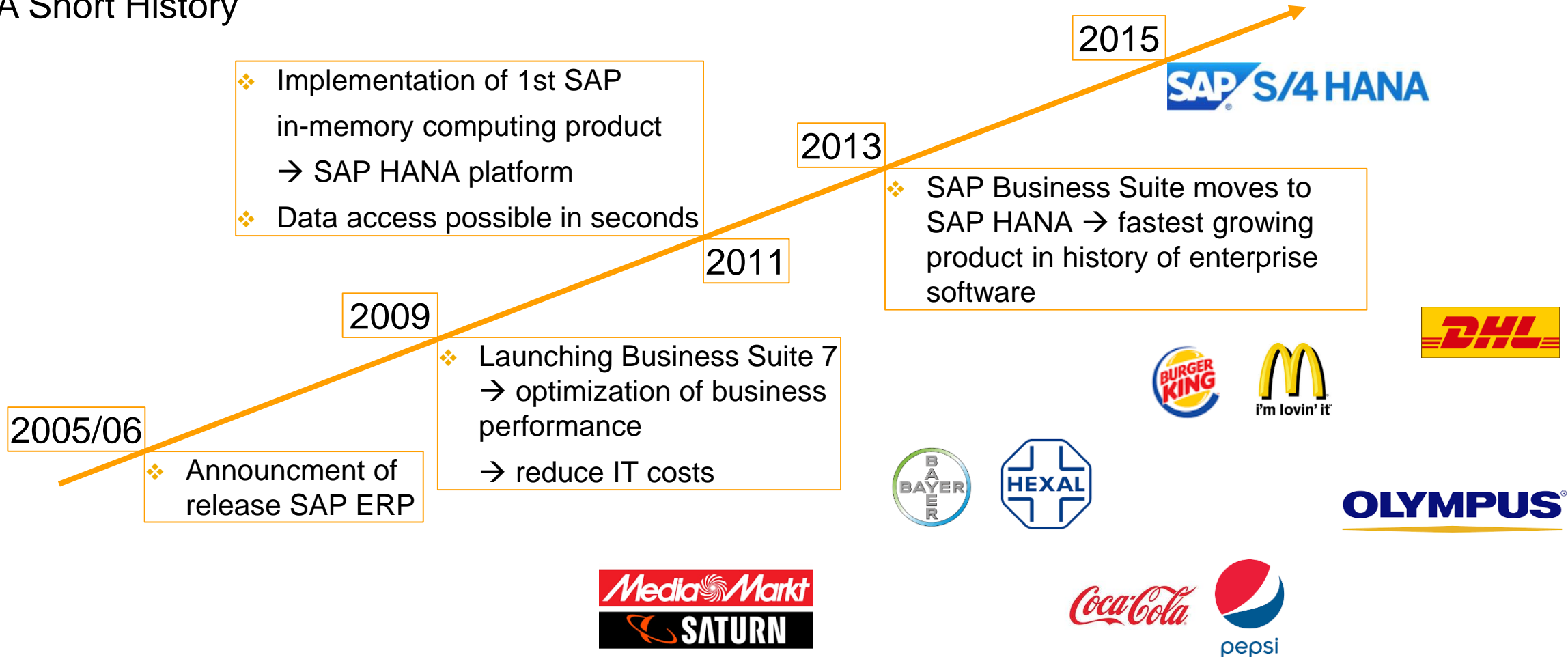
SAP – Run Simple

■ A Short History



SAP – Run Simple

■ A Short History



Agenda



SAP – The Intelligent Enterprise



Fast Facts about SAP S/4HANA



What's New?

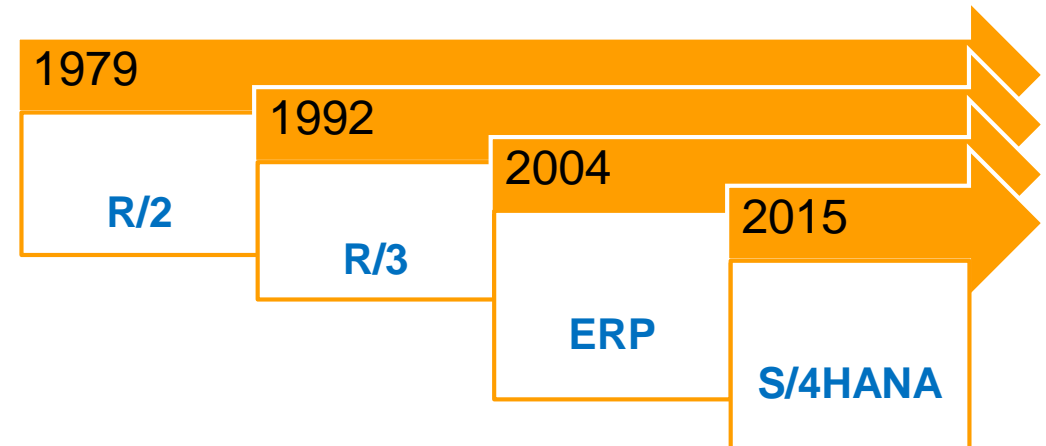


Transition to SAP S/4HANA

What's New?

■ SAP S/4HANA ...

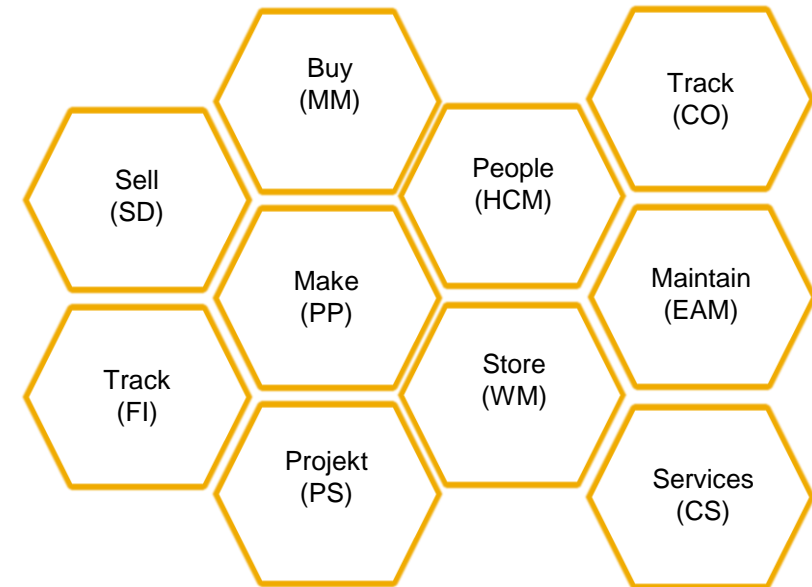
- ... is the next generation Business Suite
- ... is the biggest innovation since SAP R/3
- ... connects people, business networks and devices
- ... works in real time
- ... represents efficiency, simplicity and innovation
- ... master data is managed centrally, for example partners, customers and vendors



Fast Facts about SAP S/4HANA

Enterprise Resource Planning (SAP ERP)

- Enables a company to support and optimize its business processes
- Helps the organization run smoothly
- Real-time environment, Scalable and flexible
- Collections of logically related transactions within identifiable business functions



Fast Facts about SAP S/4HANA

Data Types in ERP Systems

?	?	?
...

