SAP S/4 HANA

Transformation in a Digital Economy

Claus Gruenewald | March 2016

The Digital Economy: This Time It IS Different
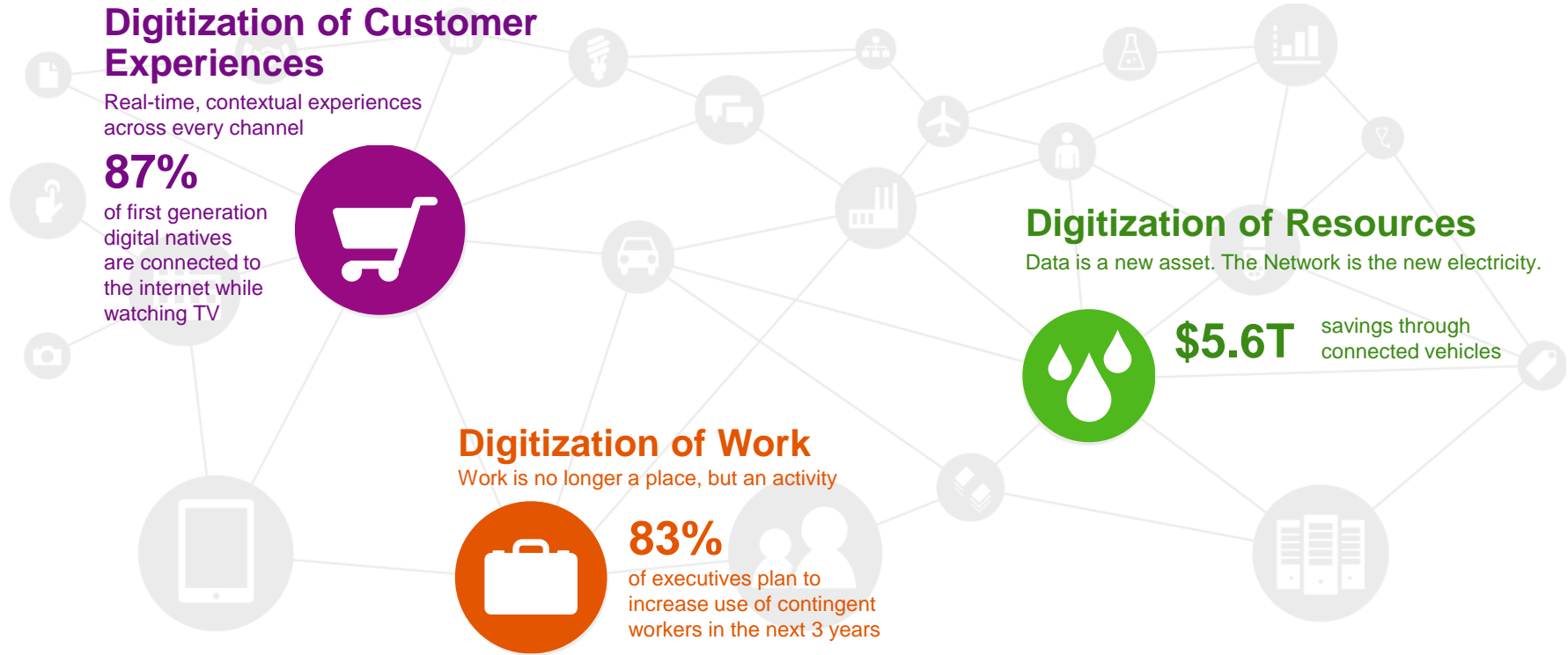
Digitization of Customer Experiences

Real-time, contextual experiences across every channel

87% of first generation digital natives are connected to the internet while watching TV

Digitization of Work

Work is no longer a place, but an activity

83% of executives plan to increase use of contingent workers in the next 3 years

Digitization of Resources

Data is a new asset. The Network is the new electricity.

$5.6T savings through connected vehicles

The world is changing quickly – digital technologies are everywhere

Digital technologies are here to stay

Mobile
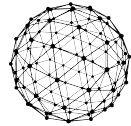
Hyper-connectivity

In-memory computing

Internet of Things

Big Data
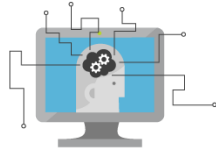
Machine learning

Social

Cloud

- Everything which can be digitized will be digitized

- Digitization of data and interactions increasing at an exponential pace

- Mobile, Internet of Things, and hyper-connectivity enabling immediate access to every "thing"

- In-memory changing the speed of computing and delivering the vision of real time

- Big Data and machine-learning technologies changing how data is being analyzed with predictive analytics

- Cloud enabling digitization with commodity storage, and on-demand computing at scale

Digital technologies are disrupting business models

Digital Business Scenario: Predictive maintenance alert results in field service technician dispatched to multiple customer sites

Value estimates

① Sensors on customer machine sends data to OEM service department

② OEM reviews predictive maintenance & machine learning

③ OEM contacts customer for approval of suggested service

④ Cross/up-sell additional services & parts

⑤ OEM determines parts & tools; technician qualifications & schedules

⑥ Review additional installed equipment at customer site

⑦ Purchase orders, manufacturing orders & resource schedules requested

⑧ Additional equipment at *same* customer scheduled

⑨ Additional equipment at *other* customers scheduled

⑩ Additional cross/up-sell analysis

⑪ Remote mentor scheduled

⑫ Spare parts, tools & visual instructions available on-site

⑬ Order fulfillment & logistics

⑭ Courtesy customer visits in local area with sales executive

⑮ Geospatial analysis of equipment locations to optimize travel

⑯ Event driven notification of job completion

⑰ Customer invoiced for services performed & parts installed

⑱ Additional equipment and/or additional customers serviced

⑲ Additional maintenance training performed

Suppliers Collaboration Business Networks

Multi-Channel Customer Experience

Workforce Engagement

Digital core

Assets & Internet of Things

Time

6%
Higher MTO on-time delivery to request date for discrete manufacturers in North America and EMEA where system allows for advance shipping notifications (ASNs) so suppliers can provide delivery and packing information to the receiver in advance of orders arrival

58%
Lower customer reject rate for organizations in North America and EMEA where all of the metrics & KPIs that are needed to monitor, measure, analyze & control performance are captured easily & automatically

42%
Lower pick to ship cycle time for organizations that have high-performing, customer-centric warehouses enabled by best in class information technology

4-5x
More revenue generated by value-added services on top of simple machine connectivity

Source: SAP and customer benchmarks / Forrester Research

Saudi Paper Manufacturing Company

SPM SAUDI PAPER MANUFACTURING CO.

