# Einblicke -
# ILM und Datenarchivierung in S/4HANA

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May 23, 2023

Public

PBS software

SAP

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# Agenda

SAP HANA - Native Storage Extension (NSE)

- Einsatzmöglichkeiten … und deren Grenzen

Erfahrungen aus Information Lifecycle Management (ILM) Projekten

- Einführung
- Best Practices
- Zusammenspiel ILM und Dokumentenarchivierung

Datenarchivierung und ILM in S/4HANA Cloud, public edition

- Einführung

Data Volume Management Dashboard

- Transparenz und Übersicht über SAP for Me

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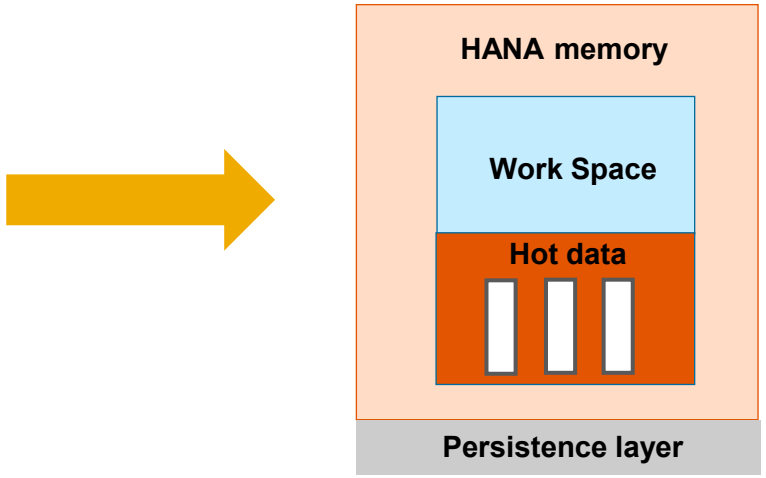
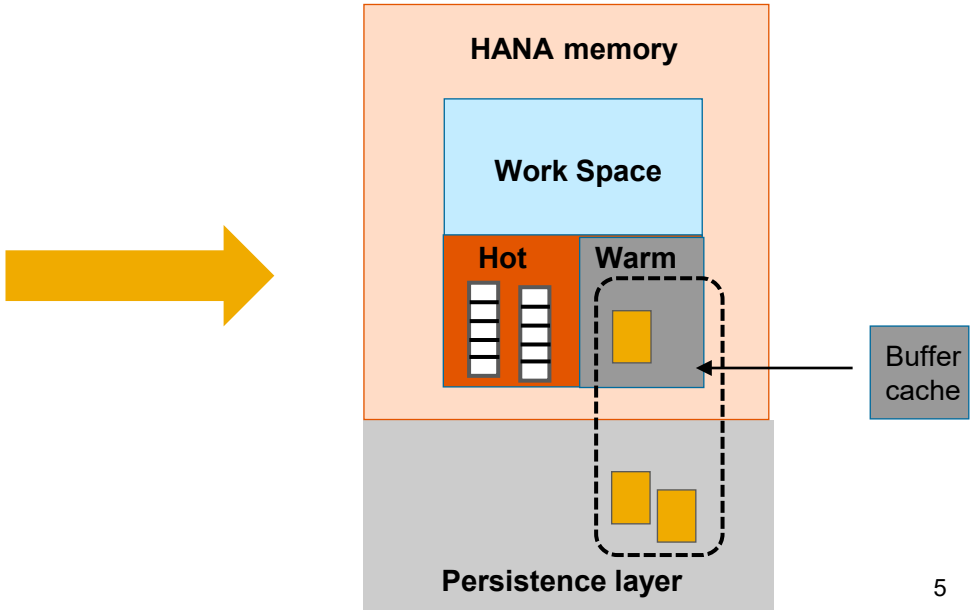
# NSE allows the user to specify that certain data is “page loadable”

- **Hot “column loadable” data:**
  - HANA is an in-memory database, and loads all data into memory for fast processing.
  - Data is “column loadable” and resides completely in memory.
- **Warm “page loadable” data:**
  - With NSE, less frequently accessed data may be specified as “page loadable”.
  - “Page loadable” data is loaded into memory in granular units of pages as required for query processing.
  - NSE will reduce memory footprint for “page loadable” data. Data is partly in memory, and partly on disk.
  - Query performance on warm data may be somewhat reduced compared to hot data.
  - Data can be converted between “column loadable” and “page loadable”.



# How can data be moved “out of main memory” with NSE?

## **Table**-Level

- Specification affecting entire table
- Table can either be in memory (column loadable)
- Or the table is disk-based (page loadable)
- Property can be changed using ALTER TABLE command

## **Column**-Level

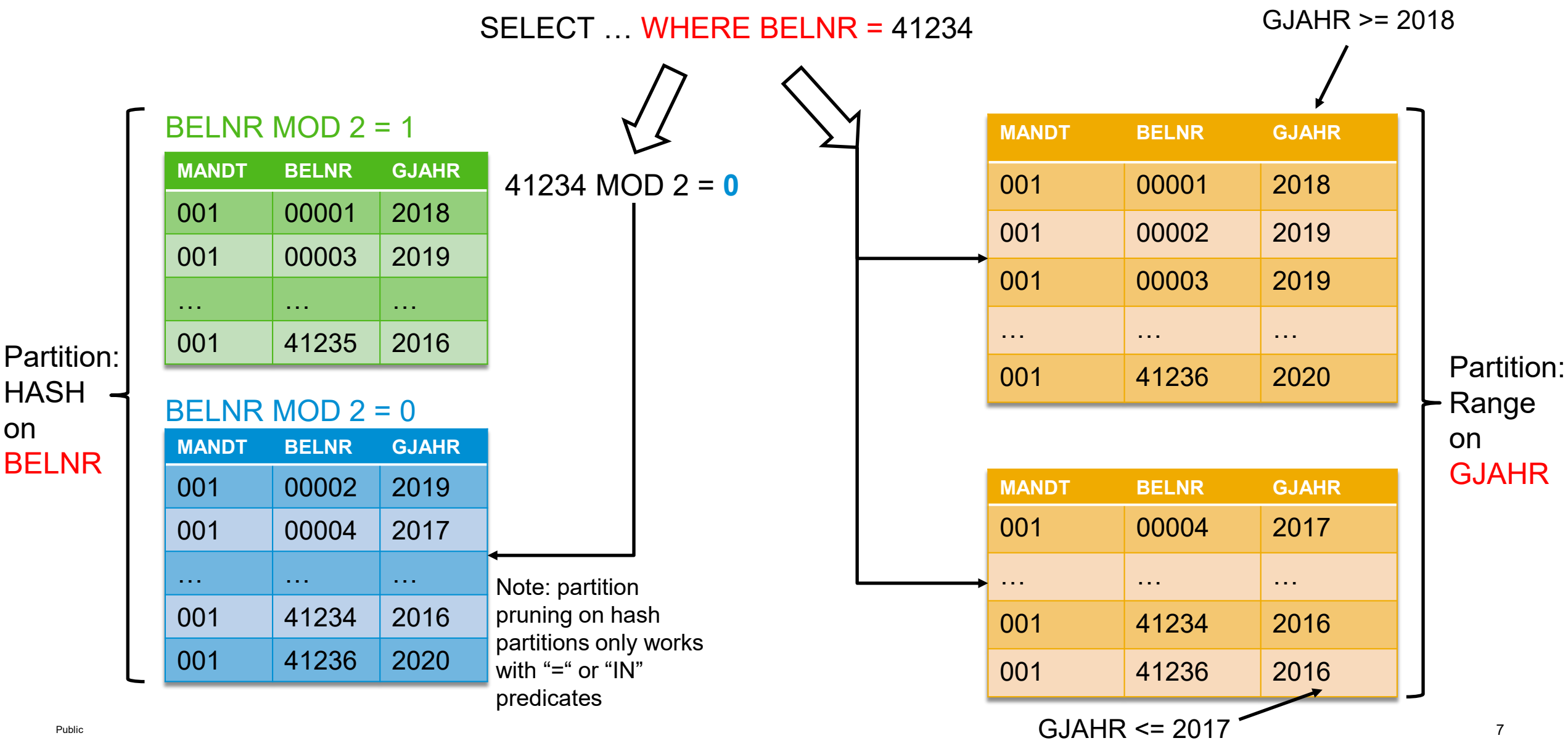
- Specification affecting selected column
  - If table is partitioned: across all partitions
- Column can be in-memory (column loadable)
- Or column is disk-based (page loadable)
- Property can be changed using ALTER TABLE command

## **Partition**-Level

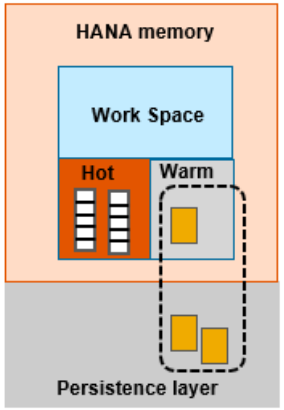
- Specification affecting selected partition of the table
- Partition can be in-memory (column loadable)
- Or partition is disk-based (page loadable)
- Property can be changed using ALTER TABLE command

SAP HANA does not choose or modify the “load unit” property of table, partition or column on its own.

# Partition Pruning – Query Predicates and Partitioning Column



# NSE adoption in SAP S/4HANA (1/2)



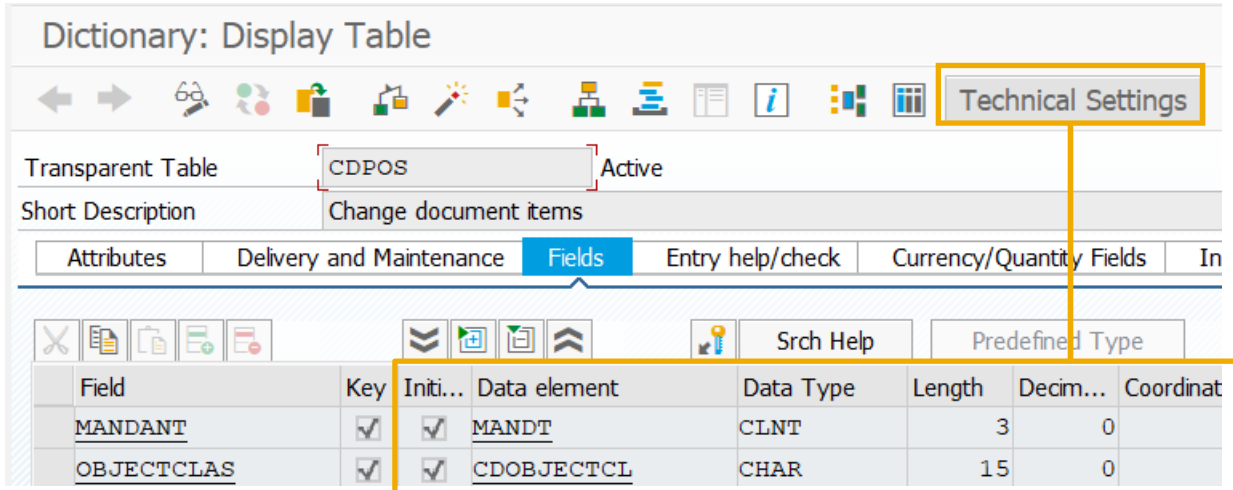

## NSE integration in ABAP Platform Data Dictionary

- available starting SAP S/4HANA 2020
- improvements made for SAP S/4HANA 2021: “preferred” settings that tolerate difference between DDIC-setting and actual setting in database (e.g.: DDIC has full table “page loadable”; customer would like to continue using table “column loadable” or only “selected columns page loadable”)
- allows shipment of tables with NSE default setting
- Important technical settings to ensure lifecycle safety: implement SAP Note 2898319
  - Available for all versions of SAP S/4HANA and **ECC** on HANA

## Current use

- SAP S/4HANA for financial products subledger (FPSL) – SAP Note 2798428
- Finance: Deferred summarization (table ACDOCD); contains line items remove from table ACDOCA. See SAP Note 3069111
- ~~Data aging starting HANA 2.0 SPS04 (but see SAP Note 2869647 regarding aging in general)~~
- Tables EDID4 (IDocs), CDPOS (change documents), BALDAT (application log)
  are shipped as page loadable (full table) starting SAP S/4HANA 2021 for new installs
  **no** automatic NSE-Conversion of these tables during upgrades
- Adoption of NSE for selected tables based on customer choice
- First customer live with NSE on massively active core application contract accounting (FI-CA) tables (selected columns)

# DDIC awareness of load unit settings

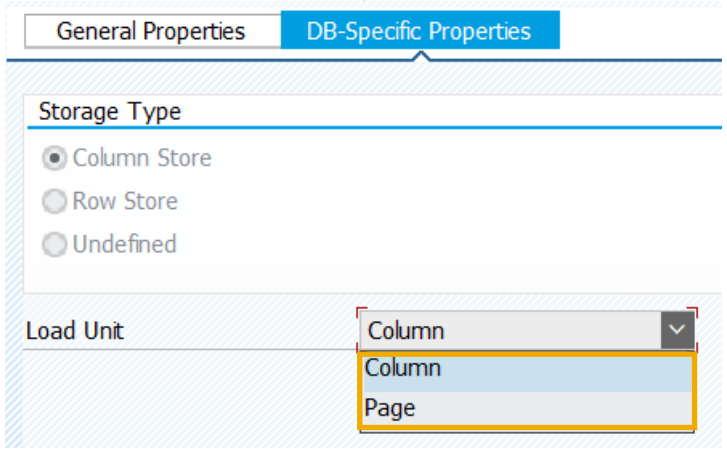



DDIC manages load unit of complete table (no granularity of partition or table)

