



Migration to SAP S/4HANA, Single Tenant Edition with SAP Sales Cloud and SAP Service Cloud

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Session ID # 83151

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Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

<http://info.asug.com/2019-ac-slides>

Agenda

-  Introductions
-  ESI & Birlasoft Quick Overview
-  Current IT landscape
-  Drivers & Scope for the Program
-  Approach & Deployment Strategy
-  S/4HANA Migration Findings
-  C/4HANA Deployment
-  Q & A

Key Takeaways

1. Understand the approach to S4 adoption via Migration
2. Understand Deployment of C/4HANA (C4C Sales) & Integration
3. ESI Customer's Perspective on Findings & Observations



About the Speakers



Lance Litmer

- Director of IT
- [short background]



Hans Dossche

- Director HANA CoE
- [short background]





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transforming materials that transform lives



ASUG

ESI's Global Footprint

~ \$300M Yearly Revenue

~ 670 SAP System Users



70 Years of Experience

Market Focus



Consumer Electronics

Mobile Devices

IoT

Various End Markets

Customer Focus



PCB Processors/Manufacturers

Semiconductor Fabricators

Component and Device Manufacturers

Manufacturing



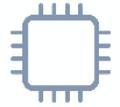
Singapore

United States

China



Processes, Technologies, Techniques and Materials



Semiconductor



PCB



Component



Micromachining



Quality Control



Display

Cutting, marking, patterning of brittle materials



ICs
Integrated circuit packaging



PCBs
HDI PCB Manufacturing and substrate processing



Flex PCBs
Via drilling, routing patterning



Semiconductors
Scribing and dicing of wafers



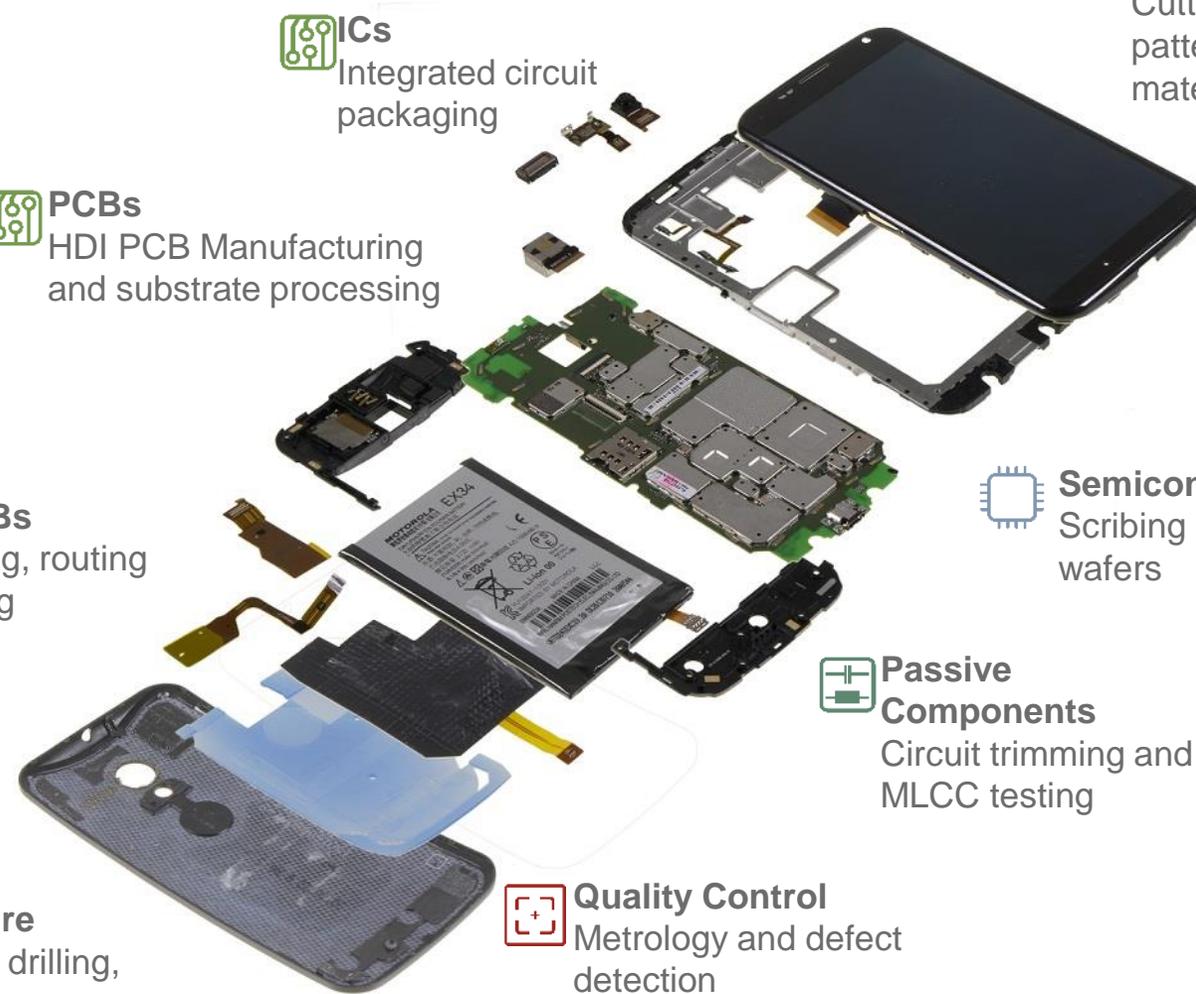
Passive Components
Circuit trimming and MLCC testing



