Correctly Managing your SAP Data & Documents

The Foundation of a Successful Intelligent Enterprise

Tuesday, 3rd December 2019

ENGAGING MINDS | EMPOWERING SUCCESS

#UKISUGCONNECT

SESSION GOALS

- **Managing Structured Data**
  - Why Bother ?
  - Analysing Data Volumes
  - Archiving Unused Data
  - Using ILM RM to Manage Lifecycle of Data
- **Managing Unstructured Data**
  - Why Bother ?
  - Types of data
  - Life cycle
  - Compliance
- **Moving to S/4 HANA**
  - Analysis Prior to Migration
  - Right Sizing
  - Case Study
  - Decommissioning
  - Bridging the Old & the New
- **SAP and Unstructured Data**
  - Standard
  - Other Options
- **Meeting Compliance Requirements**
  - GDPR Compliance
  - Other Requirements

INTRODUCING PROCEED GROUP

- Mark Johnson
  VP ILM Technologies

- Paul Shakeshaft
  VP Content Solutions

Our experienced SAP consultants provide unrivalled knowledge of SAP data & document management services and solutions for businesses specifically using SAP.

We've successfully assisted over 600 customers across North America and Europe to:

- Improve business and IT performance
- Reduce costs (TCO)
- Increase return on investment (ROI)
- Assist with data compliance and regulations (GDPR)

Managing Structured Data

Why bother?

MANAGING STRUCTURED DATA - WHY BOTHER?

As SAP systems age they must manage ever increasing amounts of data. Ultimately database growth will slow the system down and reduce its ability to function efficiently

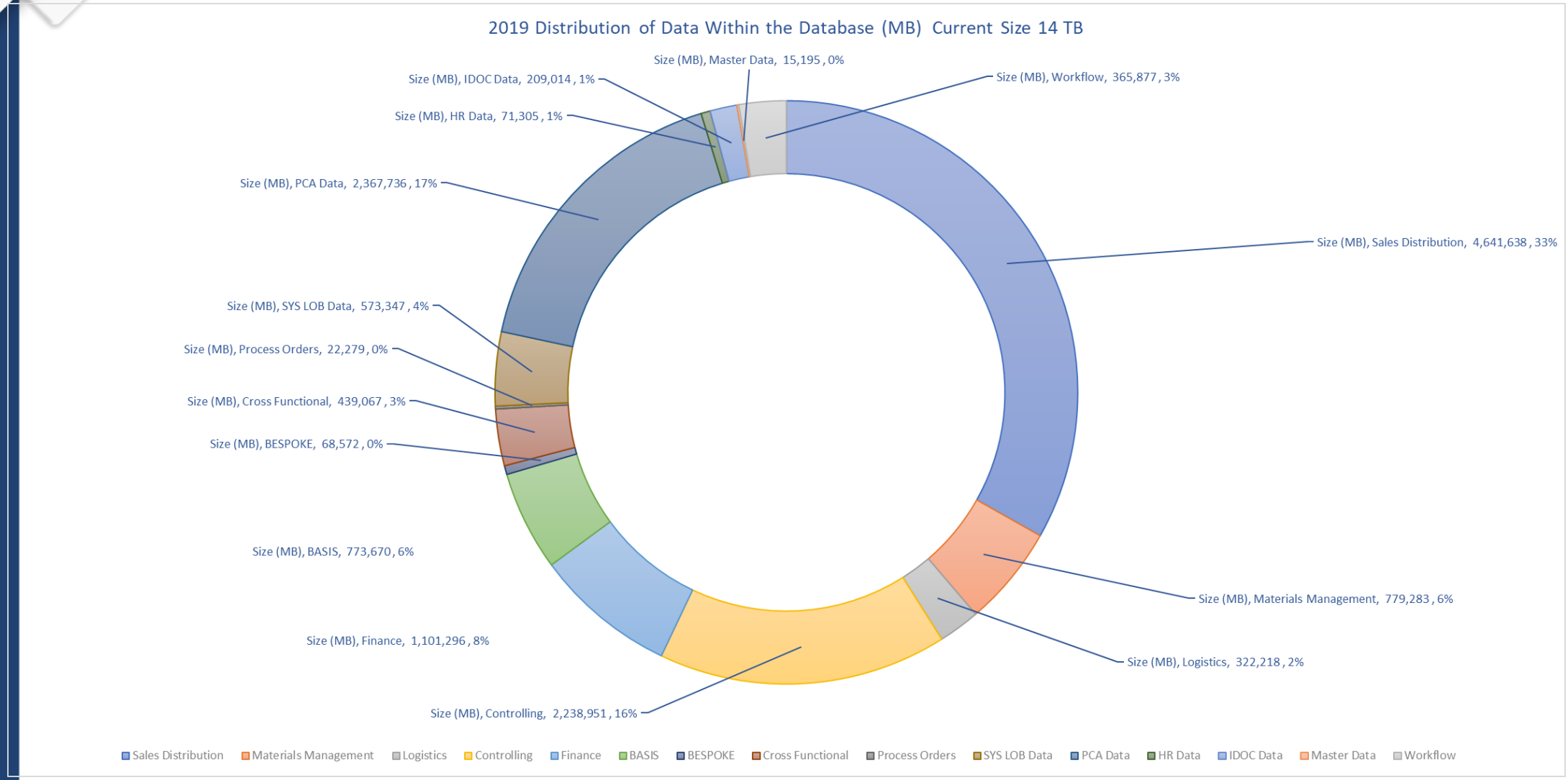
- As the SAP system fills up with data the time it takes to create new records increases. Reporting becomes a problem with many month end reports taking hours to run.
- The cost of keeping up with the Database growth can be expensive. More disk space and faster processors to cope with the performance degradation are key issues
- Daily backups can also be an issue as is the cost of hosting the infrastructure to provide a QA and PROD environment.
- SAP provides a solution to archive data by using a built in data archiving suite of programs managed through the transaction SARA.

What's the risk of not taking action?

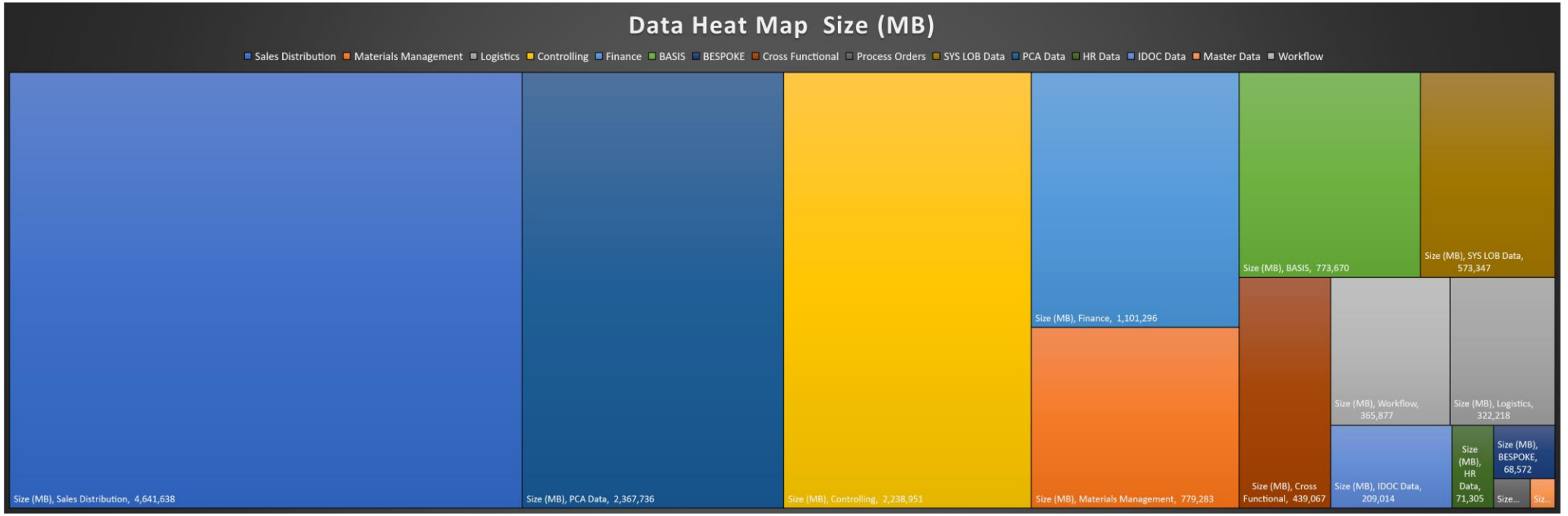
System performance is not a linear science, its difficult to predict exactly when the SAP system will hit the performance wall and require archiving. Every SAP system is different, but the biggest risk is hitting the performance issues with little prior warning.

The safest approach is to ensure that a data archiving strategy is already in place and that SAP best practice is followed.