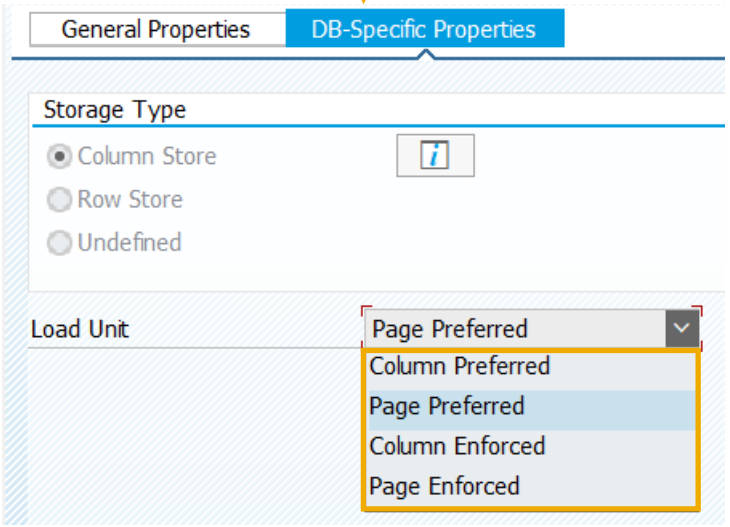
SAP S/4HANA 2020: first DDIC awareness of load unit

SAP S/4HANA 2021: the concept of 'preferred' is introduced: load unit is used for table creation at new installs, but not enforced during upgrades

SAP S/4HANA 2020

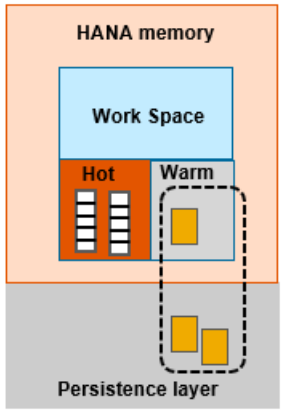



SAP S/4HANA 2021




Attribute stored in table DD09L, field LOAD_UNIT

# NSE adoption in SAP S/4HANA (2/2)




## Benefits

- Low implementation effort compared to data archiving, data aging, or deletion
  - No need to change application coding; full data visibility -> contrast to data aging
  - Little alignment with business owners, no end-user training
- Low risk because page loadable setting can be reversed
- Few changes to the SAP HANA database operation procedures

## Constraints

- Scenarios must be wisely chosen: NSE can have a significant impact on performance and other workload aspects.
  - Utilize NSE Advisor to identify candidates
  - Today's known good candidates:
    - large tables with low access frequency, such as IDocs, Application Logs, Workflow data
    - Archive Information Structure tables (ZARIX*) (automatically on NSE in S/4HANA Coud, public)
    - Z-tables
    - Table ACDOCD (populated by process of "Deferred Summarization in Finance")
  - Application tables
    - High workload on application tables may require a larger buffer cache (up to 30% of page loadable data) to achieve satisfying performance ;
    - Intensive tests required; to estimate effects on performance
  - No significant positive effect when putting LOB columns into NSE

# Implementation process

## Find objects in scope

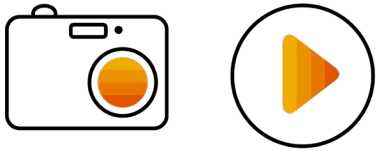
**NSE Advisor**

**SQL Monitor**

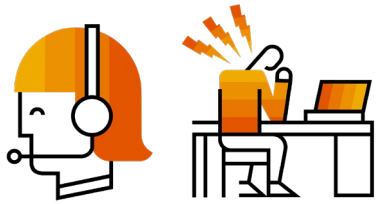
Activate NSE in Testsystem

Optional: repartitioning

## Test



**Capture & Replay**



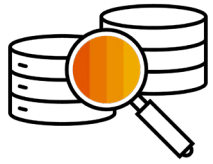
**Business tests**

Go-Live

Optional: plan business downtine

## Monitoring

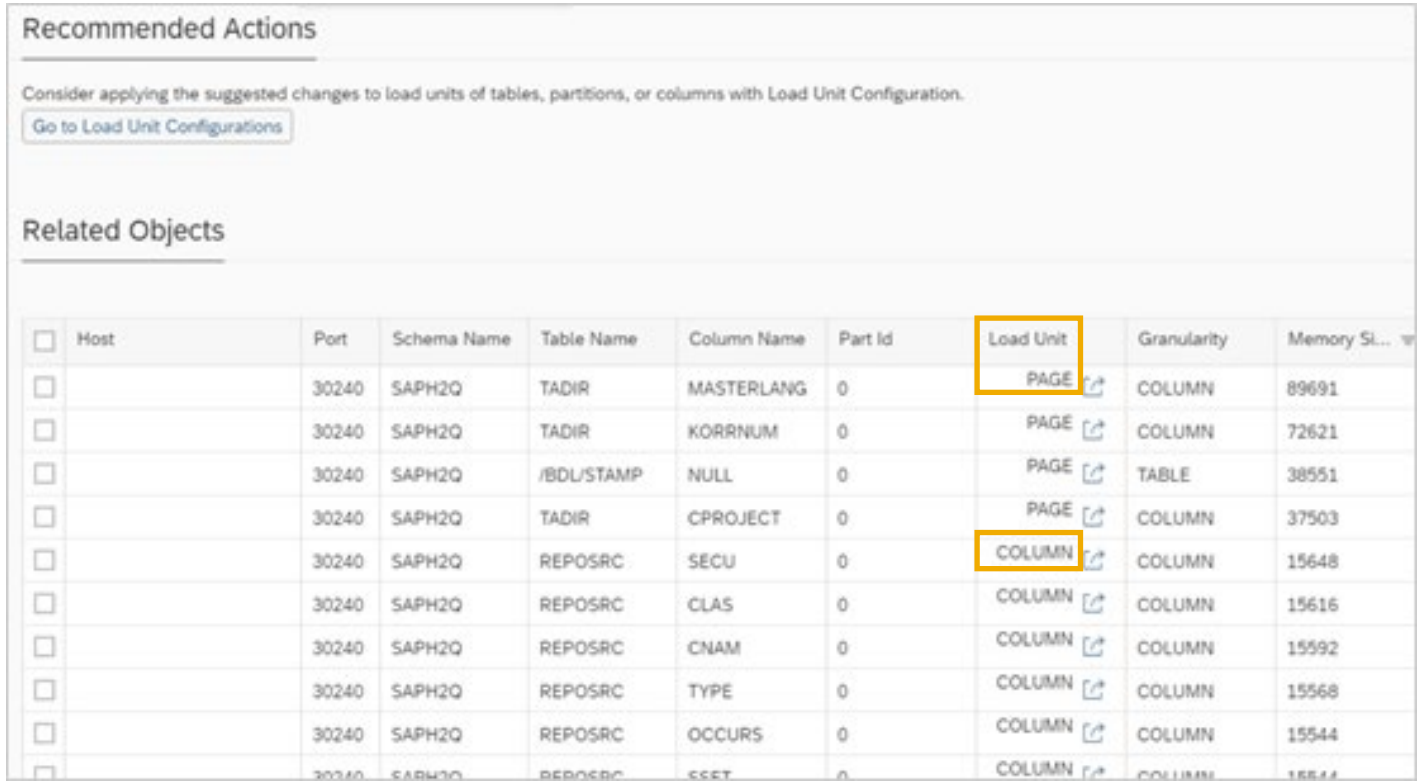
**Performance**



**Buffer cache**

# The NSE Advisor

Monitor CPU usage carefully while NSE advisor is activated – some customers reported problems



Recommended Actions

Consider applying the suggested changes to load units of tables, partitions, or columns with Load Unit Configuration.

Go to Load Unit Configurations

Related Objects

| Host | Port | Schema Name | Table Name | Column Name | Part Id | Load Unit | Granularity | Memory Si... |
|---|---|---|---|---|---|---|---|---|
| | 30240 | SAPH2Q | TADIR | MASTERLANG | 0 | PAGE | COLUMN | 89691 |
| | 30240 | SAPH2Q | TADIR | KORRNUM | 0 | PAGE | COLUMN | 72621 |
| | 30240 | SAPH2Q | /BDL/STAMP | NULL | 0 | PAGE | TABLE | 38551 |
| | 30240 | SAPH2Q | TADIR | CPROJECT | 0 | PAGE | COLUMN | 37503 |
| | 30240 | SAPH2Q | REPOSRC | SECU | 0 | COLUMN | COLUMN | 15648 |
| | 30240 | SAPH2Q | REPOSRC | CLAS | 0 | COLUMN | COLUMN | 15616 |
| | 30240 | SAPH2Q | REPOSRC | CNAM | 0 | COLUMN | COLUMN | 15592 |
| | 30240 | SAPH2Q | REPOSRC | TYPE | 0 | COLUMN | COLUMN | 15568 |
| | 30240 | SAPH2Q | REPOSRC | OCCURS | 0 | COLUMN | COLUMN | 15544 |

- The NSE Advisor tools helps you to identify objects for paged pool usage
- It is analyzing the SQL access patterns.
- It is working as well in opposite direction, to move paged content, showing sequential column scans, back to regular column store.
- In addition to NSE Advisor, tables can be identified by known business usage and size aspect.

# Example of testing approach

| Table Name | w/o repartitioning | Small set of columns on NSE | | Medium set of columns on NSE | | Whole table on NSE | |
|---|---|---|---|---|---|---|---|
| | Iteration 0 | Iteration 1.1 | Iteration 1.2 | Iteration 2.1 | Iteration 2.2 | Iteration 3.1 | Iteration 3.2 |
| Buffer Cache | | 500 GB | 250 GB | 500 GB | 250 GB | 500 GB | 250 GB |
| Z-table | Columns BETRW, VKONT, GPART in NSE | Repartition to range partition. Enable NSE for old partitions | See Iteration 1.1. (only change in Buffer Cache size) | Move additional columns to NSE (top 5 BETRW, VKONT, GPART, OPBEL, LAUFD) | See Iteration 2.1. (only change in Buffer Cache size) | Whole Table | See Iteration 3.1. (only change in Buffer Cache size) |
| DFKKOP (contract accounting line items) | | Internal Columns + PK + OPORD, VKONT, GPART in memory | | Internal Columns + PK + OPORD in memory | | Whole Table | |
| EDID4 (IDoc data) | | Column SDATA in NSE | | Whole Table | | Whole Table | |

# Customer example – Go-Live - runtimes for repartitioning and NSE activation

| TABLE NAME | RECORD COUNT [Mio] | TABLE SIZE [GB] | REPARTITION RUNTIME | NSE APPLICABILITY | NSE RUNTIME |
|---|---|---|---|---|---|
| BSIS | 2.148 | 116 | 4h 6 min | Partition<br>• 2006 – 2017 (13.47GB)<br>• 2018 (22.58GB)<br>• 2019 ( 26.25GB) | • 3 min 18s<br>• 8 min 13s<br>• 9 min 33s |
| CE11000 | 757 | 49 | N/A | Column<br>• Primary Key Index | • 4 min 59s |
| FAGLFLEXA | 2.444 | 293 | 4h 36 min | Partition<br>• 2006 – 2017 (33.05GB)<br>• 2018 (3.99GB)<br>• 2019 ( 86.54GB) | • 13 min 18s<br>• 51s<br>• 10 min 5s |
| FAGL_SPLINFO_VAL | 1.918 | 67 | 2h 23 min | Partition<br>• 2006 – 2017 (11.47GB)<br>• 2018 (1.9GB)<br>• 2019 ( 20.97GB) | • 5 min 4s<br>• 12 s<br>• 3 min 18 s |
| KONV | 11.508 | 375 | 8h 27 min* | Partition<br>• Range (000*-064*) (32.59GB)<br>• Range (10000* – 10031*) (11.25GB) | • 40 min 33s<br>• 8 min 25s |
| REGUP | 1.062 | 53 | 2h 9 min | Partition<br>• Jun 2019–Aug 2019 (0GB)<br>• Sep 2019-Dec 2019 (15GB) | • 0s<br>• 4 min 57s |
| CDPOS | 3.290 | 215 | N/A | Table<br>• Complete Table | • 8 min 56s |

* Includes dropping primary key + Repartition +Recreating Primary Key Index ( 1min+ 5h 44min + 2h 42 min)

# Experience / Lessons learned for NSE

SAP S/4HANA

## Technology 

- Adjustment of default buffer cache size necessary (10% of total memory) – related to the size of page loadable data
  => Ratio page-loadable data to buffer cache size => 8 :1
- ALTER TABLE statement (DDL): conversion of a full table requires business downtime; conversion of individual tables is faster
- For basis tables and medium workload, full table on NSE works fine; For a high number of read accesses, NSE on selected large columns can improve performance
- Consistency Check will load full primary key (i.e. all pages at the same time) in buffer cache
- No noticeable effect on write performance
- Monitoring of Buffer-Caches via Monitoring Views:
  M_BUFFER_CACHE_STATISTICS,
  M_BUFFER_CACHE_POOL_STATISTICS
- Run latest SAP HANA revision – if possible => quite some fixes regarding NSE in recent releases

## Implementation 

- Plan time for re-partitioning activities (e.g. after analysis of where clauses)
- Plan time for sufficient testing (effects on performance, buffer-cache size, full table vs. selected columns)
- Plan business downtime for conversion of full table– also consider fallback scenarios (blocked savepoints)

## Support 

- Specialized Data Volume Management services from SAP Customer Success teams
  (see Data Volume Management App in SAP for Me)
- Detailed guidance for using NSE in context of SAP S/4HANA given in SAP Note 2973243

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NSE ist **kein Ersatz** für Housekeeping, Datenarchivierung oder DPP Aktivitäten.