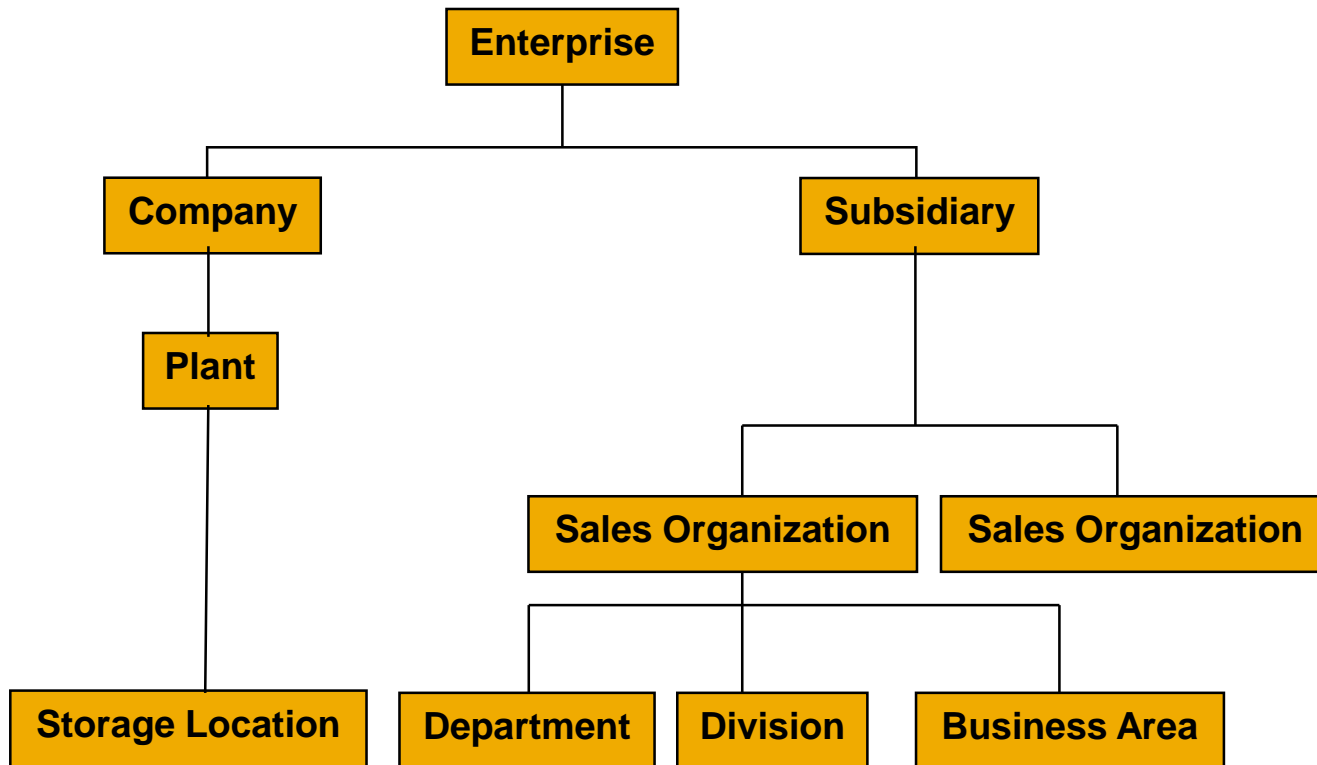
Fast Facts about SAP S/4HANA

Data Types in ERP Systems

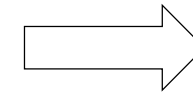
Organizational Data	Master Data	Transaction Data
Company Code	Person	Purchase Order
Plant	Material	Invoice
Storage Location	Customer	Quotation
Distribution Channel	Vendor	Sales Order
Purchasing Organization	Work Centre	Transportation Order
...

Fast Facts about SAP S/4HANA

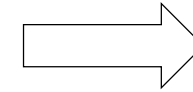
Organizational Unit



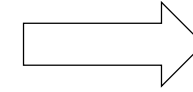
SAP Terminology:



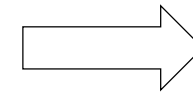
Client



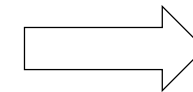
Company Code



Plant



Sales Organization



**Division
Storage Location**

Fast Facts about SAP S/4HANA Master Data

- Stored for a long time and seldom changed
- Represent logically grouped data like:
 - Customer Master
 - Material Master
 - Vendor Master
 - General Ledger accounts

The screenshot displays the SAP S/4HANA Product Master Data interface for a 'Deluxe Touring Bike (black)' with material number 'DXTR1000'. The interface includes a top navigation bar with the SAP logo, a search icon, and a user profile icon labeled 'LL'. Below the title, there are 'Edit', 'Copy', and share icons. The main content area is divided into two sections: 'Basic Data' and 'Product Compliance'. The 'Basic Data' section contains the following information:

Field	Value
Product Type	Finished Product (FERT)
Base Unit of Measure	Each (EA)
Revision Level	
Product Category	Product
GTIN	
Product Group	Finished Bikes (BIKES)
GTIN Category	
Division	Bicycles (BI)
Created By	
Old Product Number	—
Created On	19.08.2021, 11:55:19
Batch Management Required	No
Last Changed By	
Marked for Deletion	No
Last Changed On	23.08.2021, 12:36:09

A 'Show More' link is located at the bottom right of the 'Basic Data' section. The top navigation bar also includes tabs for 'General Information', 'Product Compliance', 'Components', 'Texts', 'Sales', 'Storage', and 'Warehouse Management'.

