

# SAP Runs SAP

Joachim Mette  
April 2016



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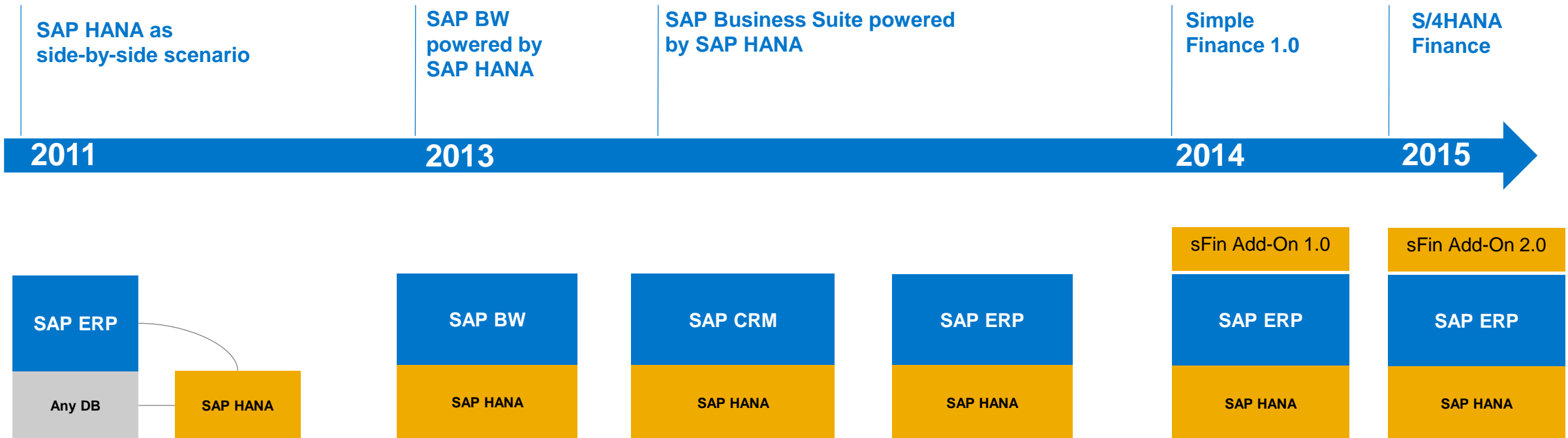
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# SAP Runs SAP

## Internal HANA adoption roadmap



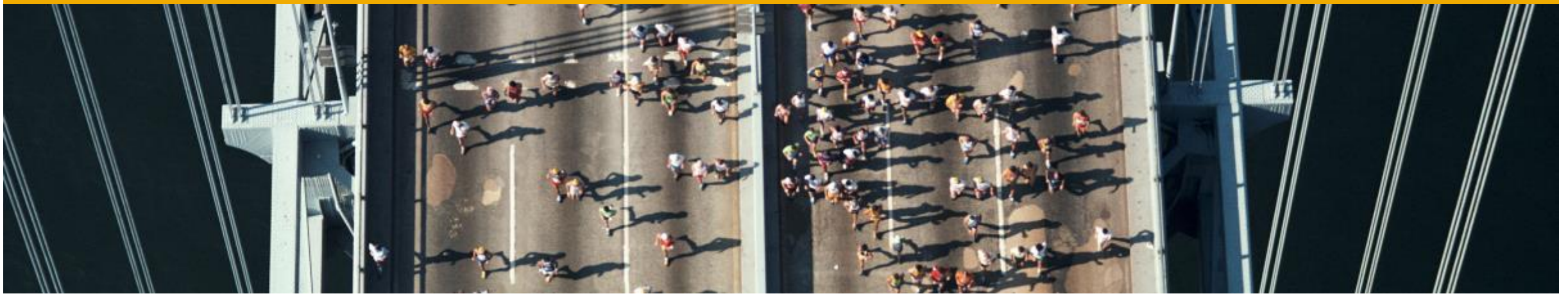
- Real time Sales pipeline reporting
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- ERP & CRM on HANA
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- Type Ahead / Fuzzy Search

- Integration of legal & internal views on line item level / Universal Journal
- No more aggregates / indices in FI & CO
- Fiori Applications
- SAP enterprise search



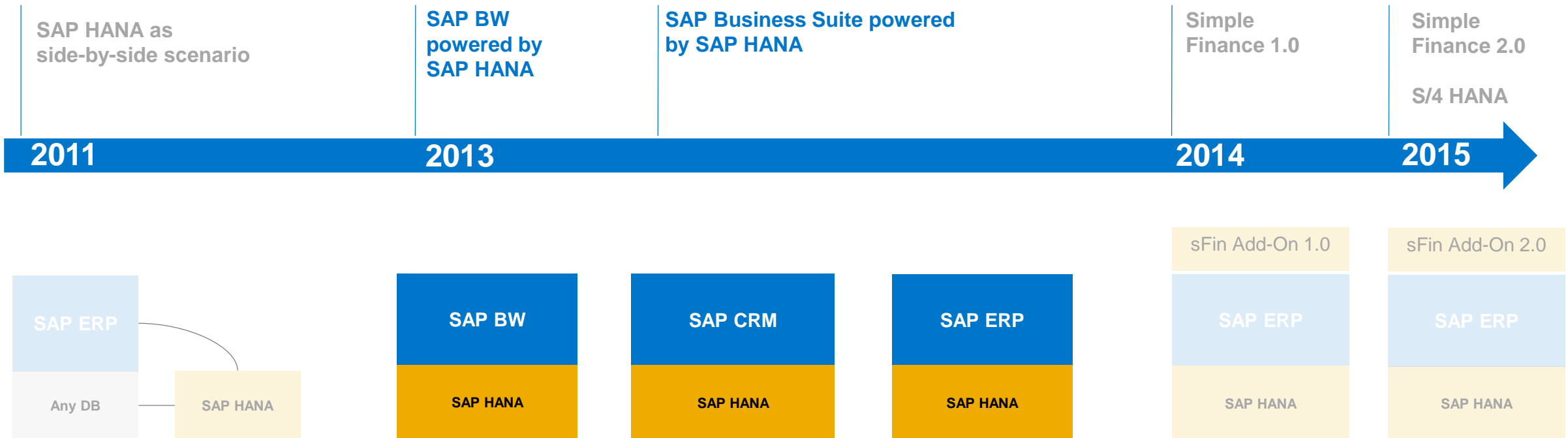


# **SAP Business Suite powered by SAP HANA**



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# SAP's Internal ERP on HANA: Key Implementation Highlights

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## SAP ERP on HANA in less than 5 months – Go Live August 21<sup>st</sup>, 2013

### Business Highlights

- First global Go Live of SAP ERP on HANA
- **67.000 ERP** user worldwide
- Implementation in 5 months
- Enables effective and close collaboration between all business areas

### Technical Highlights

- Significantly faster database request time of single processes
- Data volume reduced from 7.1 TB to 3.7TB, down to 1.8 TB in HANA
- More than 3.000 unused custom code objects retired
- HANA import runtime reduced by ~40 hours