MANAGING STRUCTURED DATA - ANALYSING DATA VOLUME



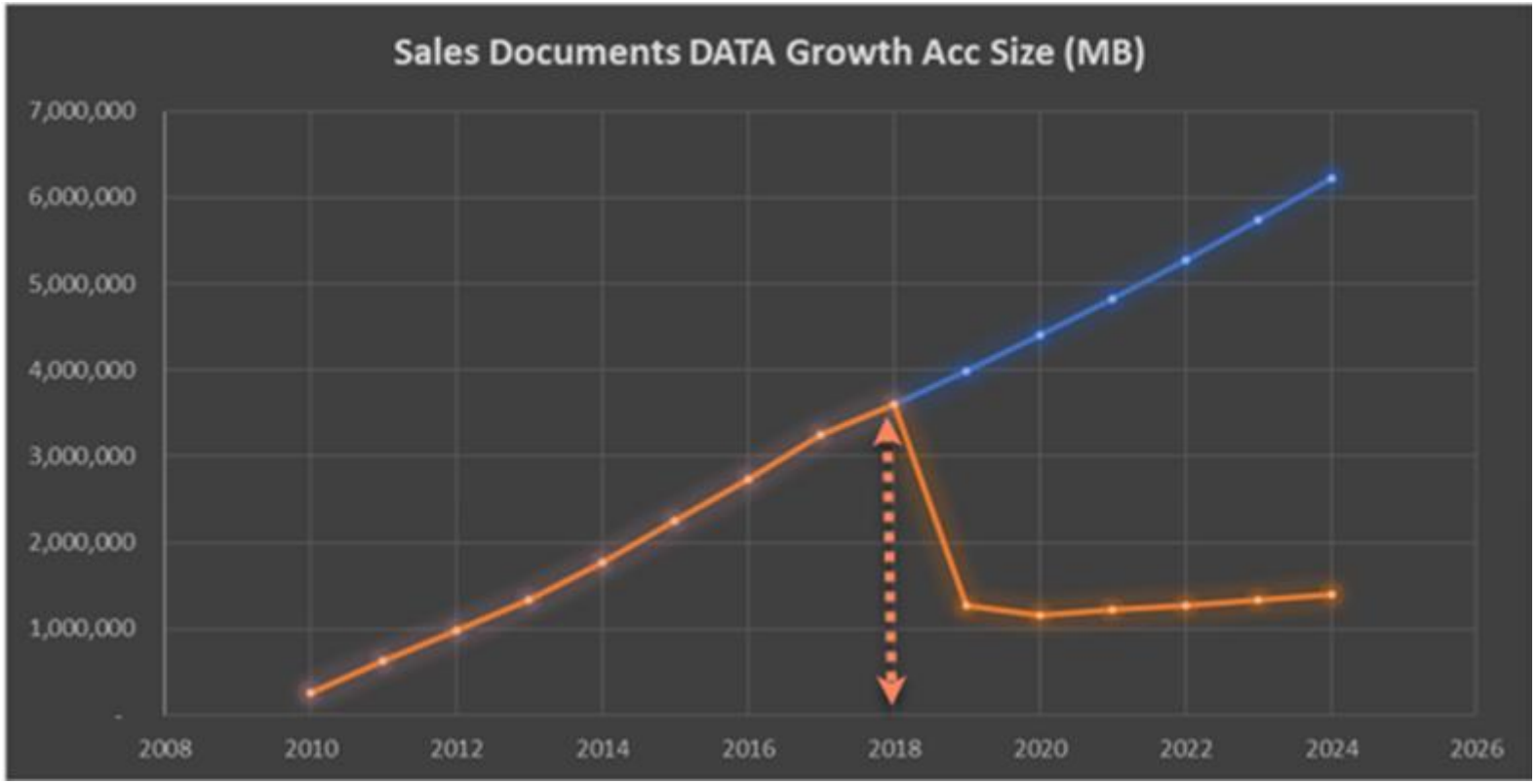
MANAGING STRUCTURED DATA - ANALYSING DATA VOLUME



MANAGING STRUCTURED DATA - ANALYSING DATA VOLUME

Archiving Object for Sales Documents (SD_VBAK)

- As of August **2019**, there is a total of **3.9TB** of data for this document type
- This will grow to **6.2TB** by **2024** if no archiving is in place
- If archiving is in place this data will be limited to a growth of **1.4TB** by **2024**
- Analysis of the distribution of the top tables associated with sales documents data by archiving object is illustrated in the table on the next slide



MANAGING STRUCTURED DATA - ANALYSING DATA VOLUME

SD VBAK (Sales Docs) Detailed Analysis

Potential Initial Reduction from

	MB		MB
	3,691,634	TO	959,096
	3,691,634		448,333

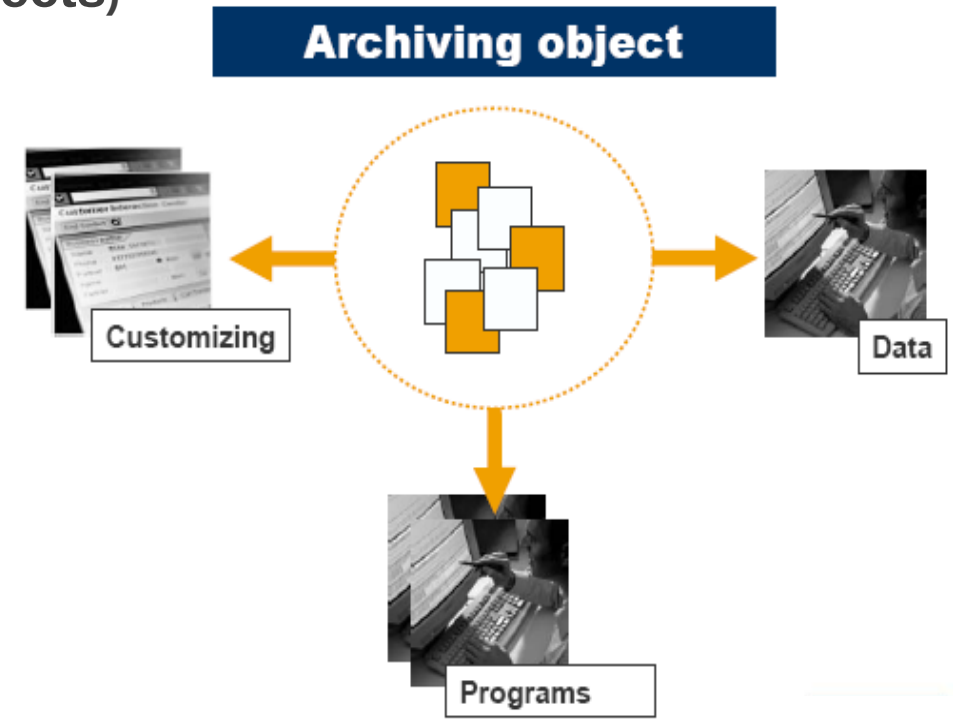
Total	Size MB	3,691,634	Size Table Data (MB)	2,114,357	
Per Rec.	Size MB	0.2665291	Size Index Data (MB)	1,577,277	
No Records July 2019		13,850,772			

	Year	No. of Entries	Acc No. Entries	Size MB	Acc Size (MB)	Annual Growth (MB)	Size with Ongoing Archiving (MB)
	2024	1,845,143	23,379,175	491,784	6,231,231	23,418.30	1,406,213
	2023	1,757,279	21,534,032	468,366	5,739,446	22,303.14	1,339,251
	2022	1,673,599	19,776,753	446,063	5,271,080	21,241.09	1,275,477
	2021	1,593,904	18,103,154	424,822	4,825,018	20,229.61	1,214,740
	2020	1,518,004	16,509,250	404,592	4,400,196	19,266.29	1,156,895
PROJECTED 2019 Total →	2019	1,445,718	14,991,247	385,326	3,995,604	18,348.85	1,263,065
	2018	1,376,874	13,545,529	366,977	3,610,278	(143,785.53)	3,610,278
	2017	1,916,348	12,168,655	510,763	3,243,301	25,168.61	3,243,301
Recommended Initial Archive up to 2016 →	2016	1,821,917	**10,252,307**	485,594	**2,732,538**	6,726.13	2,732,538
	2015	1,796,681	8,430,390	478,868	2,246,944	43,410.93	2,246,944
	2014	1,633,806	6,633,709	435,457	1,768,077	88,383.72	1,768,077
	2013	1,302,196	4,999,903	347,073	1,332,620	(7,551.30)	1,332,620
	2012	1,330,528	3,697,707	354,624	985,547	(24,944.46)	985,547
	2011	1,424,118	2,367,179	379,569	630,922	128,215.70	630,922
	2010	943,061	943,061	251,353	251,353	251,353.21	251,353

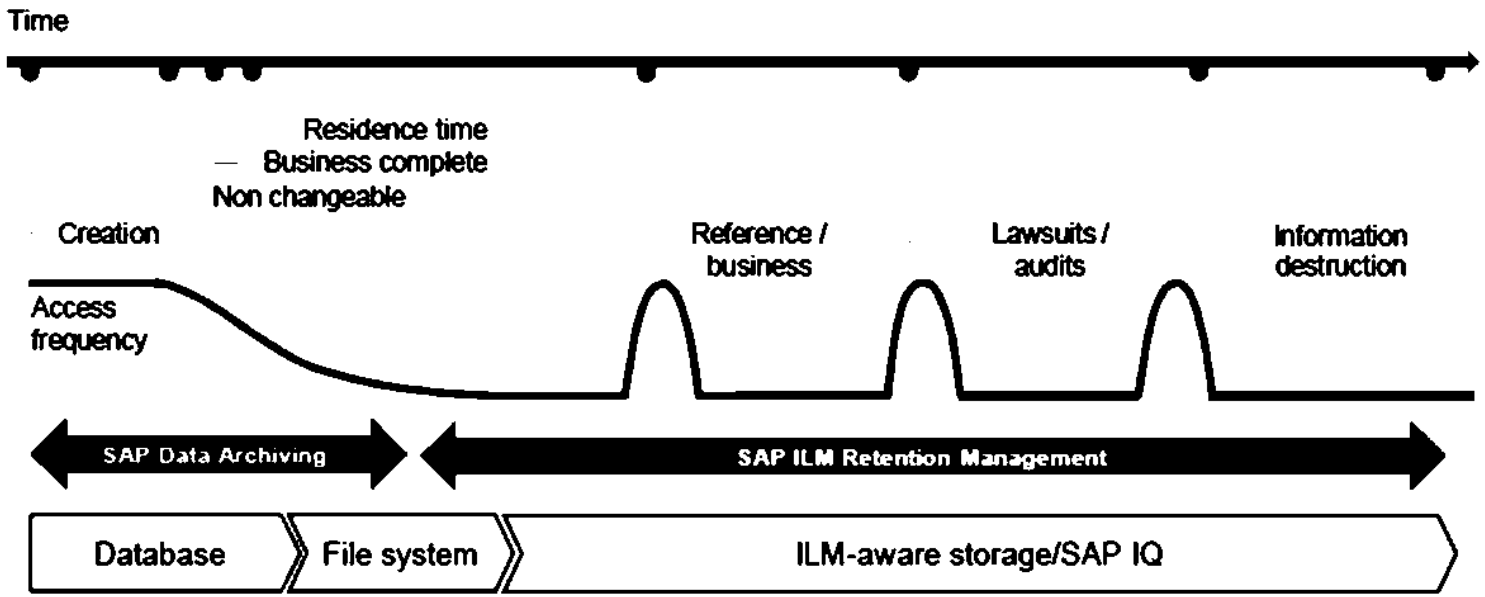
MANAGING STRUCTURED DATA – HOW TO ARCHIVE