Enclosure
Marking, drilling, cutting



Quality Control
Metrology and defect detection



About Birlasoft

20 Years of Industry Expertise Across the SAP Landscape



2000+ SAP Consultants

Global SAP AMS Partner



Early adopters of IBP, TM & MES

Digital Innovation partnership with SAP for Leonardo



Handling SAP BOBJ Worldwide product support since 2005



Ranked Leader in SAP HANA. 120+ Projects, 450+ Practitioners

SuccessFactors Leadership. 1000+ Projects, 700+ Customers



CRM / CEC – C/4HANA (Hybris, CPQ & C4C/C4S) 80+ Engagements

300+

Core SAP/BI Projects



Automotive & Transportation

Energy & Resources

Consumer & Industrial Goods

Media

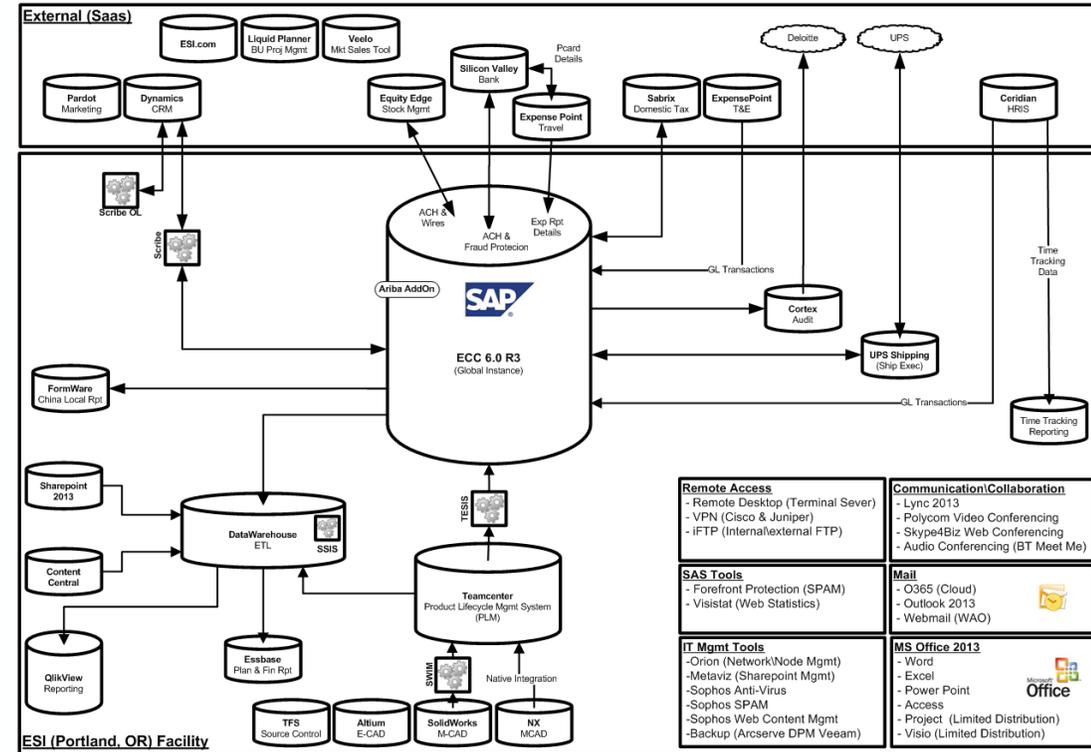
Life Sciences

Banking, Capital Markets & Insurance (BFSI)

