

# Introduction to SAP S/4HANA

Next Generation Business Suite

# Curriculum Information

---



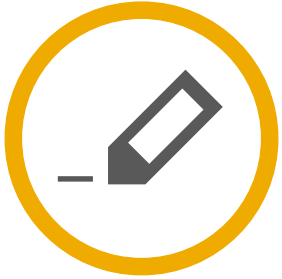
## Curriculum Version

---

- Global Bike 4.3
- Last Update: July 2025
- Software used
  - S/4HANA 2023
  - Fiori 3.0
- Prerequisites
  - none

# Module Information

---



## Authors

---

- Babett Ruß



## Target Audience

---

- Beginner to advanced
- Interest in logistics, finance and human resources

# 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

---

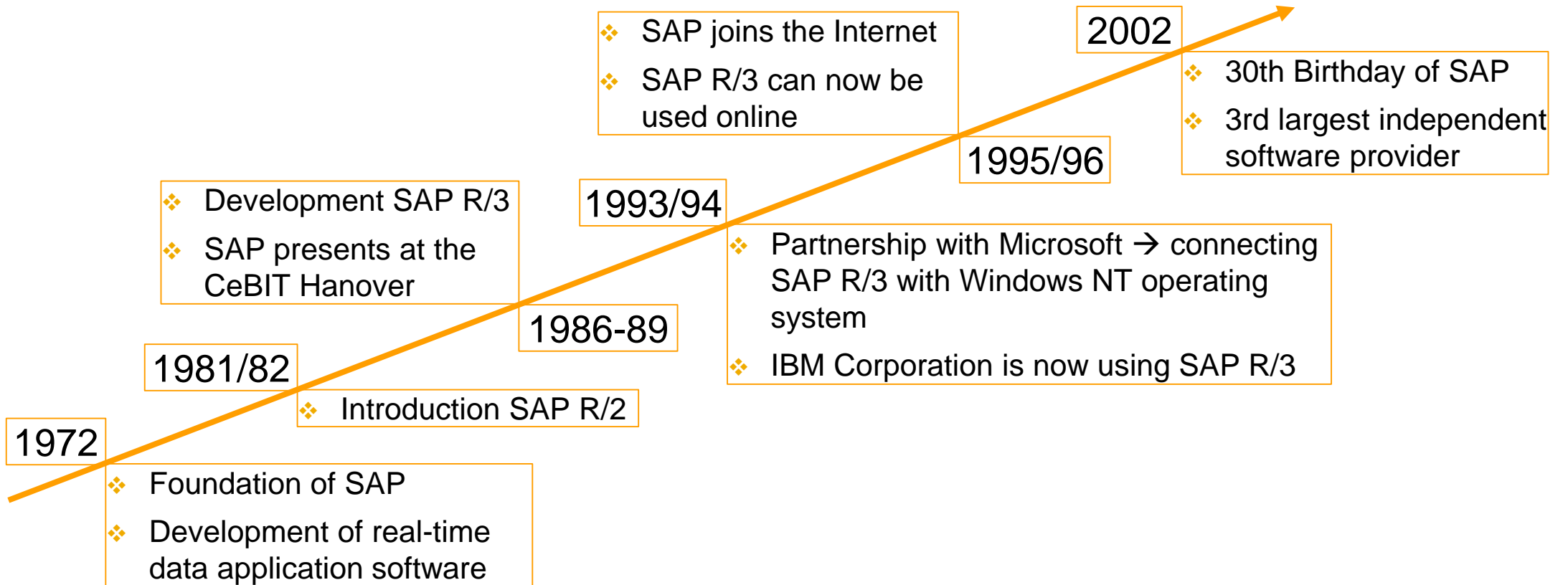
- Market leader in enterprise application software
- One of the world largest independent software manufacturer
- 400,000 satisfied Customers in 190 countries
- SAP enables companies to
  - Streamline processes
  - Use live data
  - Predict customer trends
  - Connect entire businesses