Using SAP ILM Archiving Objects (2,100 objects)

- Definition of logically related business data
- All programs required for archiving – such as formatting routines, read, write and delete programs
- Definition of required Customizing settings



MANAGING STRUCTURED DATA - USING ILM RM*



- Set of **residence times** (time data needs to be kept online in your database)
- **Retention time** (time data needs to be kept in your archive)
- **Destruction date** (date on which data get physically destroyed in your archive)
- Exception handling through **legal case management** (data is prevented from getting destroyed even if your retention date is expired)

**SAP ILM Retention Management*

MANAGING STRUCTURED DATA

USING ILM RETENTION MANAGER

- Set up and manage retention policies
- Store and retain data immutably according to applied policies
- Data destruction
  - From archive
  - From Database
- Perform e-discovery and apply legal holds

MANAGING STRUCTURE DATA - KEY POINTS

- Data once archived can be retrieved by some SAP transactions seamlessly
- ILM provides the solution to manage data that is archived and eventually deleted
- Any archived data must be business complete
- Data has to be archived in the correct sequence

Managing Unstructured Data

MANAGING STRUCTURED DATA – CASE STUDY

- **Client**
  - Large UK Energy Company
  - SAP S/4HANA
- **Scope**
  - Purchase to Pay
  - Order to Cash
  - Plant Maintenance
  - SAP Users
  - Fiori Apps
- **Objects**
  - Fast access to documents
  - Documents stored and accessible from related business data

- **Solution**
  - Document attachments to SAP objects
    - Materials Masters
    - Vendors
    - Customer
    - Equipment's Masters
    - PM Orders
    - Invoices
    - Billing Documents
  - Scanned / OCR Invoice Documents
  - Direct attachment of email attachments
  - Workflow documents

MANAGING UNSTRUCTURED DATA - WHY BOTHER?

As businesses grow they must manage increasing unstructured data growth

- Regulations require more documents to kept and managed
- Internal and External audits require more information to be kept
- Data can only be used for the purpose it has been collected

What's the risk of not taking action?

- Data is not disclosed or destroyed when required
- The business can be fined for loss, unauthorised disclose or misuse
- Data will become isolated, lost or unused increasing the risks
- Access to data needs to be restricted to user who still require access

MANAGING UNSTRUCTURED DATA - TYPES OF DATA

- **Business documents**
  - Invoices, orders, contracts, etc.
- **Sound files**
  - Phone recordings
- **Videos**
  - Training and Marketing videos
- **Physical documents**
  - Paper documents

MANAGING UNSTRUCTURED DATA – LIFECYCLE

Capture

- Electronic documents
- Scanning
- Indexing
- Selection/Rules

Usage

- Location and viewing
- Updates
- Reference data

Destruction

- Data
- Index
- Redaction
- Legal Holds

MANAGING UNSTRUCTURED DATA – COMPLIANCE

- **Data needs only be kept if there is a requirement for it**
  - Business requirement
  - Regulation requirement
- **Redaction**
  - Some data in the document is required but other parts need to be redacted before being shared or used
- **Destruction**
  - Data needs to be destroyed when it is no longer required
  - Legal hold, is required to prevent destruction if the data is part of legal/audit cases

Moving to HANA and S/4 HANA

Reducing migration and project costs

RIGHTSIZING HANA – WHY IS IT IMPORTANT?

- Not spending money on appliances that are not needed
- Getting the sizing right first time
- Reducing migration times
- Ensuring you don’t grow to quickly on the new platform
- Your best opportunity of getting the business to buy into data management

RIGHTSIZING HANA – WHY IS IT IMPORTANT?

- With HANA you get some fantastic compression ratios
- 1TB of tables in Oracle will compress in HANA to between 200GB - 150GB depending upon which tables
- Some tables vanish completely
- **SAP Note 1872170** shows memory and disk requirements for Business Suite
- SAP provides many tools to enable customers to size HANA, here is the link to one of them: https://websmp109.sap-ag.de/quicksizer

SAP S/4 HANA MASSIVELY REDUCES COMPLEXITY IN IT LANDSCAPES

Finance with aggregates and indexes

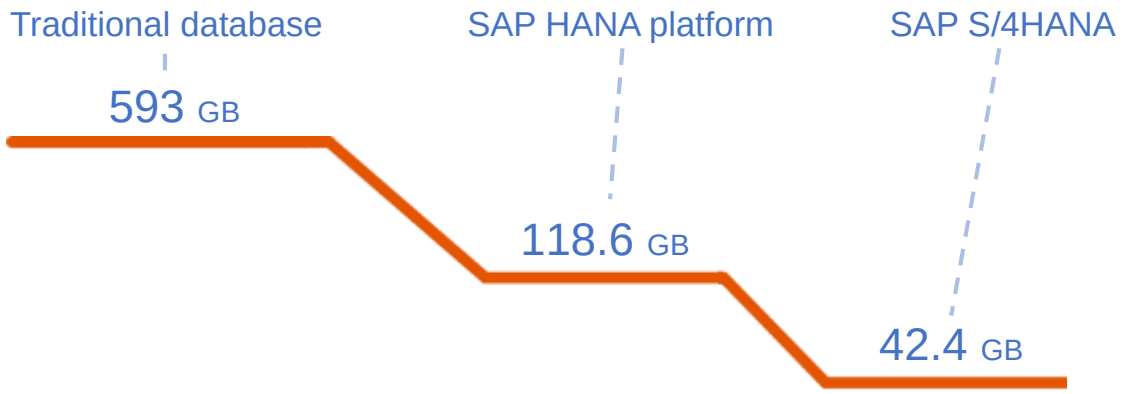
SAP Simple Finance

BKPF	BSEG	BSIS	BSIK	BSET
LFC1	GLT0	COBK	COEP	COSP

Logistics with aggregates and indexes

SAP Simple Logistics

MSEG New	Master Data	MSTB	MSKU	MSSQ	MSSA	MSKA	MARDH	MKOL	MSTBH
MKPF	MARD	MSTQ	MSPR	MSTE	MSLB	MCHB	MSKAH	MCHBH	
MSTQH	MSLBH	MSTEH	MSKUH	MARCH	MSPRH	MKOLH	MSSQH	MSSAH	



- Simplified data model
- Semantically rich data model
- Drop performance workarounds
- Keep all information

SAP DATA RIGHTSIZER TOOL FROM PROCEED

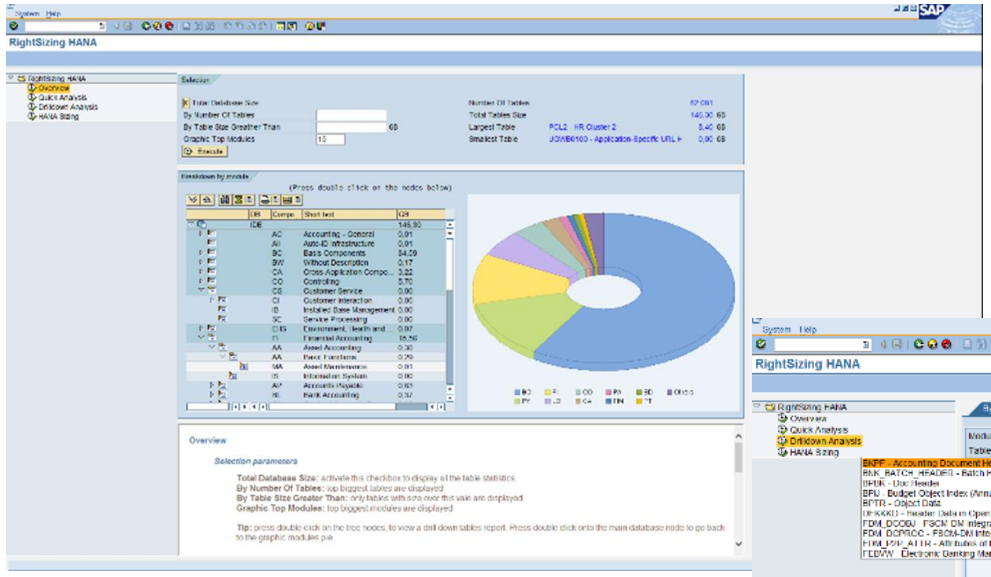
Software developed by Proceed which is installed on customers ECC6 system to analyse data to give '***What if'*** scenarios on:

