Trusted Partner for your Digital Journey

SAP Professional Days 2017

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Atos

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3 BW on HANA Migration project

4 Results & Lessons Learned

1 Atos at a glance

About Atos

Atos is a leader in digital services delivering Systems Integration services, Consulting, Managed Services & BPO, Cloud operations, Big Data & Cyber-security solutions as well as e-payments and transactional services.

€12 billion annual revenue

Atos operates under the brands Atos, Atos Consulting, Atos Worldgrid, Bull, Canopy, Unify and Worldline. Atos is a Societas europaea (SE).

100,000 business technologists *circa*

Atos is the Worldwide Information Technology Partner for the Olympic & Paralympic Games.

72 countries around the world

Atos is a TOP globally leading SAP Partner

12,000+ skilled SAP professionals

Local SAP teams in 40+ countries

6,200+ SAP projects in 90+ countries

50+ S/4 projects

Built and manages one of the **world's largest HANA Private Cloud**

SAP **Partner for 32 years** & SAP GPRs Partner

Global SAP-certified in Hosting, HANA Operations, cloud and AM services

SAP-certified bullion server for SAP HANA up to 16TB

Atos in Bulgaria

- Atos Bulgaria is presented on the Bulgarian market as a result of the merger between Siemens IT Solutions and Services and Atos Origin in 2011.
- In Bulgaria the company is from 1995 and today we have ~1000 employees (~400 SAP consultants) with more than 80 SAP customers and above 150 SAP projects. The company is a certified SAP partner for selling licenses and offers IT consulting, implementation and maintenance of SAP solutions, together with a whole range of innovative IT solutions such as Workplace-as-a-Service, Managed Print Services, Managed Infrastructure, Hosting, Outsourcing, Cloud services, etc.