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2018 Environment

- ✓ ECC 6.0 EhP7 on SQL DB
 - ✓ Original Go-Live in 2005
 - ✓ SD, SM, FICO, MM, PP, QM
 - ✓ Single global instance
- ✓ Complex product configuration
 - ✓ Use SAP Variant Configurator
- ✓ Enterprise Data Warehouse connected with ECC
- ✓ Light implementation of MS Dynamics (Sales)



Drivers & Scope for the Program

Business

- Supply Chain Collaboration (direct\indirect)
- Forecast management and visibility (Sales\Marketing)
- Improving Customer Service (Service)
- Quality focus and improvements
- Need for better Compliance enforcement
- Need DR beyond backups

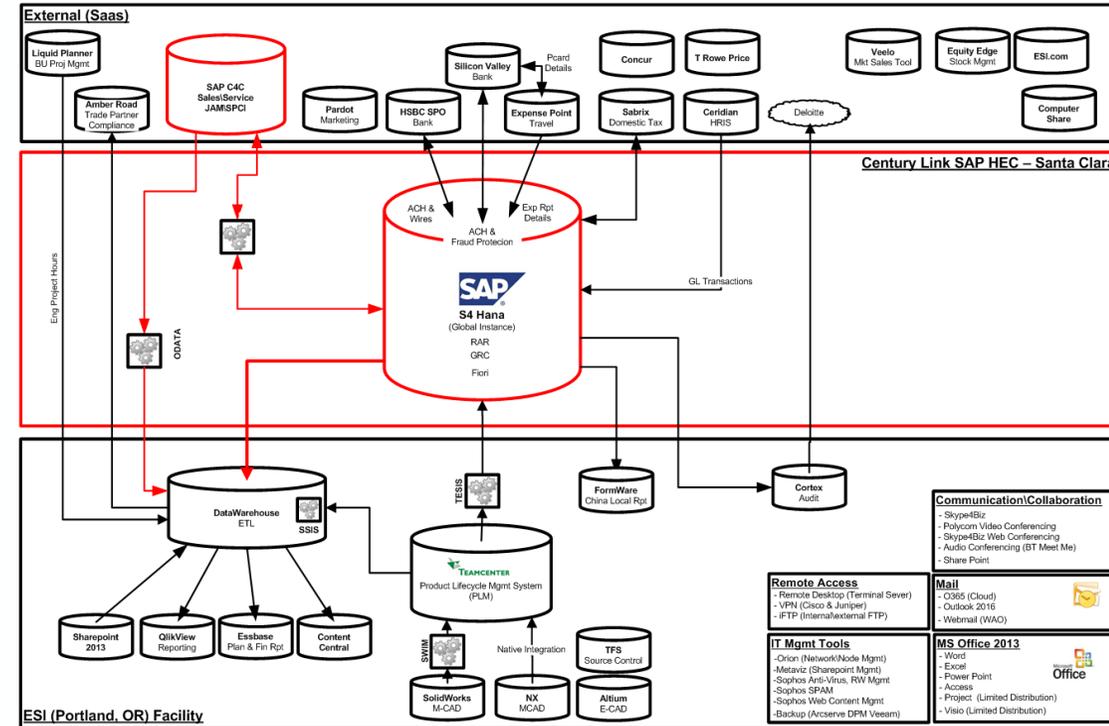


Outcome

- SAP remains ESI's core ERP platform and will move to S4\Hana Single Tenant Cloud (HEC)
- Start business transformation without having to wait S4\Hana migration to complete
 - Implement Sales and Service initiatives (C4C) along side S4 migration
- Migrate versus Green field from ECC to S\4
 - Maintain multiple year investment in existing Data Warehouse\Reporting
 - Using S4 Compatibility Views and SLT to minimize rebuild effort
- Deliver and support with AMS model