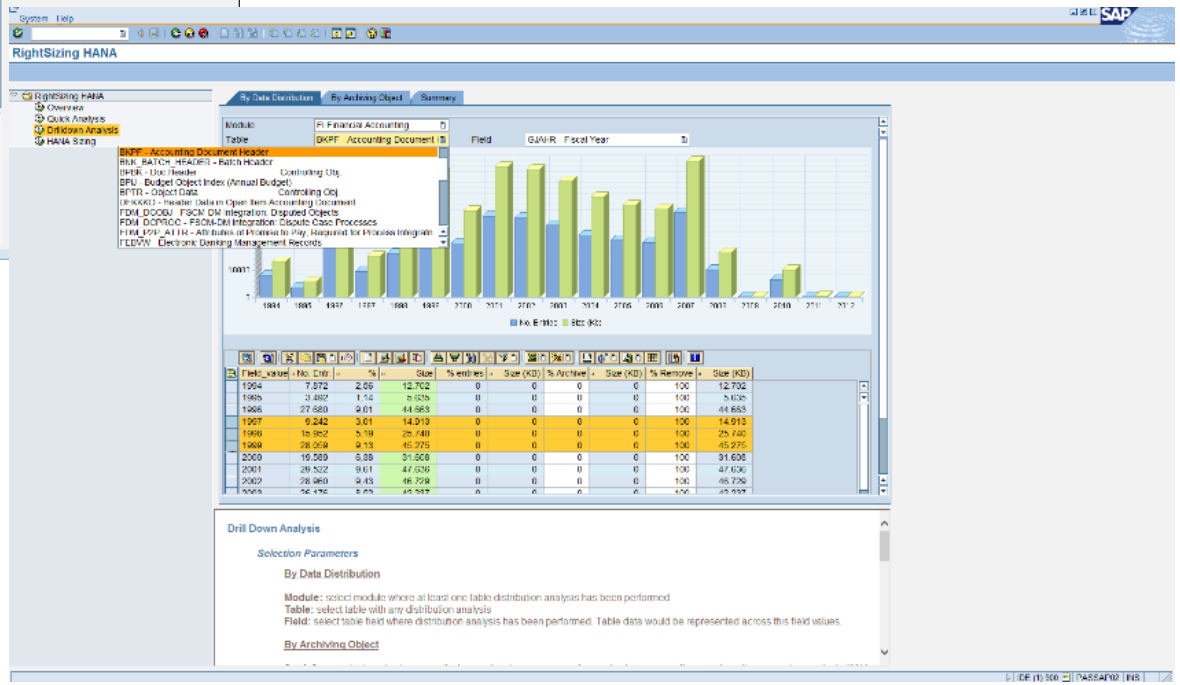
- What is the minimum size I can get my database to, if I delete and archive
- I have a 'specific size' SAP HANA appliance what do I need to delete and/or archive to create a comfortable fit
- If I delete only Basis tables what size appliance will my data fit
- What sequence to archive and/or delete would be the quickest

- What can be deleted?
- What are the easiest tables to archive
- What archive objects to use
- What is the minimum size I can get my database if I only delete

Once the 'best fit' has been decided for the 'RightSizer' analysis a blueprint is created on what needs to be completed. This automated process speeds up the analysis phase by up to 80% compared to doing it manually!

SAP DATA RIGHTSIZER TOOL





CASE STUDY

- One of the Worlds largest brewer
- 21 Billion euros revenue 2014
- 1.7 Billion euro profit
- 165 breweries in over 70 countries
- Employ in excess of 90,000 people

CASE STUDY

- SAP Landscape
- In excess of 300 productive SAP Servers
- Most on ECC6 and BW 7
- Most use Oracle
- Looking to rationalise onto smaller number of servers
- HANA employed for some BW systems
- Looking towards HANA for larger businesses – reasons
  - Reduction in Hardware Costs
  - Complexity of landscape
  - Month end closing issues – takes up to 15 days to close

CASE STUDY - POC

- Given a copy of one of their larger ECC6 systems – 21TB
- System had been running since 1999
- No data management done
- So in this landscape 1 full copy for DR, Pre Prod, ½ size copies for 2 X QA, Dev and Test
- Full suite FI/CO, SD, MM, PP, WM, QM
- Given a 1TB Hana box sandpit box

CASE STUDY - ANALYSIS

- Analysed the ECC6 system in GB's
- Calculated what this would be on HANA 3.7TB
- We needed to get 21TB down to 5.6TB

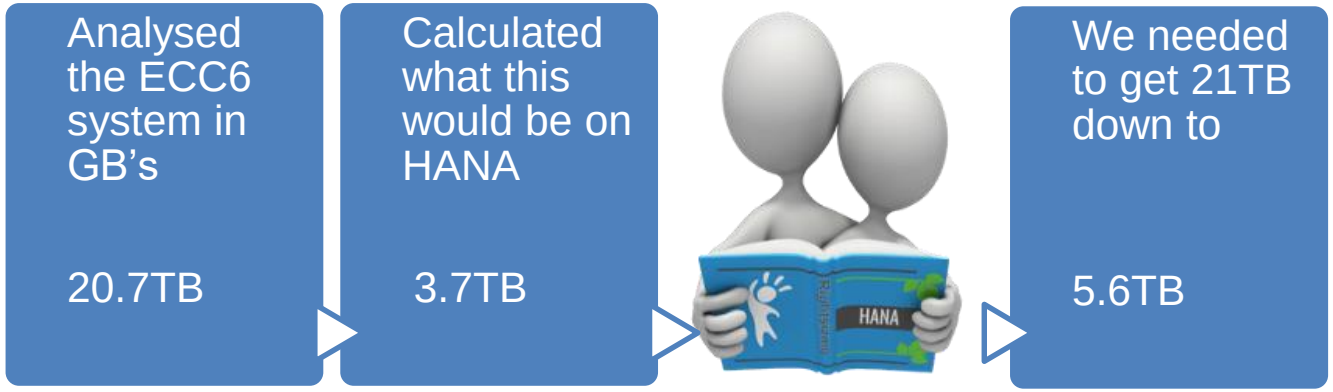


Table	Size
Basis	9,210
Bespoke	232
FI/CO	7,210
LO	421
MM	788
PP	475
QM	27
SD	1,729
Various	648
Total	20,739

CASE STUDY – WHAT WE DID

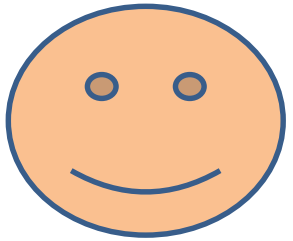
- Installed Open Text Archive Server
- Moved 2.2TB of SAP Office to OpenText
- Installed SAP ILM using Sybase IQ
- Deleted 2.6TB data more than 10 years old
- Archived 11.1TB to ILM and moved archive indexes to Sybase
- Calculated what was left on ECC6 to HANA 512GB
- Migrated data to HANA in 38 hours using Database Migration Option (DMO)

Project Completed in less than 6 months

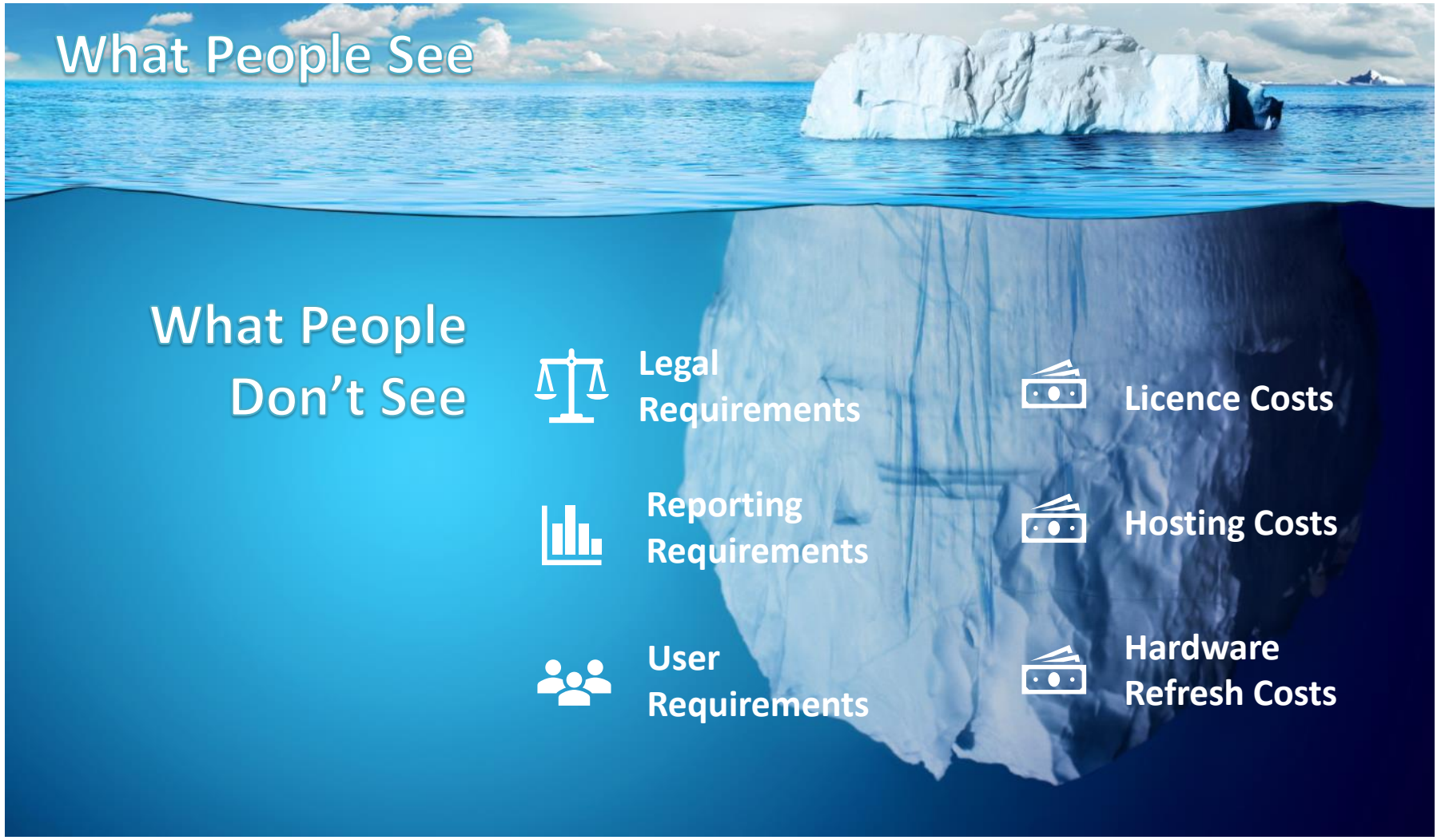
DECOMMISSIONING AFTER S/4 HANA MIGRATION

- Most S/4HANA implementations are **Green Field**
- The project usually moves over the smallest amount of data
- It takes a lot of time, effort and cost to move data across so its often left behind

No One is Using it Right ?