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

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

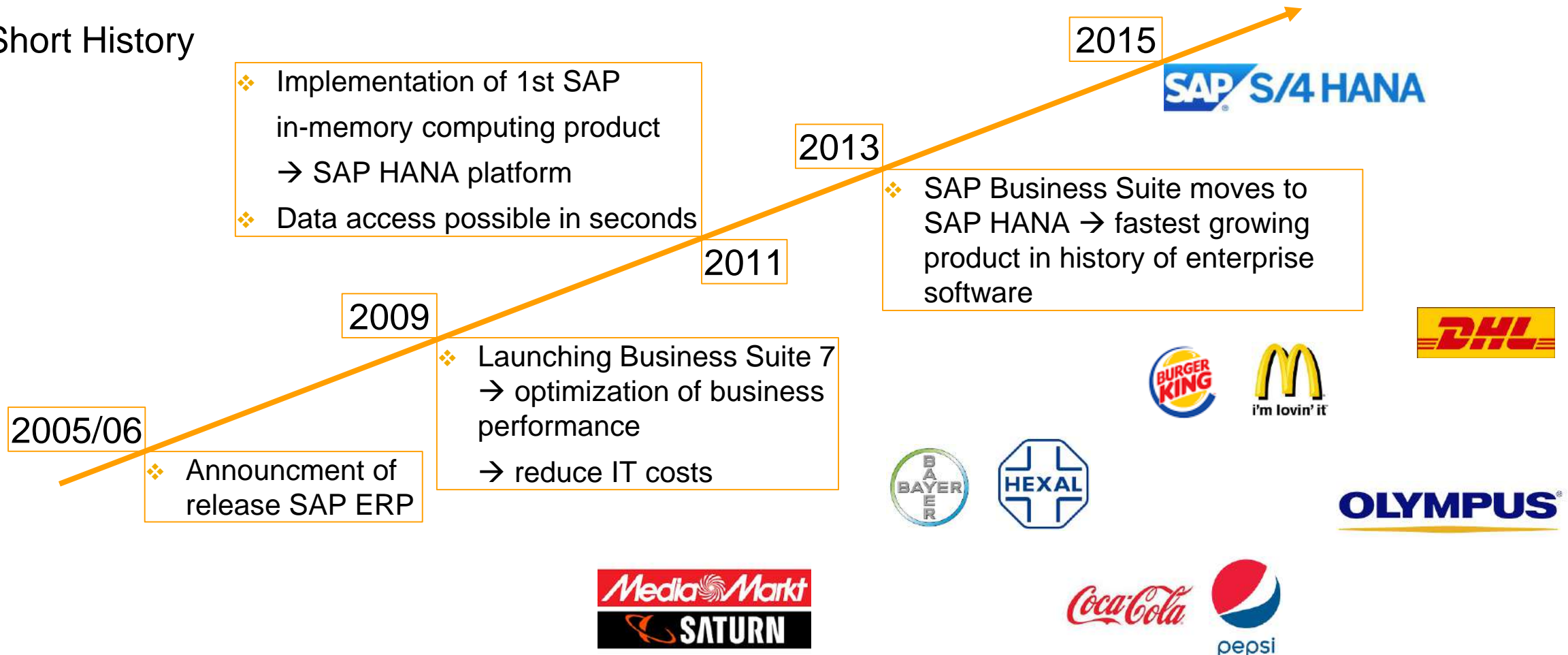
# SAP – Run Simple

## ■ A Short History



# SAP – Run Simple

## ■ A Short History





# Agenda

---



SAP – The Intelligent Enterprise



Fast Facts about SAP S/4HANA



What's New?

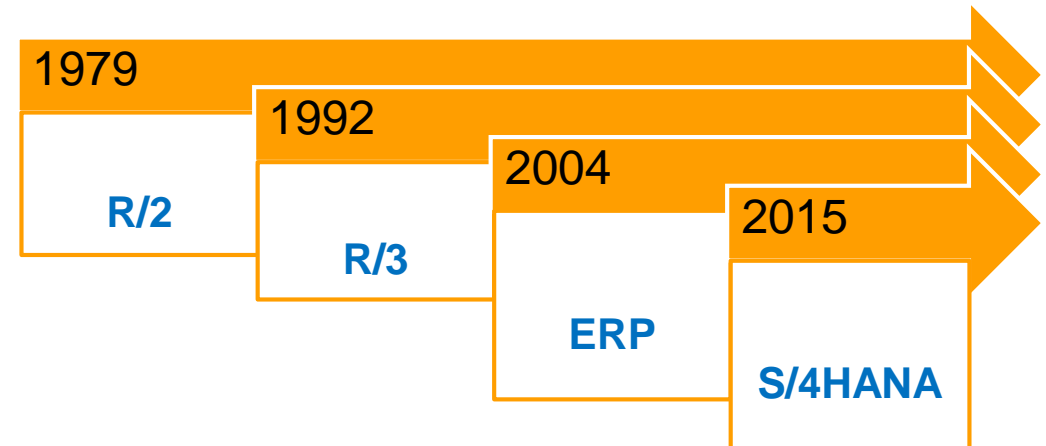


Transition to SAP S/4HANA

# 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

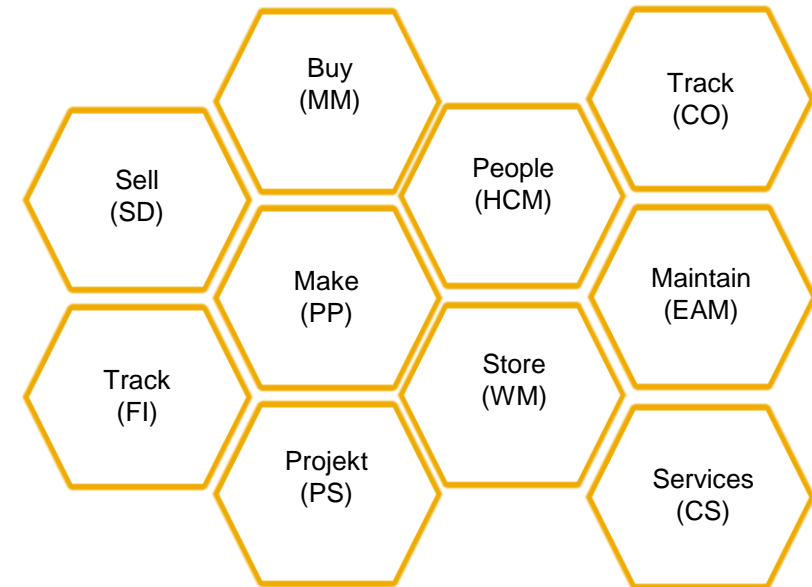


# Fast Facts about SAP S/4HANA

## 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

?	?	?
...	...	...