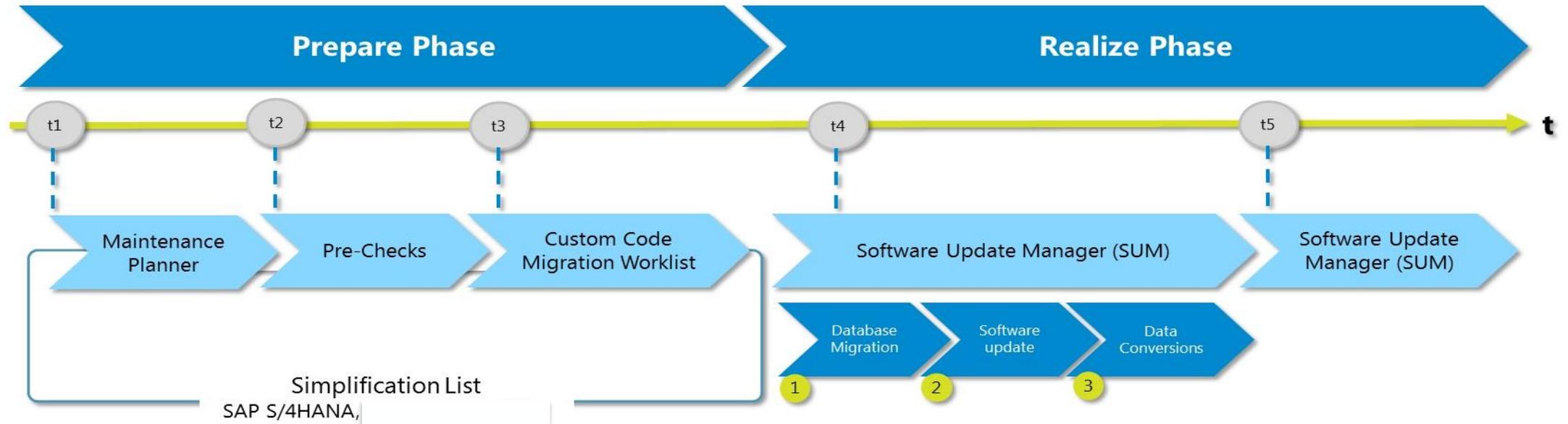
Approach & Deployment Strategy

- S/4HANA Single Tenant Cloud
 - v1709 in HEC
- ✓ C/4HANA vs. Salesforce
 - ✓ (C4C Sales & Service)
- ✓ GRC/ RAR



RED = 2019 Changes

S/4HANA Migration Approach



- **S/4HANA Readiness Check**
- Certification of Third Party Add-Ons: Confirmation of compatibility and for others de-installation required via **'SAP Maintenance Planner'**
- Simplification Business Process Impact Analysis: **'SAP Simplification List'**
- **Pre-Checks:** A pre-check report is run to identify steps to make the system compatible with the conversion process
- Technical Object Inventory & Status – 'Custom Code Migration Worklist': **'SAP Simplification Database'**, CCLM, UPL
- Birlasoft HANA Toolkit and SAP ATC
- Business Case Opportunity & Roadmap
- Project Resource (IT/Business) & Cost Plan