# Focus Topic 1: Testing

Test type	Description	Benefit
<b>User Acceptance Test</b>	<ul style="list-style-type: none"><li>Functional tests</li></ul>	<ul style="list-style-type: none"><li>Confidence for business operations</li></ul>
<b>Single Performance Test</b>	<ul style="list-style-type: none"><li>Dedicated single processes, selected by business relevance and criticality</li><li>Comparison of relational and HANA DB performance</li></ul>	<ul style="list-style-type: none"><li>Process performance improvements</li><li>Database response time improvements</li></ul>
<b>Mass Load Performance Test</b>	<ul style="list-style-type: none"><li>Stress test for the HANA DB, executing reports, Load Runner and other tools at the same time</li></ul>	<ul style="list-style-type: none"><li>Simulation of „close-to-real“ conditions</li><li>Confirmation that hardware can handle load also during peak times</li></ul>
<b>Cutover Dry-run / Rehearsal</b>	<ul style="list-style-type: none"><li>Test of technical and handover procedures during cutover</li></ul>	<ul style="list-style-type: none"><li>Routine for real cutover</li><li>Optimized procedures, clear responsibilities</li></ul>
<b>Regression Test</b>	<ul style="list-style-type: none"><li>Technical test to uncover bugs after system changes such as enhancements, fixes</li></ul>	<ul style="list-style-type: none"><li>Technical system readiness of ERP</li></ul>
<b>Integration Test</b>	<ul style="list-style-type: none"><li>Test of ERP in interaction with other dependent systems and over 150 interfaces</li></ul>	<ul style="list-style-type: none"><li>Technical readiness of ERP as part of the overall system landscape</li></ul>

# Focus Topic 2: Custom Code

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## Get transparency

- Identify the Custom code footprint
- Usage analysis
- Code analysis based on new developing guidelines

## Identify the hotspots

- Prioritization based on usage analysis

## Get the most out of it

- Efficient & effective custom code performance
- Avoidance of adoption & test efforts for unused custom code objects
- Sustainable and final remediation of performance & security findings

### Custom Code Management - Technical Components

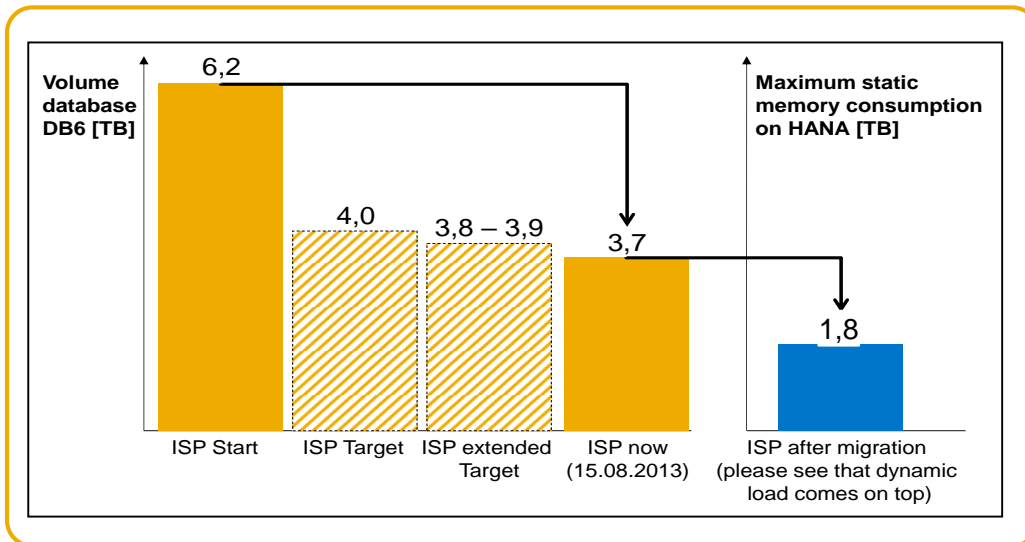
- Clone-Finder and Modification / Interface Overview
- Code inspector / ABAP Test Cockpit and Custom Code Lifecycle Management
- In Use now: ABAP Procedure Monitoring and ABAP SQL Monitoring



# Focus Topic 3: Data Volume Management

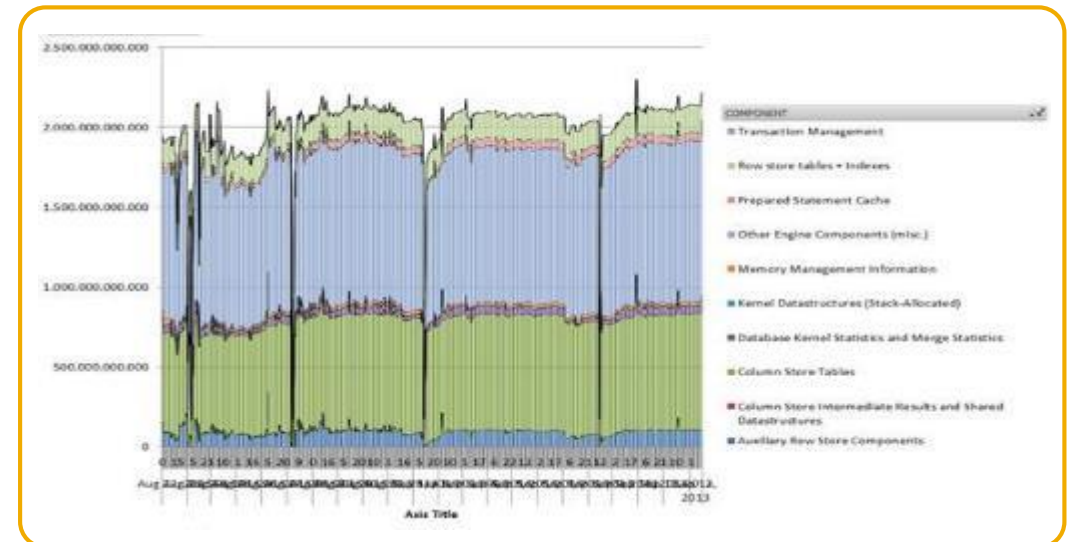
## Preparation

- Net size of the ERP before migration: 7.1 TB (deep compression)
- Reduction to 3.7 TB via archiving/deletion and database reorganization
- Static memory consumption is increased by normal monthly growth incl. month end closing activities and release deliveries
- Normal growth of ERP system on HANA of 30-60 GB / month