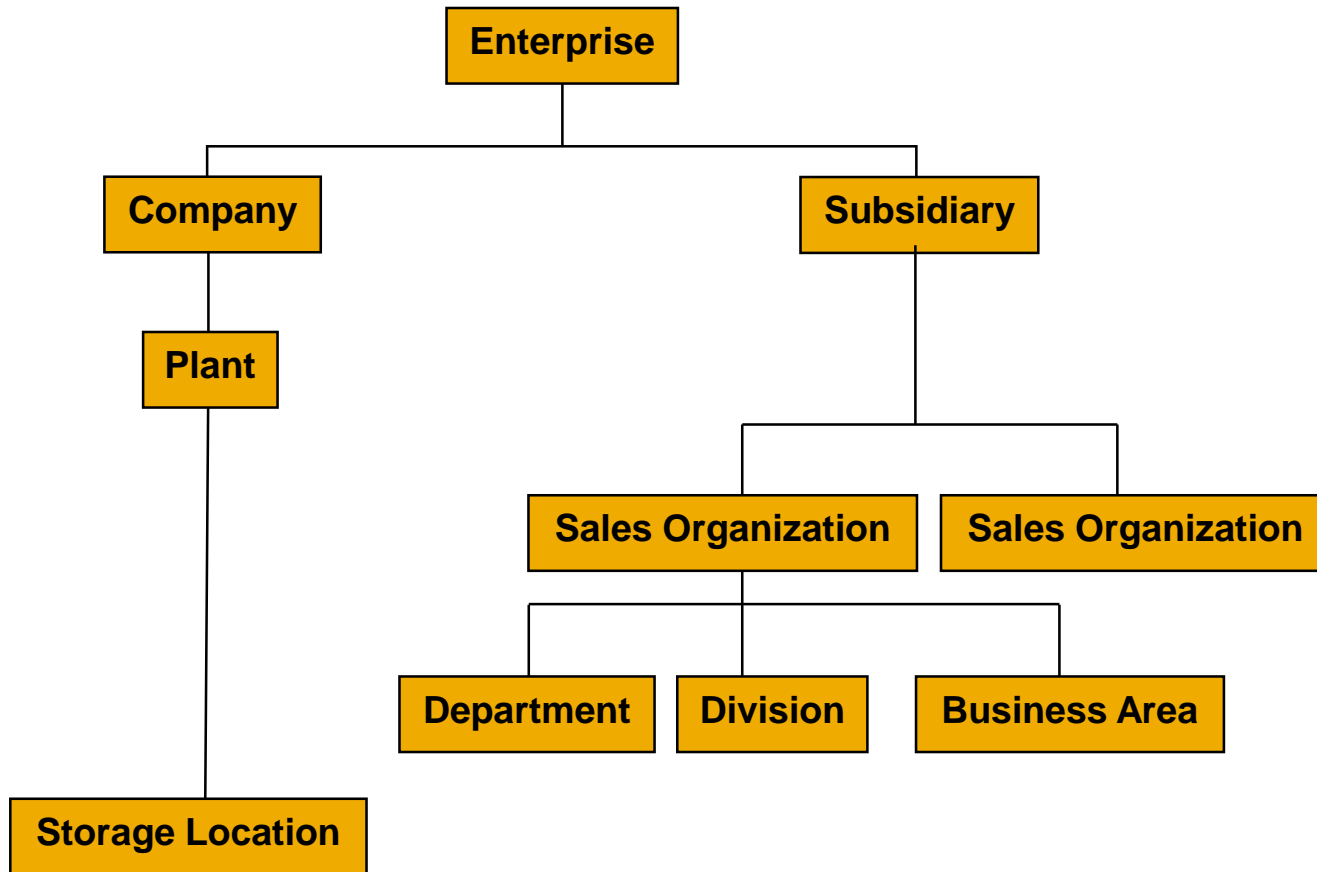
# Fast Facts about SAP S/4HANA

## Data Types in ERP Systems

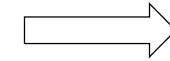
Organizational Data	Master Data	Transaction Data
Company Code	Person	Purchase Order
Plant	Material	Invoice
Storage Location	Customer	Quotation
Distribution Channel	Vendor	Sales Order
Purchasing Organization	Work Centre	Transportation Order
...	...	...

# Fast Facts about SAP S/4HANA

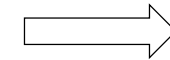
## Organizational Unit



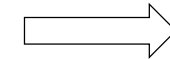
### SAP Terminology:



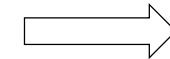
**Client**



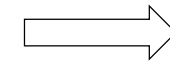
**Company Code**



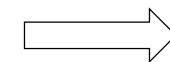
**Plant**



**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)'. The product is identified by the material number DXTR1101. The interface is organized into several sections: a top navigation bar with 'Product' and a dropdown arrow; a header section with 'Edit', 'Copy', and 'Show' buttons; a 'Basic Data' section containing fields for Division (Bicycles (BI)), Product Type (Finished Product (FERT)), Product Category (Product), Product Group (Finished Bikes (BIKES)), Base Unit of Measure (Each (EA)), Revision Level, Batch Management Required (No), Marked for Deletion (No), Old Product Number, and Basic Material. The 'Created By' and 'Last Changed By' fields are both set to 'Chris Reich'. The 'Created On' date is 08/19/2021, 11:53:06, and the 'Last Changed On' date is 08/23/2021, 12:36:14. Below the 'Basic Data' section is a 'Descriptions' section with a table showing the product name in German (Deluxe Touring Bike (schwarz)) for the language DE.

< **SAP** Product ▾

**Deluxe Touring Bike (black)** Edit Copy Show

DXTR1101

Product Type Finished Product (FERT) Base Unit of Measure Each (EA) Revision Level —

Product Category Product GTIN —

Product Group Finished Bikes (BIKES) GTIN Category —

General Information ▾ Product Compliance Components Configuration Sales Storage ▾ Warehouse Management ▾