NSE kann durch memory-sparende Datenablage eine **verlängerte Residenzzeit** ermöglichen.

## Implementation

- Plan time for re-partitioning activities (e.g. after analysis of where clauses)
- Plan time for sufficient testing (effects on performance, buffer-cache size, full table vs. selected columns)
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...agement services from SAP

...nent App in SAP for Me)

- De... ...g NSE in context of SAP S/4HANA given in S... ...43

# … noch eine technische Option *(neben NSE)* - **Inverted Individual Indexes**

- **Inverted Individual Indexes**
  - Alternative Indextechnik um den Memory-Footprint von großen Primärindexes zu reduzieren
  - Vielversprechend bei **Primärindexes mit vielen Spalten**
  - Gute **Kandidaten**: Änderungsbelegpositionen (Tabelle CDPOS) und Archivinfostrukturen (Tabellen ZARIX*)
  - Details siehe How-To Hinweis 2600076
  - **Beispiele*** aus dem Sizing Report und zur Anwendung auf der Tabelle CDPOS  System)

| LARGEST COLUMN STORE PRIMARY KEYS | PRIMARY KEY MEMORY SIZE IN GB | ENTIRE TABLE SIZE IN GB |
|---|---|---|
| CDPOS | 1.354,5 | 2.219,6 |
| EDID4 | 296,5 | 923,5 |
| VBOX | 189,9 | 306,3 |

| TABLE_NAME | RECORDS | DISK_GB | MEM_GB | PARTS | TAB_MEM_GB | IND_MEM_GB | Estimated saving GB | Actual Saving | Point in time |
|---|---|---|---|---|---|---|---|---|---|
| CDPOS | 22214720848 | 1251 | 1325 | 40 | 329 | 995 | 313 | 0 | Before |
| CDPOS | 22214896222 | 580 | 591 | 40 | 329 | 262 | 313 | 733 | After |

~700 GB Memory gewonnen; Ausführungszeit: ~ 2 min

* Beispiele aus unterschiedlichen Systemen

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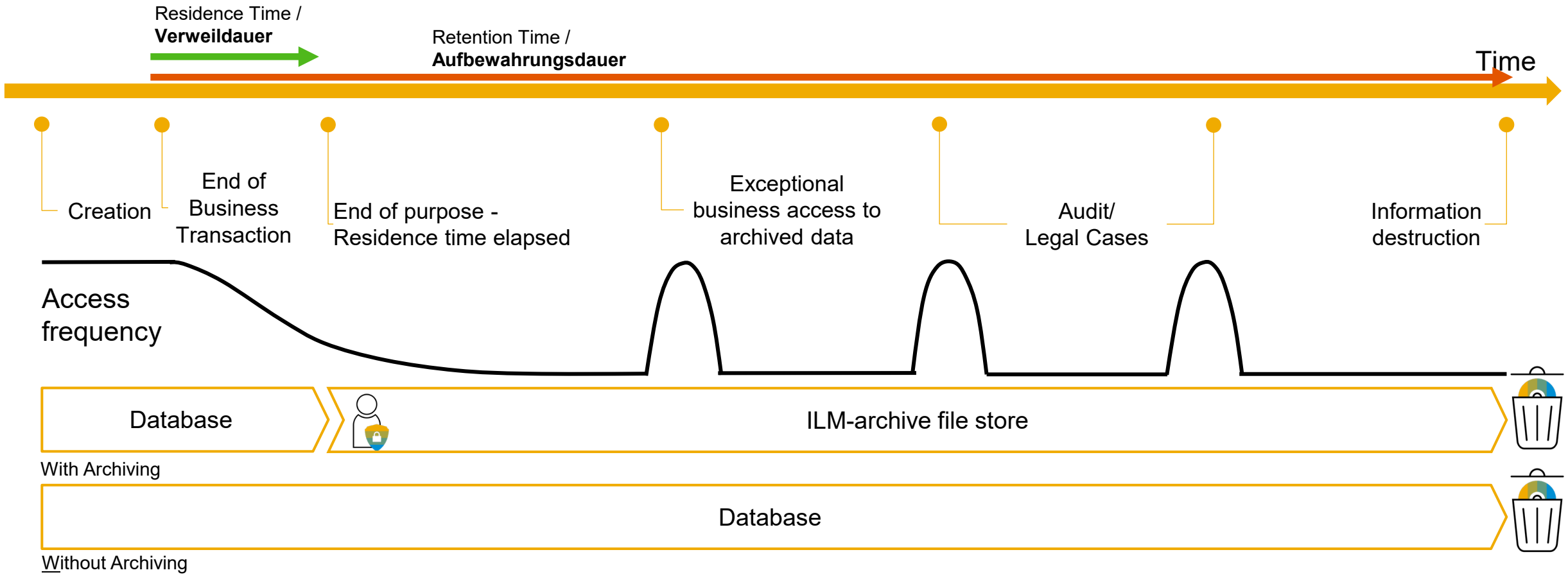
# Introduction to Information Lifecycle Management (ILM)

## Big Picture – Lifecycle of transactional data



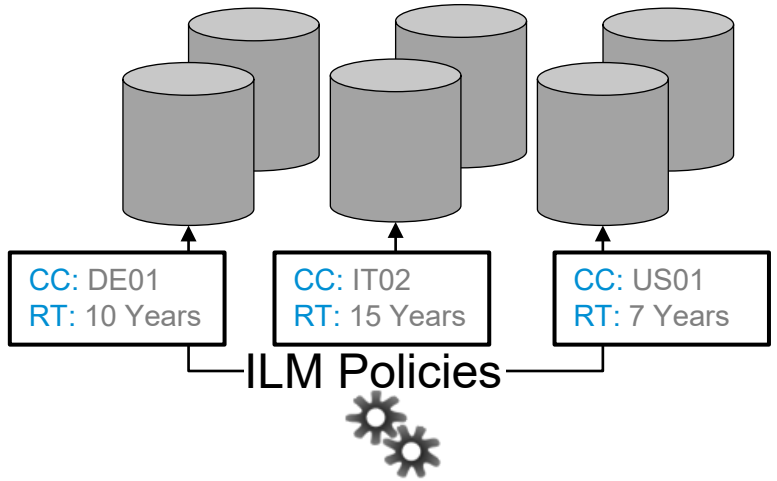

- **Residence time:** the time that data needs to be kept in database prior to transferring it to an ILM archive file
- **Retention time:** the time that data needs to be kept before it is destroyed

# Introduction to Information Lifecycle Management (ILM)

## Database Tables, Business Objects, and ILM / Archiving Objects

ILM / Archive Files

Note: retention time on archive files cannot be shortened – take a careful decision!
See SAP Note 3156148 as workaround if you cannot decide on retention time prior to the first archiving runs




CC: Company Code
RT: Retention Time

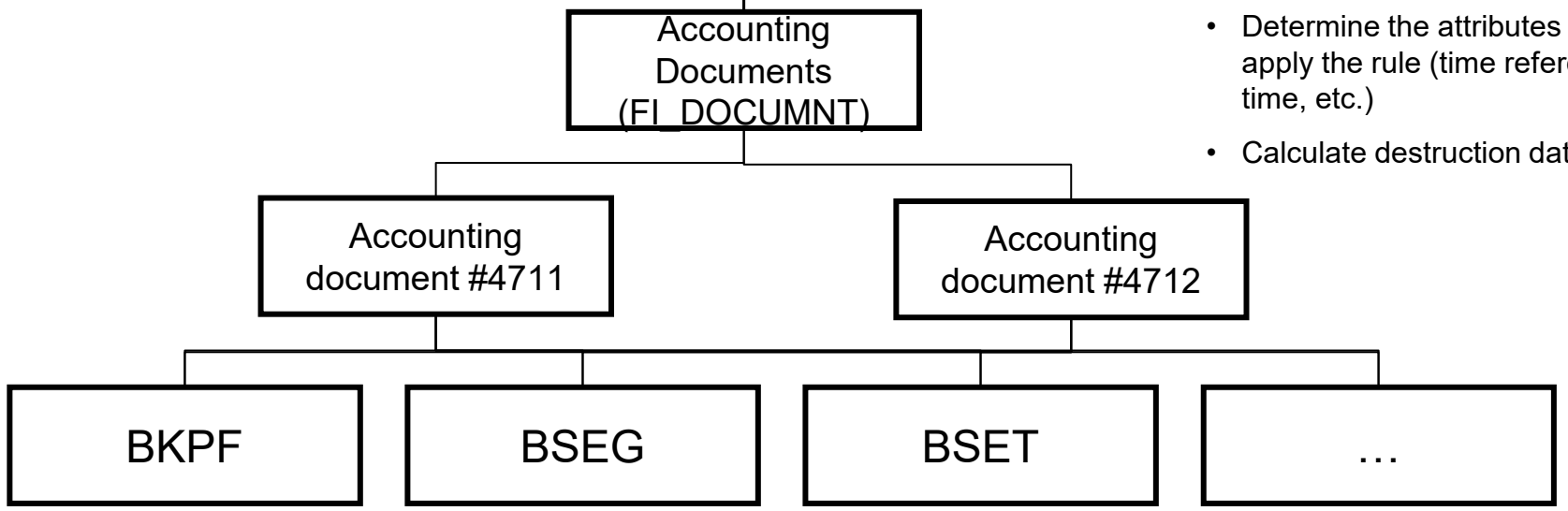
**Rule determination**

- Determine the rule that matches an entity
- Determine the attributes that are required to apply the rule (time reference, retention time, etc.)
- Calculate destruction date