DECOMMISSIONING AFTER S/4 HANA



DECOMMISSIONING AFTER S/4 HANA

DECOMMISSIONING AFTER S/4HANA

Solutions

How do we choose the right Solution

The Amount of Data to be Archived

Is a defining factor in selecting the best solution, for example, if there is a large amount of data and it is not used on a day to day basis then long term archiving via ADK is a favourite strategy.

Reporting Requirements

If the data is regularly used to report from then there is a driving need to have this data hosted in a dynamic reporting environment such as SAP BI or Accelerate for SAP.

Retention Policy

How long data must be retained as well as the strategy for dealing with this data once it has passed the time must be considered.

Solution Options

SAP ILM Retention Warehouse provides a set of functionality capable of decommissioning a legacy ERP system.

Reporting is provided by using either SAP BI, Accelerated Reporting, Moving the data into a HANA database BOBJ or Accelerate for SAP.

This solution provides balance between long term deep freeze storage and reporting functionality.

DECOMMISSIONING AFTER S/4 HANA

Solution SAP ILM RW Introduction

Decommissioning Process

Data is extracted from the legacy system using System Landscape Technology.

Once extracted it is subsequently archived using enhanced archiving objects into the ILM Retention warehouse

Reporting

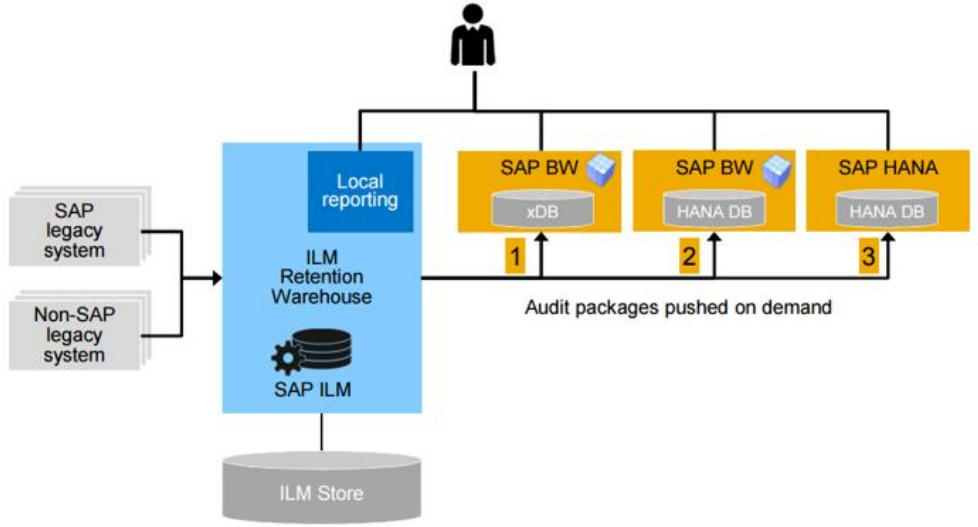
Reports that are required need to be created either using ABAP report writer tools or by creating BW queries.

When a report is called the data must first be extracted from the SAP ILM Retention Warehouse

Solution Architecture

ILM Retention Warehouse runs on a dedicated NetWeaver technology stack and requires an associated relational database.

If SAP BW is being used for reporting then a BW landscape is required



DECOMMISSIONING AFTER S/4 HANA

Solution SAP ILM RW Reporting

Reporting Solution Architecture

Reporting from decommissioned data starts with the data required being assigned to an **Audit Area**. This establishes what data could be requested from the archive for reporting purposes.

The Audit area ensures that the correct archive data is retrieved from the archive files. Once the archive data is retrieved it is available within the package of data to be sent to whatever reporting application is to be used.

The package of data is converted into distinct SAP data infocubes, or database tables depending on which reporting method has been configured.

Reporting using SAP ILM Retention Warehouse

DECOMMISSIONING AFTER S/4 HANA

Bridging the Old & the New Data

Data Bridge

Data Bridge has been developed to help customers who have decommissioned their old SAP landscape after moving to a new implementation of SAP.

Most companies use this opportunity to implement organisational change which results in new chart of accounts and changes to key data fields.

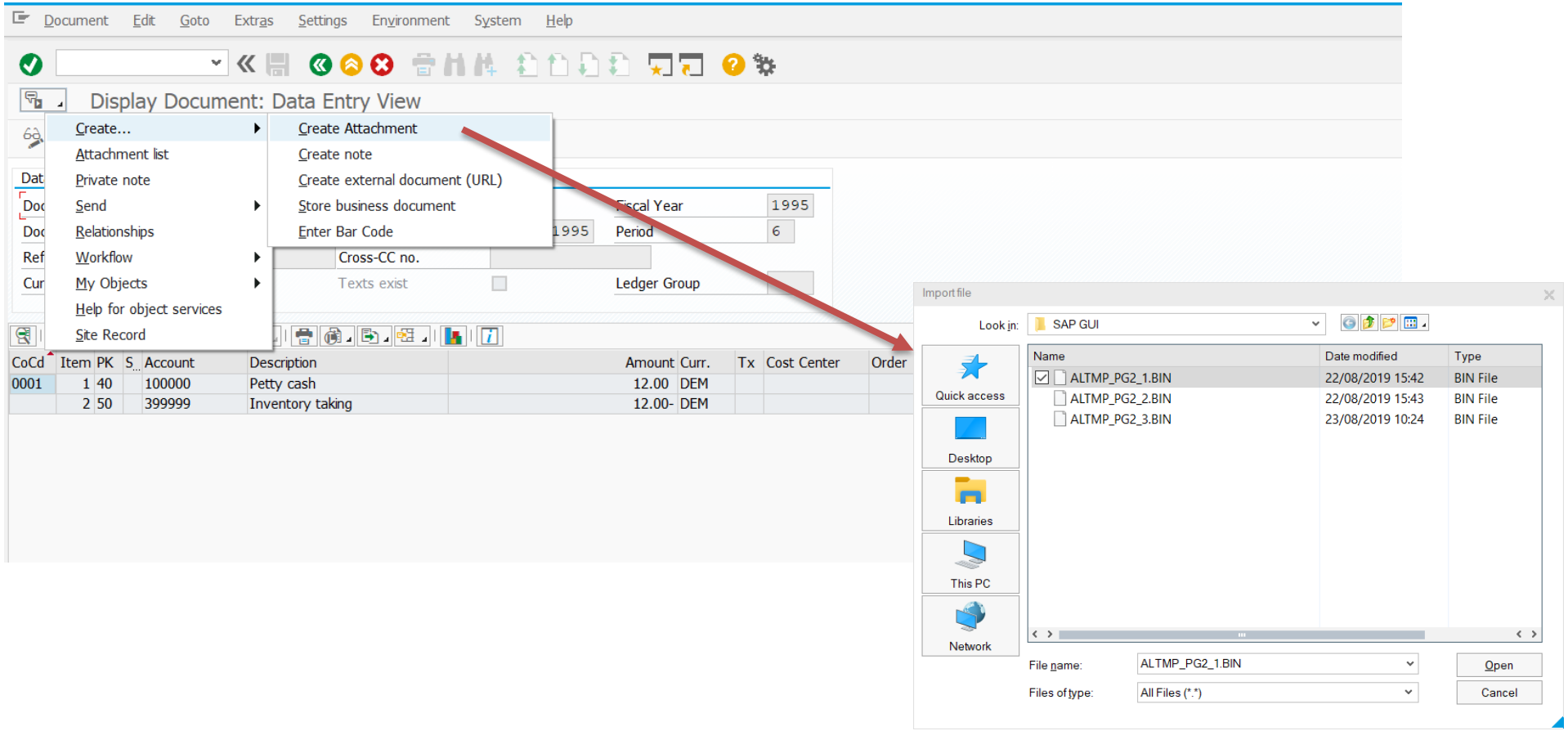
Data bridge enables mapping tables to be used between the old and new world SAP system which enables decommissioned data to be queried in the new system with the new world view.

SAP and Unstructured Data Options

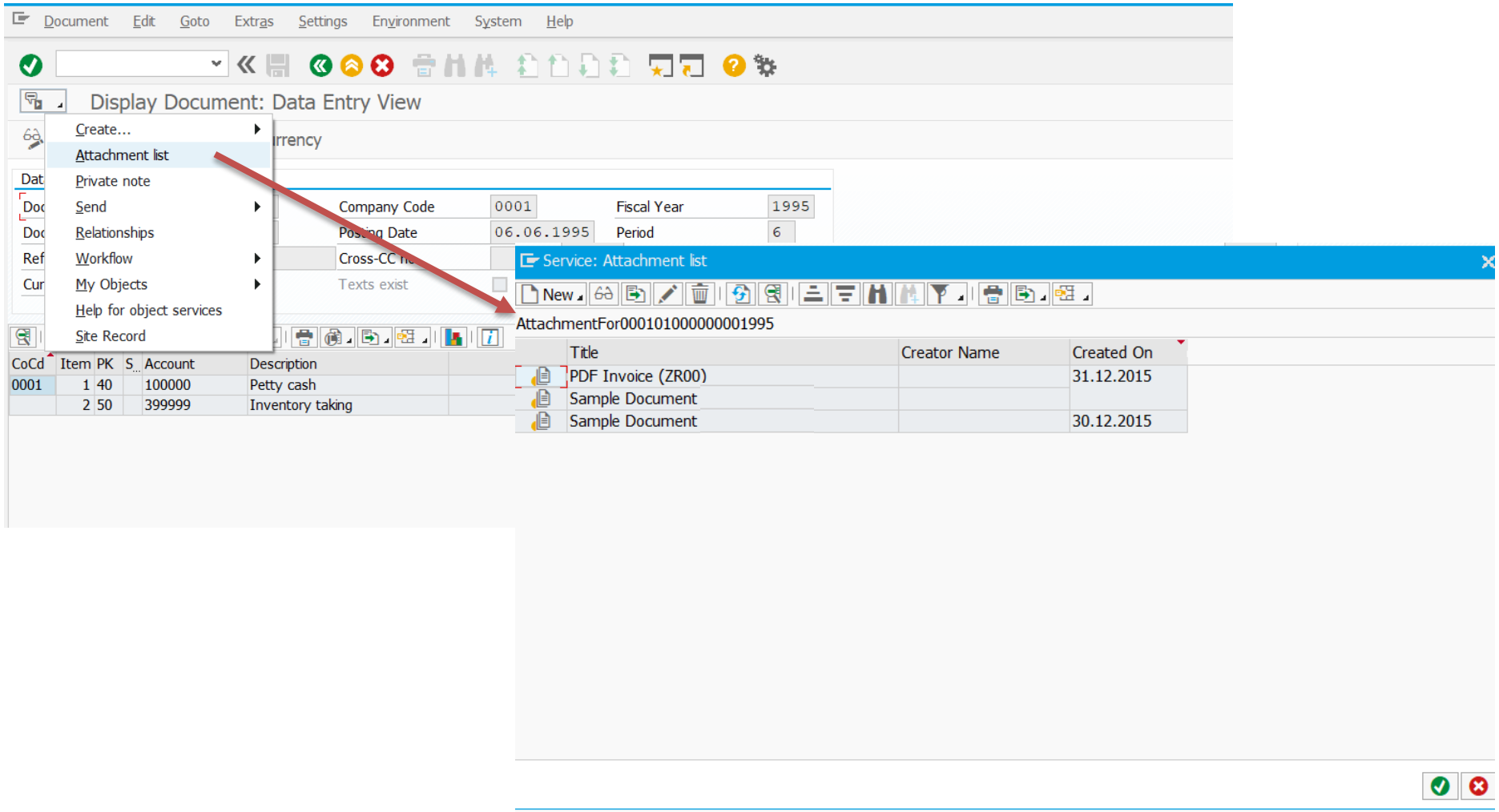
SAP AND UNSTRUCTURED DATA – SAP STANDARD