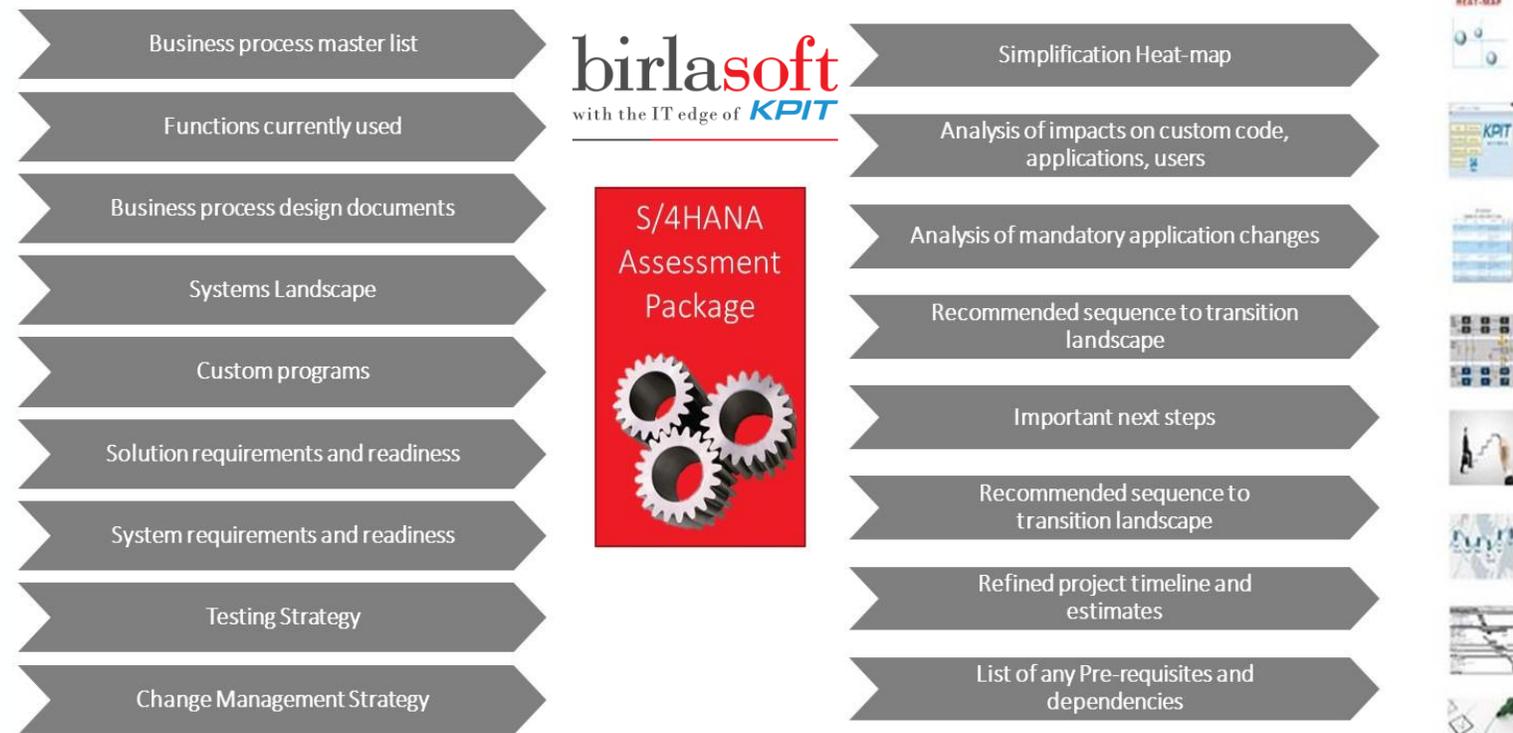
Project Approach

Conduct the migration of SAP S/4HANA in two stages. Below are the details of the approach.

Birlasoft S/4HANA v1709 Assessment Mechanism

Stage 1 - S/4HANA v1709 Assessment: :

- Copy existing production to Sandbox (ODB)
- Run HANAtanization tool sandbox (ODB)
- Analyse code
- Run DMO – SUM
- Upgrade migration tool to Sandbox (HDB)
- Testing (Functional) – Sandbox HDB



Summary HANAtization – Custom Object Analysis for HANA DB

Must Do HANAtization

Golden Rules	Total Number of Objects	Total Number of affected lines
USE ALL KEY FIELDS IN WHERE CLAUSE OF SELECT SINGLE STATEMENT	158	552
SPECIFY KEYS WHEN SORTING AN INTERNAL TABLE	63	221
SORT INTERNAL TABLE AFTER SELECT QUERY	253	1289
CHECK IF INTERNAL TABLE IS SORTED BEFORE READING WITH BINARY SRCH	43	225
USE ORDER BY PRIMARY KEYS IN CLUSTER AND POOL TABLES	27	77

Distinct Customer Objects

Record	Unique Count
Technical Objects with Syntax requiring HANAtization Remediation	382

