



# How the World's Largest ERPs Move to SAP S/4HANA

LT103

PUBLIC

# Speakers

## Las Vegas

September 24–27, 2019

---

Rudolf Hois

## Barcelona

October 8-10, 2019

---

Rudolf Hois

## Bangalore

November 13-15, 2019

---

Tina Malik



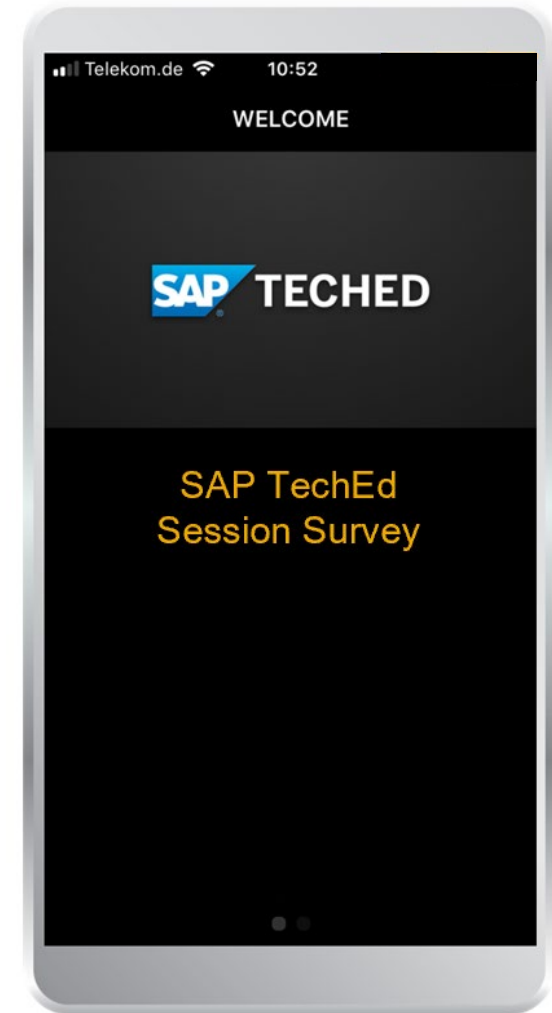
## Take the **session survey**.

We want to hear from you!

Complete the session evaluation for this session **LT103** on the SAP TechEd mobile app.



Download the app from  
iPhone App Store or Google Play.



# Disclaimer

The information in this presentation is confidential and proprietary to SAP and may not be disclosed without the permission of SAP. Except for your obligation to protect confidential information, this presentation is not subject to your license agreement or any other service or subscription agreement with SAP. SAP has no obligation to pursue any course of business outlined in this presentation or any related document, or to develop or release any functionality mentioned therein.

This presentation, or any related document and SAP's strategy and possible future developments, products and or platforms directions and functionality are all subject to change and may be changed by SAP at any time for any reason without notice. The information in this presentation is not a commitment, promise or legal obligation to deliver any material, code or functionality. This presentation is provided without a warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. This presentation is for informational purposes and may not be incorporated into a contract. SAP assumes no responsibility for errors or omissions in this presentation, except if such damages were caused by SAP's intentional or gross negligence.

All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.

# Multinational CPG customer SAP S/4HANA Journey



## The approach:

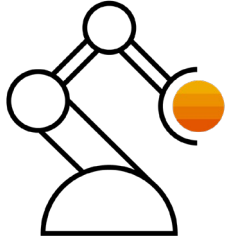
- Move from 5 Regional ECC systems to a single Global SAP S/4HANA
- Upgrade one instance to SAP S/4HANA 1709 SP02 (May 2019)
- Consolidate data and processes from other SAP ECC into SAP S/4HANA through 2021

## Program Goals:

- Drive simplification, efficiency and standardization
- Increased speed, transparency and agility
- Improve system performance with SAP S/4HANA
- IT landscape simplification and support reduction

