Material Ledger is Required for SAP S/4 HANA Finance: What Does That Mean for Your Company?

Paul Ovigele, Founder, ERPfixers

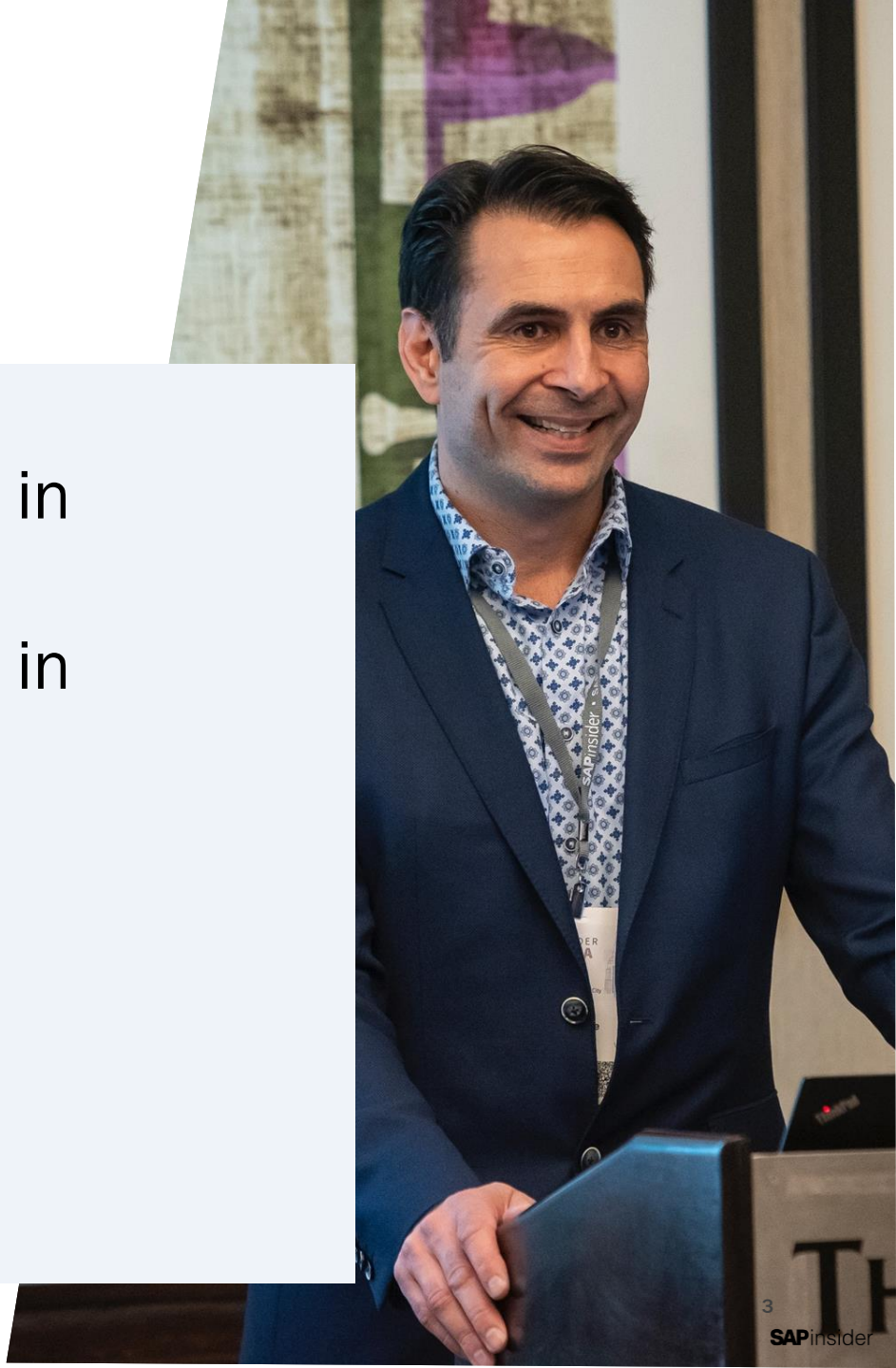
SAPinsider 2023

In This Session

- How to prepare your system for a Material Ledger conversion.
- What questions you need to ask when considering which Material Ledger functionality will be beneficial to your organization.
- What criteria you can use to determine whether to convert to Material Ledger before or after an SAP S/4HANA conversion.
- Typical mistakes that occur with a Material Ledger implementation.
- What is the recommended point in time in the month/year to convert to Material Ledger.