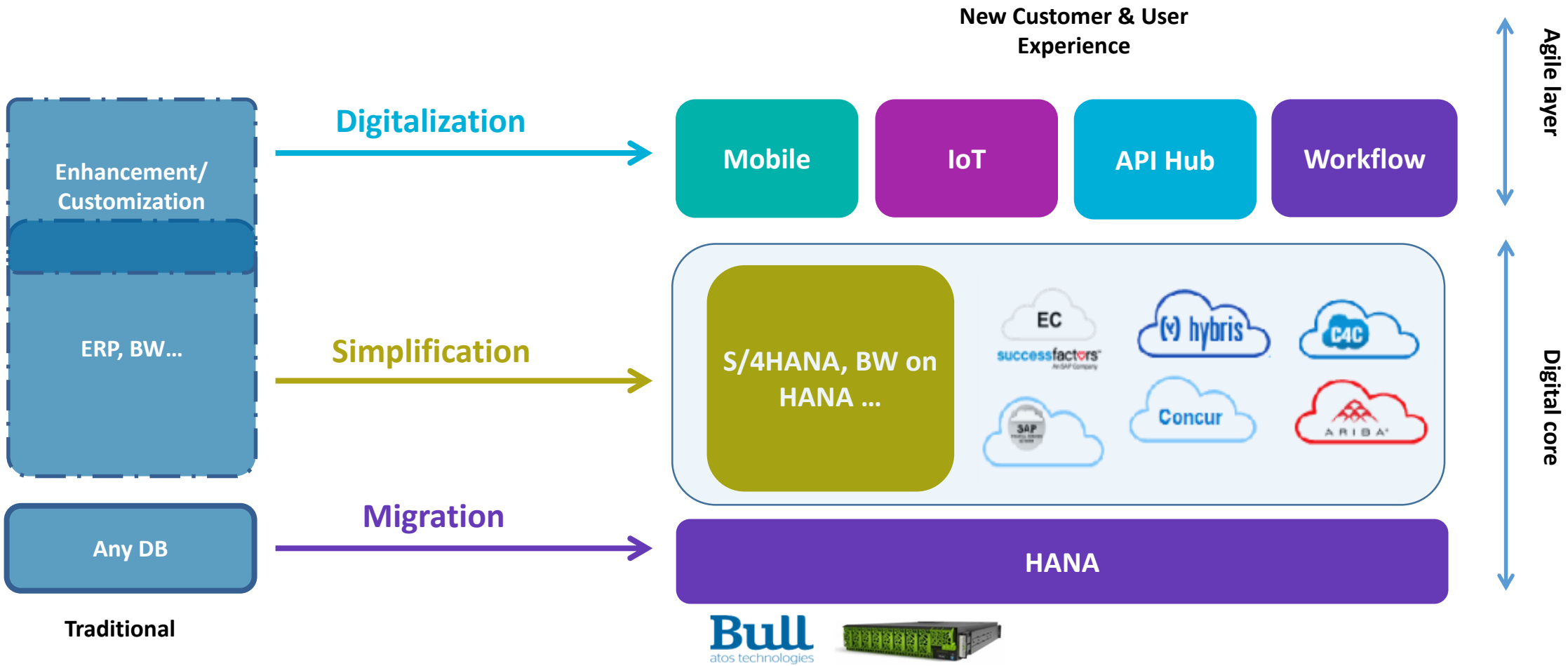
ATOS Bulgaria Competency Center

- ATOS Bulgaria Competency Center, initial focus on beverage and bottling industry
- Multiplying business globally by leveraging industry expertise
- Development of credentials, GTM/ pre-sales and delivery of project key positions

- 400+ employees with IT and domain expertise
- Part of Atos B&PS division with 32.000 business technologists
- Our services include:
  - Application development/deployment
  - Application support 24*7
  - Infrastructure deployment/support 24*7
  - Application and infrastructure performance monitoring 24*7
- Our expertise covers:
  - SAP, SAP HANA, Oracle, Microsoft, HP, IBM, Bull, Cisco, etc
- Local practices are supporting on site services to ensure customer intimacy
- Own SAP certified training center