ILM / Archiving Object

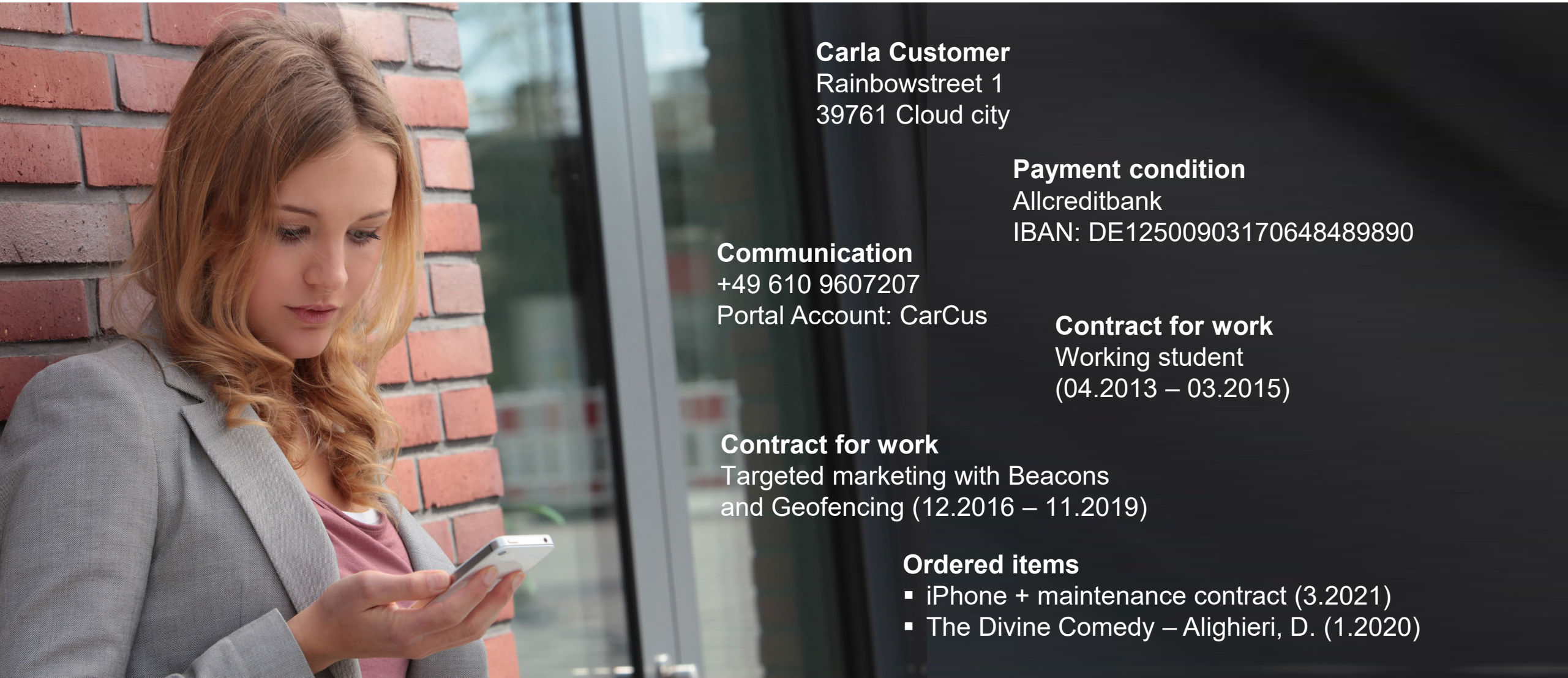
Business Object

Database Tables



# Introduction to Information Lifecycle Management (ILM)

Big Picture – blocking of business partners



# Introduction to Information Lifecycle Management (ILM) in SAP S/4HANA Cloud

## Big Picture – details on blocking of business partners

Guiding principle

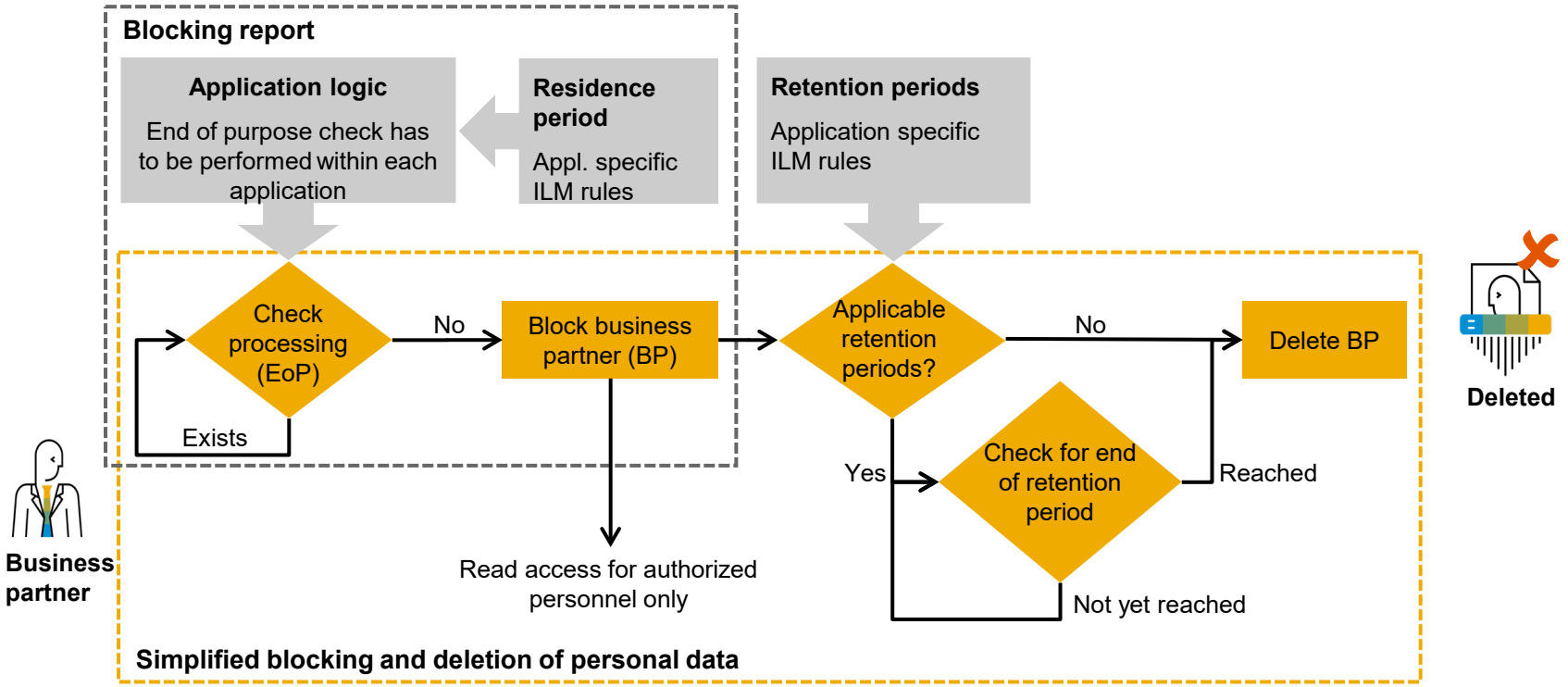
- There can be different types of business relationships with an individual – each requiring different residence and retention periods … based on the purpose
- Example: Sales department does not need access to a business partner (and its related transactional documents) 2 years after the last sales activity, but purchasing team would need active access for 4 years (e.g. to handle liability issues / warranty reasons) after the last transaction

Example - When can business partner Carla Customer* be blocked?

- HR reports back all working contracts have ended and are beyond residence time
- Sales reports back all sales processes are closed and completed
- Service management reports that there is still an active maintenance contract
  => Carla Customer still needs to be considered as an active business partner and cannot be blocked

Access to transactional data related to a blocked business partner is restricted

*see previous slide



# Lessons learned aus ILM Projekten

## Project setup

- Awareness: ILM is **not** an IT project; often not even an SAP-only project
- Include all stakeholders (auditing, DPP experts, application teams) right from the beginning
- Plan for a significant test effort, also on application teams
- Plan for a significant sign-off period of residence and retention times (especially multi-national companies)
- Plan for participation of teams from connected systems, e.g. master data server or receiving systems
- Total expected runtime: at least 12 months

## Infrastructure

- ILM aware storage is required
  - BC-ILM certified storage partner
  - SAP ILM Store (popular storage backends SAP IQ, MS Azure Blob Storage)

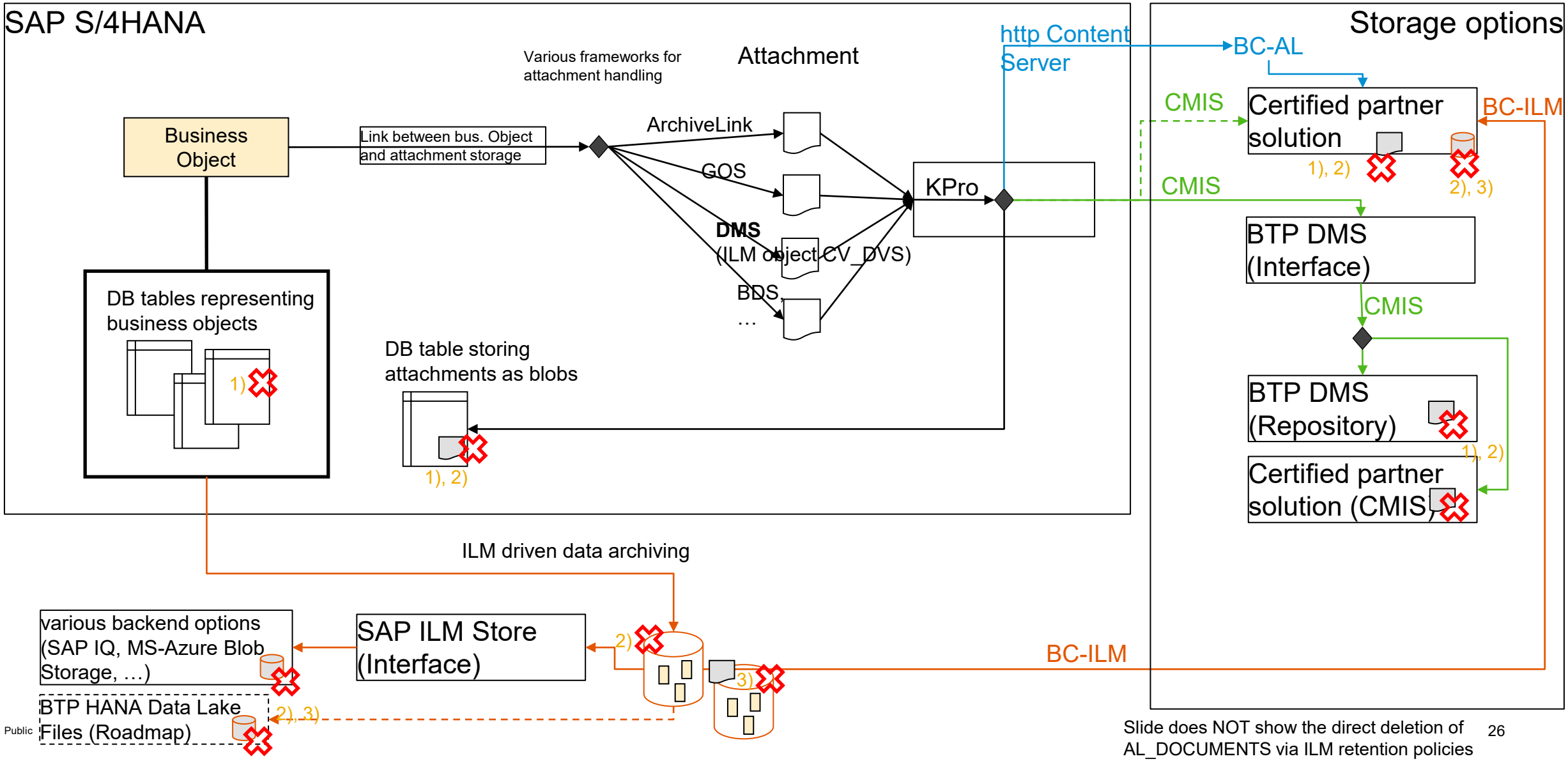
## Execution

- First focus on blocking of master data (business partner, customer, vendor, contact)
  - Testing of end-of-purpose (EoP) check is time consuming; some EoP checks required archiving o related transactional data
  - Plan for performance testing on mass data
  - Preparation of end-of-purpose by scanning archived transactional data may be required
- Then continue with blocking of transactional data by data archiving
- Sandbox system required; expect sandbox system to be refreshed several times in case tests for data destruction went wrong
- Consider complexity in testing caused by system landscape and interfaces
- Conversion of existing archive files to ILM structure may be required
- Don’t define retention times too long in case of doubt - they CANNOT be shortened once ‘stamped’ on an archive file. Use workaround from SAP Note 3156148

# ILM and Document Management with SAP S/4HANA

## View on ILM triggered data destruction

1) Non-archived business object is deleted from DB incl. triggering the deletion of related attachments from their storage location (DB Blob or external location)
2) ILM Archive file w/o containing attachments is deleted and deletion of related attachments is triggered
3) ILM Archive file including attachments is deleted




Slide does NOT show the direct deletion of AL_DOCUMENTS via ILM retention policies

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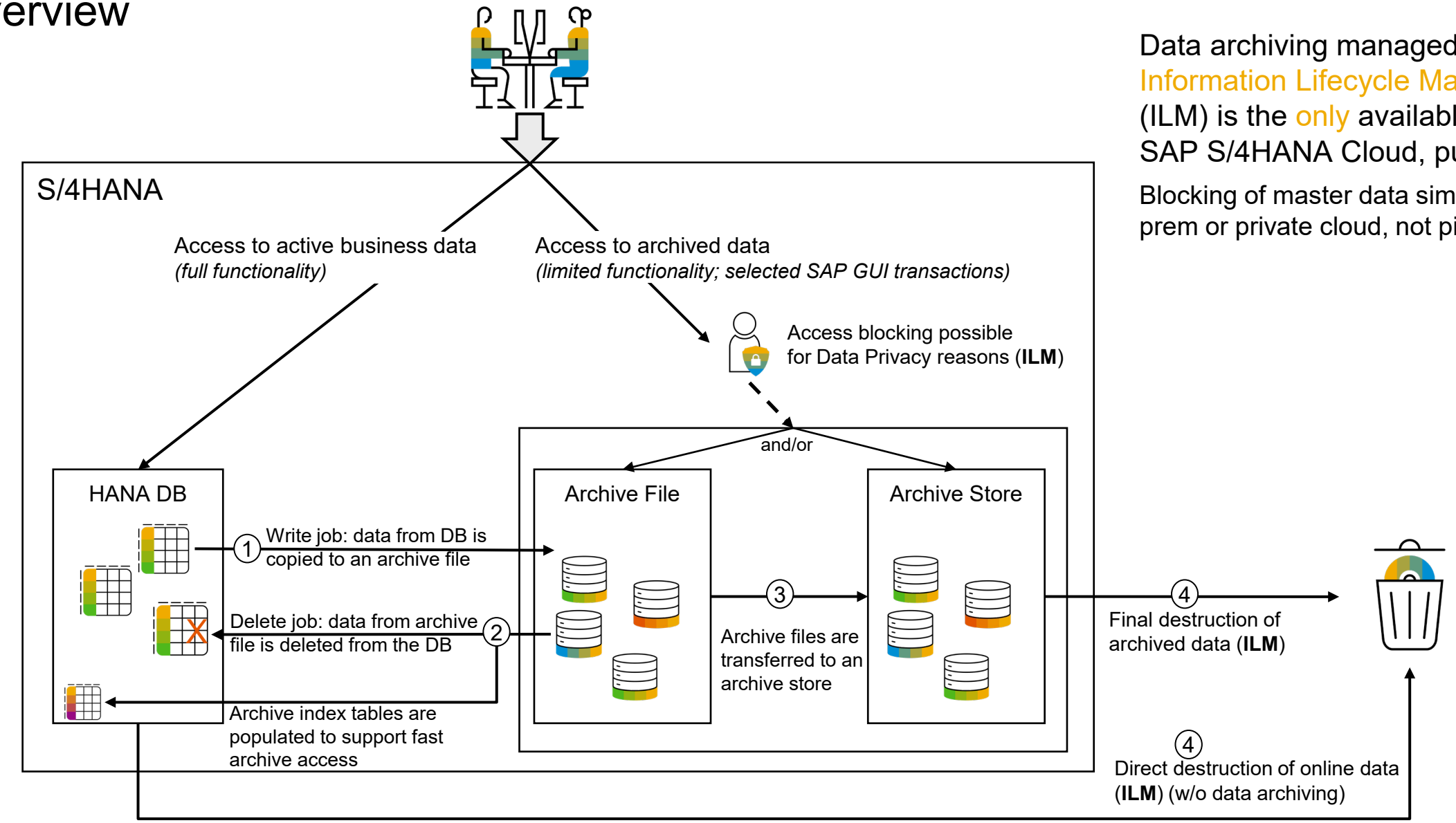
# Information Lifecycle Management (ILM) in SAP S/4HANA Cloud, public