Fast Facts about SAP S/4HANA

Transaction Data

- Transaction data is the system record of business event.
- Depending on the business event, different master data and organizational data will be referenced
- For example, during a sales order business event, the following data is stored
 - Organizational level: client, company code, sales organization
 - Master data: customer, material, pricing (condition)
 - Situational data: date, time, person, amount

Create Inquiry: Overview

Inquiry: Net Value: USD

Sold-To Party: The Bike Zone 100 / 2144 N Orange Ave / Orlando FL 32804

Ship-To Party: The Bike Zone 100 / 2144 N Orange Ave / Orlando FL 32804

Cust. Reference: Cust. Ref. Date:

Sales **Item Overview** Item detail Ordering party Procurement Shipping Reason for rejection

Valid From: Valid To:

* Req. Deliv. Date: Expect. Ord. Val.: USD

Group

All Items

	Item	Material	Req. Segment	Order Quantity	SU	Altitm
<input type="checkbox"/>	10	DXTR1100			5 EA	
<input type="checkbox"/>	20	PRTR1100			2 EA	
<input type="checkbox"/>						

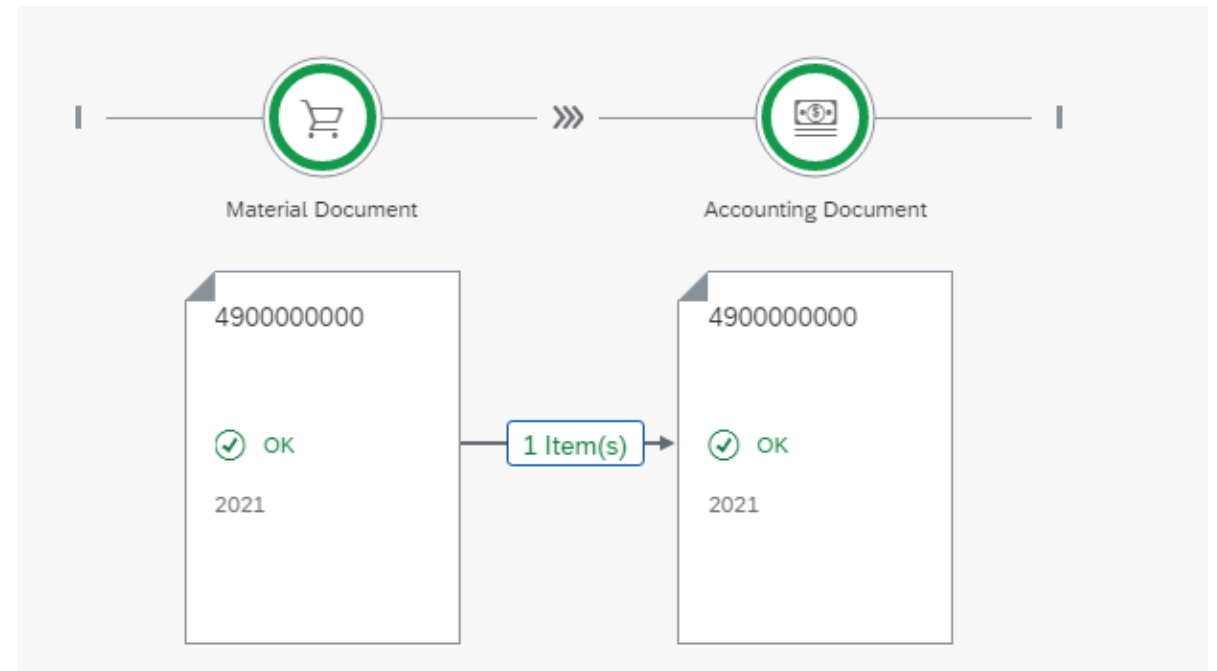
Fast Facts about SAP S/4HANA Documents

- Transactions are data sets that are generated if a business transaction was executed.
- Is a record of the business transaction
- Includes all relevant predefined information from the master data and organizational entities
- Example:
 - Sales Document
 - Purchasing Document
 - Material Document
 - Accounting Document



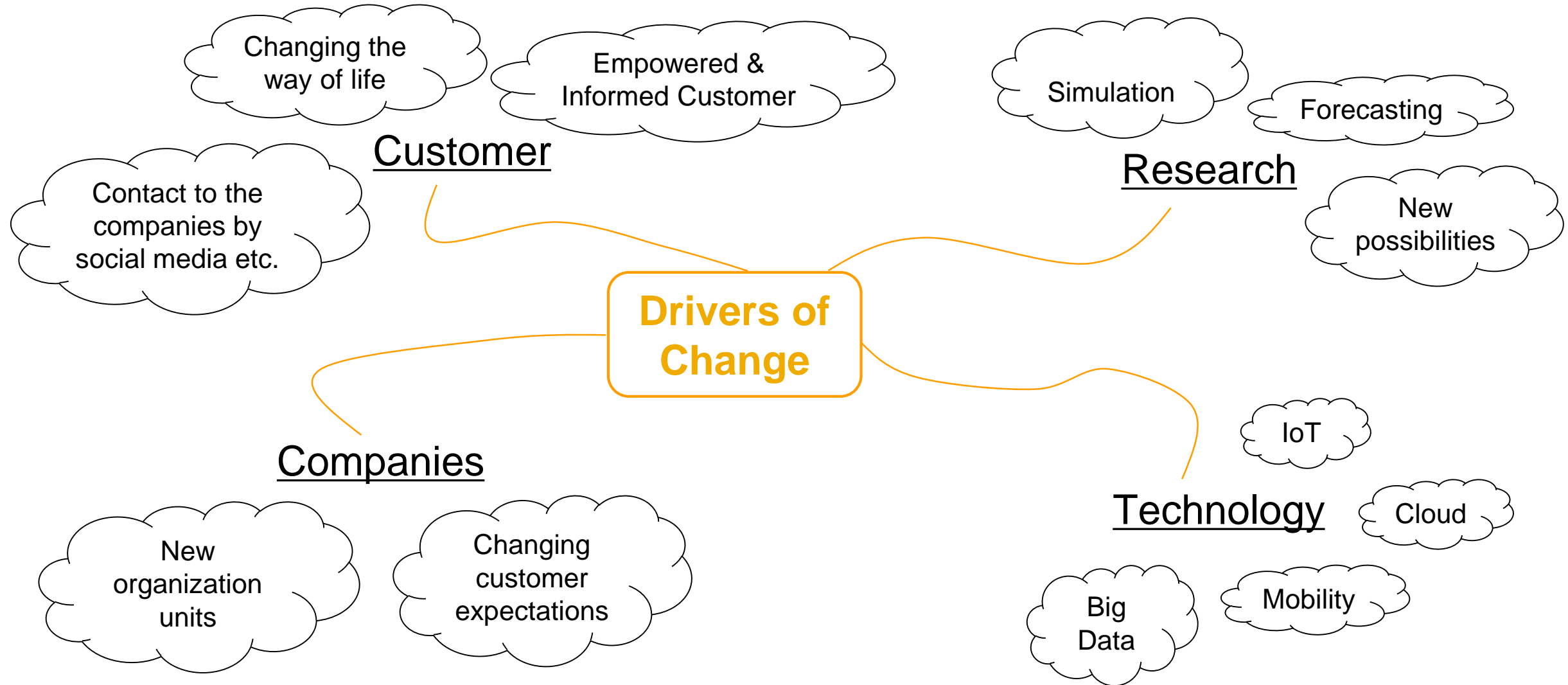
Document Flow

- The document flow as well as the order status allow the setting of the status at any point in time
- SAP revises the status every time a change in a document takes place



Fast Facts about SAP S/4HANA

Digital Transformation - Why?