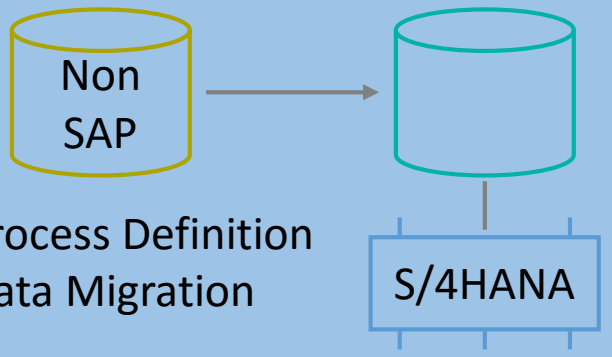
2 SAP HANA

The transformation Journey



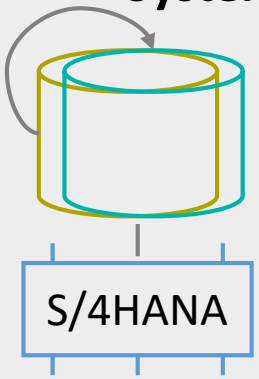
S/4HANA Transition scenarios

New Implementation



Process Definition
Data Migration

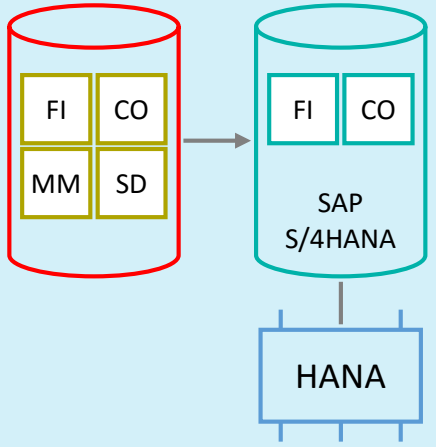
System Conversion



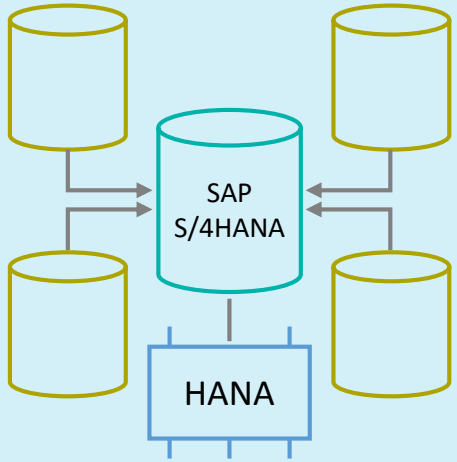
Technical Upgrade
Process Adaptions

Landscape Transformation

Migration of selected applications



System Consolidation



Consolidation of current IT landscape into
One Global SAP S/4HANA System

Atos S/4HANA unique Positioning

Atos
Worldwide IT Partner

Comprehensive S/4 HANA Capabilities

- 2.000+ consultants trained on S/4HANA & HANA
- Global S/4HANA Center of Excellence
- E2E service portfolio: strategy, design, build/migration, operate, HANA applications