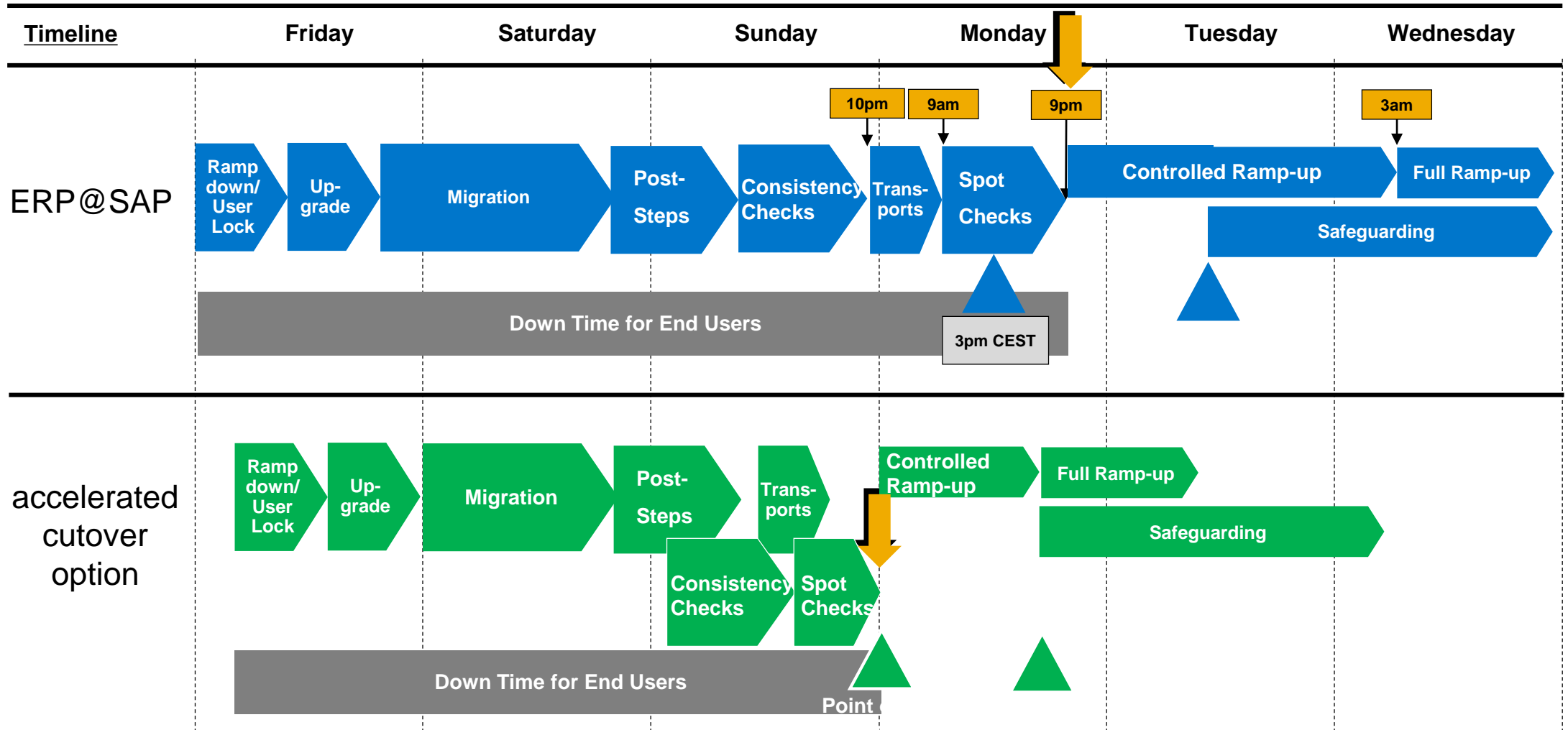


## Production

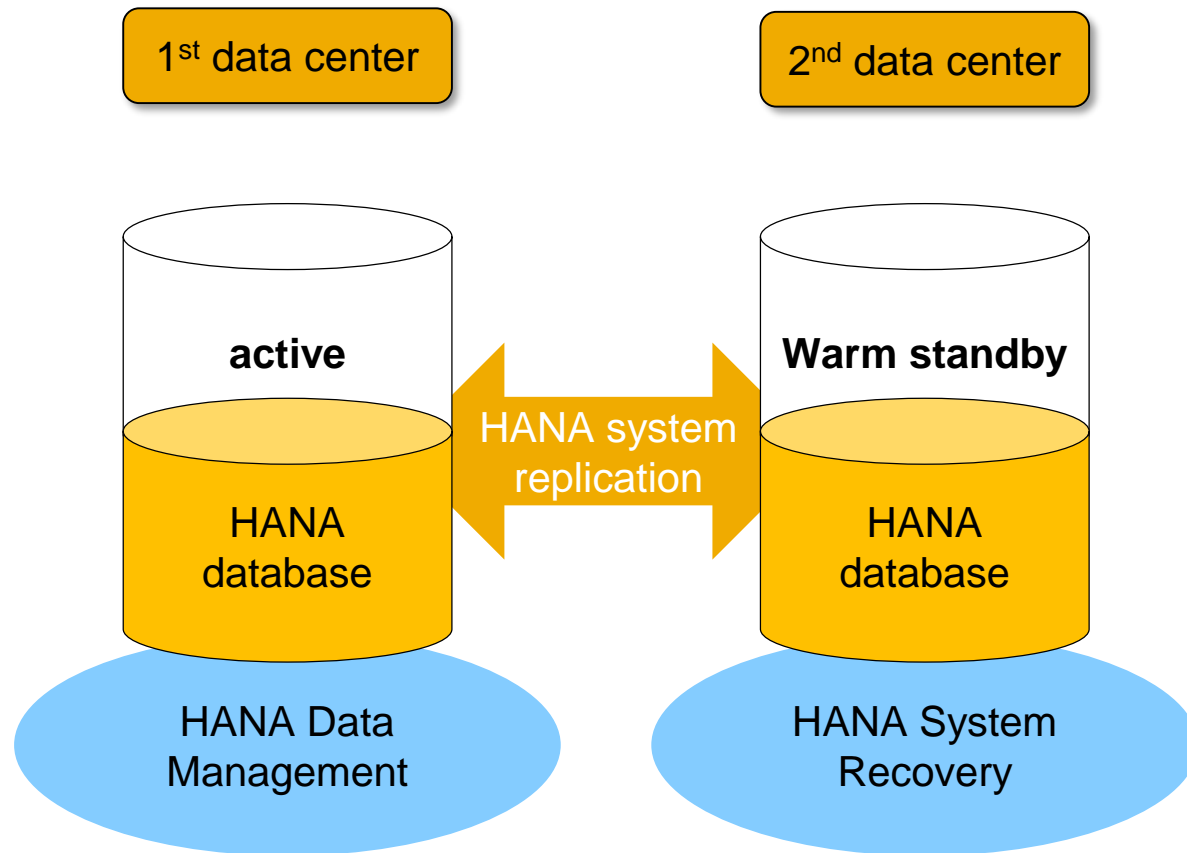
- Utilization of hardware memory relatively stable since go-live with 1.8 to 2.3 TB memory consumption