Simplification DB Custom Code Changes

Note	Count
2206980 - Logistics MM-IM Data Model Change	363
2198647 – S/4 Data Model changes in SD	71
1976487 – Finance data Model changes	30
2378796 – Material Classification with Commodity codes	127
2337368 – Inventory Valuation	93
2220005 – S/4 Hana Data Model changes in SD Pricing	15
2217299 – Material Management Inventory	93
Miscellaneous	84
Total Count of Objects to be changed / Reviewed	876

Stats from Pre-Checks/ Readiness Check

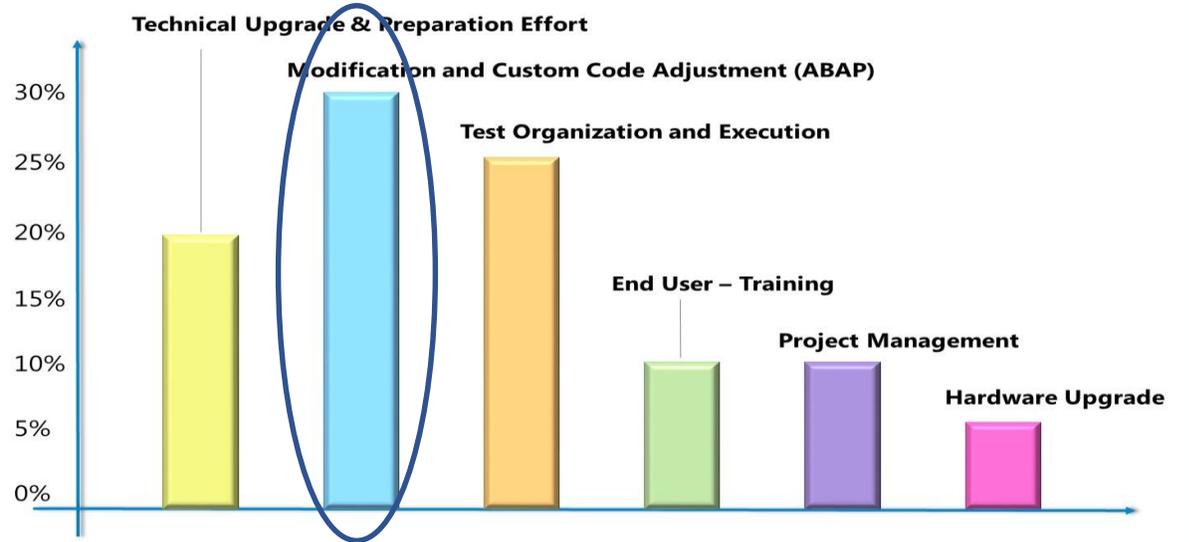
Count of Module	
Module	Grand Total
Basis	1
FI	19
MM	33
SD	16
Technical	9
PP	6
Security	1
Grand Total	85

Examples:

- Technical Activation of Material Ledger
- Asset Accounting changes
- Commodity Code in ECC Foreign Trade
- MRP Areas instead of Storage Location MRP
- Set up of Business Partners
- SD RevRec to RAR

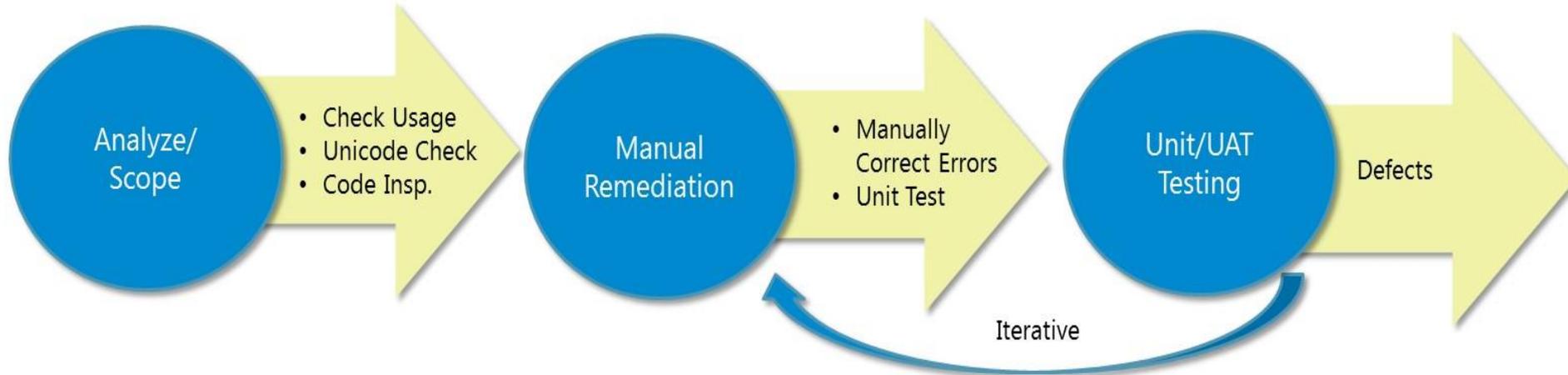
Typical Pain Points with Custom Code and HANA