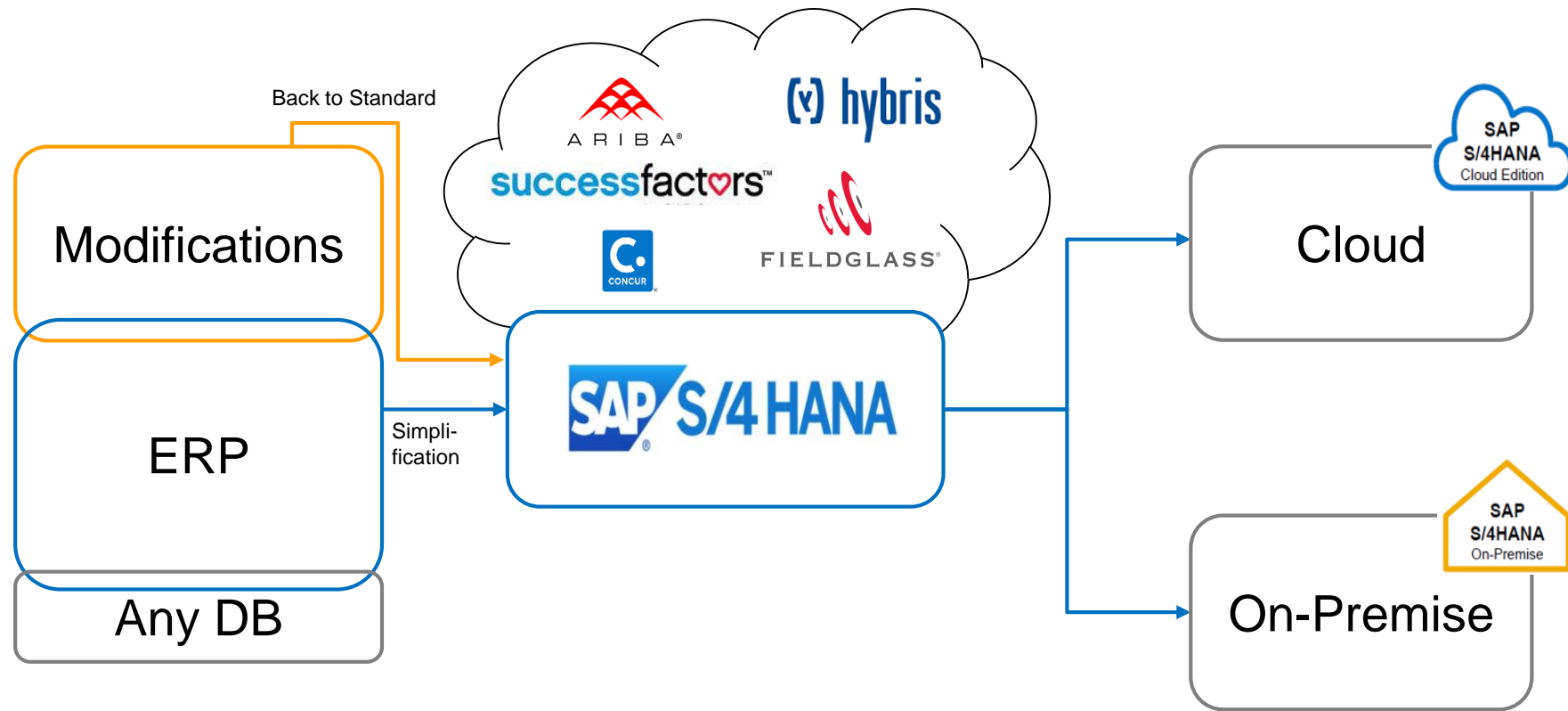


Fast Facts about SAP S/4HANA

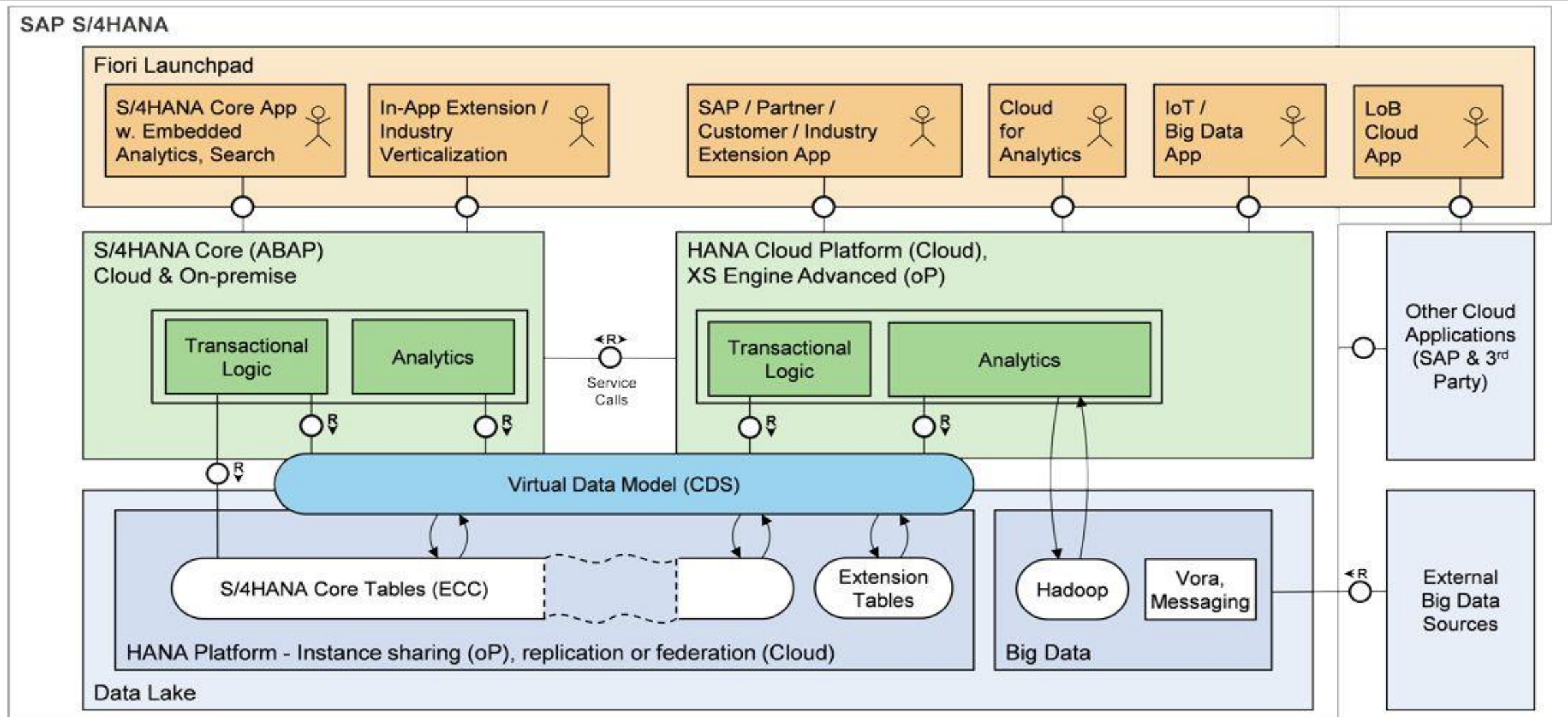
- S/4HANA is the digital core of the company that enables digital transformation.