# System Conversion to SAP S/4HANA 1709 | Live

20,000 users | 12 TB Memory | 6.3 TB DB Size | Full Scope



## Customer

- Europe
- Industrial Machinery & Components
- > 25,000 employees
- > US\$ 4.7 billion
- > 200,000 customer contacts per day

## Project

- System Conversion
- Live since Nov 2018
- 23 months duration

## Source System

- ERP 6.0
- Oracle database
- 16.4 TB database
- 300m VBAP entries

## Target System

- SAP S/4HANA 1709
- 20,000 active users
- 12 TB memory
- 6.3 TB database
- 800m ACDOCA entries
- 200m MATDOC entries

## Scope

- Single global instance
- FI, CO, CO-PA, FI-AR Credit Management, FSCM Collection Management, SD, MM, SCM, PDM, CS, PM, PP, IDM
- Sophisticated processes around customer, causing various SAP enhancements in CVI and Business Partner
- SAP Fiori Cloud (starting with minimal scope)

## Project Success Factors

- Several dress rehearsals of E2E conversion including subsequent performance and integration testing with converted system
- CVI decoupled – completed about one year before SAP S/4HANA conversion
- Involvement of key users and business stakeholders

# System Conversion to SAP S/4HANA 1610 | Live

2400 active users | 60 TB Memory | 25 TB DB Size



## Customer

- Europe
- Utilities
- 70,000 employees
- US\$ 80 billion

## Project

- System Conversion
- Live since October 2018
- 21 months

## Source System

- ERP 6.0 EhP 6
- Oracle DB
- 103 TB database

## Target System

- SAP S/4HANA 1610
- 2,400 active users
- 60+6 TB memory
- 25 TB database
- SAP HEC

## Scope

- IS-U application-level enablers for scale-out co-developed
- Billing process in focus (meter readings, invoices)
- Near Zero Downtime (NZDT) approach
- Unicode conversion
- Data center relocation to SAP HEC
- Overachieved expected performance improvements: billing process twice as fast than on source system

## Project Success Factors

- Close collaboration between customer and SAP to make first ever SAP S/4HANA utilities with SAP HANA scale-out a success
- Strong involvement of SAP DBS in planning and project execution
- Deployed at SAP HEC