Company

- Saudi Paper Manufacturing Company is one of the leading high quality tissue paper manufacturers in the Middle East, with a capacity of more than 100,000 tons per year.
- The company creates a turn over of $ 202 Mio with 2.000 employees

Process & Technology innovation

- All important business ___ are now based on SAP ERP powered bySAP ___ ___ in SAP HANA Enterprise Cloud
- Manage u___ ___ capitalize on opportunities by gathering dem___ ___ sumption data
- ___ supply chain proactively with real-time insights and ___ customer satisfaction while controlling risks and costs
- ___ eliver information in time for maximum decision-making benefit

Solution

- SAP HANA® Enterprise Cloud s___
- SAP ERP powered by SAP ___ ___ finance, manufacturing ___ management, h___ ___agement, inventory ___ ___agement, and maint___
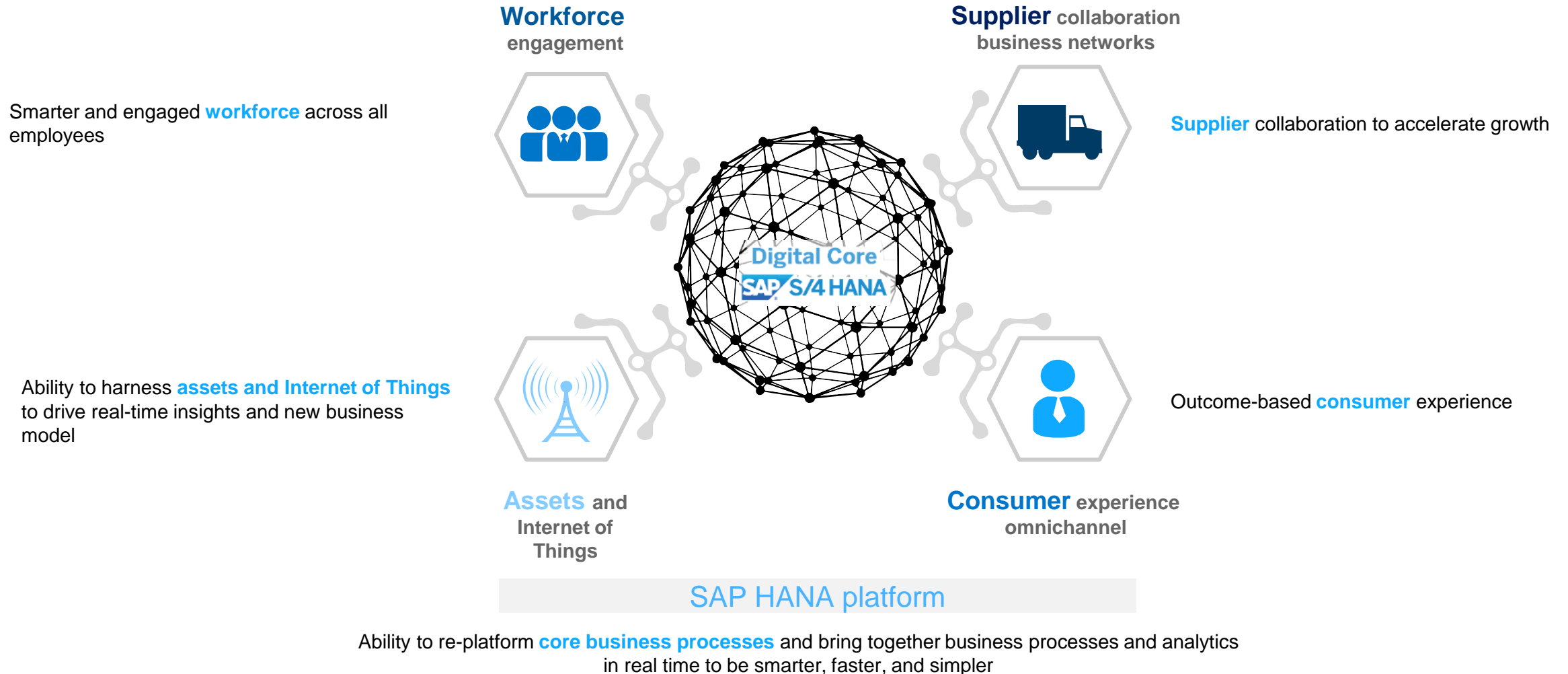
Benefits & Next Steps
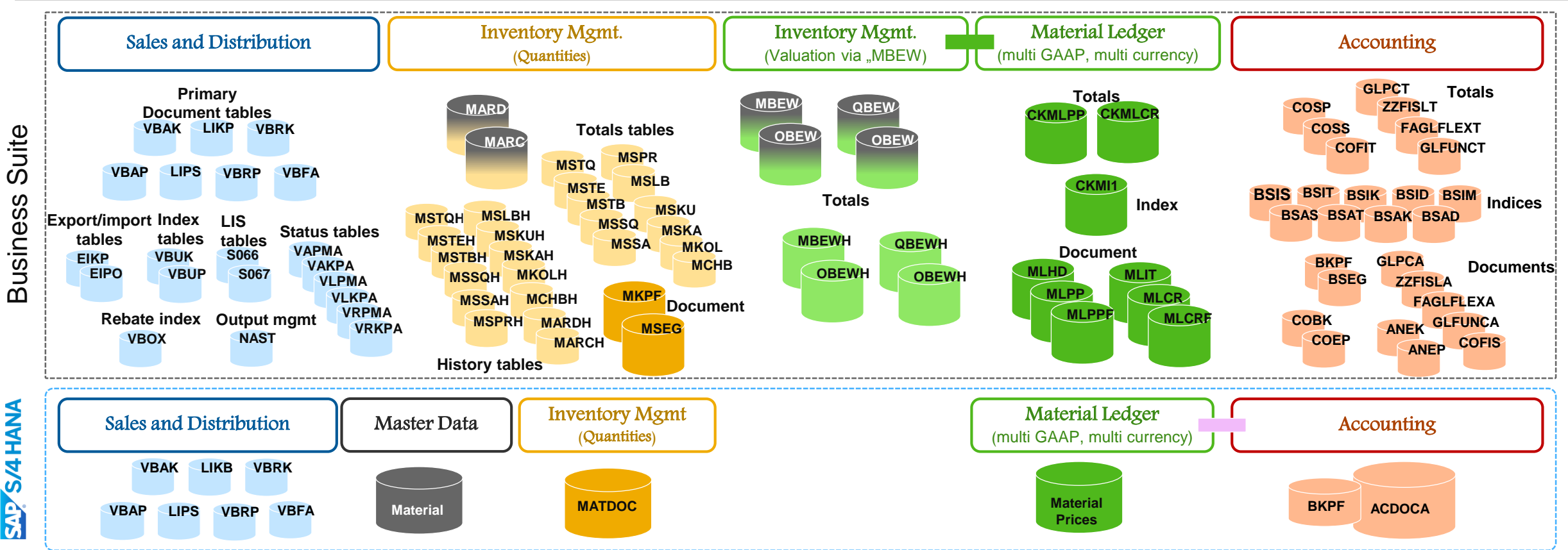
- Anticipated demand fluctuations and made adjustments that deliver the right products as expected – direct influence on profitably
- Improved data clarity and visibility
- 50% Lower IT costs with SAP HANA Enterprise Cloud
- 80% Faster adoption of new innovations
- Next will be the move to the SAP S/4HANA suite starting with S/4HANA Finance