- ✓ Large amount of custom ABAP objects
- ✓ Evolving ABAP syntax and Best Practices coding for HANA Database
- ✓ Difficult to analyze and scope the seize of impacted objects for HANA migrations
- ✓ Actively used versus obsolete custom objects?
- ✓ With S/4HANA Enterprise management there is a change in SAP standard objects & Data Dictionary



Yearly Revenue	# years on SAP ERP	ECC Database size	Total Custom Objects	Cluster/Pool Issue Program	Cluster/Pool Issue ABAP Statements	Implicit Sort Programs	Implicit Sort ABAP Statements	Binary Search Programs	Binary Search ABAP Statements
~18B USD	14	~10TB	2000	346	1057	746	2425	157	1367
~23B USD	2	~6.6TB	2183	99	431	633	2053	139	1133
~400M USD	1	~160GB	1600	40	113	116	441	23	112
~700M USD		~5.5TB	1400	88	242	303	1082	74	668
~3B USD	17	~2TB	2207	197	369	215	680		
~30B USD	4	~2TB	1094	98	481	483	1644	101	1107
~3.1B USD	16	~5.3TB	3374	181	412	856	1517	161	400
~200M USD	19	~371GB	1637	172	473	657	2253	297	2310

Custom Code Challenge



- A traditional approach follows iterative time-consuming cycles through Identification-Correct-Test
 - Sizable team of developers with significant effort to identify and correct the custom ABAP code issues
 - In-depth knowledge required; Risk of human error of either not done correctly, incomplete or affecting the existing functionality or from a performance perspective
 - Manual corrections are time-consuming, error prone and there is a risk of remediation to be inconsistent
- > Automation of code correction contributes to the success of the project while executed in the most cost efficient manner
- > Move corrected code to production upfront and keep the duration of Dual Maintenance short

Leverage Automation Tools in your S/4HANA Migration

Tools exist on the market to identify Business Value opportunities, automate the S/4HANA code inspection and retrofit process.

SAP Golden HANA Rules

- Rule1 : Keep the result sets small
- Rule2 : Minimize amount of transfered data
- Rule3 : Minimize the number of data transfers
- Rule4 : Minimize the search overhead
- Rule5 : Let the database do the job
- Rule6 : Do not use Pool and Cluster tables
- Rule7 : Use keys while sorting an internal table
- Rule8 : Identify Native SQL Statements
- Rule9 : Identify Oracle Hints
- Rule10 : Identify ADBC Connection Use
- Rule11 : Identify DB INDEX USE

Affected Program Types

Program	Class	SAP Script	Enhancements
6	2	0	1



Birlasoft S/4HANA Toolkit & Auto Code-Correction

Auto-Code Replacement

Track & Reporting the Progress

S/4 Unicode Inspector



Guided Editing

Unicode Auto Enablement

Value Identification



Custom Code Lifecycle Management

Overview

Systems

St.	Lead System	Local Obj.	System	Installation Number	Product	Product Version
✓	✓	✓	S07	20270982	SAP SOLUTION MANAGER	SAP SOLUTION MANAGER 7.0 EM...
✓	✓	✓	S1M1	20227072	SAP SOLUTION MANAGER	SAP SOLUTION MANAGER 7.0 EM...

Details of System: S07

St.	Job Name	Report Name	Period Type	Start Date	Start Time
✓	SM_CCL_OBJECTS_S07_0020270982	RAQS_CC_DET_OBJECTS	Weekly	11.02.2011	11:20:20
✓	SM_CCL_QUALITY_S07_0020270982	RAQS_CC_DET_QUALITY	Weekly	14.02.2011	09:44:29
✓	SM_CCL_STATM_S07_0020270982	RAQS_CC_DET_MONTH_STAT			
✓	SM_CCL_STATM_S07_0020270982	RAQS_CC_DET_WEEK_STAT			
✓	SM_CCL_UPR_S07_0020270982	RAQS_CC_DET_UPR_DAY			

SAP CCLM

Bar chart showing affected program types across rules.