**Basic Data**

Division: Bicycles (BI) Batch Management Required: No Created By: Chris Reich

Old Product Number: — Marked for Deletion: No Created On: 08/19/2021, 11:53:06

Basic Material: — Last Changed By: Chris Reich

Last Changed On: 08/23/2021, 12:36:14

**Descriptions**

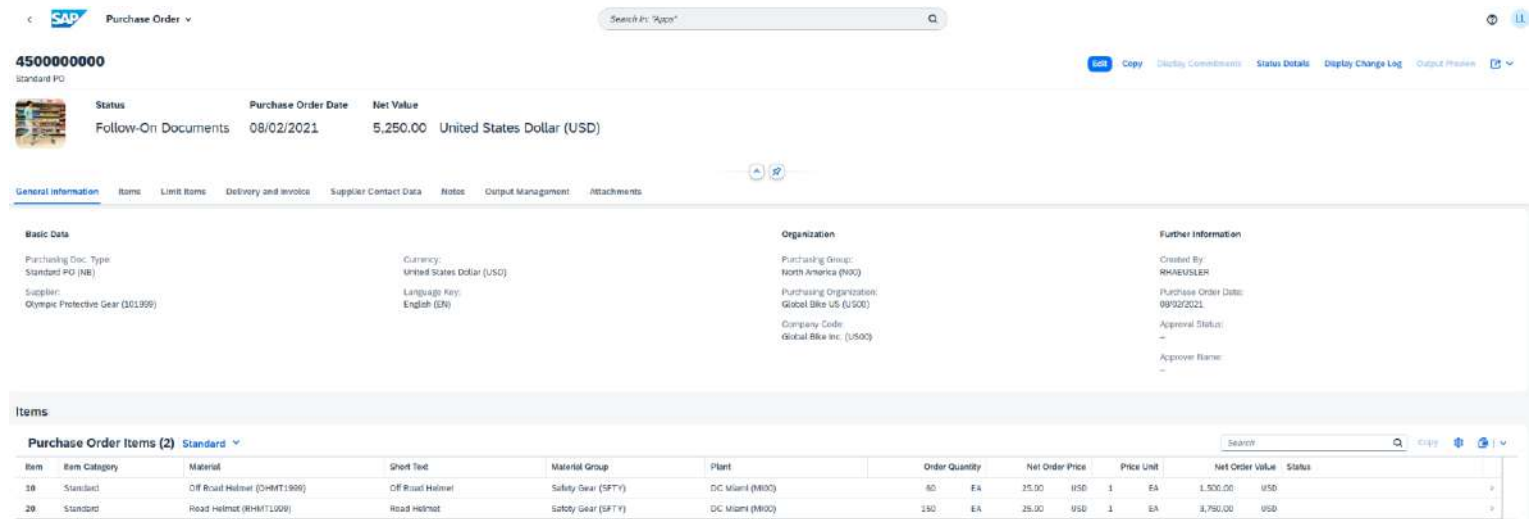
Descriptions (4) Standard\* ▾

Language	Product
German	Deluxe Touring Bike (schwarz)
DE	

# Fast Facts about SAP S/4HANA

## Transaction Data

- Transaction data is the system record of business events
- 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



The screenshot displays the SAP S/4HANA interface for a Purchase Order (PO) with ID 4500000000. The header section shows the PO is a 'Standard PO' with a status of 'Follow-On Documents', a purchase order date of 08/02/2021, and a net value of 5,250.00 USD. The 'Basic Data' section identifies the purchasing document type as 'Standard PO (NR)', the supplier as 'Olympic Protective Gear (O1900)', and the currency as 'United States Dollar (USD)'. The 'Organization' section lists the purchasing group as 'North America (N00)', the purchasing organization as 'Global Bike US (U000)', and the company code as 'Global Bike Inc. (U000)'. The 'Further Information' section shows the document was created by 'RMAEUSLER' on 09/02/2021. The 'Items' section contains a table with two line items: item 10 for 'Off Road Helmet (O1900)' and item 20 for 'Road Helmet (R1900)', both with quantities of 80 and 250 respectively.

Item	Item Category	Material	Short Text	Material Group	Plant	Order Quantity	Net Order Price	Price Unit	Net Order Value	Status
10	Standard	Off Road Helmet (O1900)	Off Road Helmet	Safety Gear (SFTY)	DC Miami (M00)	80	25.00	USD	1,500.00	USD
20	Standard	Road Helmet (R1900)	Road Helmet	Safety Gear (SFTY)	DC Miami (M00)	250	25.00	USD	3,750.00	USD



# 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



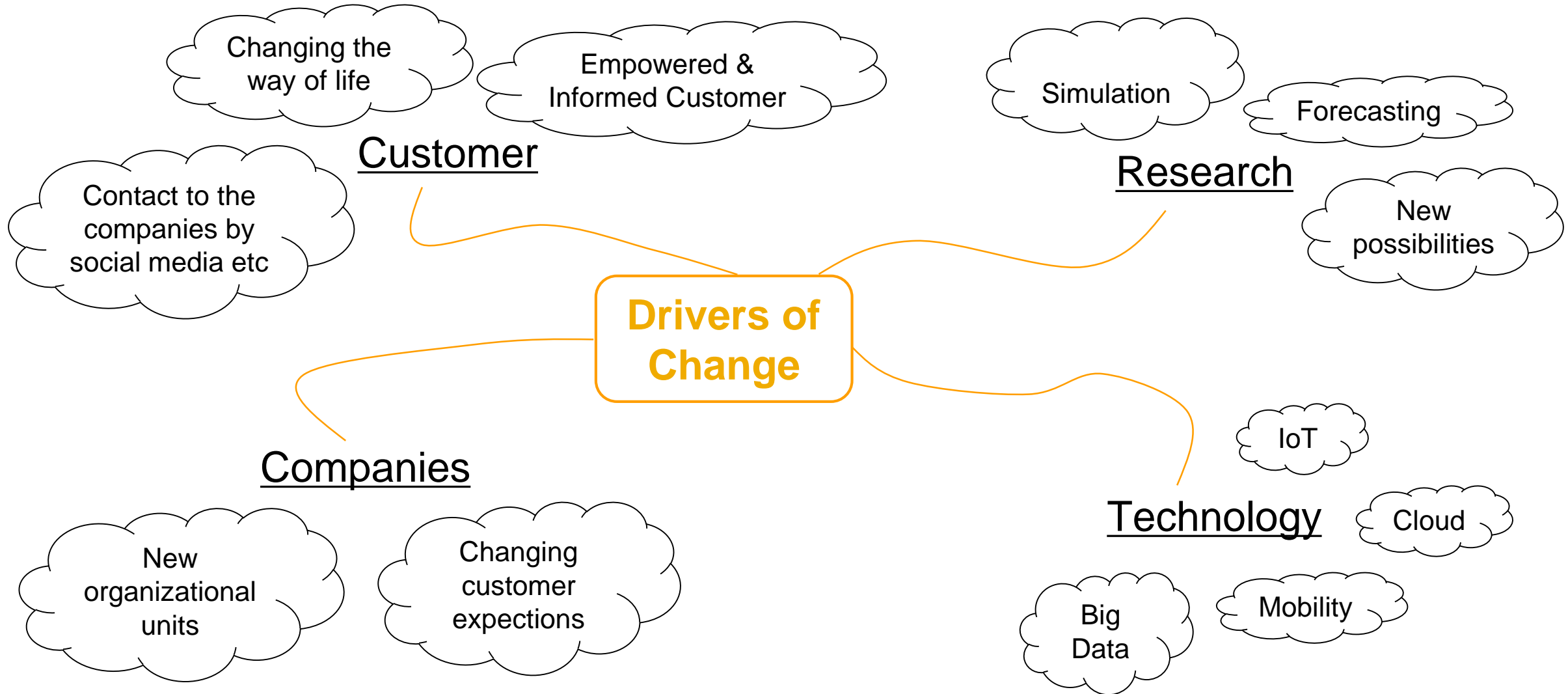
## Document Flow

- 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?