See more S/4HANA customer use cases at openSAP.com

The digital value network interconnects all aspects of the value chain in real time to drive business outcomes

Workforce **engagement**

Smarter and engaged **workforce** across all employees

Supplier collaboration business networks

Supplier collaboration to accelerate growth

Digital Core
SAP S/4 HANA

Ability to harness **assets and Internet of Things** to drive real-time insights and new business model

Assets **and Internet of Things**

Outcome-based **consumer** experience

Consumer experience omnichannel

SAP HANA platform

Ability to re-platform **core business processes** and bring together business processes and analytics in real time to be smarter, faster, and simpler

S/4HANA Simplification – Example

SIMPLE DATA MODEL

» Only main tables remaining, no redundancies

» Clear separation of master data from transactional data
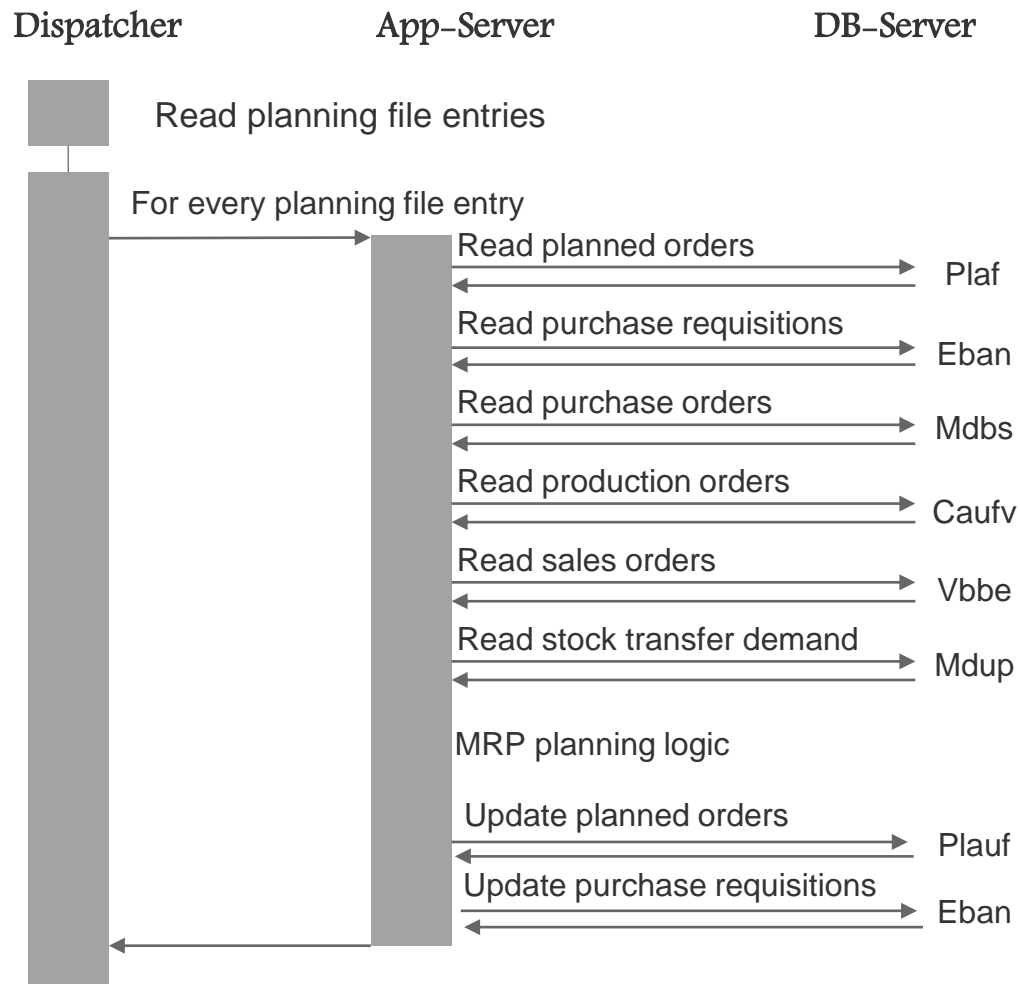
» Reduction of memory footprint