## Overview

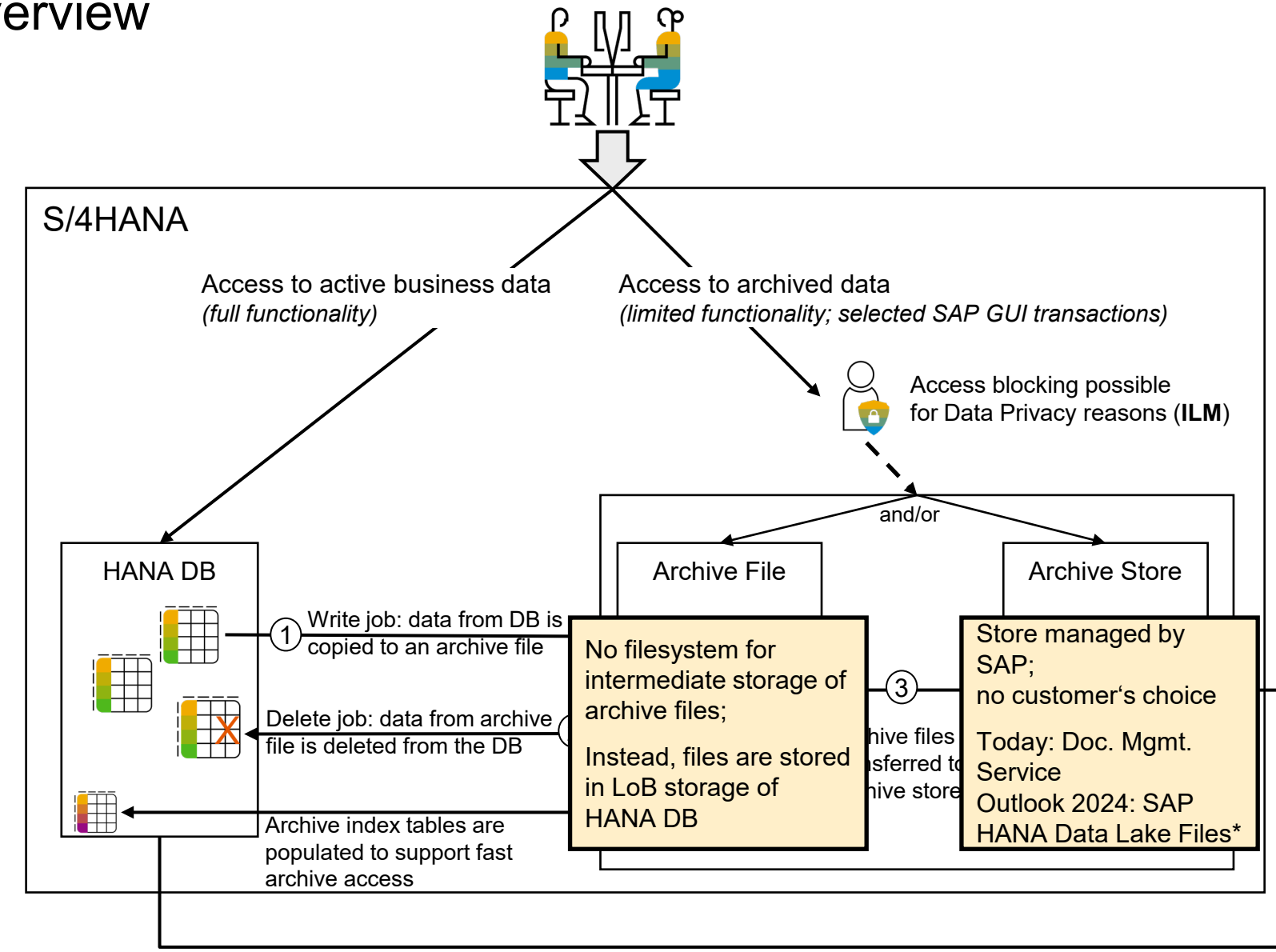



Data archiving managed by Information Lifecycle Management (ILM) is the only available option in SAP S/4HANA Cloud, public

Blocking of master data similar to On-prem or private cloud, not pictured here

# Information Lifecycle Management (ILM) in SAP S/4HANA Cloud, public

## Overview

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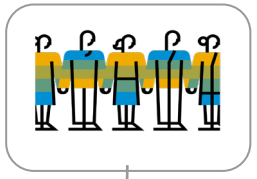
# ILM Apps Process Flow – From Set-up to Execution and Monitoring

## Overall process

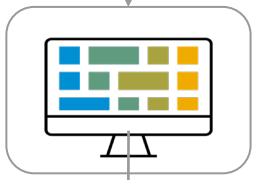
**Scope Item:** Information Lifecycle Management (1KA)

**Initiate**
***Project Management***

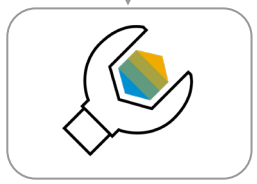


**Define teams and responsibilities**
Define your team setup and areas of responsibility in the *Manage Teams and Responsibilities* app

**Configure**
***Project Team***



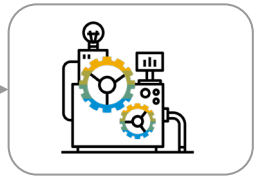
**Define business objects in scope**
App ILM Audit Area



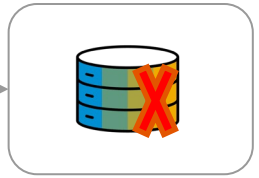
**Define how long data should be kept in the database (residence time) and how long it should be kept in total (retention time)**
App ILM Policies**

TEST*

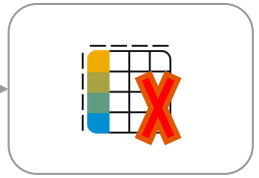
**Execute**
***Operations Team***



**Schedule data archiving**
App Manage archiving variants



**Schedule data destruction of archive files**
App ILM Data Destruction



**Schedule data destruction of online data**
App Manage archiving variants
or
App ILM Data Destruction

**Monitor results of data archiving**
App Monitor Archiving Jobs (Logs)
or
App Manage archiving variants (Volume)

**Access archived data**
***Auditor, End users***

**Access archived business objects**
App Archive Explorer (technical view)
or
selected business apps

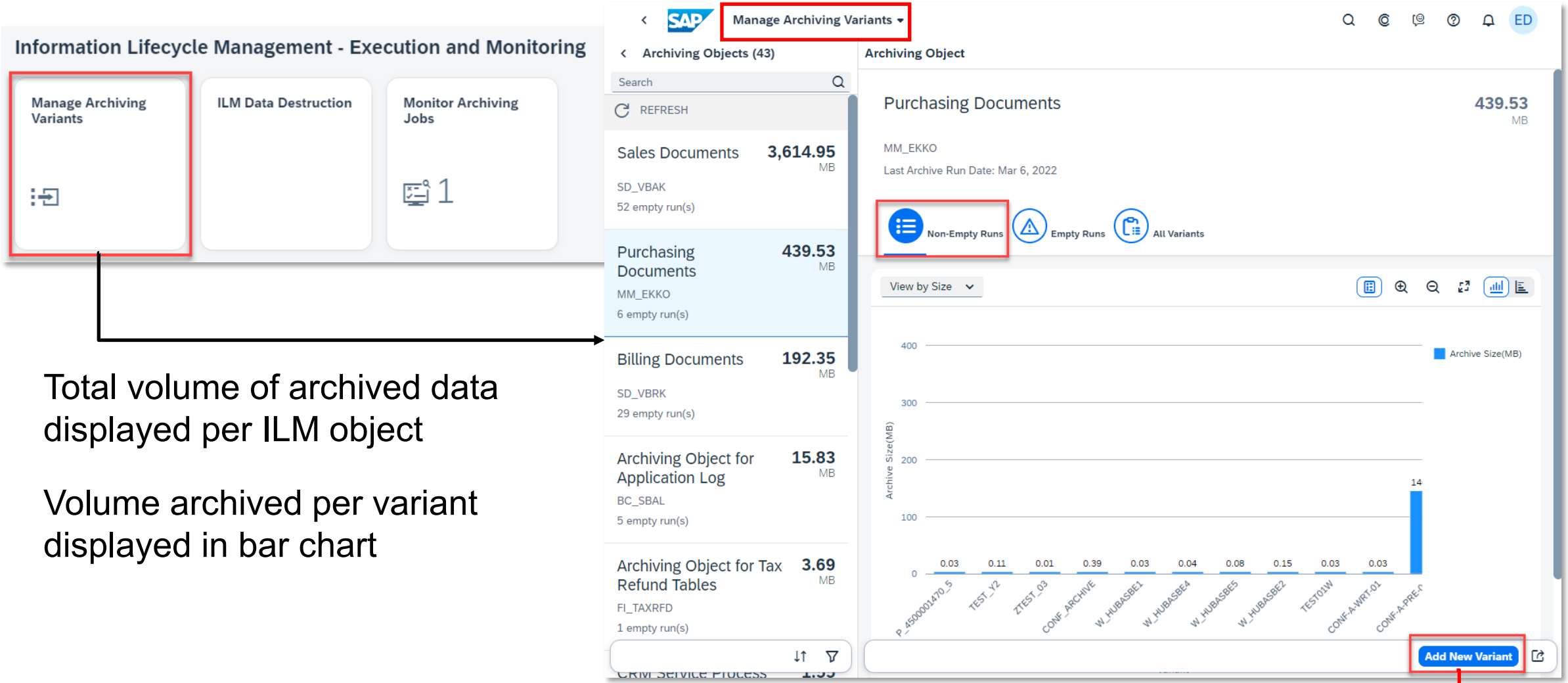


** Apps Manage ILM Audit Groups and Manage ILM Business Rules not covered in this presentation

* Test performed by project team before hand-over to the operations team for productive execution