Fast Facts about SAP S/4HANA



SAP S/4HANA Architecture



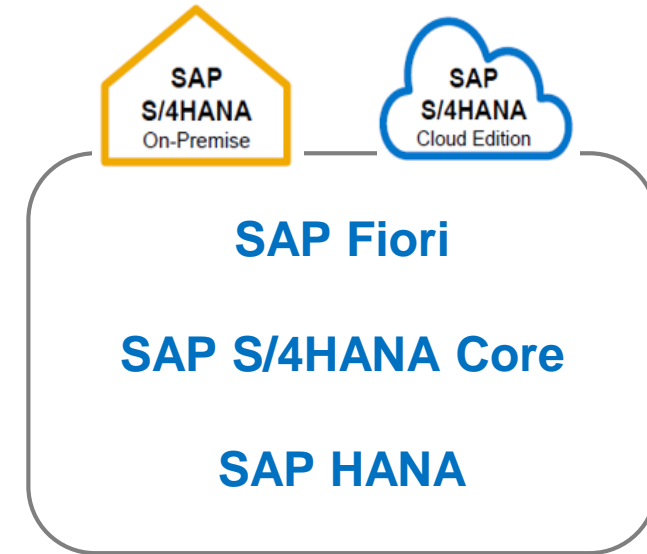
Fast Facts about SAP S/4HANA

On-Premise vs. Cloud

■ SAP S/4HANA ...

... Choose between Cloud and On-Premises

- Cloud and On-Premise can be used hybridly without losing the company's integration
- Possible migration of SAP Business Suite customers



Fast Facts about SAP S/4HANA

On-Premise vs. Cloud



Subscription Licensing

→ Deployment in the private cloud, maintained by SAP

- SAP provides system and controls maintenance
- Automatic participation in quarterly innovation upgrades
- In-App extensibility with limited ABAP
- Current release cycles
- SAP ERP embedded



Traditional licensing

→ Traditional licensing with customer control of deployment and maintenance

- Private control of deployment and maintenance
- Hardware at companies location
- Privately controlled data
- Fewer release cycles
- Individual requirements possible
- Traditional ABAP extensibility up to core modification

Fast Facts about SAP S/4HANA

Optimization Levers

■ What needs to be optimized?

❖ Efficiency

- Accelerate execution
- Automate process steps
- Digital out-tasking

❖ Effectiveness

- Speed up action
- De-layer process
- Raise process intelligence

❖ Agility

- Process flexibility
- Organizational agility
- Assimilate process innovation

Fast Facts about SAP S/4HANA

Optimization Levers - How?

- Optimization levers applied on ... Market to the Segment of One

Business	IT
<ul style="list-style-type: none">• Real-time performance and information• Real-time operation and collaboration• Data-driven market• Cross-channel integration• Merge structured and unstructured data	<ul style="list-style-type: none">• Removing of locking issues• Simple data model• Removing of indices• Faster handling of more numbers of documents• Higher volume of customer data• Easy maintenance

❖ Efficiency



❖ Effectiveness



❖ Agility



Fast Facts about SAP S/4HANA

Optimization Levers - How?

- Optimization levers applied on ... Real Time Inventory Management

Business	IT
<ul style="list-style-type: none">• Real-time inventory management• Real-time product availability• Increased inventory turnover• Reduced batch size• Faster operational reporting• Fewer stockouts• Better order fulfillment• Lower safety stocks	<ul style="list-style-type: none">• No separation of data entities from different tables• Parallel postings and processes• Faster reporting• Frequent updates• 1 document table instead of 26 aggregate tables• Reduced memory footprint• New data-based architecture

❖ Efficiency



❖ Effectiveness



❖ Agility



Fast Facts about SAP S/4HANA

Optimization Levers - How?

- Optimization levers applied on ... Accelerated Material Requirements Planning

Business	IT
<ul style="list-style-type: none">• Real-time data• MRP run on request• System-based recommendations for faster decision making• State-of-the-art cockpit• Costs savings• Improved just-in-time delivery• Increased inventory turnover	<ul style="list-style-type: none">• Single source of truth• Merging of OLAP & OLTP• Better system handling• Opportunity to run MRP centrally• Better customer solutions• Reduced data footprint• Better system performance

❖ **Efficiency** ✓

❖ **Effectiveness** ✓

❖ **Agility** ✓

Agenda



SAP – The Intelligent Enterprise



Fast Facts about SAP S/4HANA



What's New?