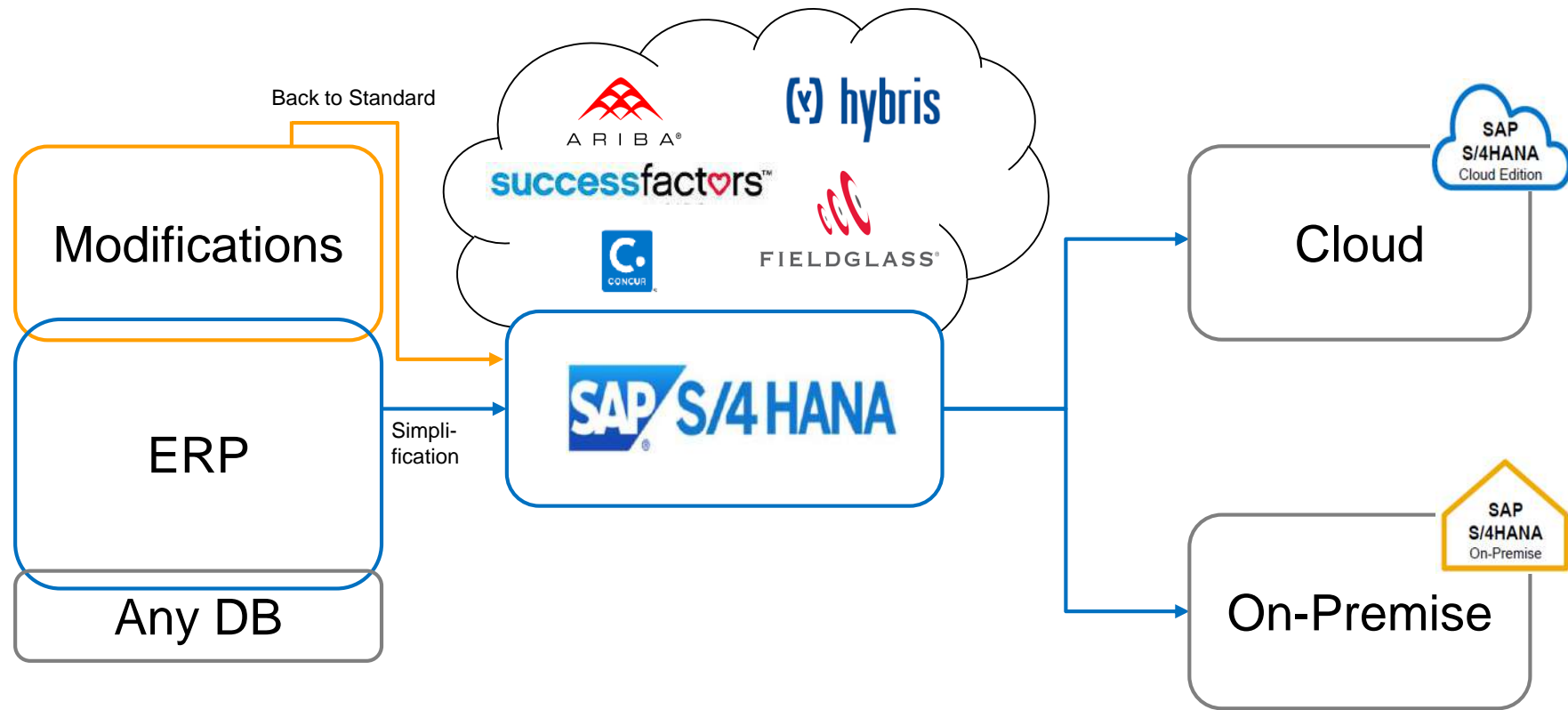


# Fast Facts about SAP S/4HANA

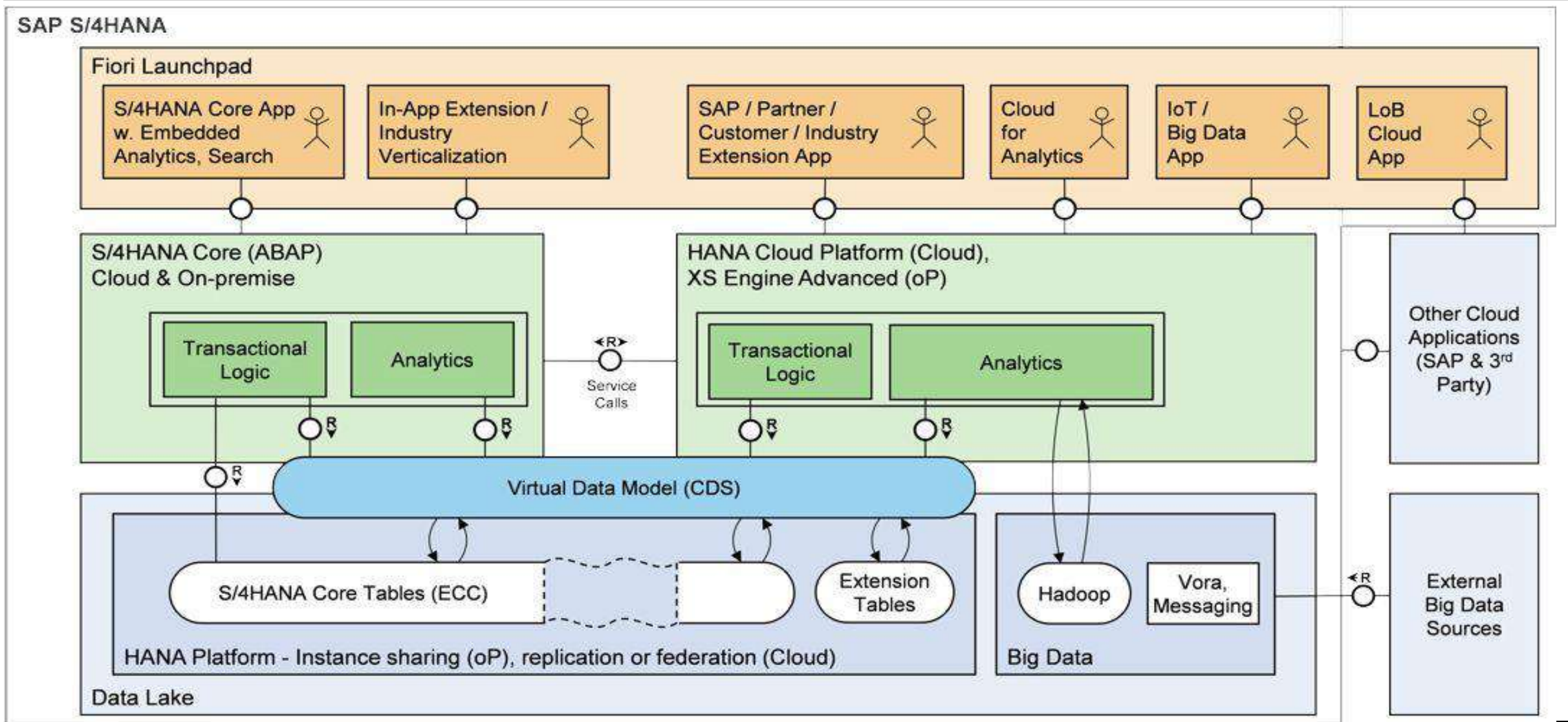
- S/4HANA is the digital core of the company that enables digital transformation.