PRINCIPLE OF ONE

» Only one valuation method (Material Ledger) instead of 2 (IM + ML)

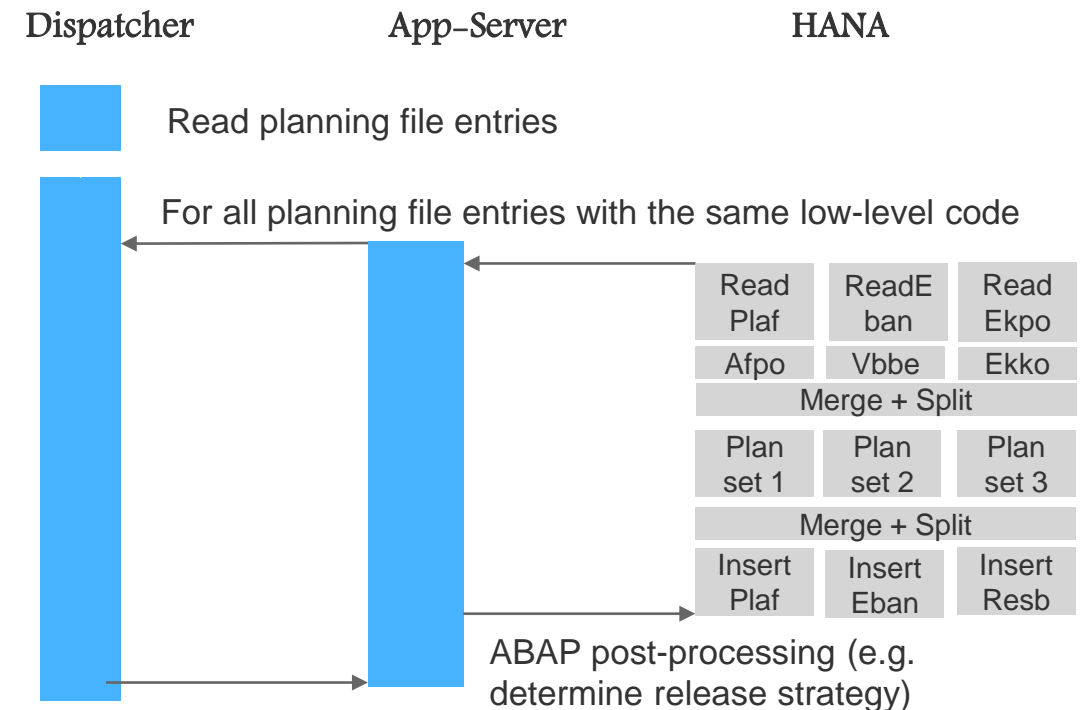» Flexible rebate management instead of cumbersome and expensive redundancies

THROUGHPUT INCREASE

» INSERT only on database level (MM-IM), no locks for standard price valuation

SAP S/4HANA coding simplification in manufacturing

Dispatcher   App–Server   DB–Server

Read planning file entries

For every planning file entry

Read planned orders → Plaf

Read purchase requisitions → Eban

Read purchase orders → Mdbs

Read production orders → Caufv

Read sales orders → Vbbe

Read stock transfer demand → Mdup

MRP planning logic

Update planned orders → Plauf

Update purchase requisitions → Eban

1.300 lines of code

Dispatcher   App–Server   HANA

Read planning file entries

For all planning file entries with the same low-level code

Read Plaf	ReadE ban	Read Ekpo
Afpo	Vbbe	Ekko
Merge + Split		
Plan set 1	Plan set 2	Plan set 3
Merge + Split		
Insert Plaf	Insert Eban	Insert Resb

ABAP post-processing (e.g. determine release strategy)
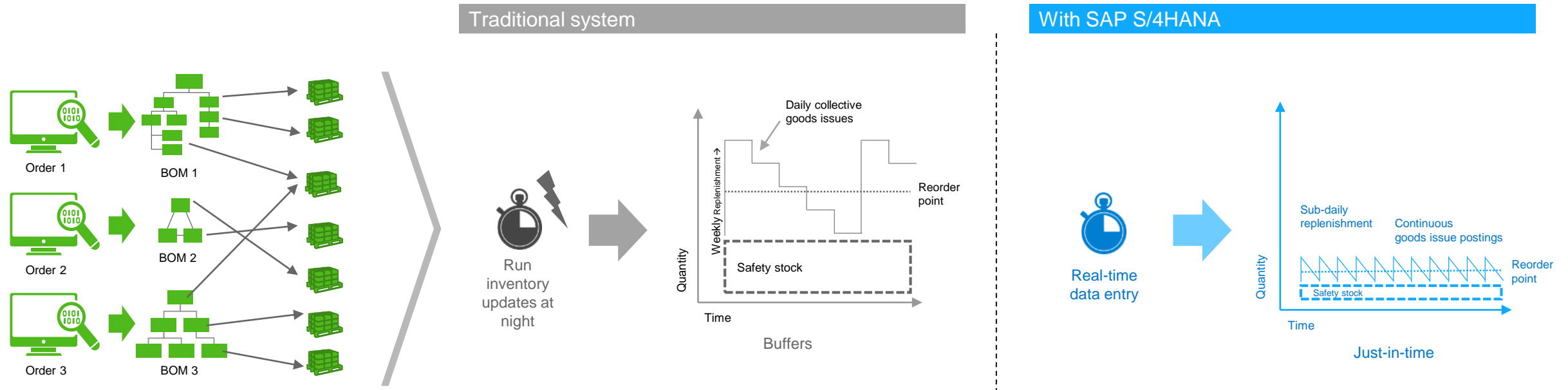
In the classic implementation, the application server calls the database server many times to read a lot of data. This data is then transferred from the database server to the application server. All tables are read sequentially one after another.