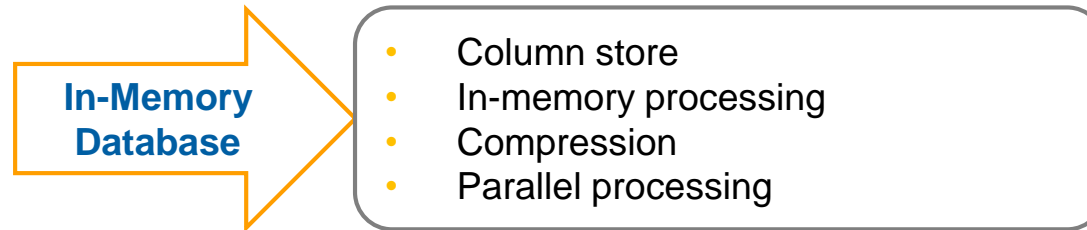


Transition to SAP S/4HANA

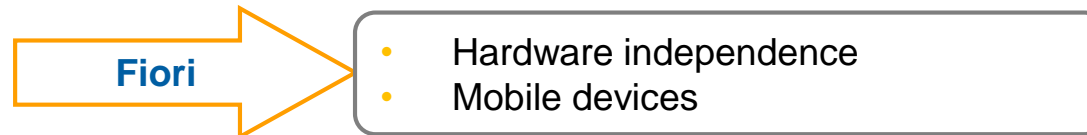
What's New?

■ SAP S/4HANA ...

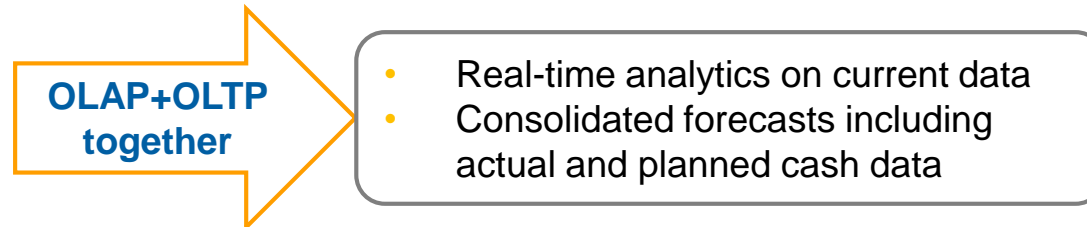
... works with in-memory



... has a new and modern design

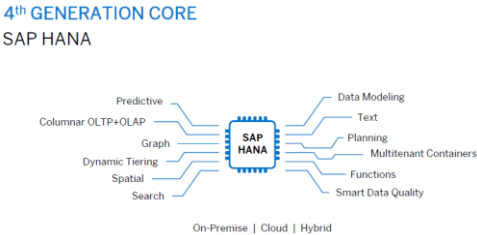
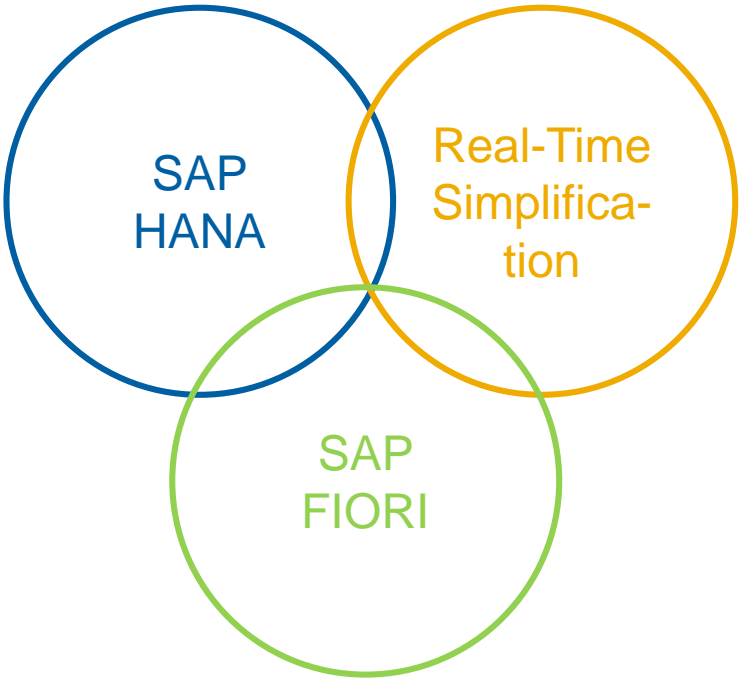


... works with new technology

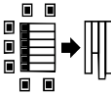
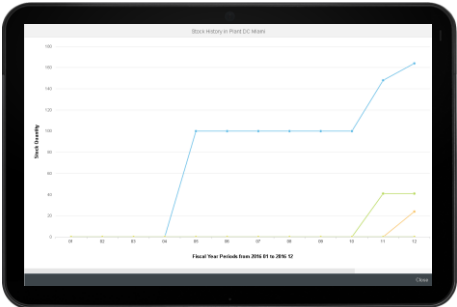


What's New?

Innovation & Simplification



OLAP+OLTP together

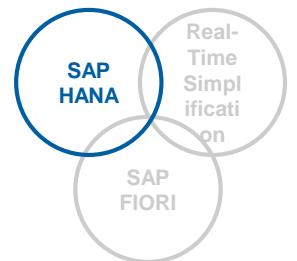


Any Attribute as an Index

What's New?

SAP HANA

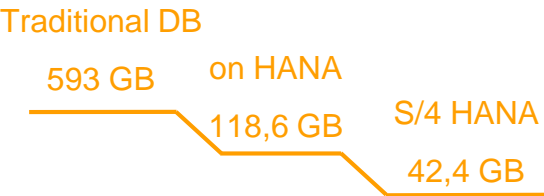
- SAP HANA is an in-memory database that allows you to process data very fast
- But SAP HANA can do way more with its different processing engines



What's New?

Real Time Simplification

- Example of data compression

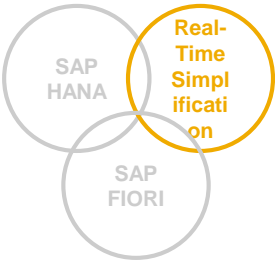


A typical booking transaction addressed 15 tables.
 → Now it only impacts 4 tables.