Rule	Technical Objects	ABAP Lines
Rule1	3	3
Rule2	11	30
Rule3	6	13
Rule4	2	5
Rule5	10	33
Rule6	1	1
Rule7	7	14
Rule8	0	0
Rule9	0	0
Rule10	1	1
Rule11	0	0

Display Usage & Procedure Logging Data

Selection of UPL data time frame

Start Date: [] available from []

End date: []

Filter Options

SAP UPL

Details

Location / Finding	Description	Contact Person
ZTEST_CD265_EXERCISES_37		
ZCD265_EZ_37	Exercise 2	
ZCD265_EZ_37	Exercise 2	
33		
Analysis of WHERE Condition for SELECT		
Table ...: No WHERE Condition		
Priority 2		
First Found on	22.08.2012 22:29:37	
Found on	02.10.2012 07:00:08	
Table SCARR: No WHERE Condition		
The error message can be hidden by the pseudo comment "#EC CL_NOWHERE		
Display Object		

Display help information for this finding

Navigate to object

SAP ATC

S/4HANA Migration Findings & Observations

- ✓ **Migration Effort:** Upfront efforts can be mostly done and managed by SI
- ✓ **Business Partners:** Vendor & Customer Upfront clean-up, Archiving and conversion strategy to BP
- ✓ **MRP Areas:** Review ECC set up before conversion, particularly returns and sub-contracting vendor solutions
- ✓ **Fiori:** Fiori Strategy assessment in advance. Understanding mandatory vs. optional (set your expectations upfront)
- ✓ **SAP HEC:** Implementation and coordination requires heavy interaction and management
- ✓ **S4 provided CDS Views; SLT** for external Data Warehouse feed (Worked!!)
- ✓ **OCM:** Limited Changes with S4\Hana for end user

C4C Sales & Service

A single source global real time solution

C4C Sales:	Live November 2018
C4C Service:	In Build Phase

Sales

Global multi-faceted sales forecast

Prospect, Lead, Contact mgmt.

Sales Activity Management

Multiple Opportunity type process support

Integrated to SAP Quoting

Integrated to SOP reporting in Data Warehouse

Service

Full customer communication capture

Incidents, Billing, Inquiry

Contract Mgmt

Auto Warranty\Obligation Determination

FSE resource scheduling (availability\skills)

Service quote\orders integrate to ERP billing

Remote FSE mobility

C4C User Experience

Easy to Learn and Use (rated high by users)

Very little difference in Mobile\Web app

Global performance good

Ease of access and use has driven adoption (use)

Status of the Program

S/4HANA: Completed IST1 and IST2

C4C Sales: Live in November

C4C Service: Go live August 2019

Q&A

For questions after this session, contact us at
[Lance Litmer <litmerl@esi.com>] and [Hans.Dossche@Birlasoft.com]



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May 8, 2019 | 1:00PM – 1:40PM | 310B

ESI: Roadmap: SAP S/4HANA Private Cloud Migration with VC, Sales & Service Cloud
May 8, 2019 | 3:00PM – 3:40 PM | 330C

Rack Room Shoes: The Perfect Fit- Racking Up New Sales with SAP Commerce for B2C
May 8, 2019 | 4:00PM – 4:40PM | 330C

Tennant: SAP SuccessFactors Employee Central Core-Hybrid with On-Premise Payroll
May 9, 2019 | 1:00PM – 1:40 PM | 330H

Pregis: Packaging at Pregis runs best with SAP
May 9, 2019 | 2:00PM – 2:40PM | 310E

Herc Rentals: SAP SuccessFactors Recruiting in 4 Weeks by Keeping the Scope Simple
May 9, 2019 | 2:30PM – 2:50 PM | Services and Support Pavilion

Pall Corporation: Field Service Automation with SAP Service Cloud at Pall Corporation
May 9, 2019 | 3:00PM – 3:40 PM | 330D

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