Unique S/4HANA Tools and Accelerators

- Atos S/4HANA Value Engineering Framework
- Proprietary S/4HANA Tools and Accelerators
- Industrialized S/4HANA Migration Factory
- SAP HANA Lab and SAP Innovation Hub

Flexible SAP HANA Hosting and Cloud Services / Leading HANA appliance

- Atos Hosting and Outsourcing services (Data Centre in Sofia)
- Canopy private cloud solutions
- Optimization of IT cost and capex expenditure through flexible pricing
- Bullion – own SAP HANA certified hardware

One-stop-shop for SAP environment

Atos
Worldwide IT Partner

- SAP Digital Enterprise Transformation
- SAP HANA & S/4HANA Migration
- SAP Application Management
- SAP Basis & Hosting Services
- SAP Infrastructures, Licenses & Maintenance

An end-to-end SAP capabilities

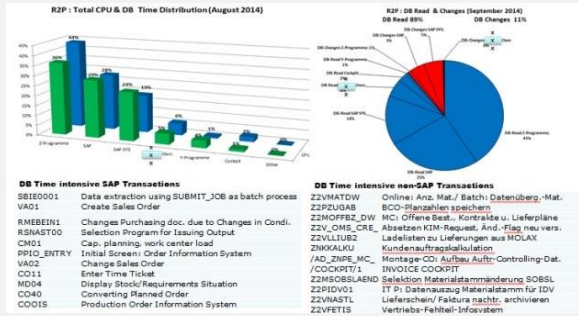
- SAP & DIGITAL TRANSFORMATION SERVICES ✓ ✓
- SAP TRADITIONAL AM & HOSTING SERVICES ✓ ✓
- INFRASTRUCTURES FOR SAP ✓

Atos S/4HANA types of services

Focused S/4HANA Quick Start Services

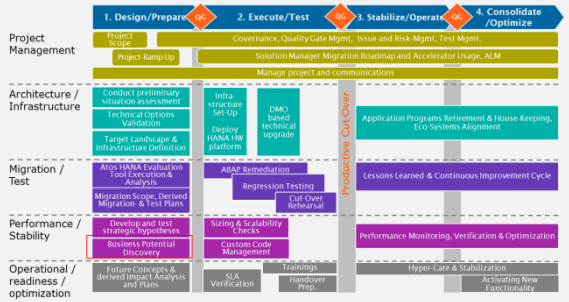
- Driving business value generation
- Accelerating technical realization

Advanced S/4HANA Tools & Accelerators



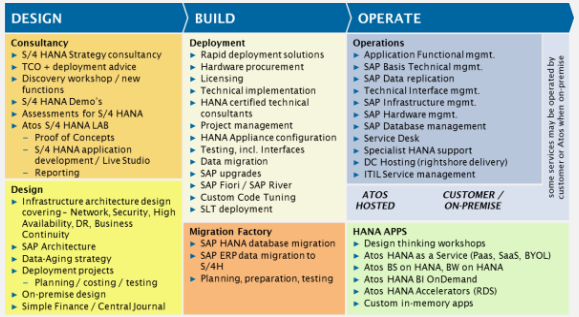
- Atos HANA Evaluation Tool
- Atos HANA Business Process Analyzer

Accelerated S/4HANA Delivery



- Industrialized approach
- Migration factory

Full E2E S/4HANA Service Catalogue (target)



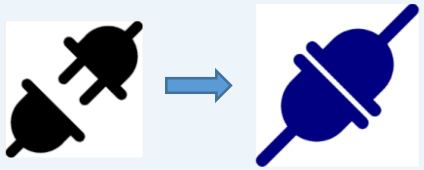
- Design, build/ migrate and operate
- From consulting to technical implementation