# How large can you get?

Size of certified SAP HANA database systems for SAP /4HANA applications

## SAP HANA scale-up (single-node servers)

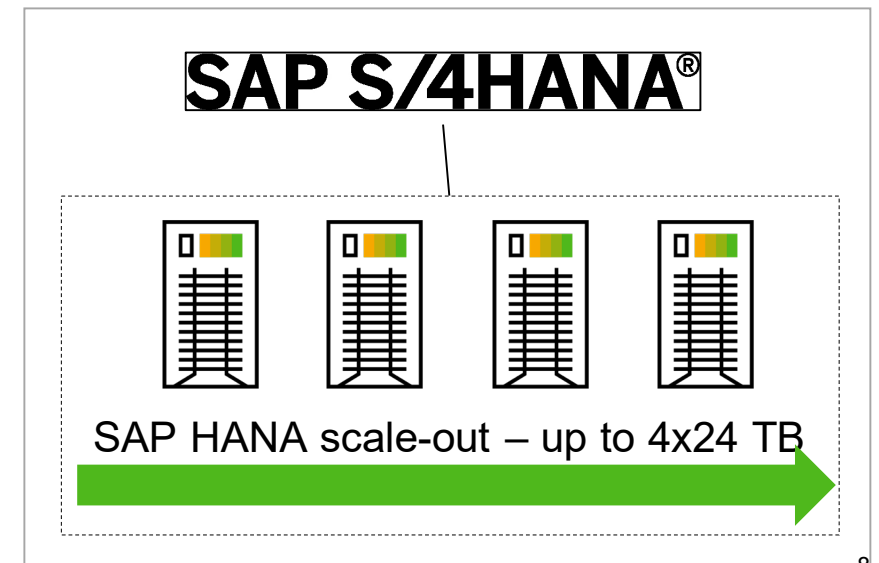
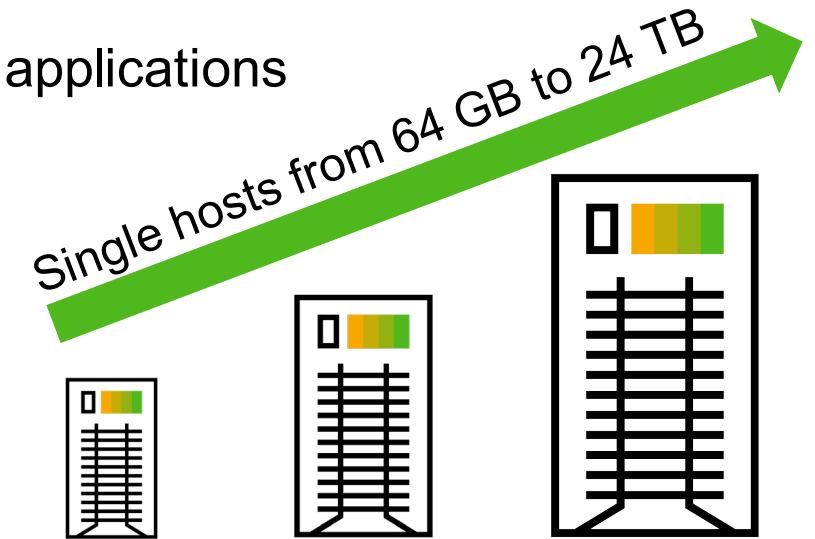
- Vast variety of host sizes
  - Up to 24 TB of Memory
  - Up to 32 CPUs (896 CPU cores)
  - Lab tests on commodity SAP HANA hardware:  
More than 500k SELECT/s, 100k INSERT/s, 5k COMMIT/s

## Using SAP HANA scale-out

- Supported with up to four database nodes
- Extending DB capacity up to 96 TB RAM, 128 CPUs (3584 cores)
- Lab test system:  
ACDOCA with 180 billion records; 400 million GL line items every day

## Freedom of choice:

- Bare metal in your own data center or hosted
- Virtualization with a variety of hypervisors
- Infrastructure as a Service with major hyperscale partners





# What do we see in **productive use**?

## Information on large SAP S/4HANA installations



2015



2016



2017



2018

- Max HANA RAM: 2 TB
- Max data volume: 1.5 TB

12 TB  
3.5 TB

24 TB  
14 TB

60 TB  
26 TB

### Further statistics of interest

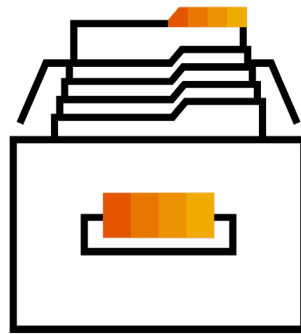
- SAP S/4HANA systems in productive use:
  - Up to 240k active users
  - ACDOCA: >10 billion entries – More than 1.5 billion material document line items – IS-U billing: > 1.5 million bills/hour
- SAP HANA database deployments in productive SAP S/4HANA systems
  - Single-node: systems with size 4..24 TB resemble the SAP ERP volume distribution
  - Scale-out: live systems with size 24..60 TB
- Migration paths for these:
  - Brown-field or new install: ~2/3 of projects – System conversion: ~1/3 of projects
  - Five out of the seven largest systems chose NZDT