		Table sizes of customer system	
Table	Description	ERP Financials in Suite on HANA	Simple Finance on HANA
BKPF	Accounting documents	1.2 GB	1.2 GB
BSEG	Accounting document line items	4.5 GB	** 5.0 GB
BSID	Open items Accounts Receivable	0.1 GB	
BSIK	Open items Accounts Payable	0.0 GB	
BSIS	Open items General Ledger	* 23.2 GB	
BSAD	Cleared items Accounts Receivable	3.3 GB	
BSAK	Cleared items Accounts Payable	2.1 GB	
BSAS	Cleared items General Ledger	* 5.5 GB	
KNC1	Totals Accounts Receivable	0.1 GB	
LFC1	Totals Accounts Payable	0.0 GB	
GLT0	Totals General Ledger	0.0 GB	
Total (of above tables)		40.0 GB	6.2 GB

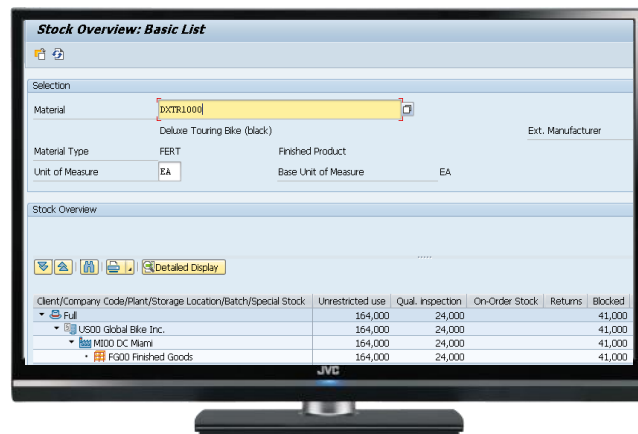
Traditional Database Architecture	S/4HANA Data Model Principles
<ul style="list-style-type: none"> Normalized data modeling third normal form Avoidance of unwanted redundancies Avoidance of inconsistencies and anomalies <p><u>Disadvantages</u></p> <ul style="list-style-type: none"> Frequent use of redundant data to increase the performance of e.g. data aggregation Higher effort to update redundant data 	<ul style="list-style-type: none"> Storage of data in denormalized form Single source of data No longer need for redundant data storage for tasks such as aggregation Processing of aggregation and analytics on the fly Check for inconsistencies and anomalies due to denormalization no longer a critical task



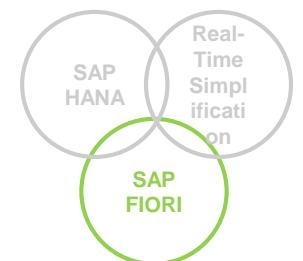
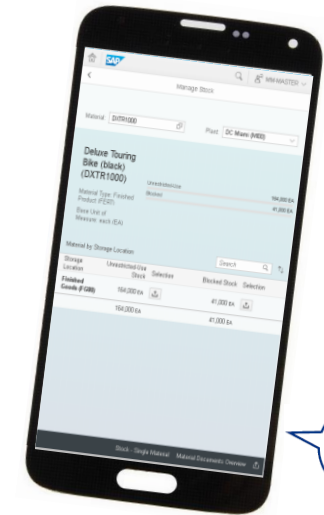
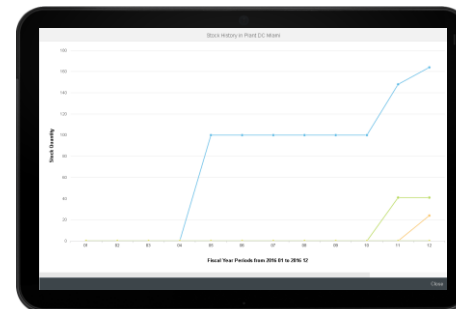
What's New?

SAP FIORI

- SAP S/4HANA provides SAP Fiori user interface and experience



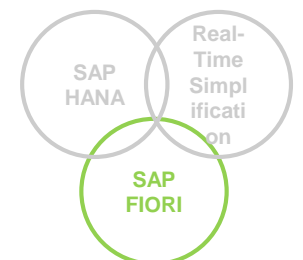
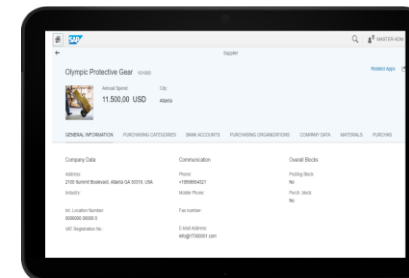
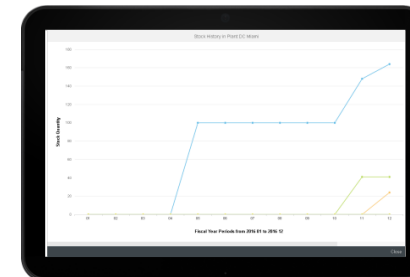
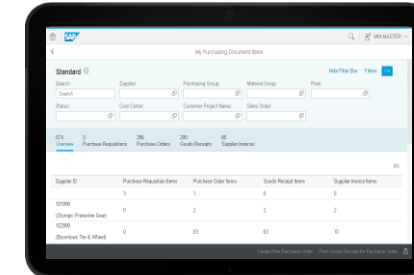
- SAP S/4 HANA**
- Independent of hardware
 - Real-time



What's New?

SAP FIORI

- SAP Fiori offers three application types:
- Transactional Apps:
Access to tasks like create, change or display process with guided navigation
- Analytical Apps:
Visual overview about business data
- Factsheet:
View essential information about objects and contextual navigation between related objects