- **Documents Attachments**
  - Attached to most SAP Business transactions
  - No configuration required
  - Stored in the SAP database by default
  - Only viewable within SAP
- **Business Documents**
  - Attached to most SAP Business transactions
  - Requires configuration
  - Only viewable within SAP
  - Requires external content server to store the documents
- **SAP FIORI apps**
  - Application specific functionality
- **SAP DMS**
  - Full document management solution
  - Integrated into SAP PLM
  - Requires configuration
  - Windows desktop client or SAP access
  - Requires external content server to store the documents
- **Document Storage specific SAP Applications**
  - CRM
  - SRM
  - Fiori
  - Setup varies by application components

SAP AND UNSTRUCTURED DATA – ATTACHMENTS

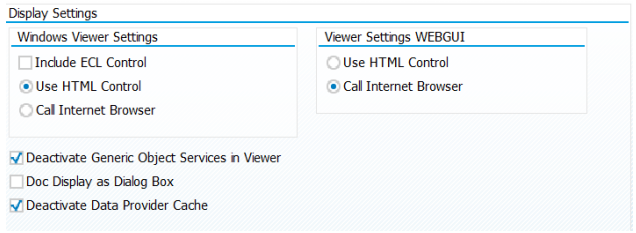


SAP AND UNSTRUCTURED DATA – ATTACHMENTS

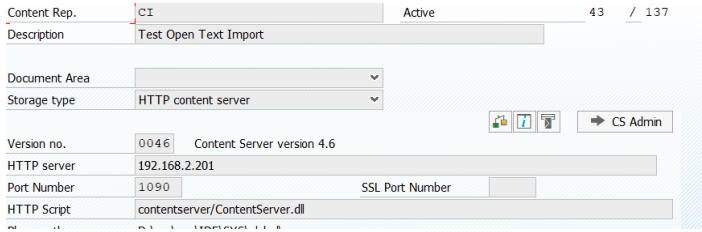


SAP AND UNSTRUCTURED DATA – BUSINESS DOCUMENTS

- **Configuration**
  - Configure Viewing (OAG1)



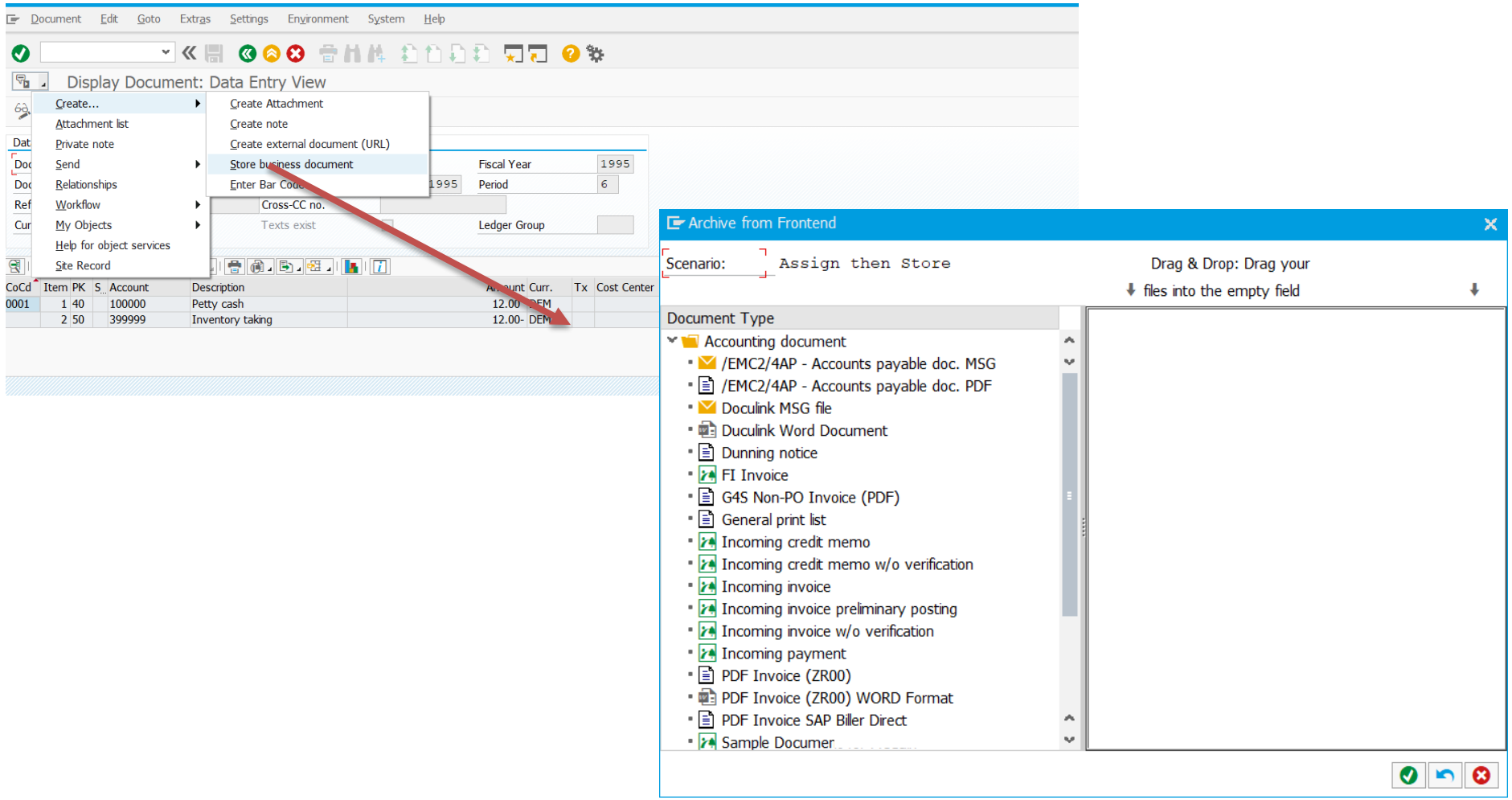
  - Create Content Repository (OAC0)



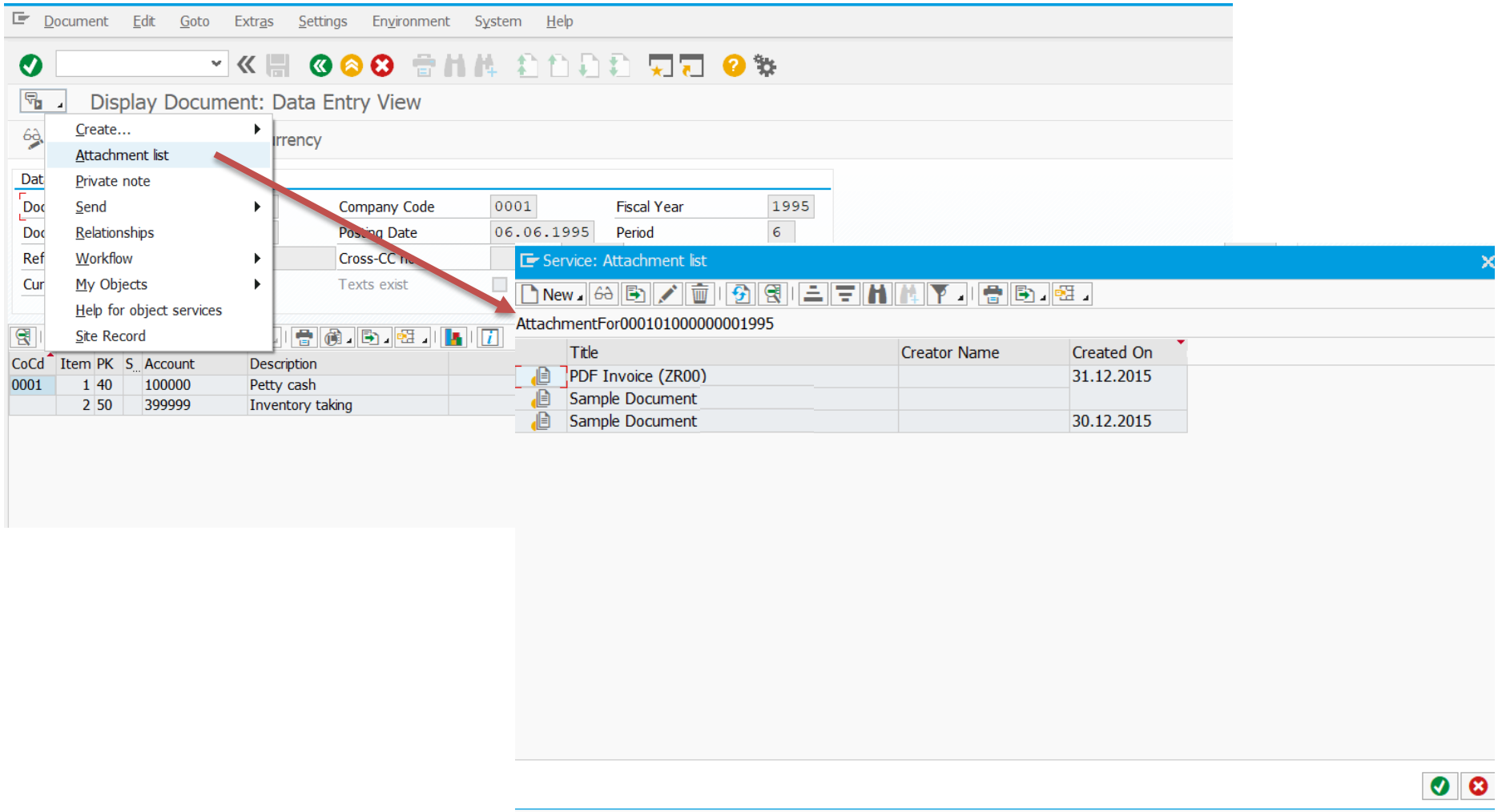
  - Assign Content Repository to Business object (OAC3)