In the SAP S/4HANA Implementation, many tables are read in parallel using the parallelization capabilities. The data is not transferred back to the application server but used to compute material shortages directly in the database server.

~90 lines of code

Business process view – high-volume inventory backflush

Traditional system

Run inventory updates at night

Daily collective goods issues

Weekly Replenishment →

Quantity

Reorder point

Safety stock

Time

Buffers

With SAP S/4HANA

Real-time data entry

Sub-daily replenishment

Continuous goods issue postings

Quantity

Reorder point

Safety stock

Time

Just-in-time

Order 1 — BOM 1
Order 2 — BOM 2
Order 3 — BOM 3

Business process

- Production orders are based on BOMs
- Production confirmations capture progress w.r.t. components issued and activities provided
- Backflush automates confirmation postings in high-volume scenarios

With traditional system

- Throughput limitations cause queuing of data entry
- Limited inventory visibility increases error rate and supply shortages (for example, sub-daily deviations)
- Best practices to increase safety stock

With SAP S/4HANA

- Real-time inventory information, including early error detection.
- Capturing the lowest level of granularity in inventory stock keeping , including where-used information per unit (lot size 1)
- Drastic decrease of stock levels (safety stock)

SAP Fiori UX, modern user experience and responsive design

TODAY
Functional-based applications

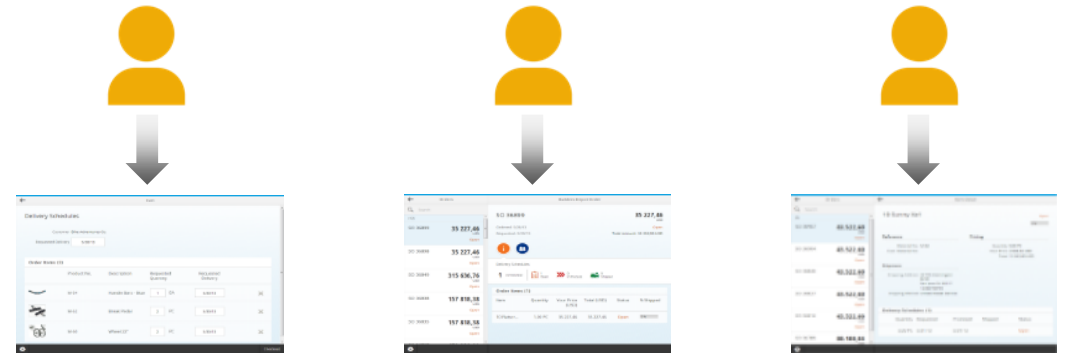**FROM:** One transaction for multiple roles with too much and complex functionality
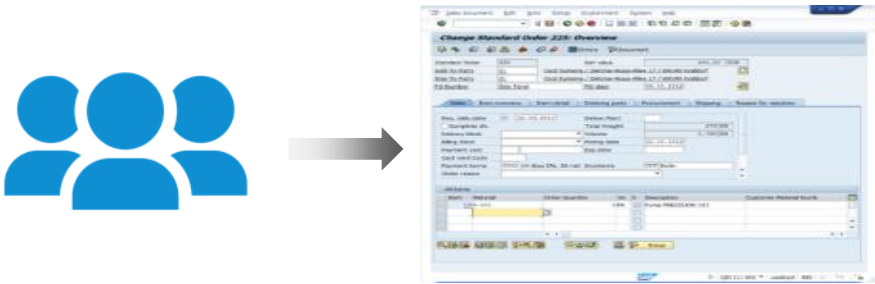
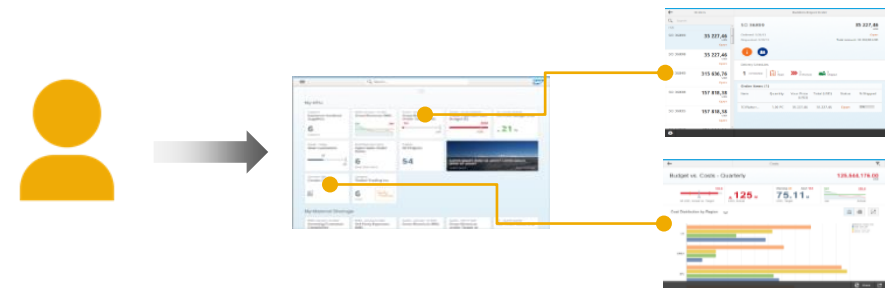**FROM:** Multiple entry points for the user and inconsistent user experience