# ILM Apps Process Flow – From Set-up to Execution and Monitoring

## Define archiving variants entry point (1/4)


Total volume of archived data displayed per ILM object

Volume archived per variant displayed in bar chart

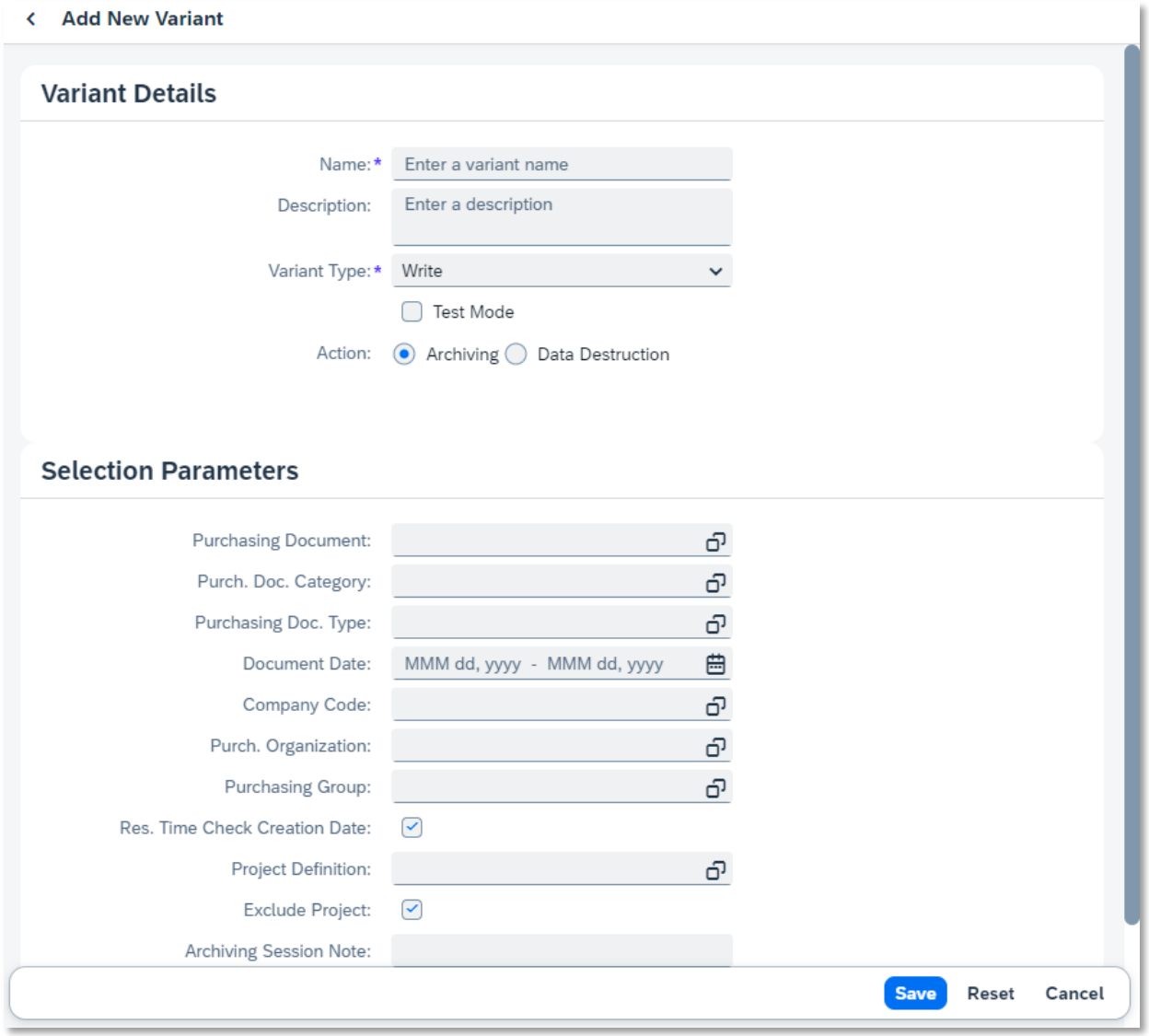
See next slide

# ILM Apps Process Flow – From Set-up to Execution and Monitoring

## Define archiving variants – details (2/4)


Variants offer different selection fields – depending on ILM object

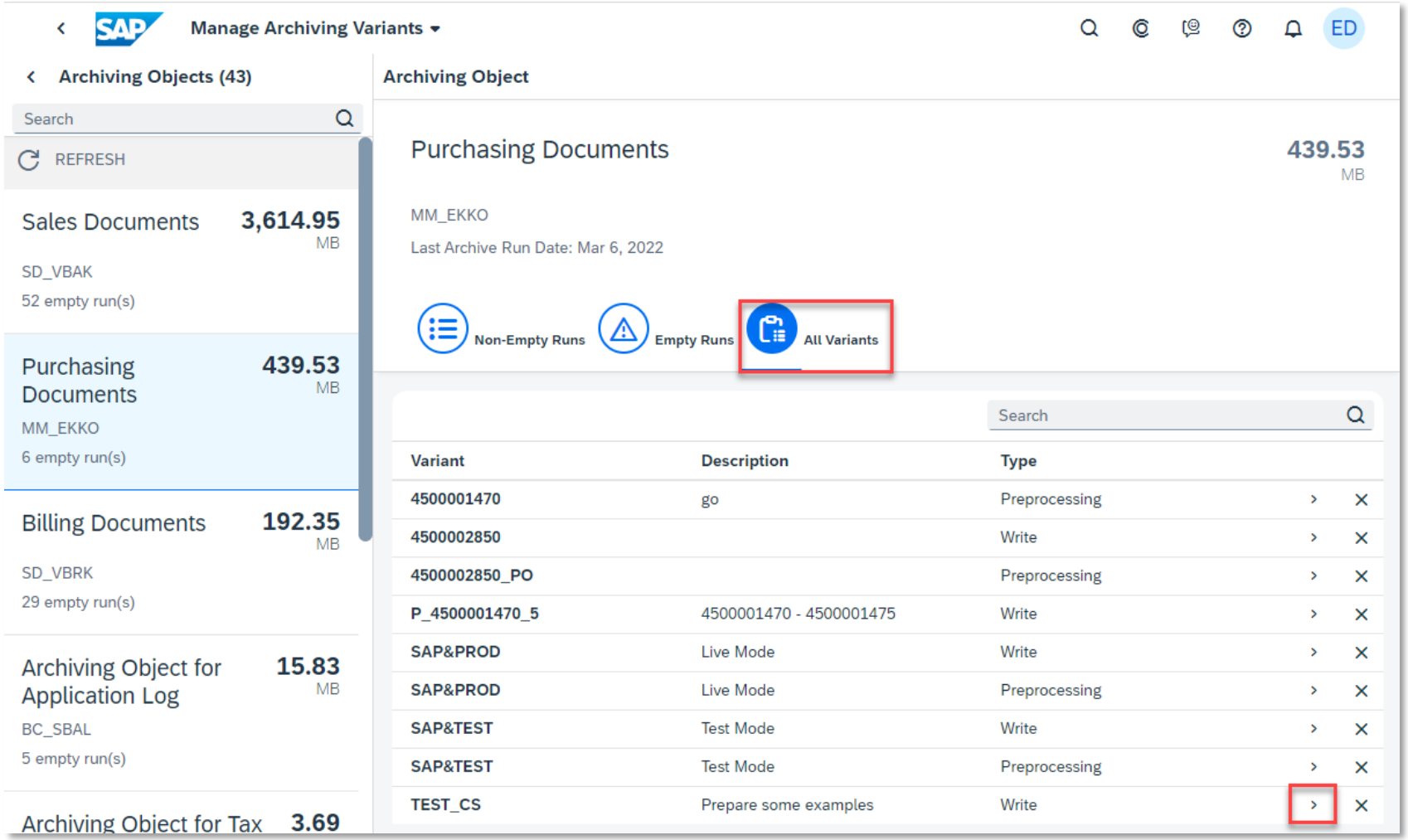
Test mode could be chosen



# ILM Apps Process Flow – From Set-up to Execution and Monitoring

## Plan archiving job (3/4)


Select a defined variant, choose details section '>' to start scheduling



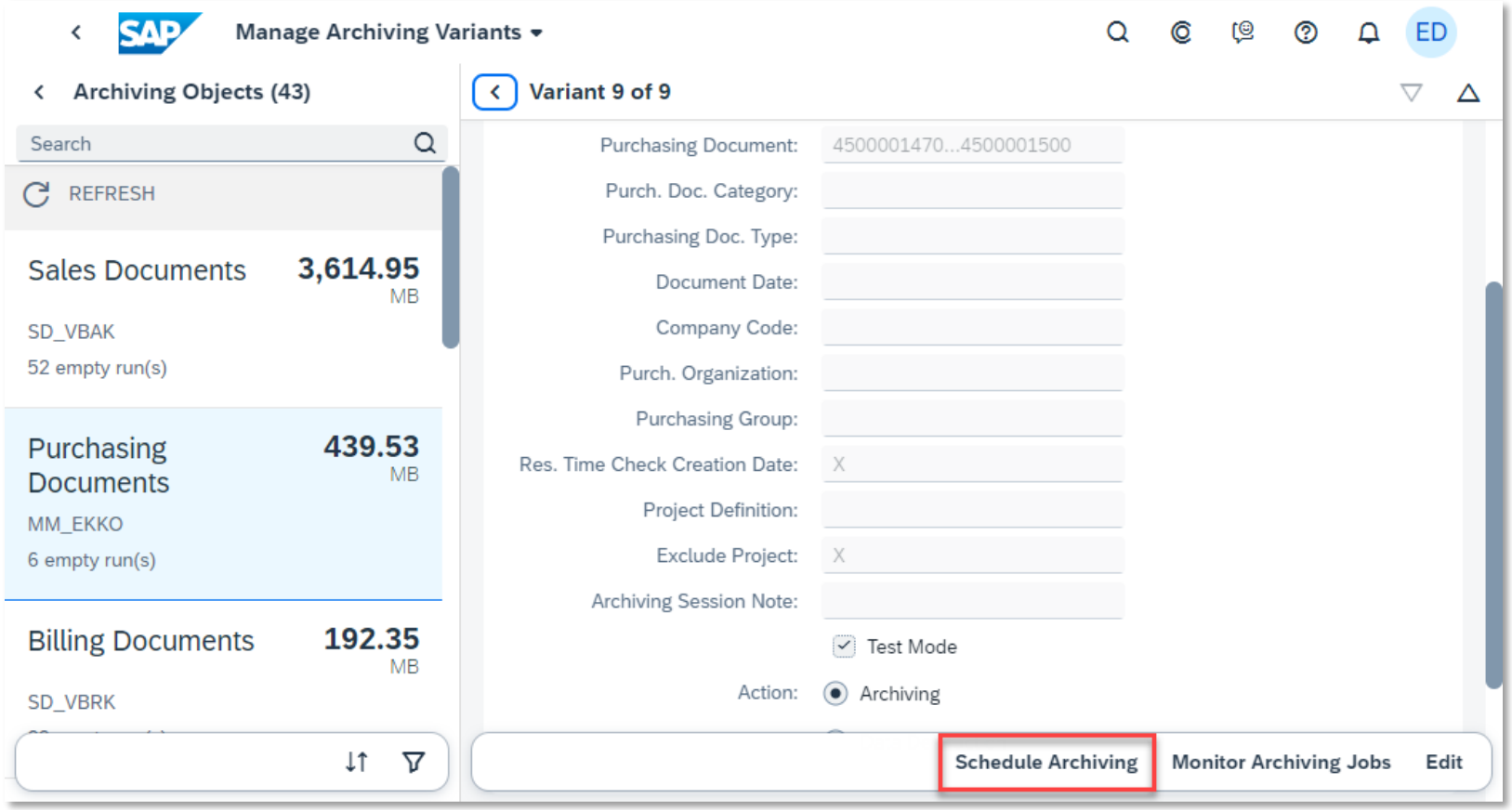
# ILM Apps Process Flow – From Set-up to Execution and Monitoring

Plan archiving job (4/4)


‘Schedule Archiving’ triggers the creation of an archive job.

The archive write job is executed based on a periodic scheduling schema (i.e. not immediately)

All jobs subsequent to the archive write job (delete job and store job) are scheduled automatically



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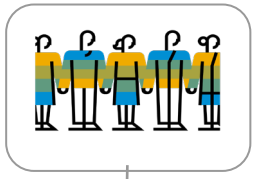

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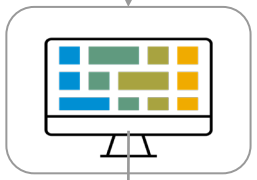

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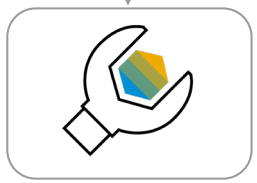

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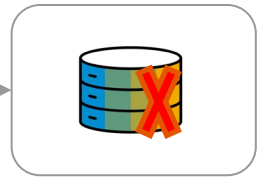

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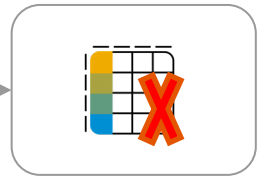

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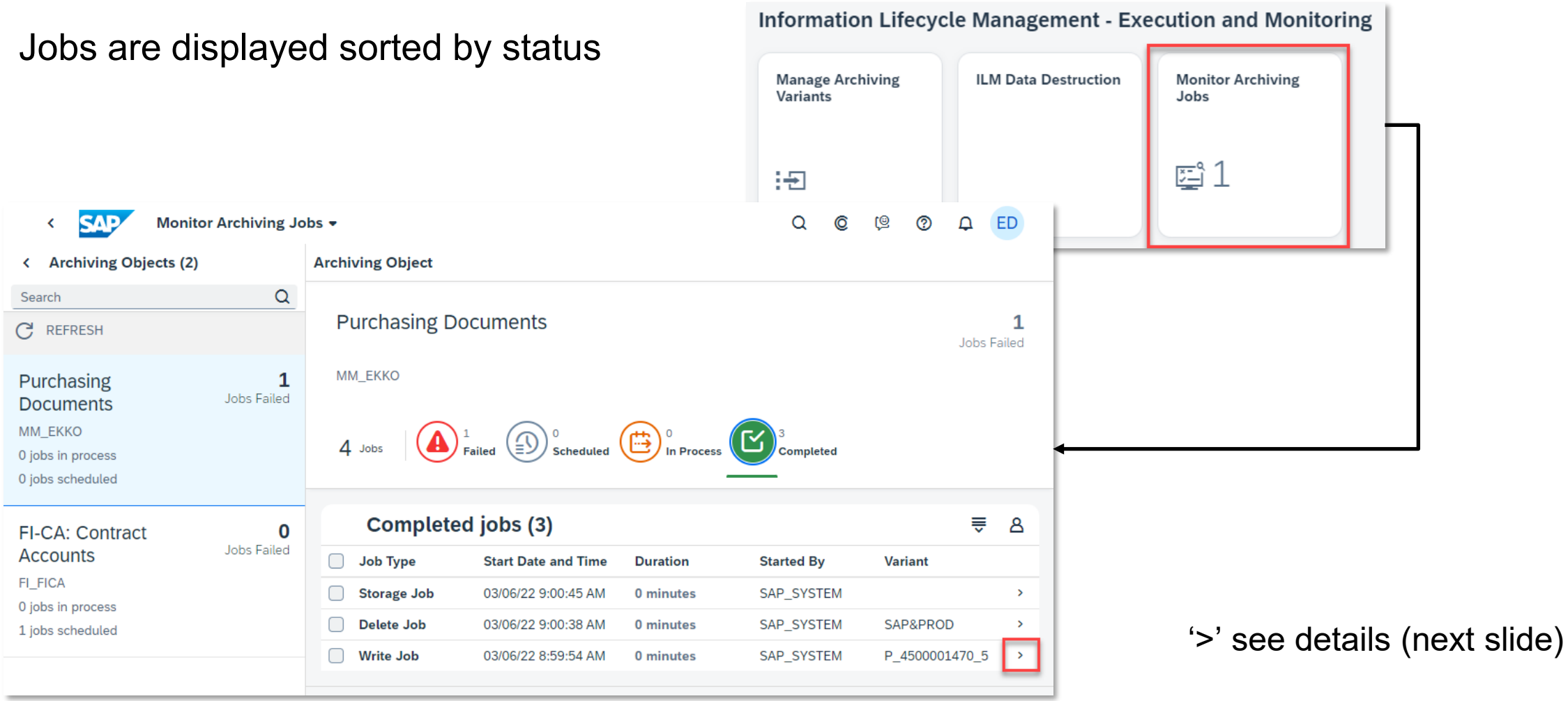
# ILM Apps Process Flow – From Set-up to Execution and Monitoring