# Focus Topic 4: Cutover Process



# Focus Topic 5: Disaster Recovery



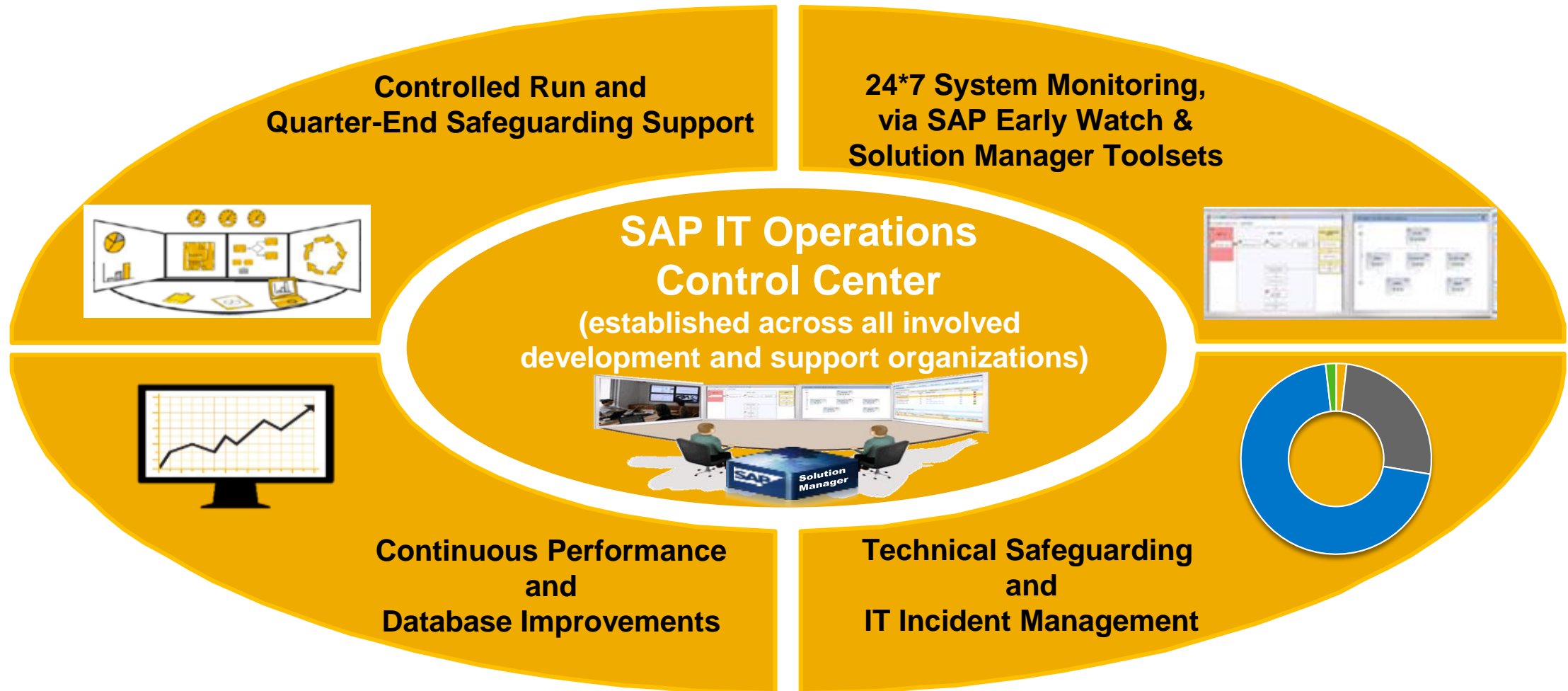
Replication of data and logs only

**Warm standby** server

Fast failover: HANA database already partially started

Hardware **vendor independent**

# Focus Topic 6 : Ongoing Operations



# SAP's ERP journey @ a glance – Simple Finance as driver for excellence

2013

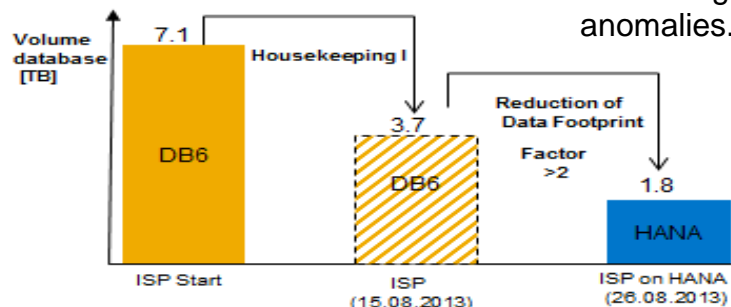
Move to HANA in 5 month

## Main Technical Value

- **Data footprint reduction** from 7,1 TB to 3,7 through rigid data management
- **HANA database compression** from 3.7 TB to 1.8 (factor > 2,5)
- **Significant less storage space** on disk needed in comparison to previous database system
- **New monitoring and analysis features** with HANA studio

## Main Business Value

- **Fast close enablement** - 28% of processing time removed. New quality through real time analysis & continuous intercompany reconciliation.
- **Simplified Receivables management** - removal of offline backend processes & finance & Sales working on unified record level. DSO reduction of 10%
- **Risk & compliance** - fraud detection monitoring. Real time screening for anomalies.



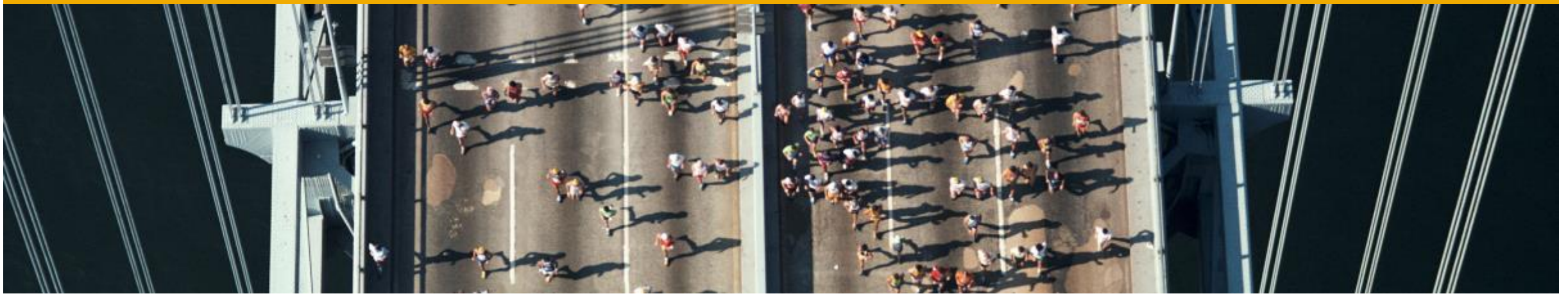
April

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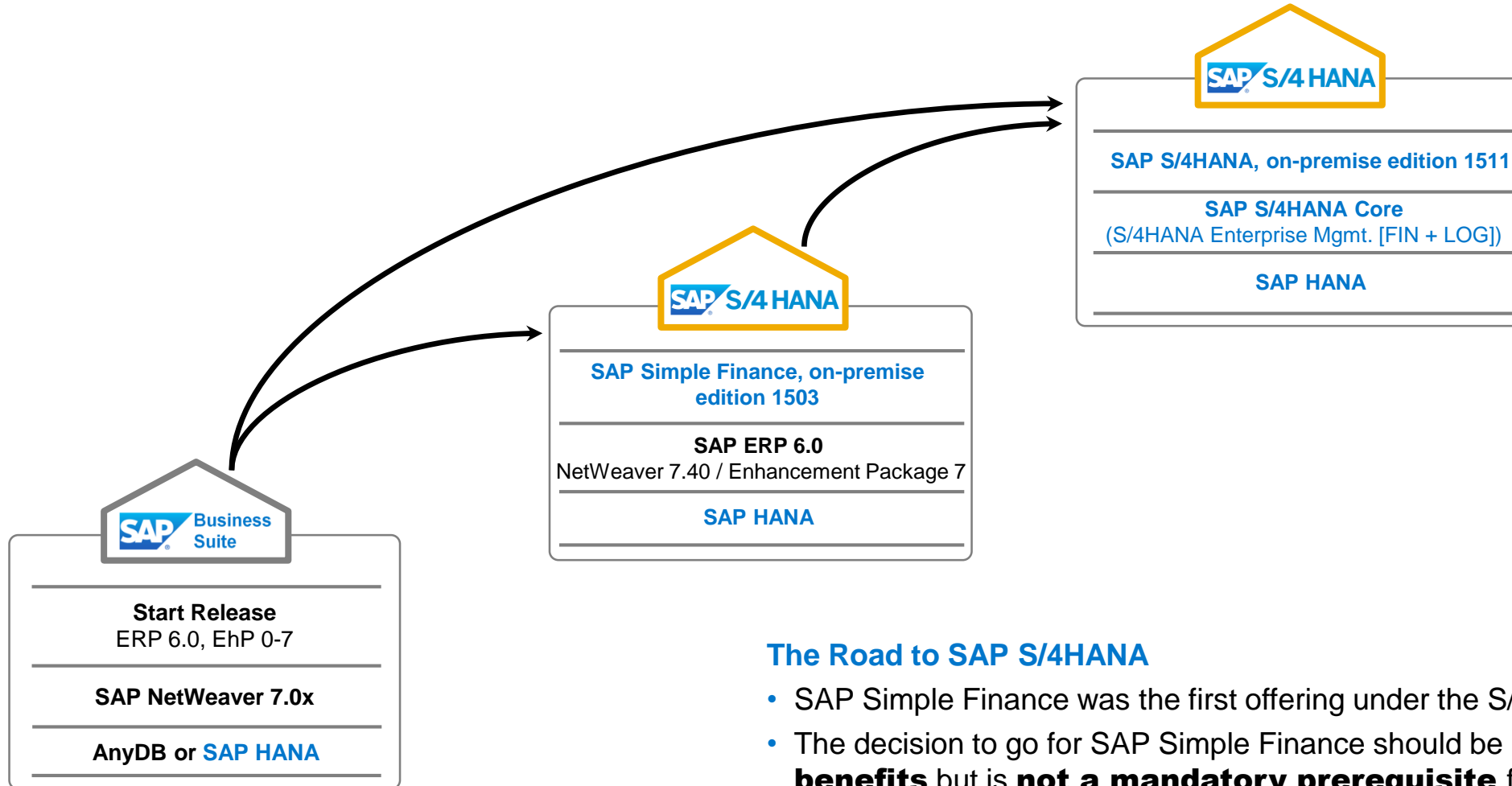
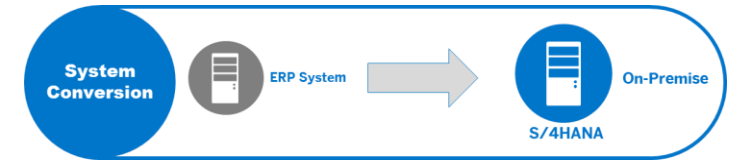




# Simple Finance 1.0 & S/4HANA Finance

# System Conversion

## System Conversion & SAP Simple Finance



### The Road to SAP S/4HANA

- SAP Simple Finance was the first offering under the S/4HANA product family
- The decision to go for SAP Simple Finance should be based on the **business benefits** but is **not a mandatory prerequisite** for any system conversion

# What is SAP Simple Finance?

## SIMPLE FINANCE IN A NUTSHELL

SAP Simple Finance is a non-disruptive evolution of SAP's unrivaled portfolio of **global financial solutions** based on SAP HANA. It delivers **instant insight anywhere** for CFOs and Finance departments around the world to help them **transform their business** in a rapidly changing world.