TARGET
Role-based applications

TO: Decomposed apps for each role with simple functions

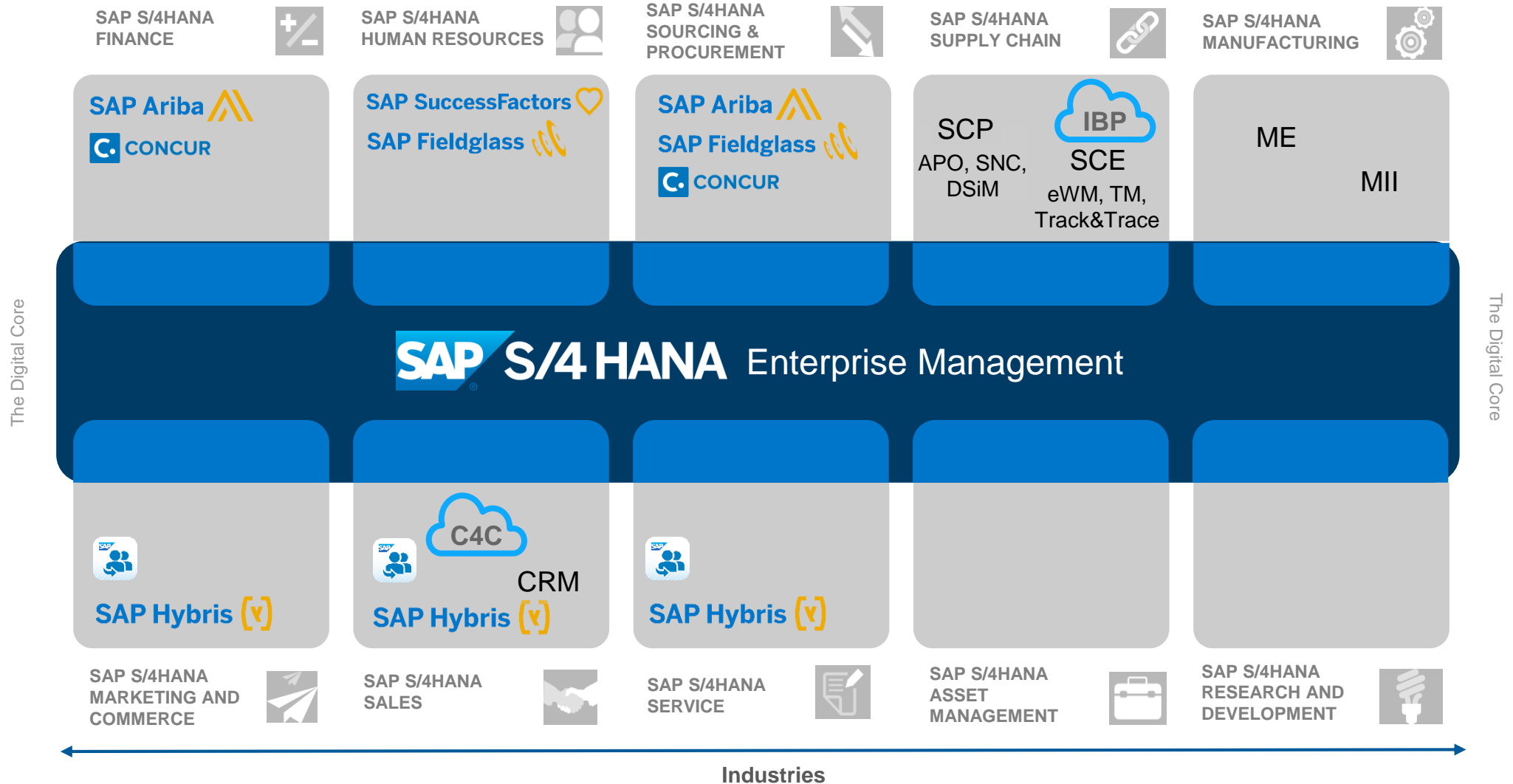**TO:** One entry point for the User and UX following common design directions

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

SAP S/4HANA
Introducing the next-generation core and lines-of-business solutions for the digital economy

- The **SAP S/4HANA lines-of-business (LoB) solutions** combine a modern and simplified core built on the SAP HANA platform with best-in-class LoB solutions and connection to business networks.

- These solutions are designed to **help meet the new requirements of lines of business in the digital economy**: real-time information on Big Data, personalized customer experiences, omnichannel, connected devices, people, and businesses.

- The LoB solutions can continue to be consumed as standalone solutions or as part of the SAP S/4HANA LoB solutions, **giving more choice to customers, allowing true hybrid scenarios and incremental deployments.**

The Digital Core

SAP S/4HANA FINANCE

SAP Ariba
CONCUR

SAP S/4HANA HUMAN RESOURCES

SAP SuccessFactors
SAP Fieldglass

SAP S/4HANA SOURCING & PROCUREMENT

SAP Ariba
SAP Fieldglass
CONCUR

SAP S/4HANA SUPPLY CHAIN

SCP
APO, SNC, DSiM

IBP
SCE
eWM, TM, Track&Trace

SAP S/4HANA MANUFACTURING

ME

MII

SAP S/4 HANA Enterprise Management

SAP Hybris

C4C
CRM
SAP Hybris

SAP Hybris

The Digital Core

SAP S/4HANA MARKETING AND COMMERCE

SAP S/4HANA SALES

SAP S/4HANA SERVICE

SAP S/4HANA ASSET MANAGEMENT

SAP S/4HANA RESEARCH AND DEVELOPMENT

Industries

SAP S/4HANA Enterprise Management 1511 on-premise
Next-generation ERP

SAP S/4 HANA Enterprise Management

The Digital Core

Modules

Logistics General (LO)	Product Lifecycle Management (PLM)
Sales and Distribution (SD)	Materials Management (MM)
Logistics Execution (LE)	Quality Management (QM)
Plant Maintenance (PM)	Customer Service (CS)
Production Planning & Control (PP)	Project System (PS)
Environment, Health & Safety (EHS)	Others: Settlement Management, Global Trade Management, …
Finance	Human Resources

Industries*

Core industries

- Chemicals
- Life Sciences
- Wholesale
- High Tech
- Mining
- Industrial Machinery & Components

Core Industries – adding features and processes

- Automotive**
- EC&O**
- A&D**
- Mill Products**

** New included in EM

Feature and function parity to SAP ECC 6.0x

plus

- major innovations in **Finance** and **Logistics**

- Inclusion of additional **industries** in the Core

- Detailed feature and function description in S/4HANA Enterprise Management Solution Explorer or S/4HANA Product Map