## Monitor archiving jobs – overview (1/4)


Jobs are displayed sorted by status




'>' see details (next slide)

# ILM Apps Process Flow – From Set-up to Execution and Monitoring

## Monitor archiving jobs – Job Detail, Job Log, Application Log (2/4)


Job Details | Job Log | Application Log

| | |
|---|---|
| Variant: | P_4500001470_5 |
| Variant Description: | 4500001470 - 4500001475 |
| Execution Mode: | Production mode |
| Archiving Session: | 003322 |

Job Details | Job Log | Application Log

| Message | Type | Date and Time |
|---|---|---|
| Job ARV_MM_EKKO_WRI20220306085954 08595400 started | Success | 03/06/22 8:59:54 AM |
| Step 001 started (program RM06EW70, variant P_4500001470_5, user ID SAP_SYSTEM) | Success | 03/06/22 8:59:54 AM |
| Reading purchasing documents | Success | 03/06/22 8:59:54 AM |
| Archiving session 003322 is being created | Success | 03/06/22 8:59:55 AM |
| 1 of 1 purchasing documents processed | Success | 03/06/22 8:59:55 AM |
| Error when reading content of the physical document SOMU_PHIO(98BE94F7BF511EDC8789235730B7C5B9) - 3 | Information | 03/06/22 8:59:59 AM |

SAP Monitor Archiving Jobs

Archiving Objects (2)

Search

REFRESH

Purchasing Documents — 1 Jobs Failed
MM_EKKO
0 jobs in process
0 jobs scheduled

FI-CA: Contract Accounts — 0 Jobs Failed

Write Job (3 of 3)

Write Job

0 Minutes

ARV_MM_EKKO_WRI20220306085954

Completed

Start Date and Time: March 6, 2022 8:59:54 AM

Job Details | Job Log | Application Log

| Message | Type | Number of ... | Date and Time |
|---|---|---|---|
| Purchasing document archived 4500001470 | Success | 6 | 03/06/22 9:00:38 AM |

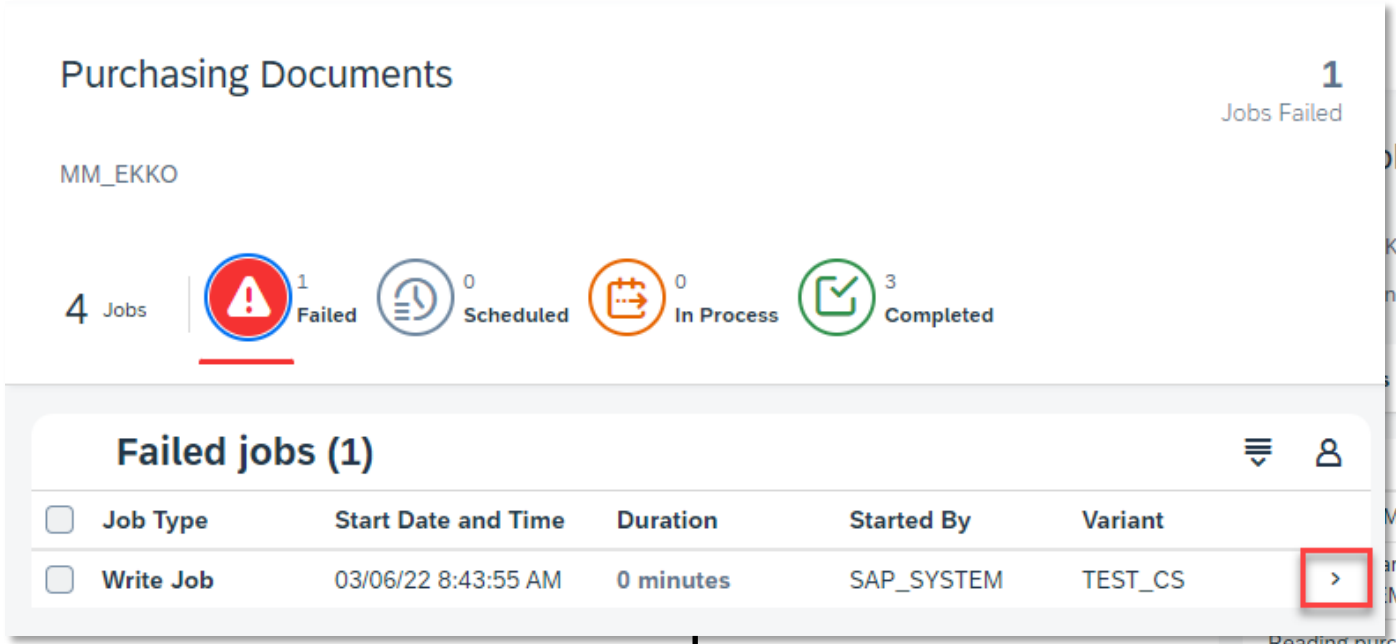
## Available views

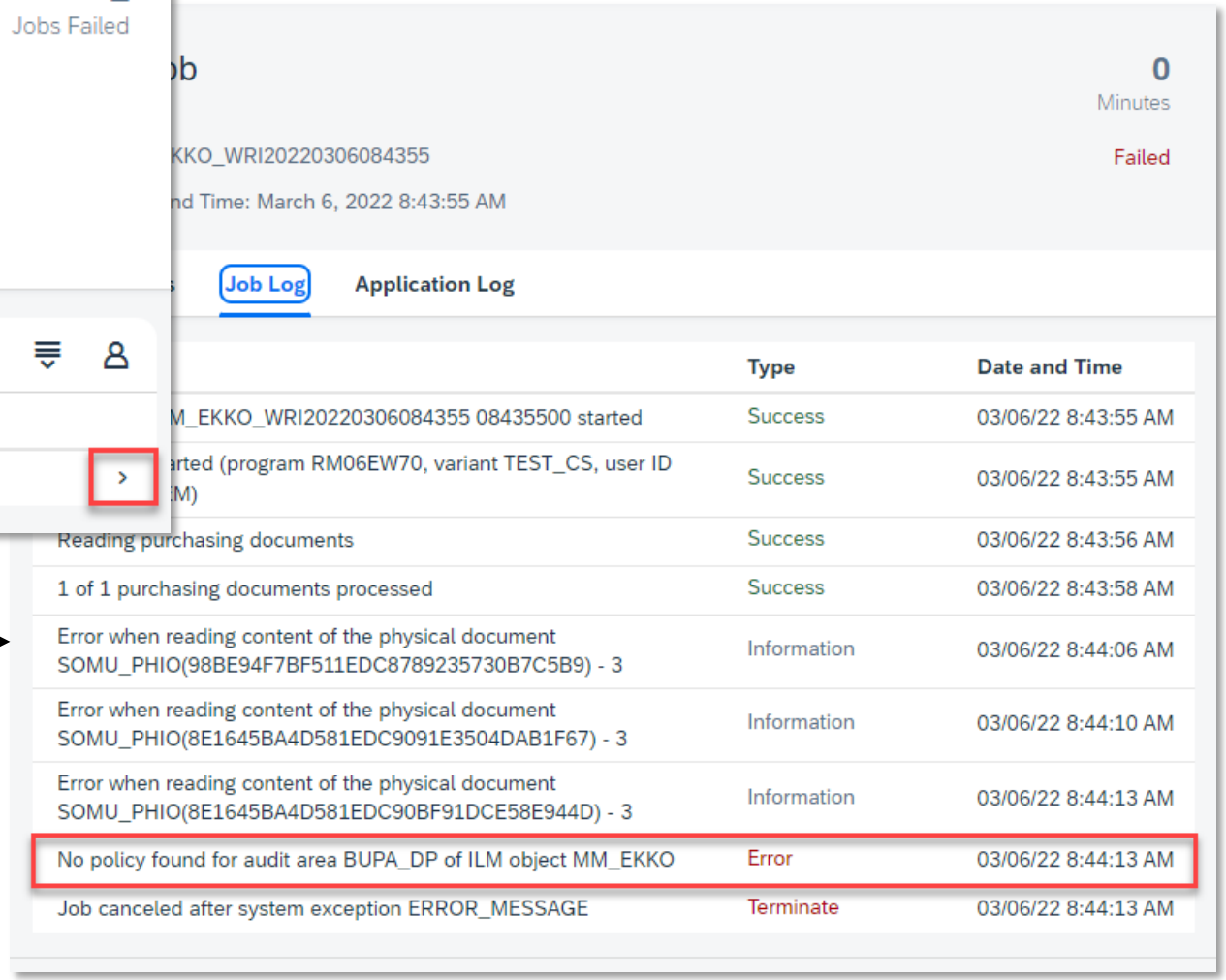
- Job Details
- Job Log
- Application Log

# ILM Apps Process Flow – From Set-up to Execution and Monitoring

## Monitor archiving jobs – example of failed job (3/4)

Monitor Archiving Jobs
Manage archiving variants




Example:
Archive write job failed because of missing customizing of ILM policies

# Lessons learned – so far

ILM activities so far driven by DPP reasons or ‚housekeeping‘ of basis/cross-application data

- Application Integration Framework AIF
- Change documents

Experienced on-prem customers miss familiar tools

Non on-prem customers struggle with scoping and focusing

Fixed schedule plan (1 day for test jobs, 7 days for productive jobs) delays testing

Training Meet-the-expert session available in SAP Learning Hub

# Lab Preview - ILM Advisor

Lab Preview

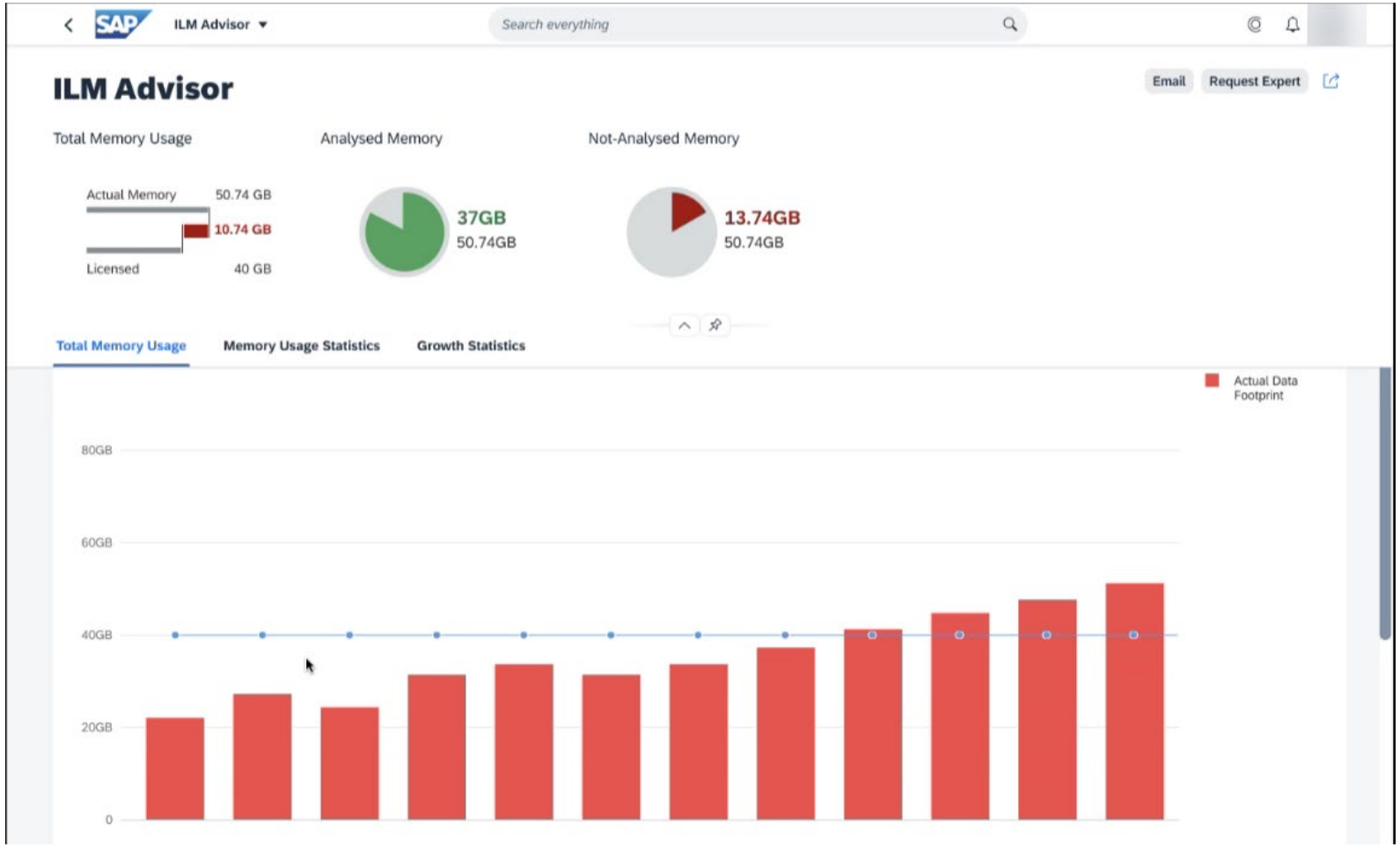
## Problem statement

- Lack of useful on-prem **tools** (DB02, DB15, SE16, TAANA) or **services** leads to a lack of transparency