3 BW on HANA Migration project

Project Objectives

From 4 to 1 productive systems
Reduced data duplication

Faster reporting in all areas

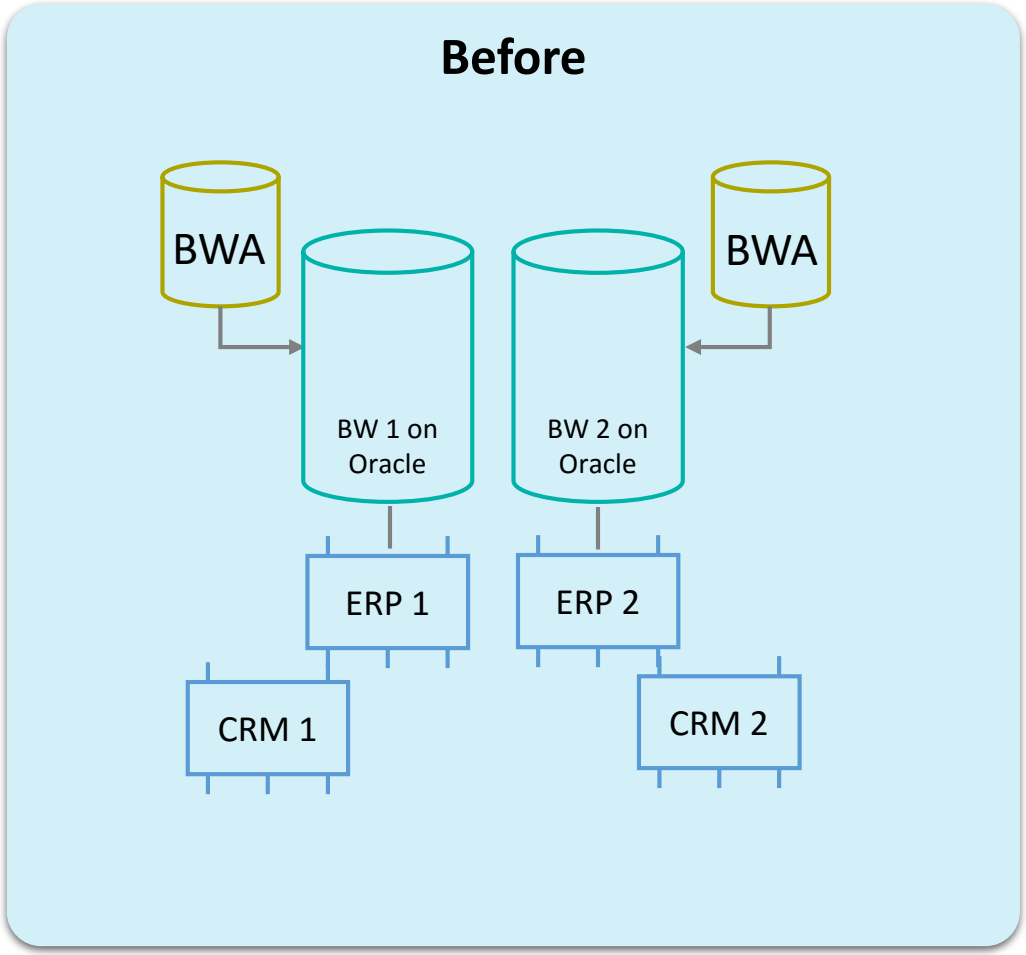


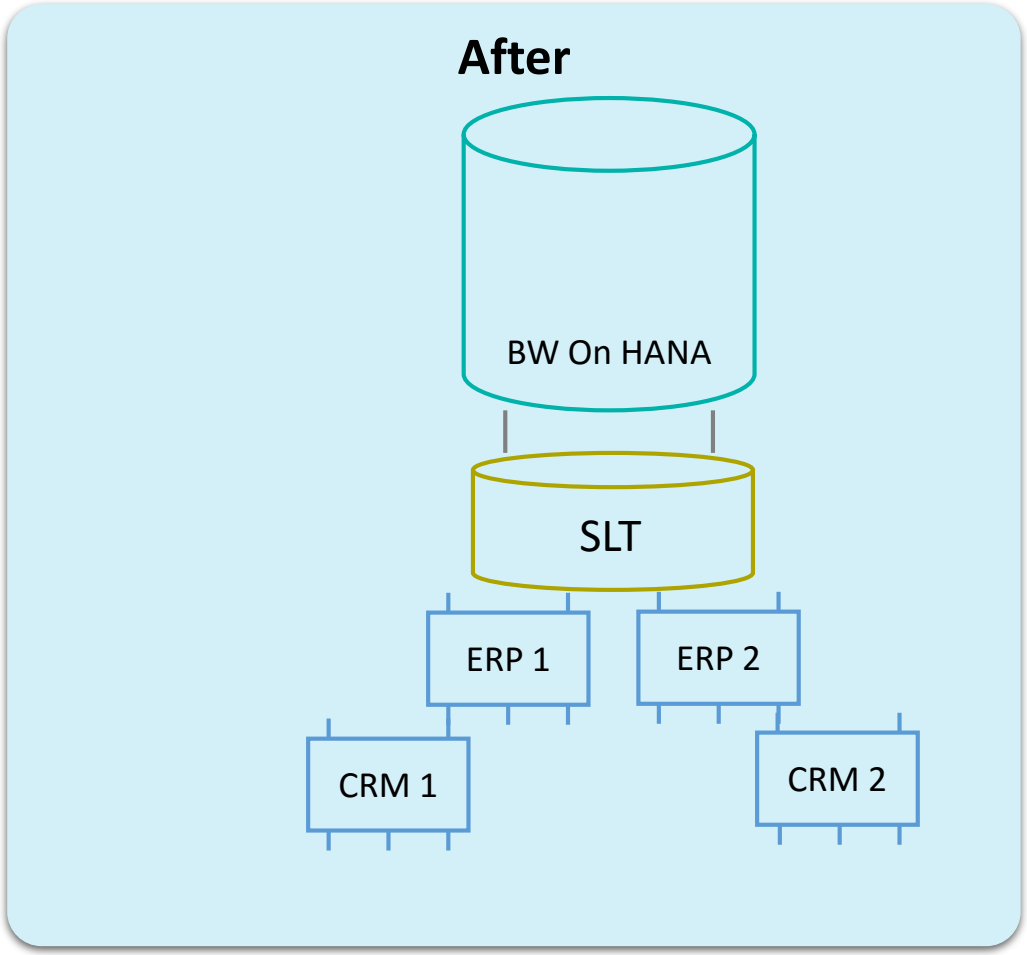
Real Time Profitability Data

BW in System – pre HANA

- BW System on Oracle 7.3
- ~ 13000 Users
- ~ 4000 Cubes
- ~ 60 Production Plants
- ~ 400 Production Lines
- ~ 400 Distribution Centers
- > 2 700 000 Customers
- > 500 SKU
- > 125 000 Orders a Day
- 8 Time zones
- Extractors from SAP ERP, CRM, APO, HR, SRM…
- 250 Billion records