BKPF	ZDL_DOC	X	01	TOA01	0

SAP AND UNSTRUCTURED DATA – BUSINESS DOCUMENTS

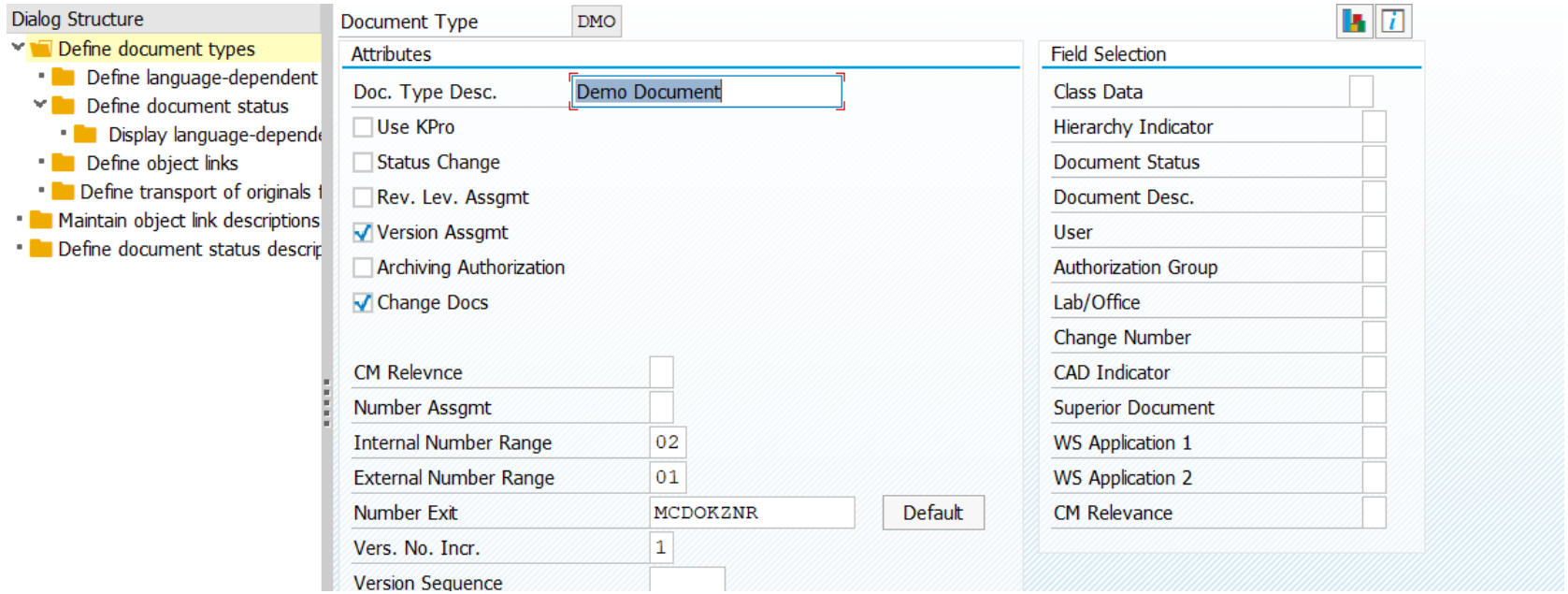


SAP AND UNSTRUCTURED DATA – BUSINESS DOCUMENTS



SAP AND UNSTRUCTURED DATA – SAP DMS

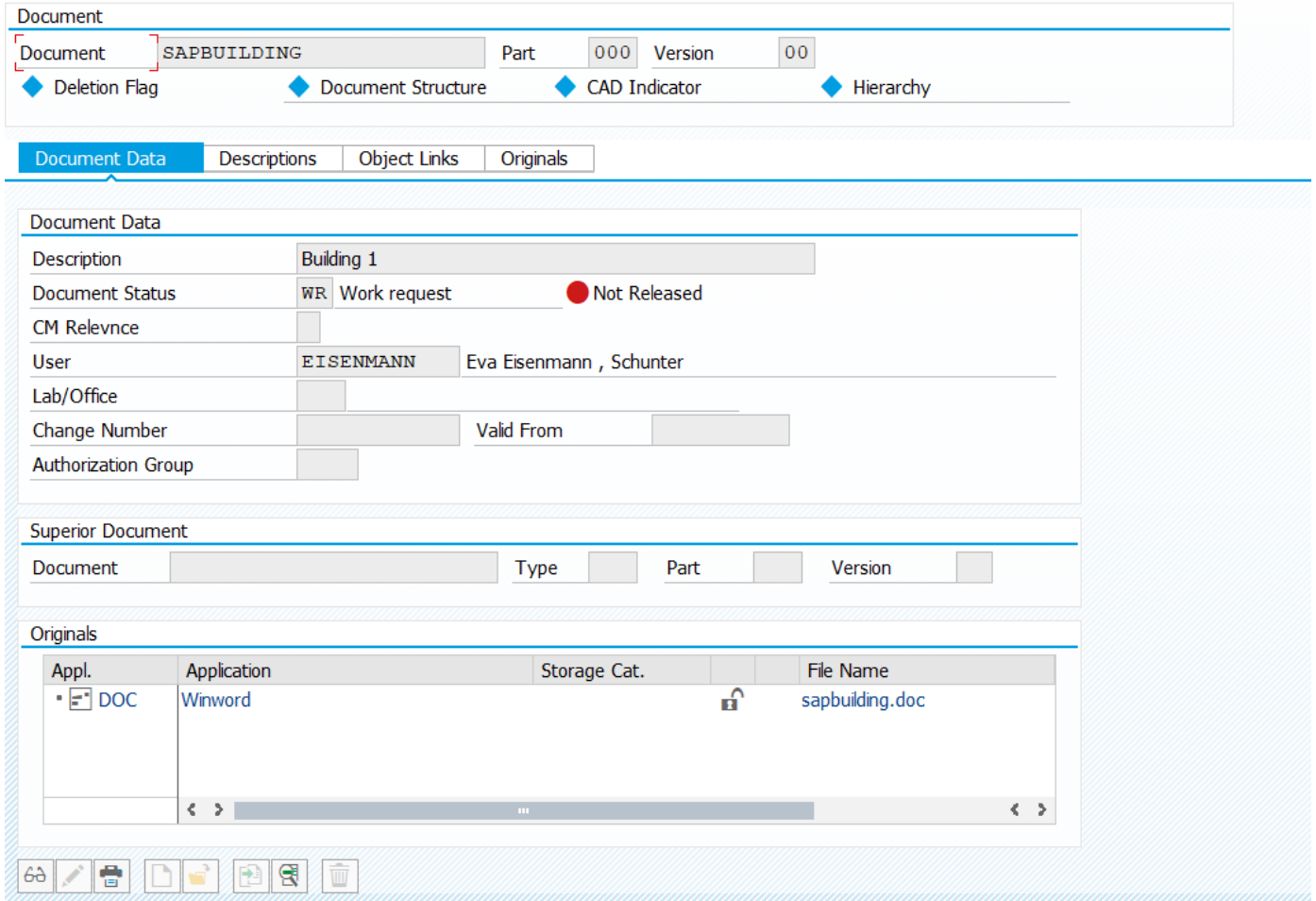
- Configure Document Type (DC10)



- Configure Data Carriers (DC30)
- Configure Workstation applications (DC30)

SAP AND UNSTRUCTURED DATA – SAP DMS

- Change Document (CV02N)



SAP AND UNSTRUCTURED DATA – OTHER OPTIONS

- **Extended ECM**
  - Integration with multiple leading applications including SAP
  - Exposes Leading application data to ECM users
  - Full life cycle management
  - Full document auditing
  - Full data searching