Transformative business value  
from real-time analytics  
enabled by HANA



New **consumer-grade user experience** for all devices  
provided by BI and Fiori



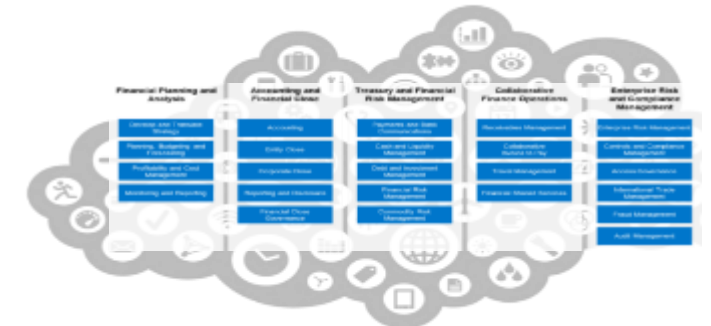
Easily **consumable as a managed service** from the HANA Enterprise Cloud  
(or *continued on-premise*)



Flexible on-the-fly reporting enabling interactive analysis and simulation of complex business situations.



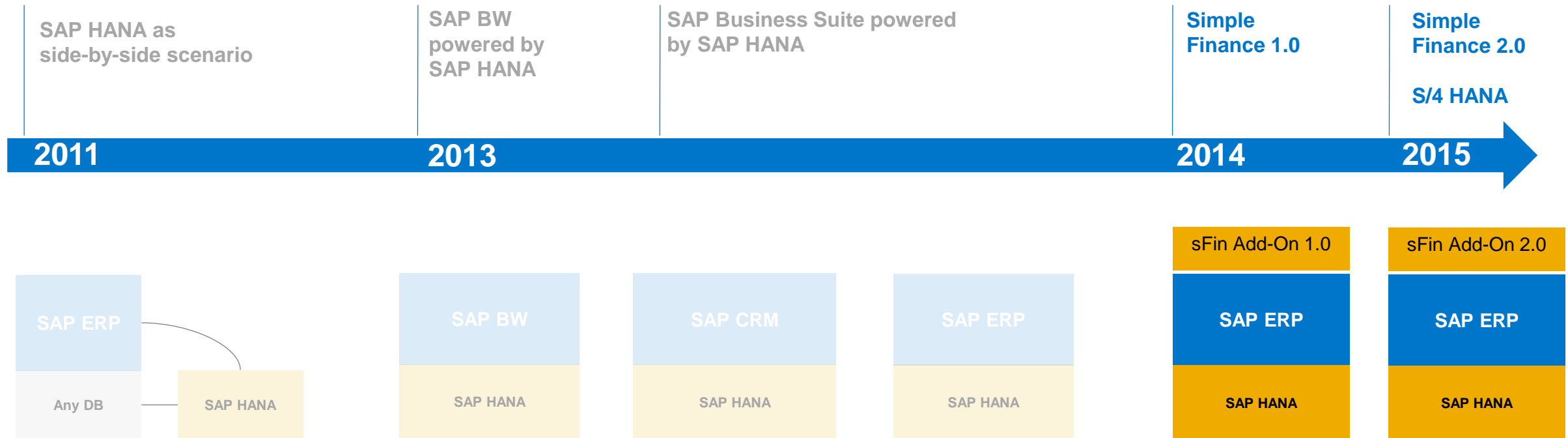
Personalized, responsive and simple consumption of analytics, dashboards and reports across devices.



Easy and flexible adoption of innovation based on simple solution architecture with complete choice of deployment.

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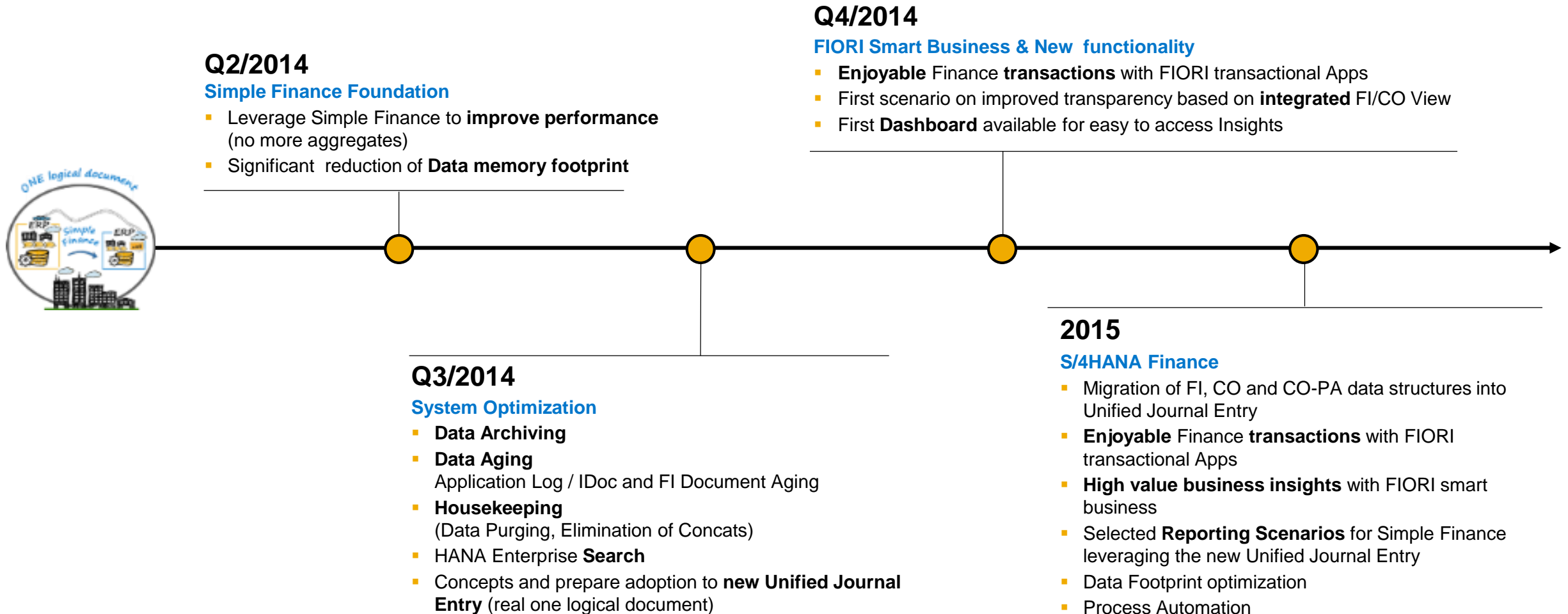
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# S/4HANA Finance

## Benefits – roadmap 2014 & 2015





# S/4HANA Finance

## Benefits – roadmap 2016



### Q4/2015

- **Fiori delivery:** Close functional / process gaps, coverage of Process Receivables
- Roll Out of **Optimized HANA Transactions**