# Minimizing **resource** consumption

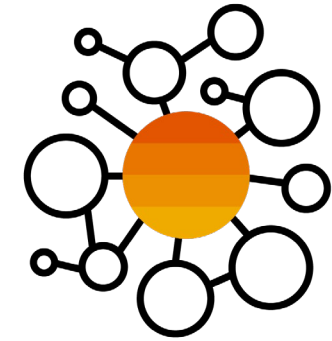
Use your SAP HANA hardware efficiently



Delete or archive data  
prior to migration to  
SAP S/4HANA



Use archiving and ILM  
to manage data  
volume and lifecycle

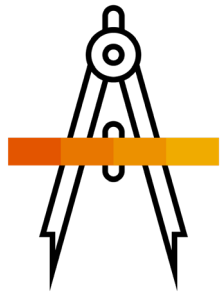


Stay up-to-date to  
benefit from technology  
innovations

# SAP S/4HANA is ready for the largest of SAP ERP systems

Many successful implementations of very large SAP S/4HANA systems

- Throughout the industry spectrum, covering different workload patterns



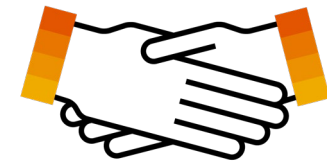
Preparation is key



Test drive E2E  
conversion



Get your team  
on board



Embrace collaboration  
with SAP experts

# Continue your SAP TechEd 2019 Learning Experience

Join the digital SAP TechEd Learning Room 2019 in [SAP Learning Hub](#)

---

- Access SAP TechEd **Learning Journeys**
- Discover **related** learning content
- Watch **webinars** of SAP TechEd lectures
- Learn about SAP's latest innovations with **openSAP**
- Collaborate with **SAP experts**
- **Self-test** your knowledge
- Earn a SAP TechEd **knowledge badge**

**SAP** Learning Hub

open**SAP**



# More information



## Related SAP TechEd Learning Journeys

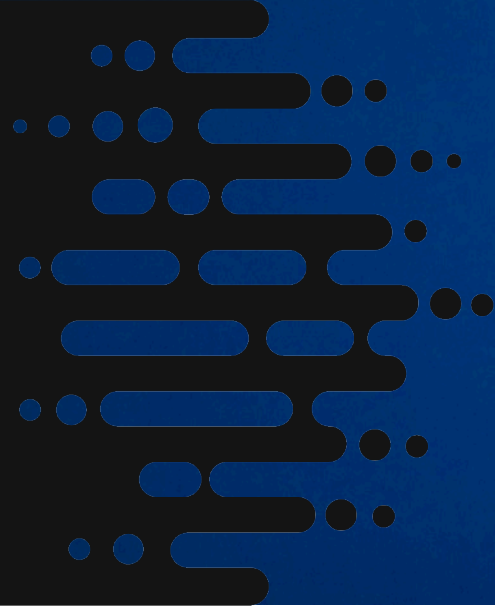
- CAA3 – Move to SAP S/4HANA
  - CAA4 – Get to SAP S/4HANA Cloud
- 

## Related SAP TechEd sessions

- CAA801 – Overview, Road Map, and Strategy for SAP S/4HANA, L1
  - CAA114 – Paths for Transitioning to SAP S/4HANA, L1
  - CAA118 – Experience Intelligent ERP with SAP S/4HANA Cloud, L1
  - CAA303 – Sizing for SAP S/4HANA and SAP S/4HANA Cloud, L1
- 

## Public SAP Web sites

- SAP Community: [www.sap.com/community](http://www.sap.com/community)
- SAP products: [Discover SAP S/4HANA](#), [SAP product & solution roadmaps](#)
- OpenSAP course [“Your Path to SAP S/4HANA”](#)
- SAP S/4HANA product related Training: [SAP S/4HANA Overview and Business Processes](#)



Thanks for attending **this session.**



## Feedback

Please complete your session evaluation for **LT103.**

## Contact for further topic inquiries

Rudolf Hois  
Vice President, SAP S/4HANA  
[r.hois@sap.com](mailto:r.hois@sap.com)

Follow us



[www.sap.com/contactsap](http://www.sap.com/contactsap)

© 2019 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company.

The information contained herein may be changed without prior notice. Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors. National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

In particular, SAP SE or its affiliated companies have no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platforms, directions, and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, and they should not be relied upon in making purchasing decisions.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. All other product and service names mentioned are the trademarks of their respective companies.

See [www.sap.com/copyright](http://www.sap.com/copyright) for additional trademark information and notices.