- **Cloud Solutions**
  - SharePoint
  - Google Docs
  - OneDrive

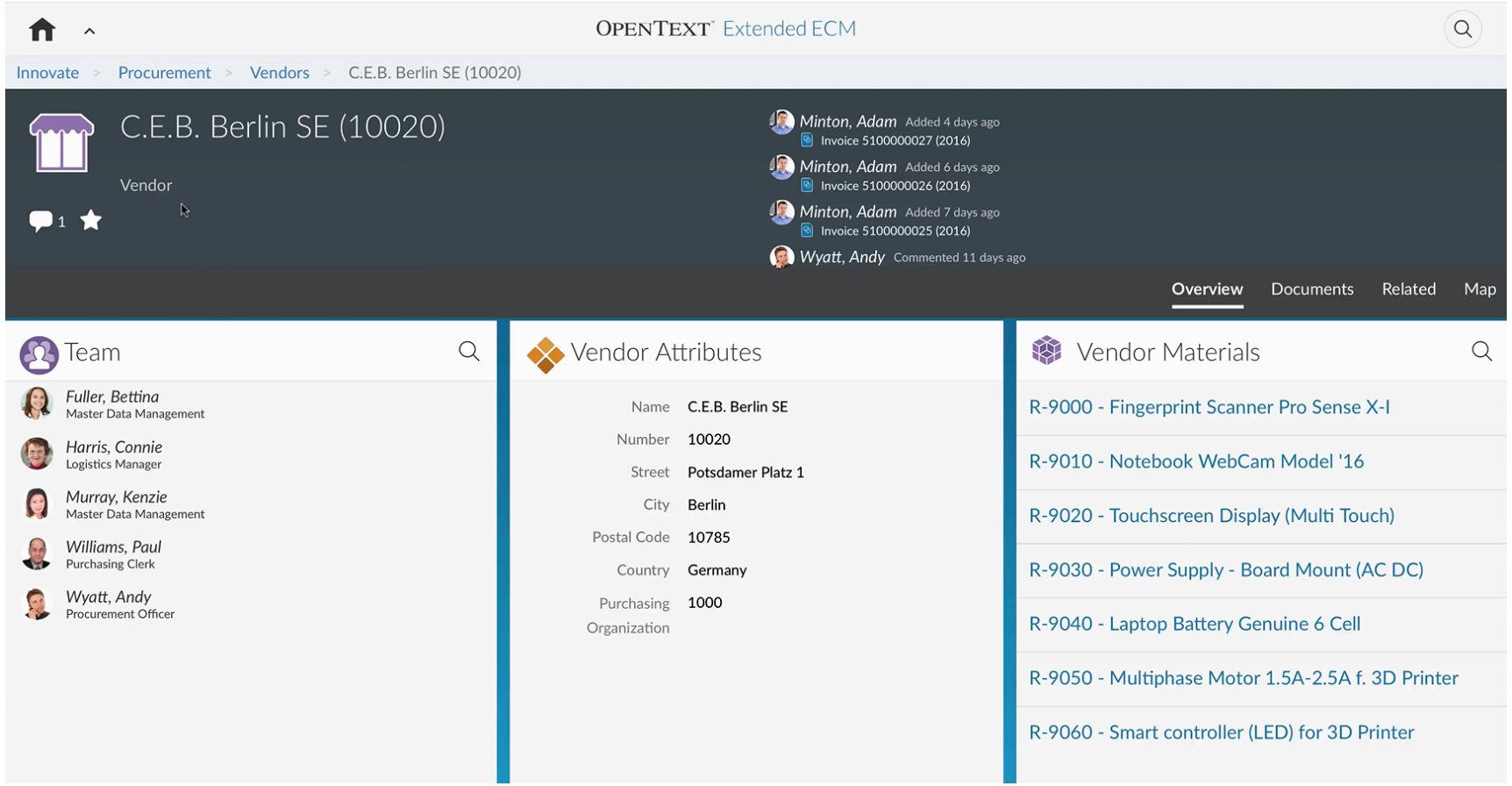
- **On Premise Solutions**
  - SharePoint
  - File Shares
  - Other EIM solutions

SAP AND UNSTRUCTURED DATA – EXTENDED ECM

- **Configure SAP and Extended ECM integration**
  - Connect the applications
  - **Configure data providers for SAP and Extended ECM**
    - What SAP data is presented and how it is structured
    - What ECM data is presented and where it is linked in SAP (Workspaces)
  - **Configure Access rights between the applications**
  - **Configure views and workspaces**

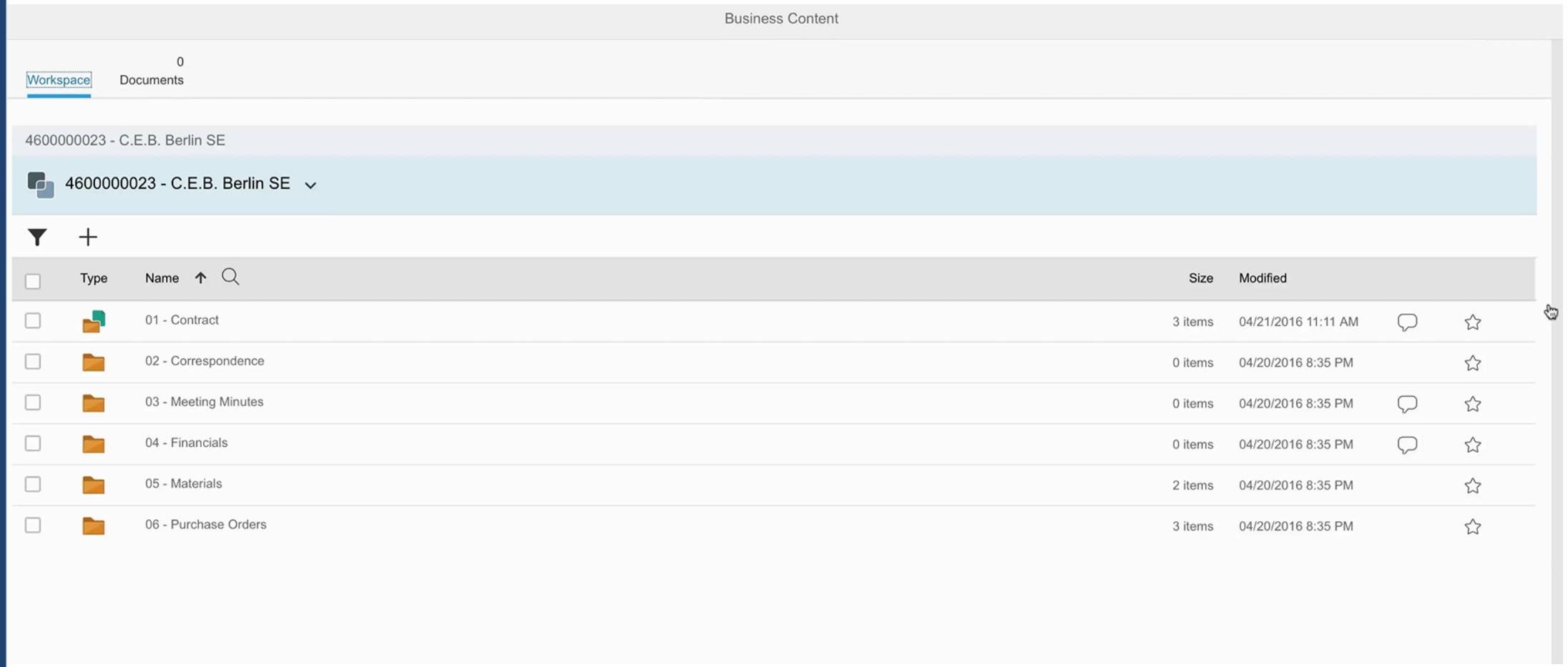
SAP AND UNSTRUCTURED DATA – EXTENDED ECM

- ECM Access to SAP data



SAP AND UNSTRUCTURED DATA – EXTENDED ECM

- SAP Access to ECM data



Meeting Compliance Requirements

Shhh! don’t mention GDPR

MEETING COMPLIANCE REQUIREMENTS - HCM DATA

- SAP supplies several HCM related ILM Objects
- ILM is free to use for GDPR compliance
- HCM Objects only Delete Data
  - There is no blocking functionality
  - Once the data is deleted its gone
  - This presents a compliance issue with TAX authorities and others.
- Proceed has produced a solution which extends ILM to enable HCM data to be redacted until such time as it can be deleted

MEETING COMPLIANCE REQUIREMENTS
A FEW SUCCESS STORIES

- **Kone Lifts**
  - Blocking and Deletion of ECC Customer data
- **CAPITA**
  - Blocking and Deletion of S/4 HANA Customer and Vendor data
  - ECC 6 HCM Deletion of employee data
- **RDW**
  - ECC6 HCM Deletion of employee data
- **EDF Energy**
  - ECC 6 HCM Automate solution to redact and delete employee data
  - ECC 6 ECC Automate solution to encrypt Nuclear Specific data
- **Stora Enso**
  - ECC 6 HCM Automate solution to redact and delete employee data
  - ECC 6 ECC Automate solution to redact vendor and customer data

MEETING COMPLIANCE REQUIREMENTS - ECC DATA

- SAP supplies an ILM Blocking technology
- The ILM Blocking technology works by introducing a new authorisation concept
- For the data object to be blocked it must be business complete
  - This can be problematical if the business process is not complete
  - Data is ultimately deleted using the standard ILM Archiving objects
- Proceed has produced a solution which extends ILM to enable ECC data to be redacted until such time as it can be deleted.

TECHNICAL PREREQUISITES

- With SAP Information Lifecycle Managements (ILM) the functionality of *Simplified blocking and deletion of business partners* is available as follows:

System/Application	Release - prerequisite
ERP	SAP ERP 6.0 EHP7 SPS12
CRM	SAP CRM 7.0, EHP3, SPS05
IS-U	SAP ERP 6.0 EHP7 SP08
HCM	SAP ERP 6.0 EHP6 SPS16

Scope:

- End of purpose checks (EOP) available in more than 120 modules/applications
- Possibility of handling blocked data in transactions and reports
- Full ILM-enablement of archiving objects in respective modules/applications

Q & A

Question time or visit our stand to discuss your specific requirements

UKISUG
CONNECT
2019
THE ICC, BIRMINGHAM
1-3 DECEMBER
THANK YOU FOR ATTENDNG THIS SESSION
www.proceedgroup.com
Drop by our stand today
or Contact Us to discuss you requirements
ENGAGING MINDS | EMPOWERING SUCCESS
#UKISUGCONNECT