# Fast Facts about SAP S/4HANA



# SAP S/4HANA Architecture





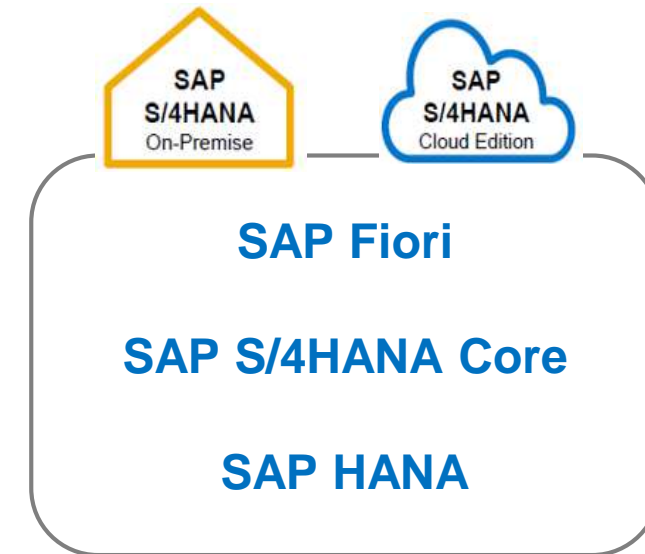
# Fast Facts about SAP S/4HANA

## On-Premise vs. Cloud

### ■ SAP S/4HANA ...

... Choose between Cloud and On-Premise

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

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

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

❖ **Efficiency**



❖ **Effectiveness**



❖ **Agility**



# Agenda

---



SAP – The Intelligent Enterprise



Fast Facts about SAP S/4HANA



What's New?



Transition to SAP S/4HANA

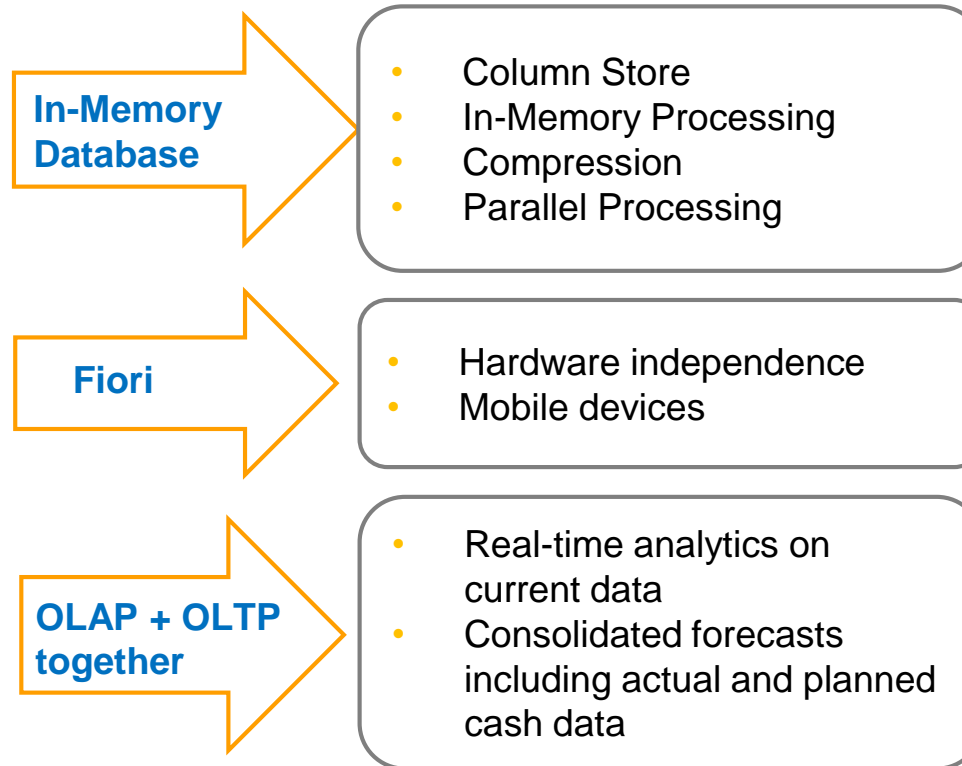
# What's New?