## Mitigation – **ILM Advisor app**

- Initial version focused on volume management (2308) (excludes ILM Destruction objects)
  - Total Memory Usage
    - *Display growth history*
  - Memory Usage Statistics
    - Show largest contributing ILM objects
    - Allow projection of reduction potential
  - Growth Statistics
    - Shows fastest growing ILM objects

- Mid-term outlook
  - include DPP aspects
    - Lists all ILM objects with no. of related business objects
  - refine volume aspects
  - Include navigation to ILM configuration and execution



# Additional Resources and Key Takeaways

## Additional Resources

SAP Help Portal on SAP Information Lifecycle Management

Value Maps in SAP Learning Hub

- Data Volume Management

Roles/User

- SAP_BR_DATA_PRIVACY_SPECIALIST/data_privacy_specialist
- SAP_BR_EXTERNAL_AUDITOR/external_auditor (for Archive Explorer app)

Scope Items

- 1KA - Information Lifecycle Management
- 5LE - Data privacy and protection

Fiori Apps Library

# Agenda

SAP HANA - Native Storage Extension (NSE)

- Einsatzmöglichkeiten … und deren Grenzen

Erfahrungen aus Information Lifecycle Management (ILM) Projekten

- Einführung
- Best Practices
- Zusammenspiel ILM und Dokumentenarchivierung

Datenarchivierung und ILM in S/4HANA Cloud, public edition

- Einführung

Data Volume Management Dashboard

- Transparenz und Übersicht über SAP for Me

# Data Volume Management App (1/3) - Startseite

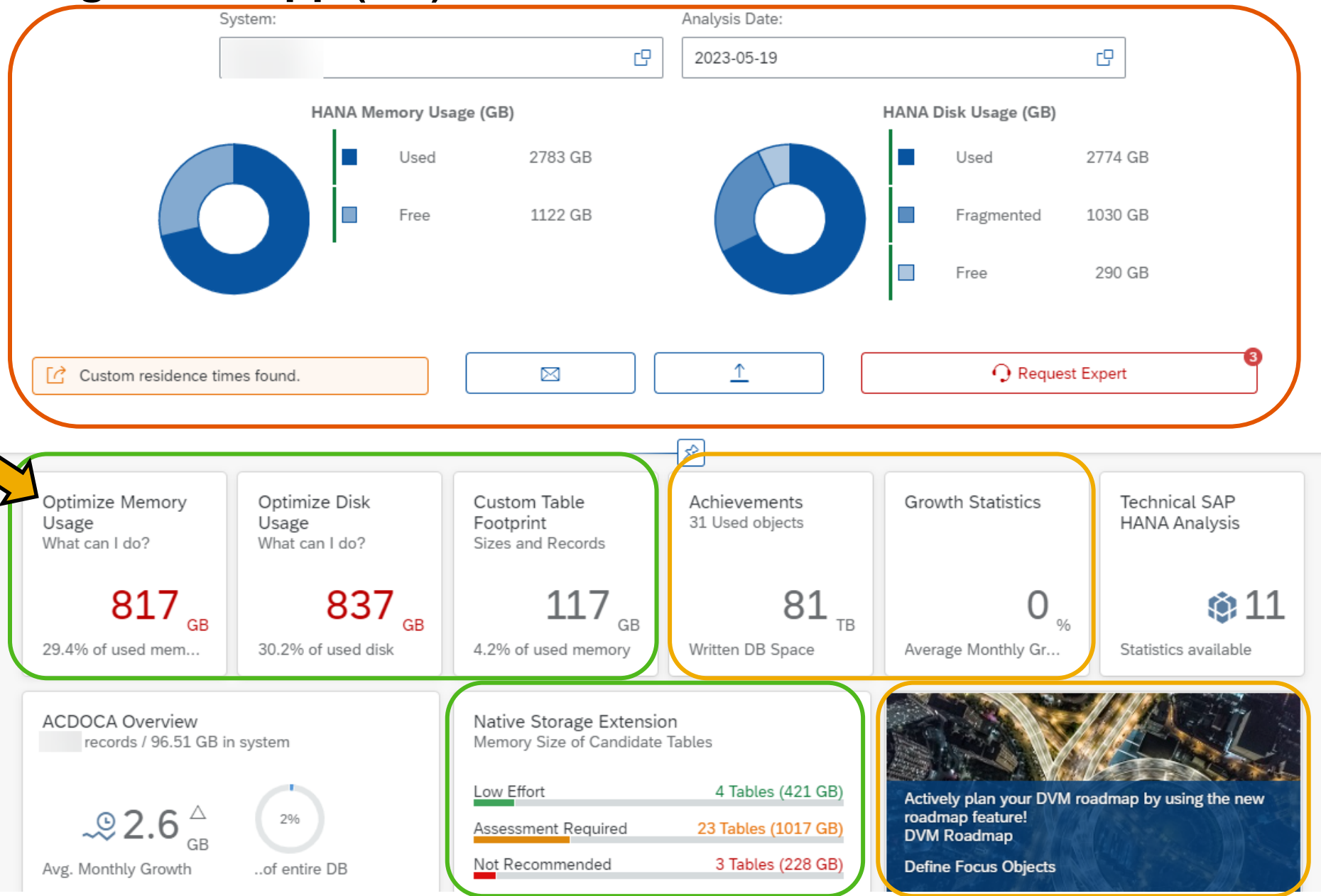
Einstieg über SAP for Me

Überblick

Fokus auf Datenarchivierung und NSE

Blick auf Historie und Zukunft (Projekt Roadmap)

For more information on the DVM App see SAP Note 2716655

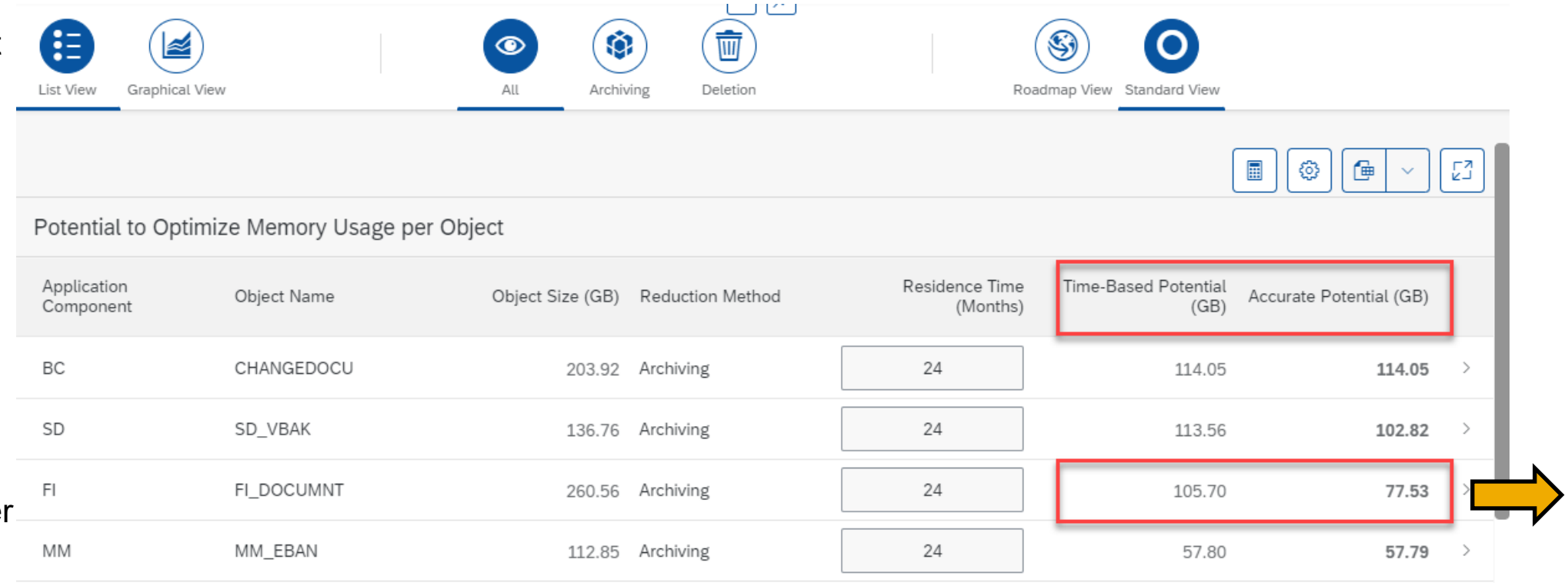


# Data Volume Management App (2/3) – Drilldown zu Memory Optimization

Residence Time kann individuell für Simulation angepasst werden

Time-Based Potential bezieht sich alleine auf das Alter der Daten

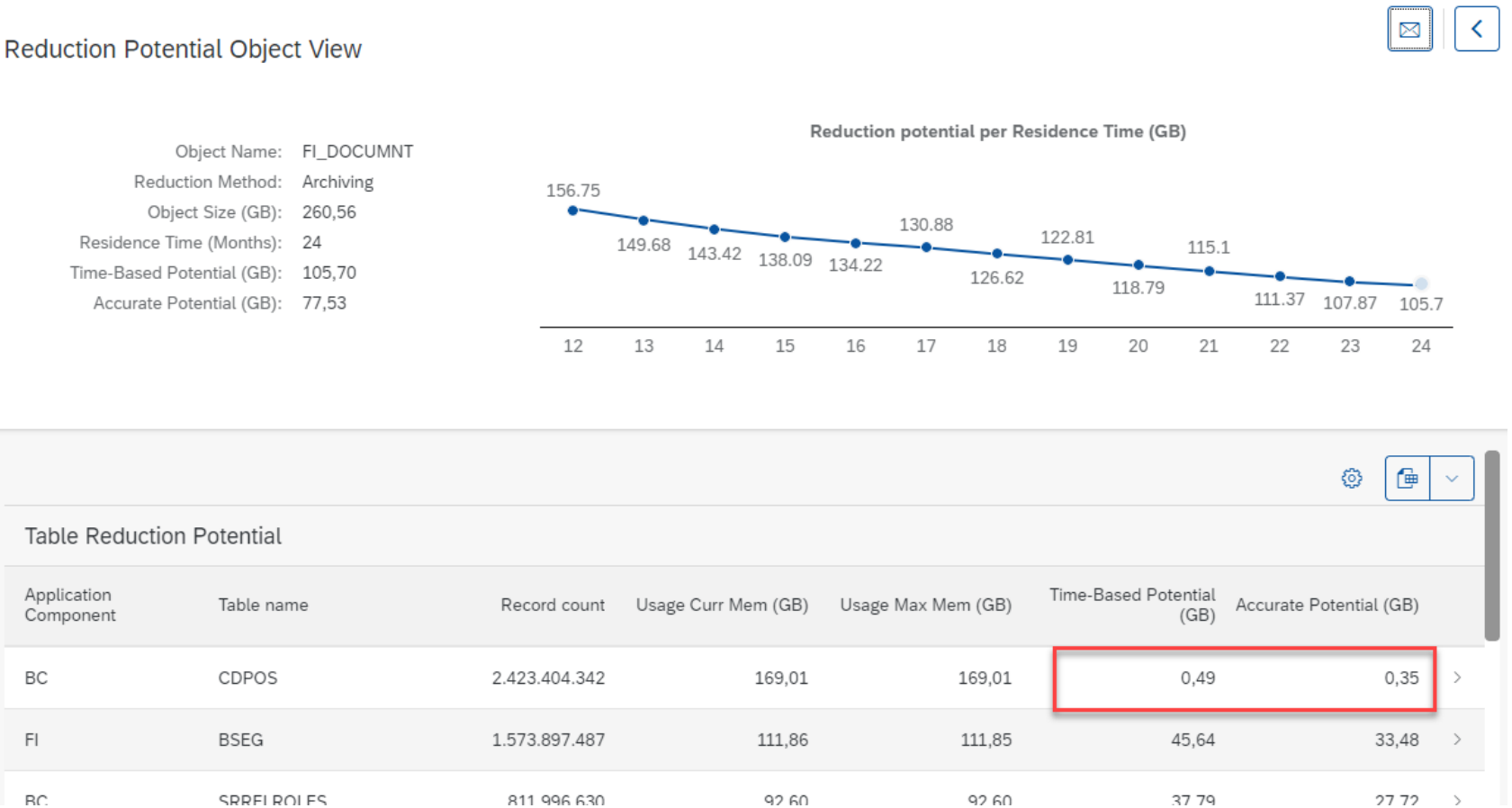
Accurate Potential berücksichtigt (grob) einige der fachlichen Voraussetzungen (z.B. abgeschlossener Beleg)



# Data Volume Management App (3/3) – Drilldown in ein Archivierungsobjekt

Graphische Darstellung des Effekts der Residenzzeit

Cross-Application Tabellen (z.B. CDPOS) werden nur mit ihrem jeweiligen Anteil berücksichtigt



# Thank you.

Contact information:

Claudia Semmler
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