- Value and Innovation description

SAP S/4HANA, on-premise edition 1511 FPS01
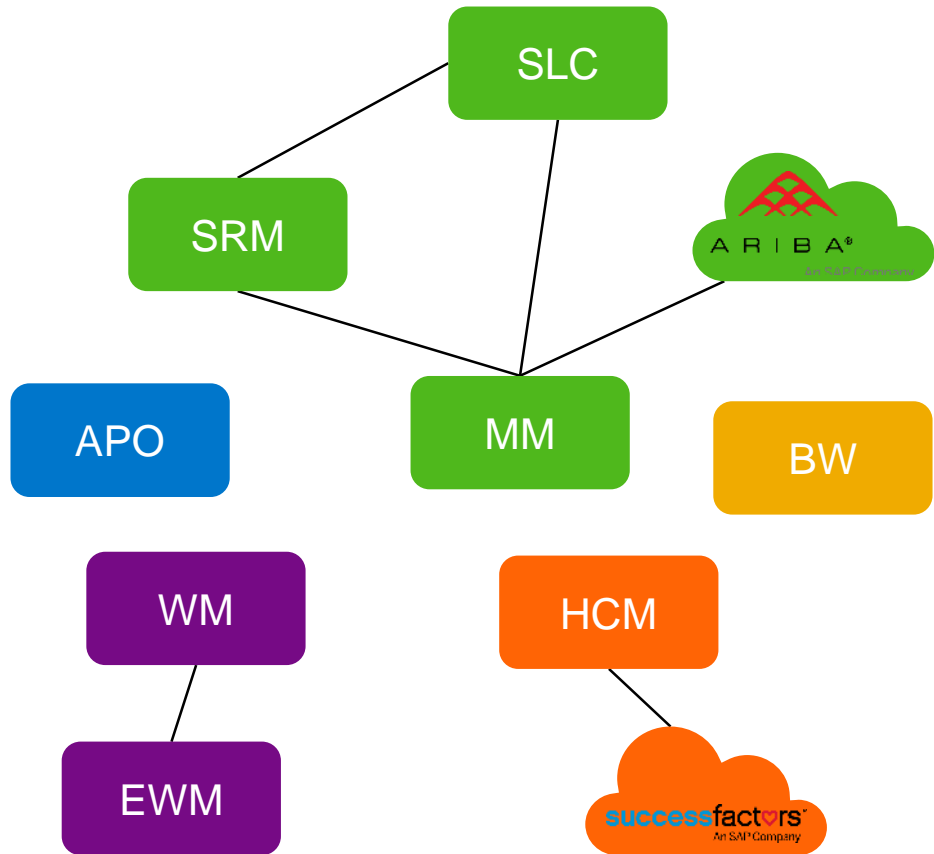## Key innovations mapped to Product Map**

Procurement — **Inventory Management** — **Material Valuation** — **Material Requirements Planning** — **Available to Promise** — **Capacity Planning** — **Order Mgmt. & Billing** — **Industry to Core** — **Accelerated Financial Close** — **Universal Journal & Central Finance***

Streamlined Procure to Pay
- Supplier Information and Master Data
- Sourcing and Contract Management
- Operational Procurement
- Inventory and Basic Warehouse Management
- Invoice and Payables Management

Accelerated Plan to Product
- Production Planning
- Production Engineering
- Production Orchestration and Execution
- Inventory and Basic Warehouse Management
- Project Control and Product Development
- Maintenance Management
- Quality Management

Optimized Order to Cash
- Order and Contract Management
- Inventory and Basic Warehouse Management
- Receivables Processing

Enhanced Request to Service
- Service Master Data Management
- Service Management
- Service Parts Management
- Service Agreement Management

Human Resources Foundation
- Time and Attendance Management

Core Finance
- Accounting and Closing Operations
- Cost Management and Profitability Analysis
- *Financial Planning & Analysis**
- *Treasury & Financial Risk Management**
- *Finance Operations**
- *Enterprise Risk & Compliance Mgmt.**

*Separate license required

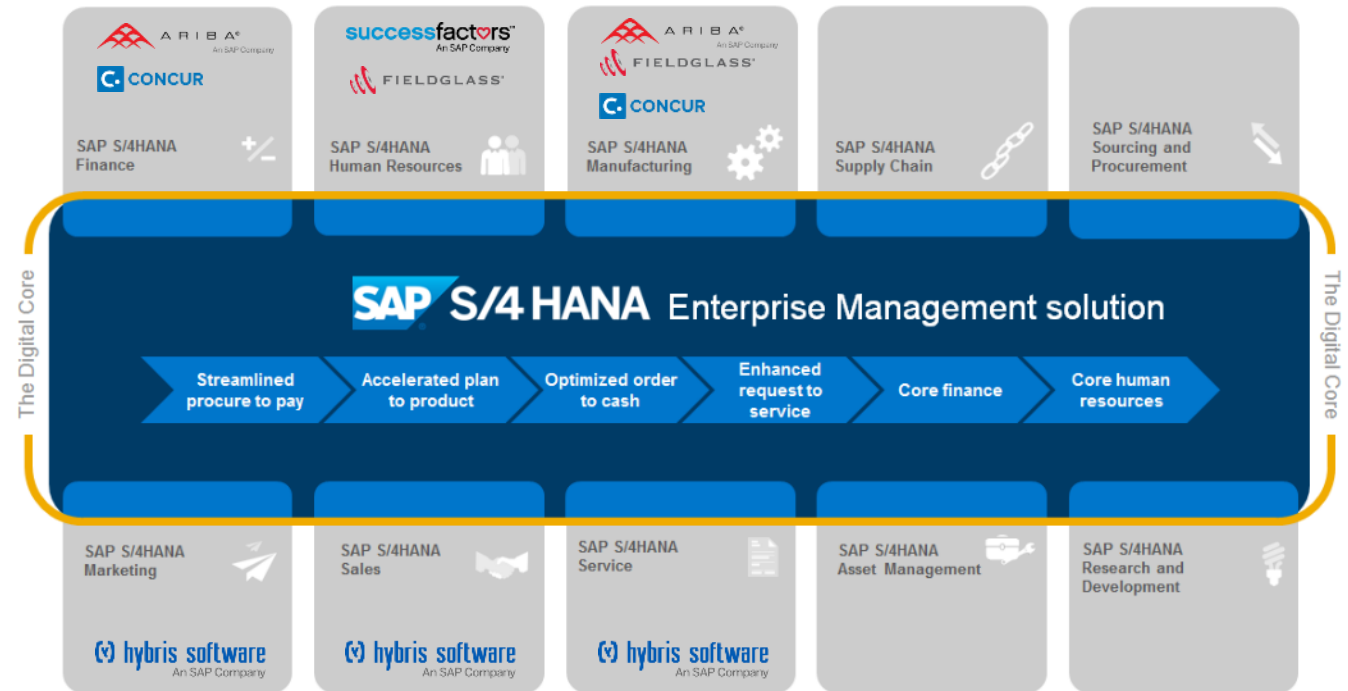**https://solutionexplorer.sap.com/solexp/ui/

SAP S/4HANA: The modular suite
The great simplifier

Before

No complete picture. Only illustrative.