### Q2/2016

- **First simulation scenario**– New business insights with **forward looking close**
- **Flexible Steering** - Universal Journal – Reporting across relevant attributes for PCA, COPA, Consulting Ledger
- **Single Source of truth (FI/CO)**– complete SAP specifics into Universal Journal for COPA and Consulting Ledger
- **Fiori delivery 1602:** Controlling –Apps for Master Data Maintenance, Reporting and Allocations, Asset Management, Treasury Apps for Analytics

### Q1/2016

- **Single Source of truth (FI/CO)**– complete SAP specifics into Universal Journal for Profit Center Accounting (PCA)
- **Flexible Steering** - Universal Journal – Reporting across relevant attributes for PCA related Data
- **SAP RealSpend, cloud edition:** first users

### Q3/2016

- **Cash Reporting** on all dimensions; AR and AP Data enhanced with all attributes (“Online Split”)
- P&L on the Fly with Boardroom for everybody
- **Softclose** – Full Transparency on Projects (Daily insides) Sfin Profitability 2.0 PoC for Projects
- **Seamless Reporting** – New Archiving Concepts allow seamless accessibility of data
- **Flexible Steering** - Universal Journal – Reporting across all attributes

# Project Scope

## What will change with S/4HANA Finance OP 1503?

### Mandatory

Aggregate tables and application index tables have been removed and replaced by equally named HANA views

### Optional

For a number of t-codes / reports newer versions are to be used (see SAP note #[1946054](#) )

### Mandatory

**New General Ledger is mandatory**, comes with different IMG, new transactions/ reports and authorization objects

### Mandatory

**New Asset Accounting as per EHP7 is mandatory**, some code of old AA was deleted (more functionality)

### Mandatory

**RE-FX is mandatory**, only applications built on top of RE classic may have problems

### Optional

Data Aging introduced for the archiving object FI\_DOCUMENT, replacing classical archiving

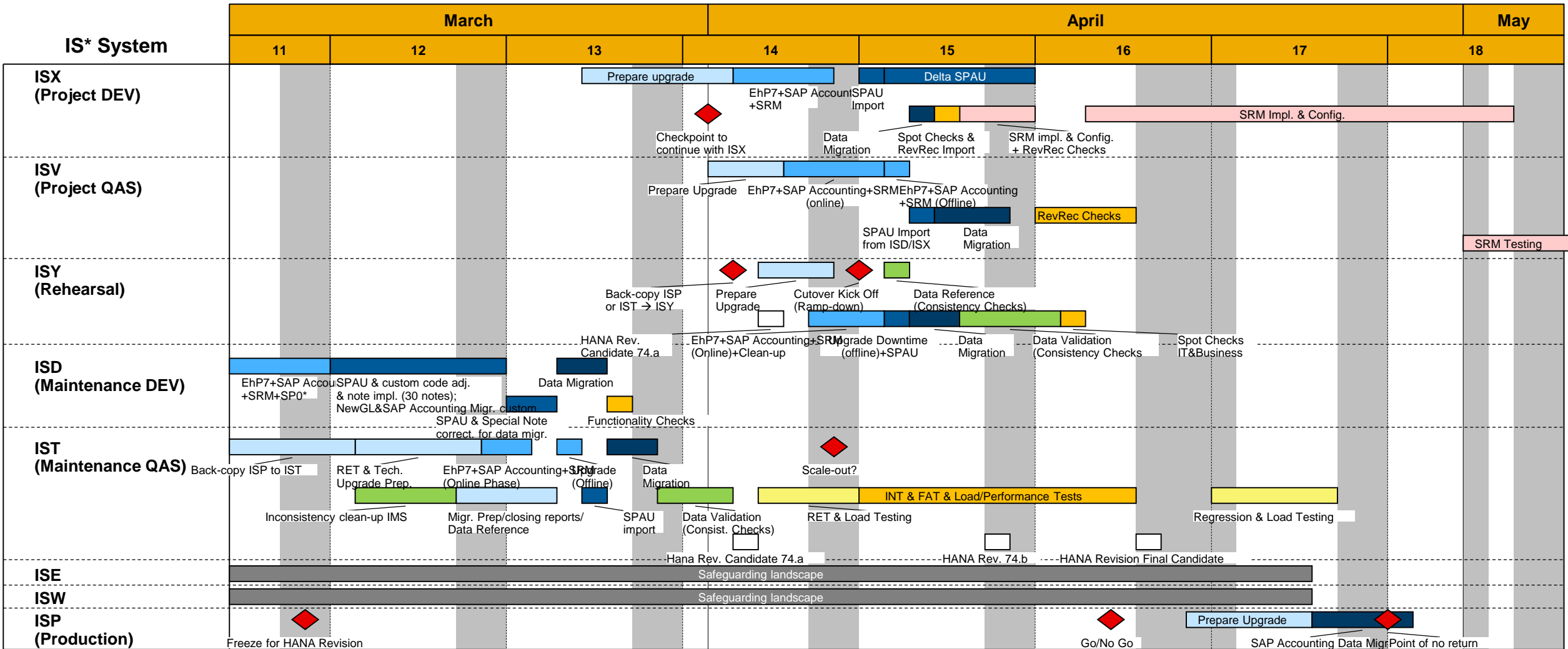
### Optional

SAP Cash Management powered by SAP HANA replaces the classic Cash Management

# Technical starting point and go-live configuration of Simple Finance

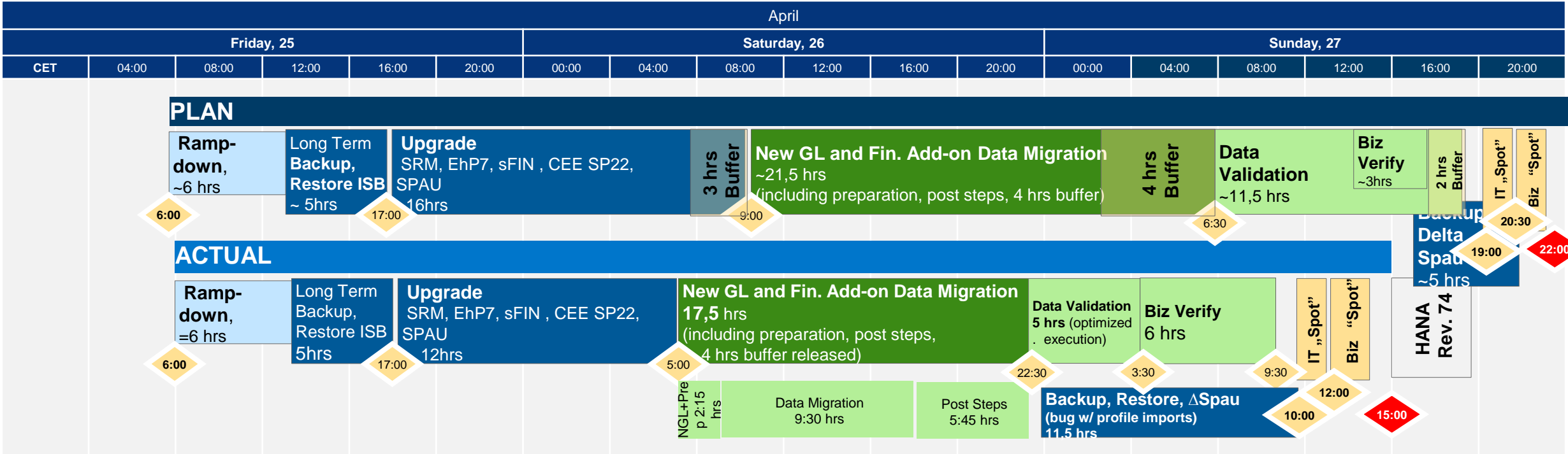
	Starting Point	Final Go Live Configuration
ERP	<ul style="list-style-type: none"> <li>ECC 6.0 EHP6</li> </ul>	<ul style="list-style-type: none"> <li>ECC 6.0 EHP7</li> </ul>
ABAP / NetWeaver Kernel	<ul style="list-style-type: none"> <li>NW 7.40 SPS 04, kernel 7.40 PL25</li> </ul>	<ul style="list-style-type: none"> <li>NW 7.40 SPS 06, kernel 7.41 PL26, sFIN 1.0</li> <li>Add-ons:               <ul style="list-style-type: none"> <li>IW_GIL: Generic Interaction Layer</li> <li>SAP_FIN: Financials add-on for SAP Business Suite powered by SAP HANA</li> <li>EA-FIN: Financial Extension needed for Add-On Simple Finance</li> <li>FSCM_CDD: Financial Supply Chain Mgmt business function needed for Add-On Simple Finance</li> <li>SRM_Server: Supplier Relationship Management Server part installation</li> <li>CEE patched to SP22: ECC core country version</li> </ul> </li> </ul>
HANA Version	<ul style="list-style-type: none"> <li>Rev. 73</li> </ul>	<ul style="list-style-type: none"> <li>Rev. 74</li> </ul>