## ■ SAP S/4HANA ...

... works with in-memory

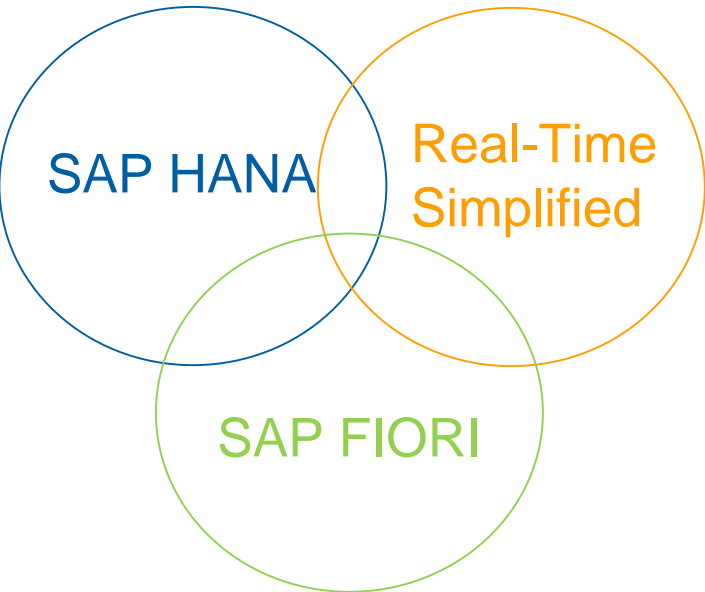
... has a new and modern design

... works with new technology


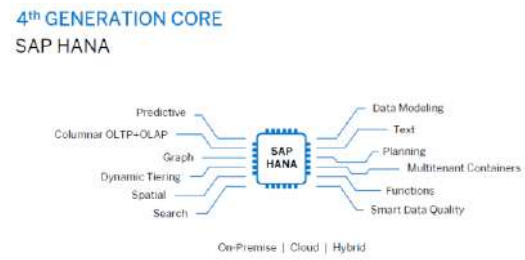


# What's New?

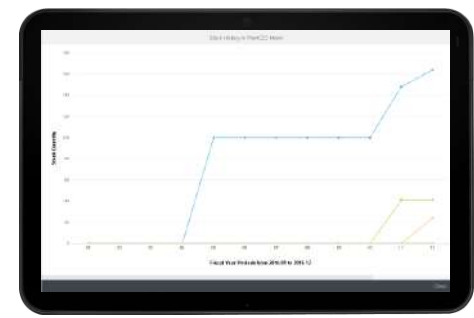
## Innovation & Simplification



Compression



OLAP + OLTP  
together



Simulation



Decision  
Support



Any Attribute as an  
Index

# What's New?

## SAP HANA

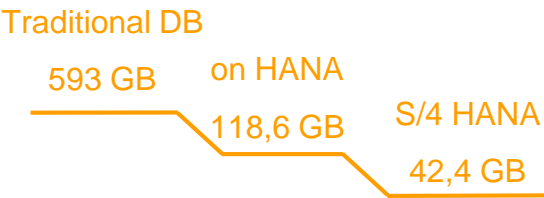
- SAP HANA is an In-Memory Database that allows you to process data very fast
- But SAP HANA can do way more with its different processing engines



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

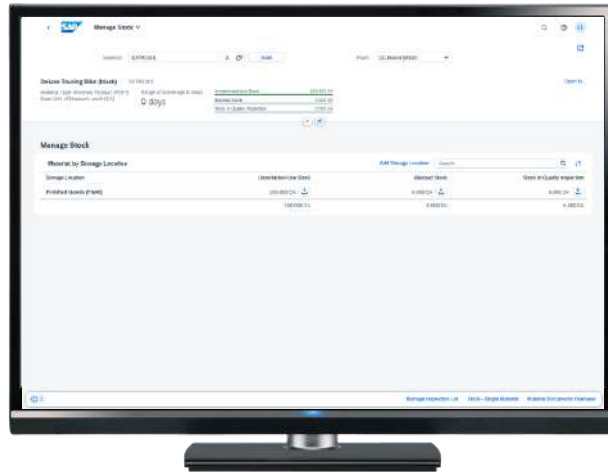




# What's New?

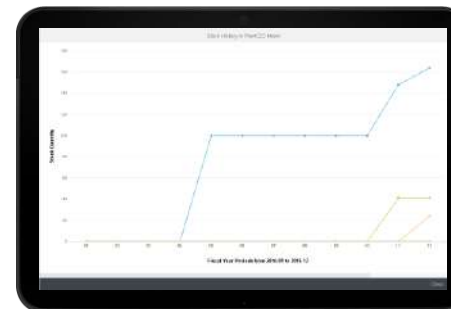
## SAP FIORI

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



**SAP S/4 HANA**

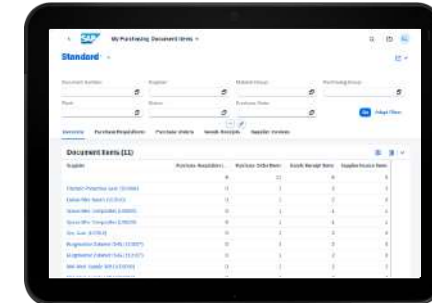
- Independent of hardware
- Real-time



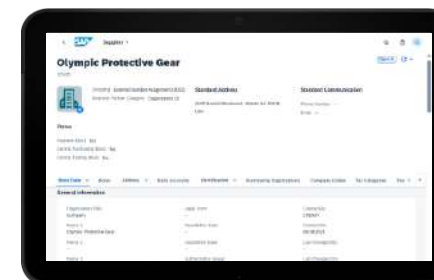
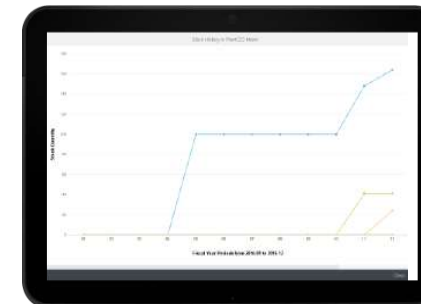
# What's New?

## 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



A screenshot of a SAP Fiori Transactional App interface. It shows a form for creating or editing a purchase order. The form includes fields for 'Document Number', 'Supplier', 'Purchase Order Number', and 'Purchase Order Date'. Below the form, there is a table with columns: 'Supplier', 'Purchase Order Number', 'Purchase Order Date', 'Purchase Order Amount', and 'Purchase Order Status'. The table contains several rows of data.



A screenshot of a SAP Fiori Factsheet App interface. It shows a table with columns: 'Object Name', 'Object Type', 'Object ID', 'Object Description', 'Object Status', and 'Object Date'. The table contains several rows of data. Below the table, there is a section for 'Related Objects' with a list of links to other objects.