SAP S/4HANA 1511[1] On-Premise Industry Enablement Roadmap

All 25 Industries released for SAP S/4HANA with SAP S/4HANA Finance[1]

Industries
- Chemicals
- High-Tech
- Higher Education & Research
- Industrial Machinery & Components
- Insurance
- Life Sciences
- Mining
- Professional Services
- Sports & Entertainment
- Telco
- Travel & Transportation
- Wholesale

Industries released with major coverage[2]
- Aerospace & Defense
- Automotive
- Banking
- Consumer Products
- Defense & Security
- Engineering, Construction & Operations
- Mill Products
- Public Sector
- Utilities

Release of additional industry scenarios
including Oil & Gas

+

First simplified industry Solutions
e.g. Healthcare, Retail, Fashion Public Sector

Release of additional industry scenarios
including Media

Solution today	Planned	Future

1) For restrictions related to S/4HANA Finance 1503, see SAP Note 2119188
2) Limitations related to selected industry specific scenarios like CWM and DSD. See SAP Note 2214213 for details.
3) As of S/4HANA SP01 (released on February 3rd 2016)

SAP S/4HANA on-premise
Release and Maintenance Strategy

Key message

1. SAP S/4HANA follows fast-cycle innovation driven by cloud principles along **one joint cloud/ on-premise** innovation code line

2. SAP S/4HANA on-premise release strategy follows the SAP releases and maintenance model with quarterly shipment of service packs and yearly releases
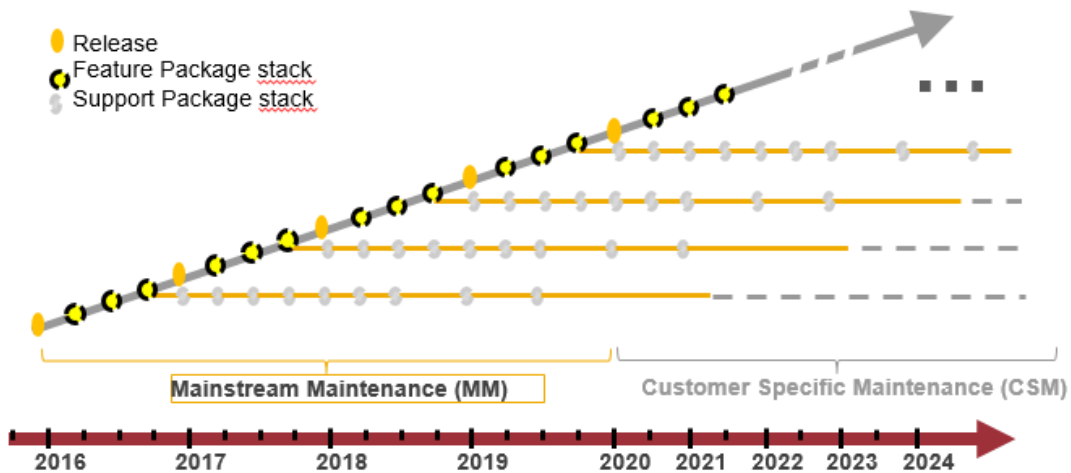
One Innovation Code Line

- ❖ One major delivery per year (release) consolidation all new features and fixes. In general to be expected in Q4

- ❖ Quarterly deliveries (service package) which will contain fixes and could contain features. General guideline:
  Q2: new features (Feature Package Stack)
  Q1/Q3: Fixes (Support Package Stacks)

- ❖ Support Package Stacks in maintenance only phase

- ❖ Scope of mainstream maintenance and customer specific maintenance phases keep as is

- ❖ Focus on fast-cycle innovation deliveries – fits to market requirements and SAP company strategy

- ❖ Similarity to cloud approach of SAP S/4HANA Cloud

SAP S/4HANA Enterprise Management, on-premise edition
Delta Scope Description

Project control and product development	Project financials control	Project logistics control	Product development foundation				
Production engineering	Production BOM management	Recipe/routing management	Inspection planning				
Production planning	Material requirements planning	Basic order promising/available to promise					
Production orchestration and execution	Production control	Production execution	Basic subcontracting	Basic external processing	Repetitive manufacturing	Kanban	JIT outbound processing
Quality management	Quality engineering	Quality inspection	Quality improvement				
Inventory and basic warehouse management	Goods issue	Goods receipt	Basic warehouse management	Basic shipping			
Maintenance management	Maintenance planning and scheduling	Maintenance execution					

The Move to SAP S/4HANA
The Transition Scenarios

System Conversion

ERP System → S/4HANA — On-Premise

- *Example:* Complete conversion of an existing SAP Business Suite system to SAP S/4HANA

Landscape Transformation

ERP System - Region A -
ERP System - Region B -
ERP System - Region C -
→ On-Premise / Cloud

- *Example:* Consolidation of current regional SAP Business Suite landscape into one global SAP S/4HANA system

New Implementation

ERP System
Non-SAP System
→ On-Premise / Cloud

- *Example:* New or existing SAP customer implementing a new SAP S/4HANA system

Call-to-Action

- **Digital Enterprise is reality for large and for small companies; for net new and installed base customers**

- **Educate yourself - leverage SAP Learning, use SAP S/4HANA PartnerEdge**
    - SAP S/4HANA Solution Explorer **>>**
    - SAP S/4HANA - Innovation- & Value Discovery (LoB & industry) **>>**
    - SAP S/4HANA Roadmap **>>**
    - S/4HANA Simplifications and Improvements **>>**
    - S/4HANA Delta Scope **>>**

- **Transition customers now – don't wait for others to do it!**

SAP® Partner Edge®

Thank you

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S/4HANA Go-to-Market

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