# SAP Accounting Flight Plan



# Implementation and Solution

## Cut-Over Plan @ a glance



### NEAR ZERO DOWNTIME APPROACH

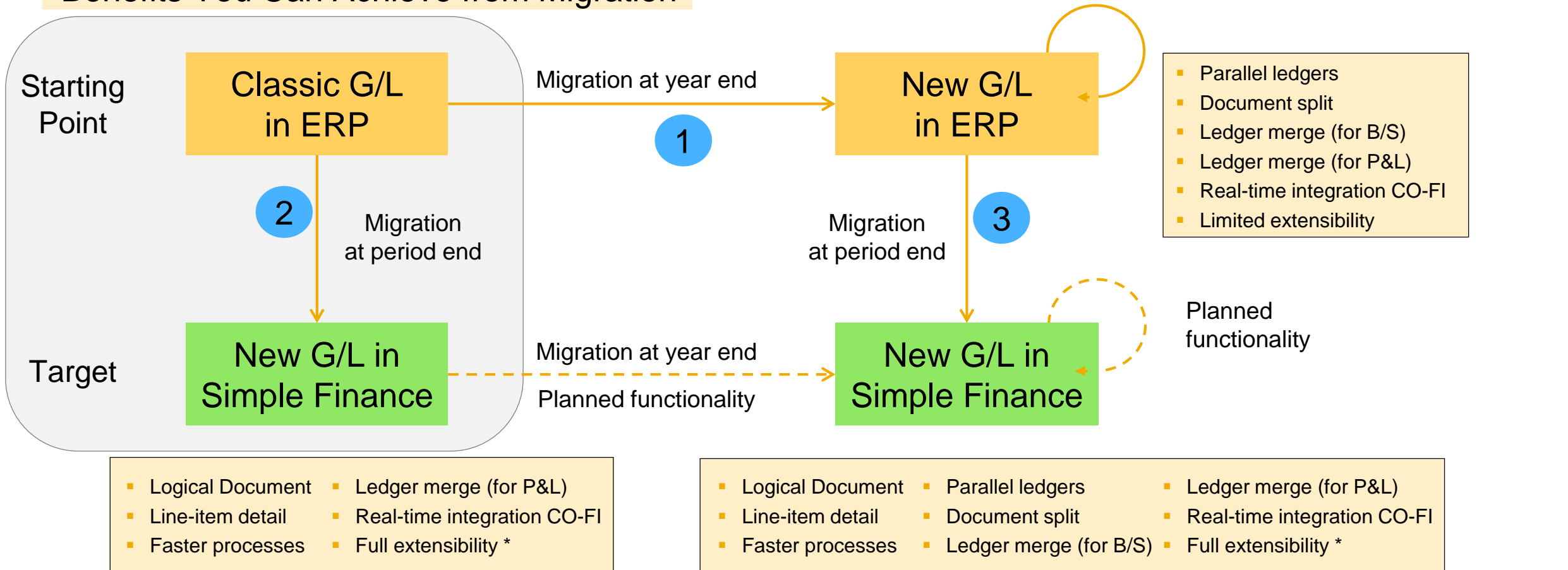
Uptime					Downtime (technical 4 hours)						
New System	Upgrade SRM, EhP7, sFIN , CEE SP22, SPAU 12hrs	New GL and Fin. Add-on Data Migration 17,5 hrs (including preparation, post steps, 4 hrs buffer released)	Delta Replay of recorded productive data 1 day	Backup 5hrs	Ramp-down, =6 hrs	Final delta replay 1h	Delta migration 1h	Technical validation 1h	System switch 1h	Data Validation 5 hrs	Biz Verify 6 hrs
System Copy	Data created during productive system operations is recorded				Analyze original data						



# Project Scope

## Migration from SAP ERP to Simple Finance

### Benefits You Can Achieve from Migration



\* planned

# Benefits

## Value realized and value anticipated @ a glance

2014

### Move to New GL & Simple Finance in 55 days

#### Main Technical Value

- **Huge simplification of code.** materialized aggregates all replaced by SQL statements for aggregation on the fly, database indices dropped
- **Dramatic data footprint reduction.** Final HANA database size targeted ~500 GB. Reduction in FI/CO from 234 to 106 GB (factor 2,2)
- **Performance gains** through Scale out: equal distribution of tables, memory on master: 1,194 TB, on slave: 0,654TB

#### Main Business Value

- **Business agility – adopt to new Business realities :** reflection of organizational changes on the fly (from 1 week to 1 day)
- **Financial Insights** - integration of legal & internal management views on line item level
- **Inherent reconciliation** - reconciliation efforts eliminated by operating against a single set of granular data
- **User Experience**



February

April

# Summary: SAP's ERP journey @ a glance – Simple Finance as driver for excellence

2013

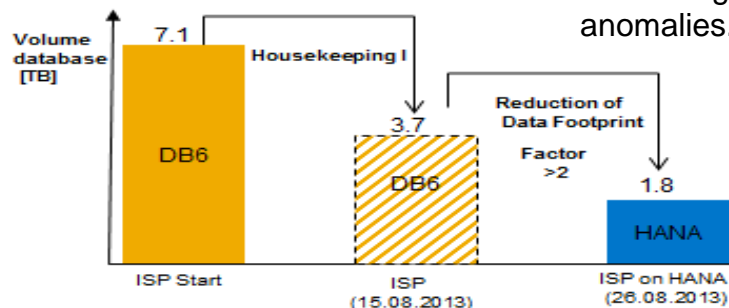
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2014

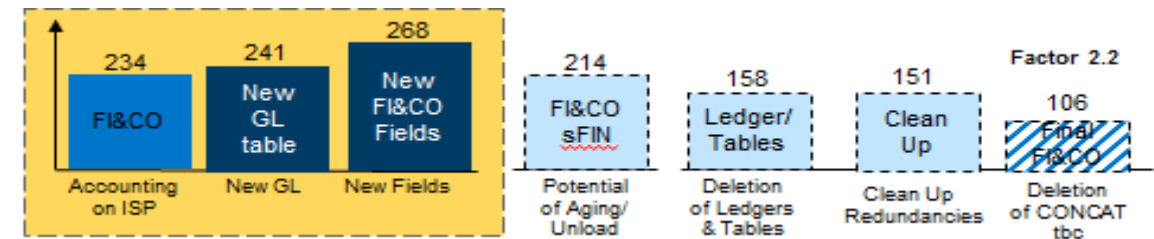
## Move to New GL & Simple Finance in 2 ½ month

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April

August

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# Implementation and Solution