# Agenda

---



SAP – The Intelligent Enterprise



Fast Facts about SAP S/4HANA

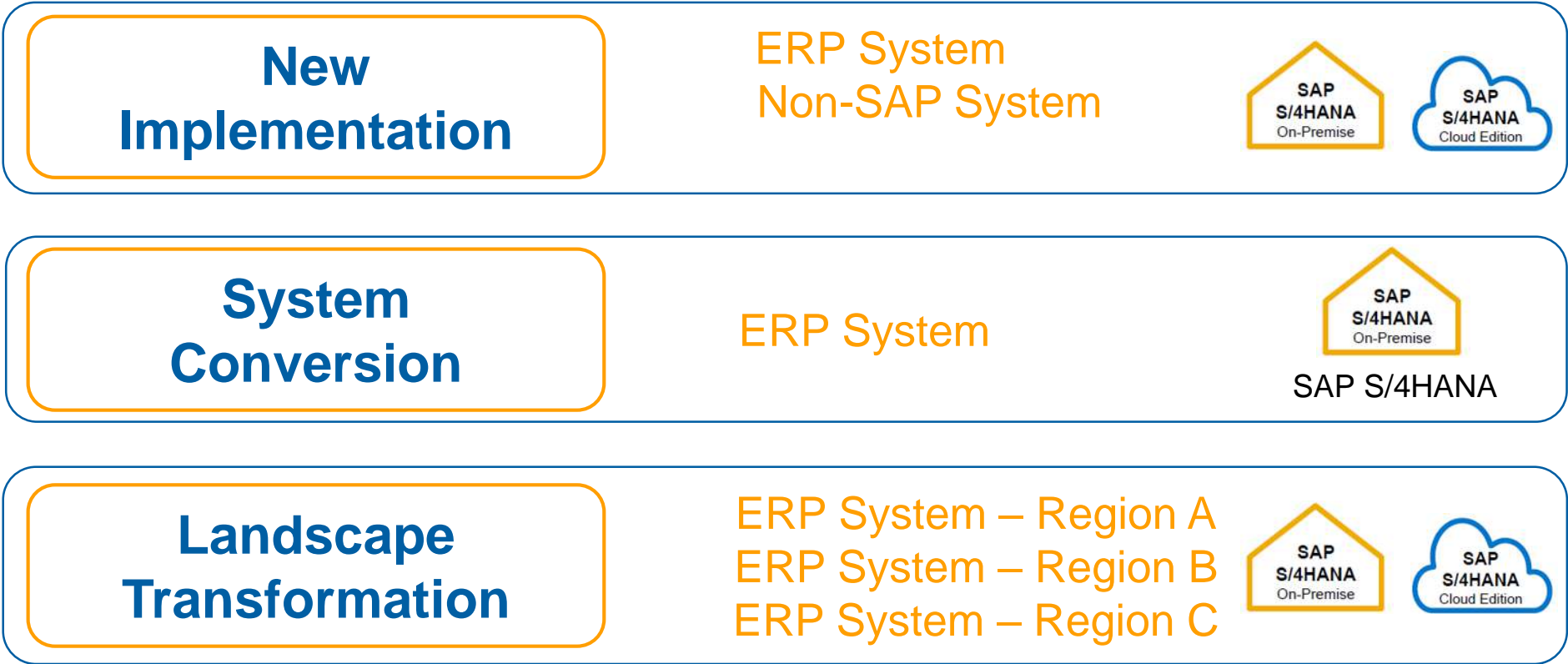


What's New?



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

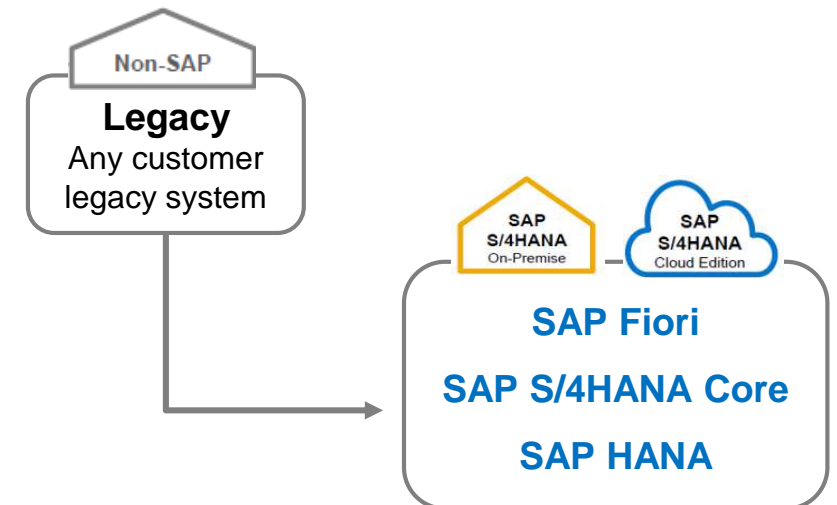
- Reengineering and process simplification based on ready-to-run business processes
- Predefined migration objects & best practices available with guided configuration
- Reduce time to value and customer total cost of ownership
- Rapid adoption of new innovations

### 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

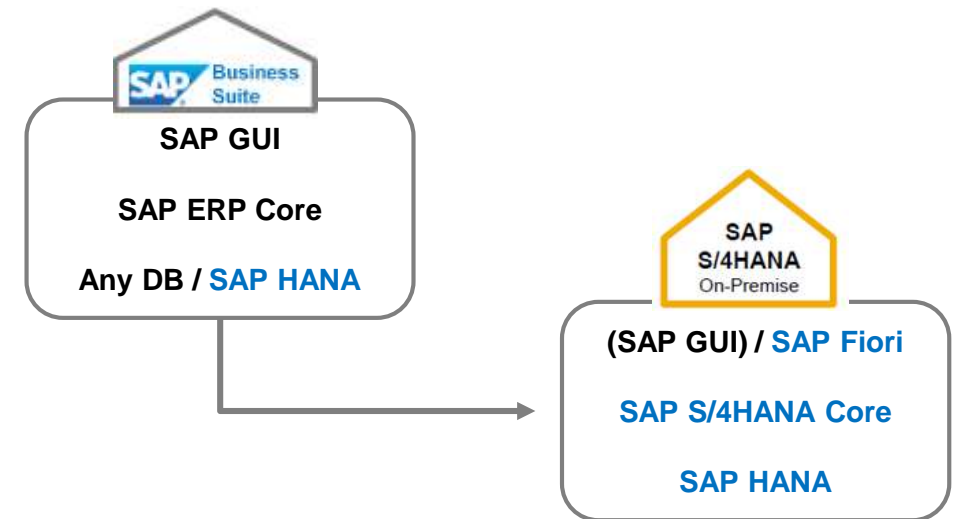
### Benefits for the customer

- Migration without re-implementation
- No disruption for existing business processes
- Re-evaluation 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