System Landscape





Divide and conquer

PoC

Sandbox **DB Migration**

One data model

January 2016

Upgrade

Upgrade SAP to 7.5

Custom code fixes

SAP migration cockpit

Extensive **testing**

November 2016

DB migration

DMO approach

Multiple **rehearsals**

Use **HANA** hardware for export/import

February 2017

Merge

Master data

Compounding

Transactional data

Extensive **testing**

May 2017

Go Live and Stabilisation

Front-end set-up

Post go-live extensive support

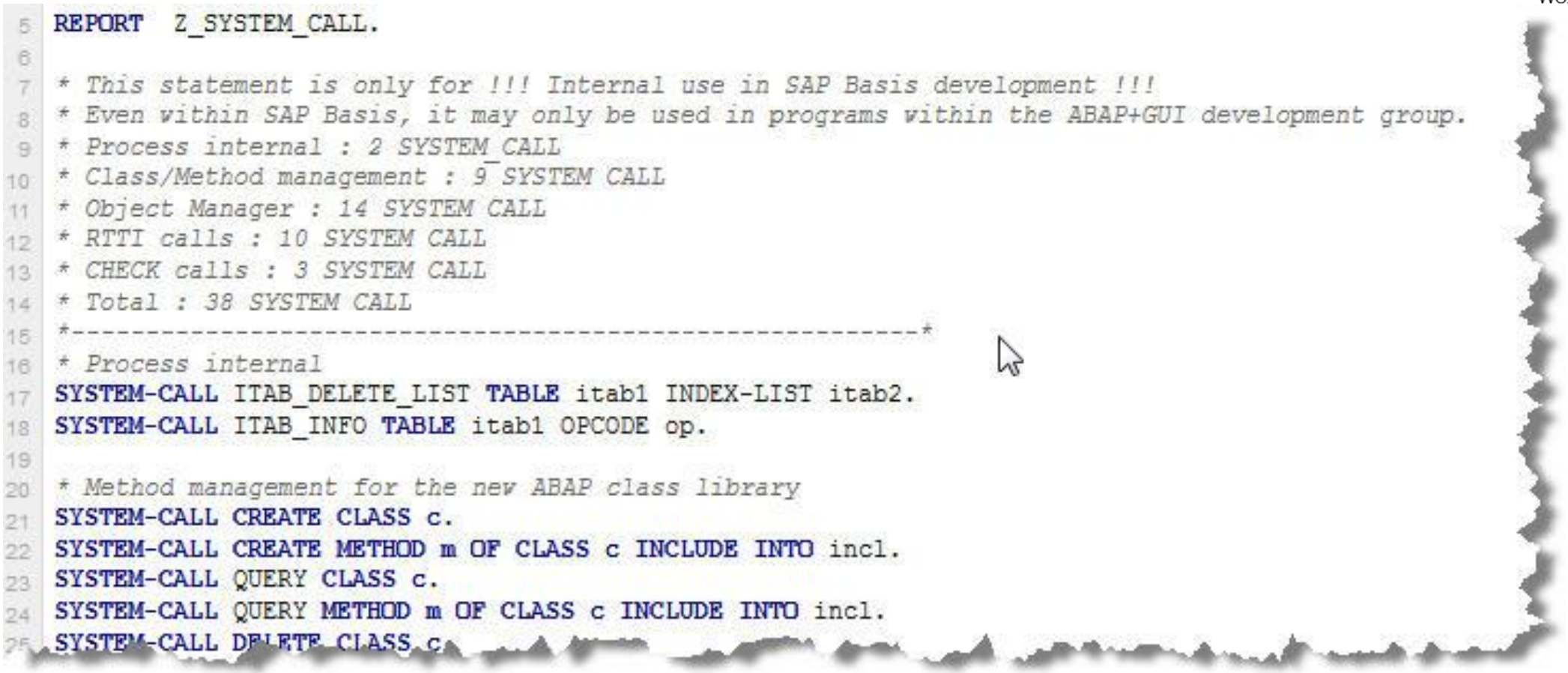
July 2017

Proper sizing

- ZBW_HANA_MIGRATION_COCKPIT
  - System Sizing
  - Cubes compression
  - Large basis and administration tables

Archiving & Housekeeping

Custom code



```
REPORT  Z_SYSTEM_CALL.

* This statement is only for !!! Internal use in SAP Basis development !!!
* Even within SAP Basis, it may only be used in programs within the ABAP+GUI development group.
* Process internal : 2 SYSTEM_CALL
* Class/Method management : 9 SYSTEM CALL
* Object Manager : 14 SYSTEM CALL
* RTTI calls : 10 SYSTEM CALL
* CHECK calls : 3 SYSTEM CALL
* Total : 38 SYSTEM CALL
*---------------------------------------------------------------*
* Process internal
SYSTEM-CALL ITAB_DELETE_LIST TABLE itab1 INDEX-LIST itab2.
SYSTEM-CALL ITAB_INFO TABLE itab1 OPCODE op.

* Method management for the new ABAP class library
SYSTEM-CALL CREATE CLASS c.
SYSTEM-CALL CREATE METHOD m OF CLASS c INCLUDE INTO incl.
SYSTEM-CALL QUERY CLASS c.
SYSTEM-CALL QUERY METHOD m OF CLASS c INCLUDE INTO incl.
SYSTEM-CALL DELETE CLASS c.
```

Migration

DMO (Database migration option)

- Migration steps are simplified
- The source database remains consistent, so a fast fallback is possible
- Use HANA server to optimize downtime
- Rehearse, rehearse, rehearse…

4 Results & Lessons Learned

Lessons learnt

1. Choose **migration scenario** per system and **prepare accordingly**. Do a proper sizing for HANA. You might consider **data growth**. Involve hardware partner early.
2. Consider **available** migration and optimization tools. Leverage them to ease migration.
3. **Custom code** optimization and tests are the main drivers for project **duration & costs**. Often **prioritization** of efforts is required depending on number of objects to be corrected and/or optimized
4. No big problems found during migration to HANA, however project was **underestimated.**
5. Reporting and Planning Functions: **0! to 100x** faster.
6. Data loading: up to **48x faster, 5x average.**

Lessons learnt

1. **100+ SAP Notes applied** (purely related to HANA migration)
2. **30+ OSS Messages** (purely related to HANA migration)
3. **4 new HANA revisions** applied (3 pre and 1 post go live)
4. Nights without sleep
5. **SAP MAX** – “Migration Planning Workshop” ! Helps understanding complexity/risks
6. **Manage expectations**
    - Expect in avg. little improved reporting performance (in case BWA is in place)
    - Expect some reports can get a **negative performance impact**

Lessons learnt

Long term benefits which can be realized due to the implementation of HANA:

- **Future proof data warehouse solution** – by migrating the entire existing BW solution to HANA you get a data warehouse platform that can leverage future technology and tools, i.e. Predictive Analysis, HANA studio
- **Improving performance of data warehouse** – by utilizing the in-memory calculations
- **Drastically improve reporting performance** – by redesigning data flows and reports gain the true potential that BW on HANA brings

5 Q & A

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