## Key Take-Aways



### Preparations

- Integrate all performance testing activities in one work stream
- Conduct technical preparation phase incl. archiving and code management
- Identify business transactions that will be replaced by Simple Finance/New GL transactions
- Upgrade system to latest version of application, NetWeaver and HANA database revisions
- Run inconsistency checks and prepare consistent system environment



### Recommendations

- Ensure on-site availability of key subject matter experts and project managers
- Run cutover dry-run in an integrated system
- Involve business stakeholders closely in project
- Set up change management stream to train Business users on new transactions
- Ensure strong expertise in Business and IT for FI/CO

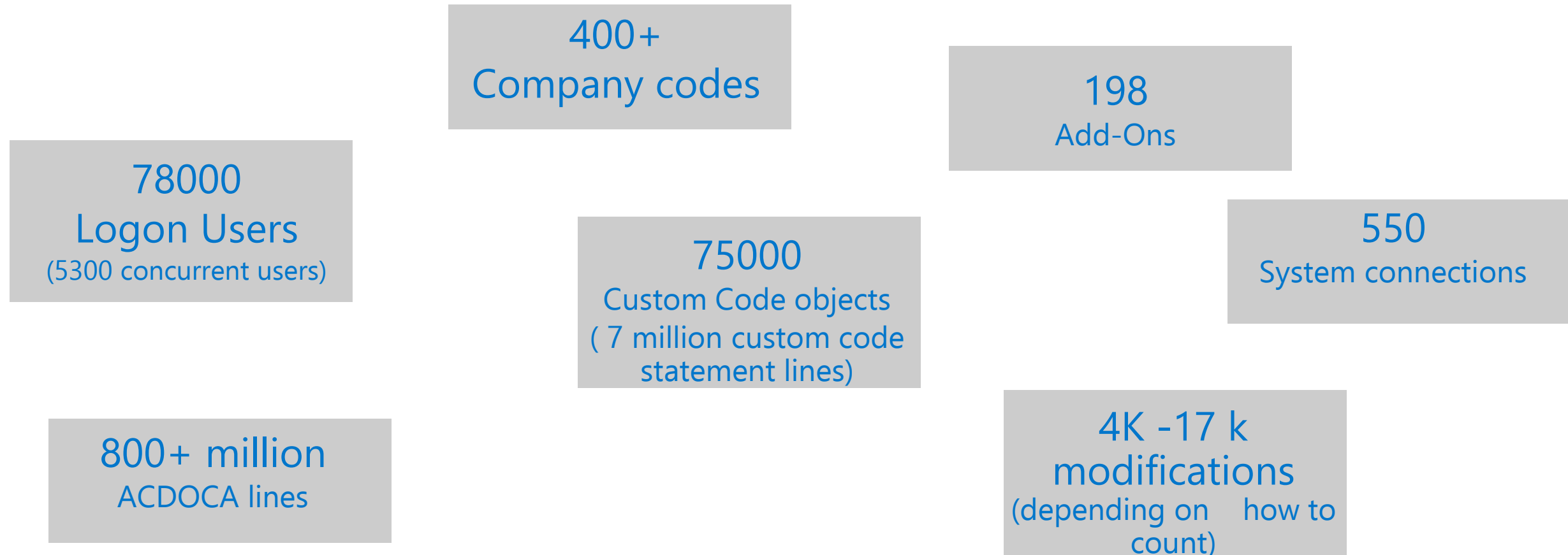


# S/4HANA

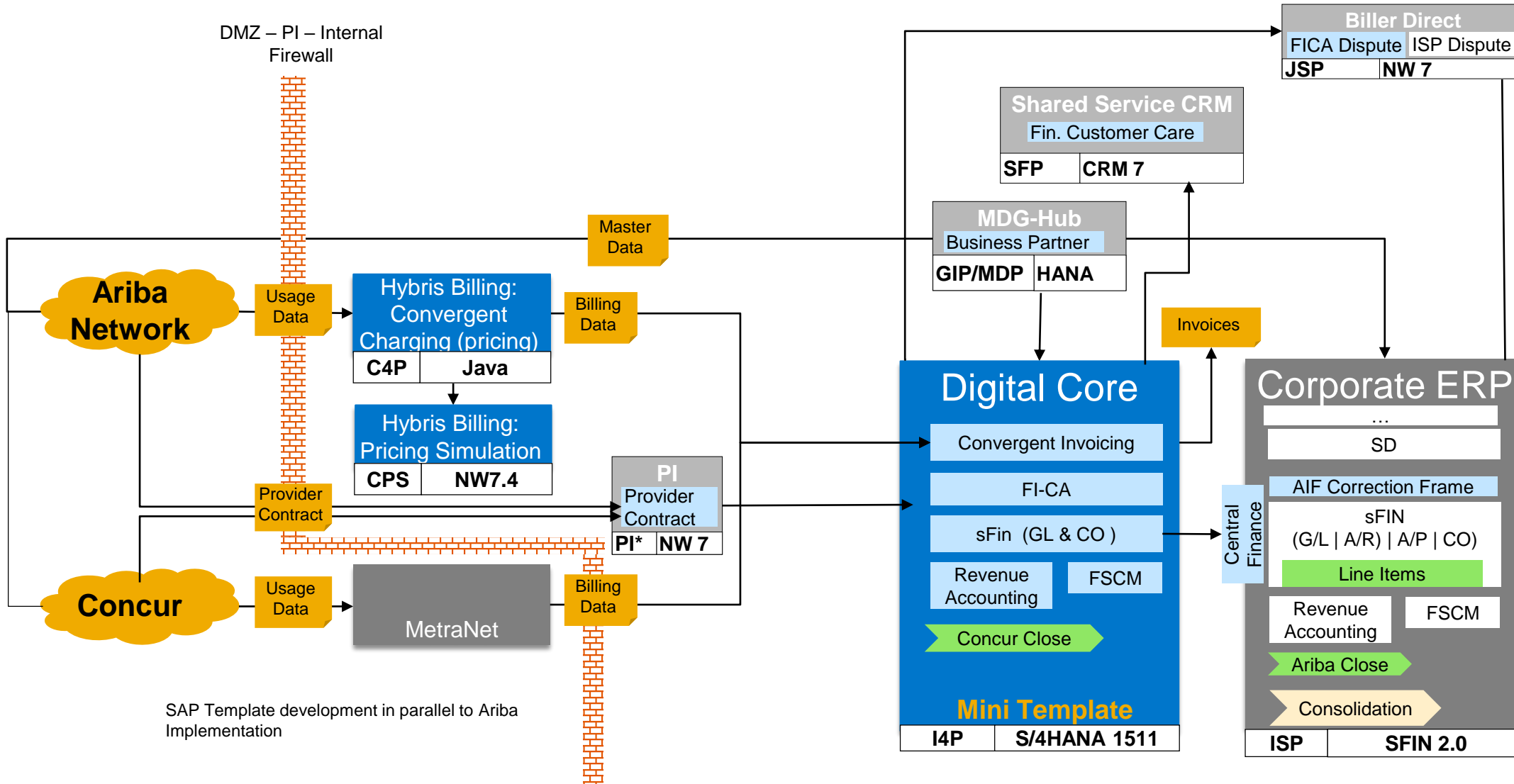


# How does SAP's internal ERP system look today?

From a system landscape that carries legacy from more than 20 years ..



# Simplified High Level View 2016 (Ariba & Concur)



# Further Information

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- **The simplification list for SAP S/4HANA**  
[https://uacp.hana.ondemand.com/http.svc/rc/PRODUCTION/pdfa4322f56824ae221e10000000a4450e5/1511\\_000/en-US/SIMPL\\_OP1511.pdf](https://uacp.hana.ondemand.com/http.svc/rc/PRODUCTION/pdfa4322f56824ae221e10000000a4450e5/1511_000/en-US/SIMPL_OP1511.pdf)



# Invitation to connect



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# Appendix