Agenda



SAP – The Intelligent Enterprise



Fast Facts about SAP S/4HANA

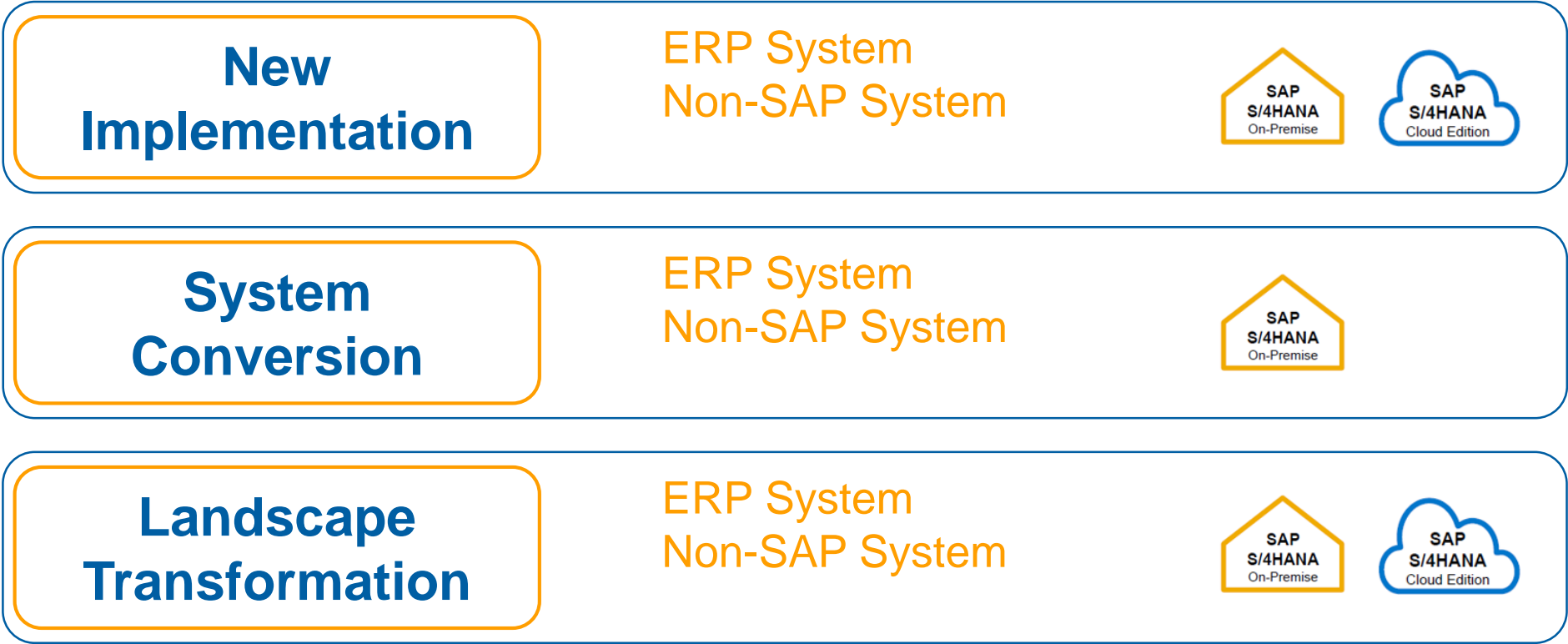


What's New?



Transition to SAP S/4HANA

Transition to SAP S/4HANA



Transition to SAP S/4HANA

New Implementation

Scenario description

- **New implementation** of SAP S/4HANA
- e.g. for customers migrating a legacy system (also known as “greenfield” approach)

Benefits for the customer

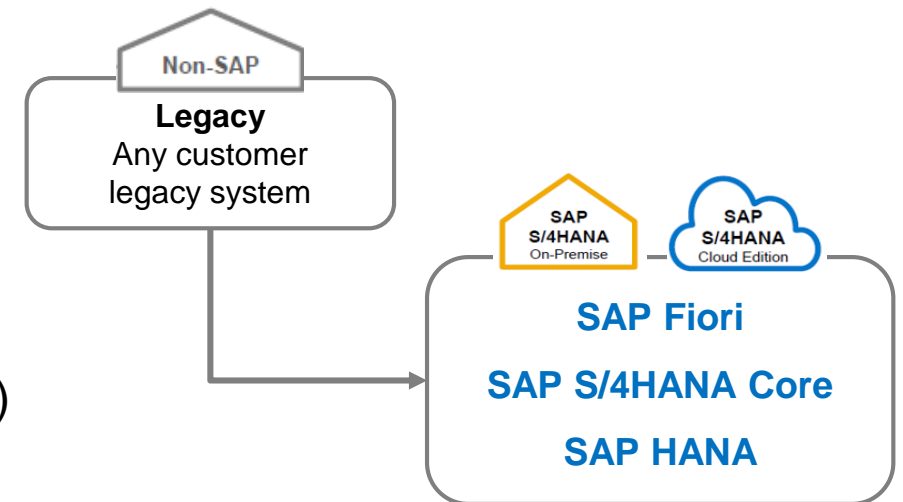
- Reengineering and process simplification based on ready-to-run business processes
- Predefined migration objects & best practices available with guided configuration
- Reduce time to value and customer total cost of ownership
- Rapid adoption of new innovations

Project duration parameters

- Number of data migration objects (Material, Customer, Vendor, etc.)
- Volume and complexity per data migration object

1. Installation SAP S/4HANA
2. Initial data load from source system

Tools used are: **SAP Data Services (SAP DS)** for On-Premise
SAP Landscape Transformation (SAP LT) for Cloud



Transition to SAP S/4HANA

System Conversion

Scenario description

- Customers who want to **convert** their **current system** into an SAP S/4HANA system
- **Database, SAP NetWeaver** and **application** transition in one step

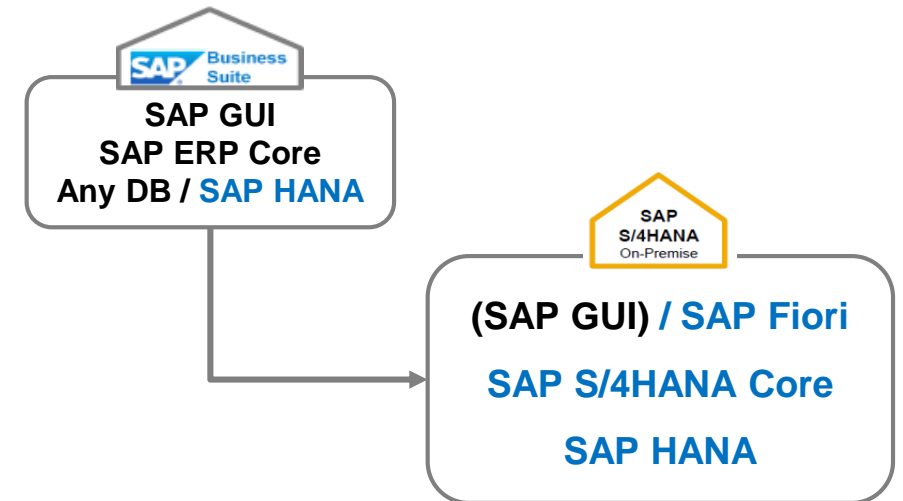
Benefits for the customer

- Migration without reimplementation
- No disruption for existing business processes
- Reevaluation of customization and existing process flows

Project duration parameters

- Technical: Number of systems and source database size
- Functional: Number of company codes, ledgers, operating concerns, etc.

1. Check add-ons and other solutions to ensure compatibility
2. Check components and customer code to validate further prerequisites
3. Run the conversion



Transition to SAP S/4HANA

Landscape Transformation

Scenario description

- Customers who want to **consolidate** their landscape or to **selectively transform** data into an SAP S/4HANA system

Benefits for the customer

- Selective data transformation allows a phased approach, focusing on parts of the business with highest ROI and lowest TCO
- System and landscape consolidation with harmonized/simplified processes and unified master data lead to lower TCO

Project duration parameters

- General: Depending on the selected sub-scenario (System Consolidation, Selective Migration, Central Finance)
- Specific: Number of systems to be consolidated, volume of selected data

1. Consolidation: Consolidate clients from different source systems into one new or existing SAP S/4HANA system using the SAP Landscape Transformation (SAP LT) tool.
2. Selective Data Transformation: Migration of selected SAP applications (e.g. Central Finance)
Tool used: SAP Landscape Transformation