What We'll Cover

- Converting to Material Ledger in the ECC System
- Converting to Material Ledger in the SAP S/4 HANA System
- Wrap Up

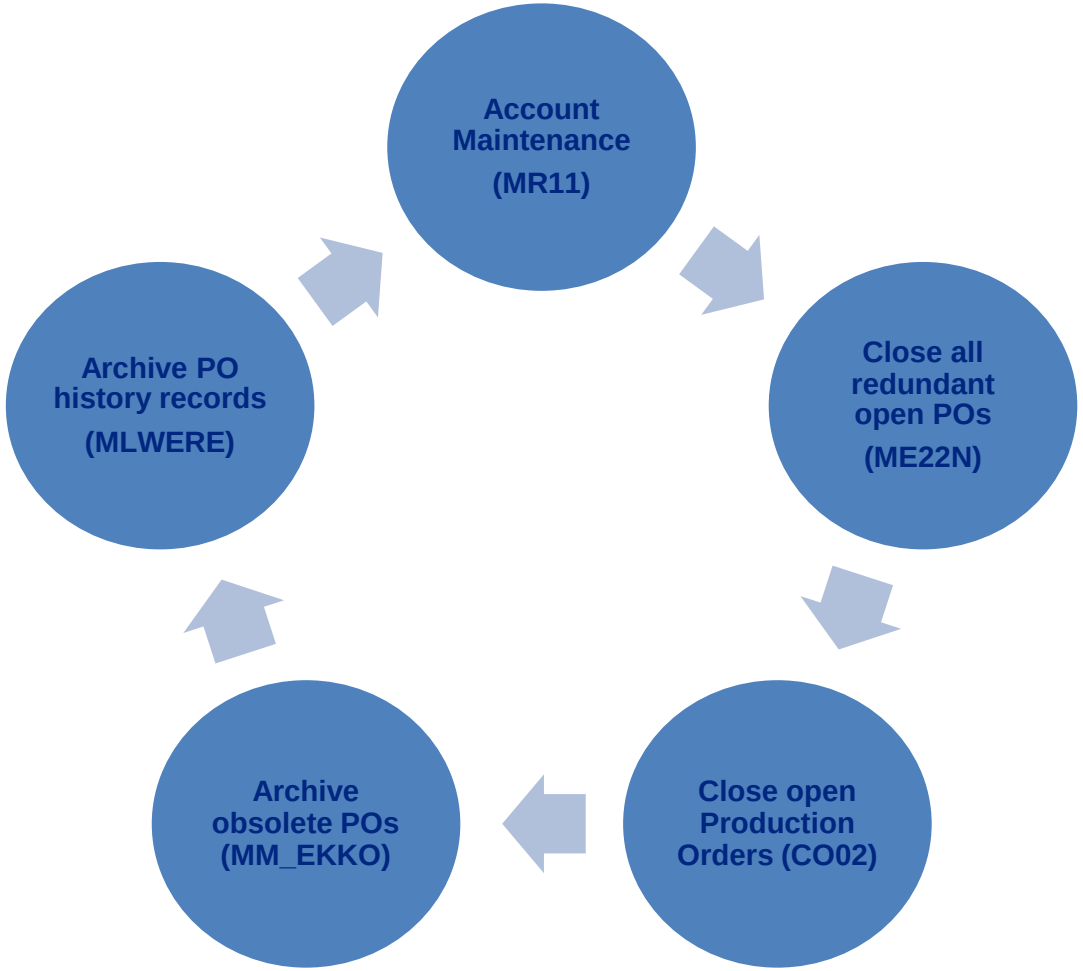


Converting to Material Ledger in the SAP ECC System

Preparing the System for Conversion

- Ensure that all plants in a company code are activated for material ledger
- Between activation and production startup, no material master or inventory transactions should be made
- 24 – 48 hours downtime (normally during a weekend)
- To facilitate reconciliation, all FI currencies should be enabled in material ledger

Reducing Existing Data Volumes



Clearing PO Line Items and History

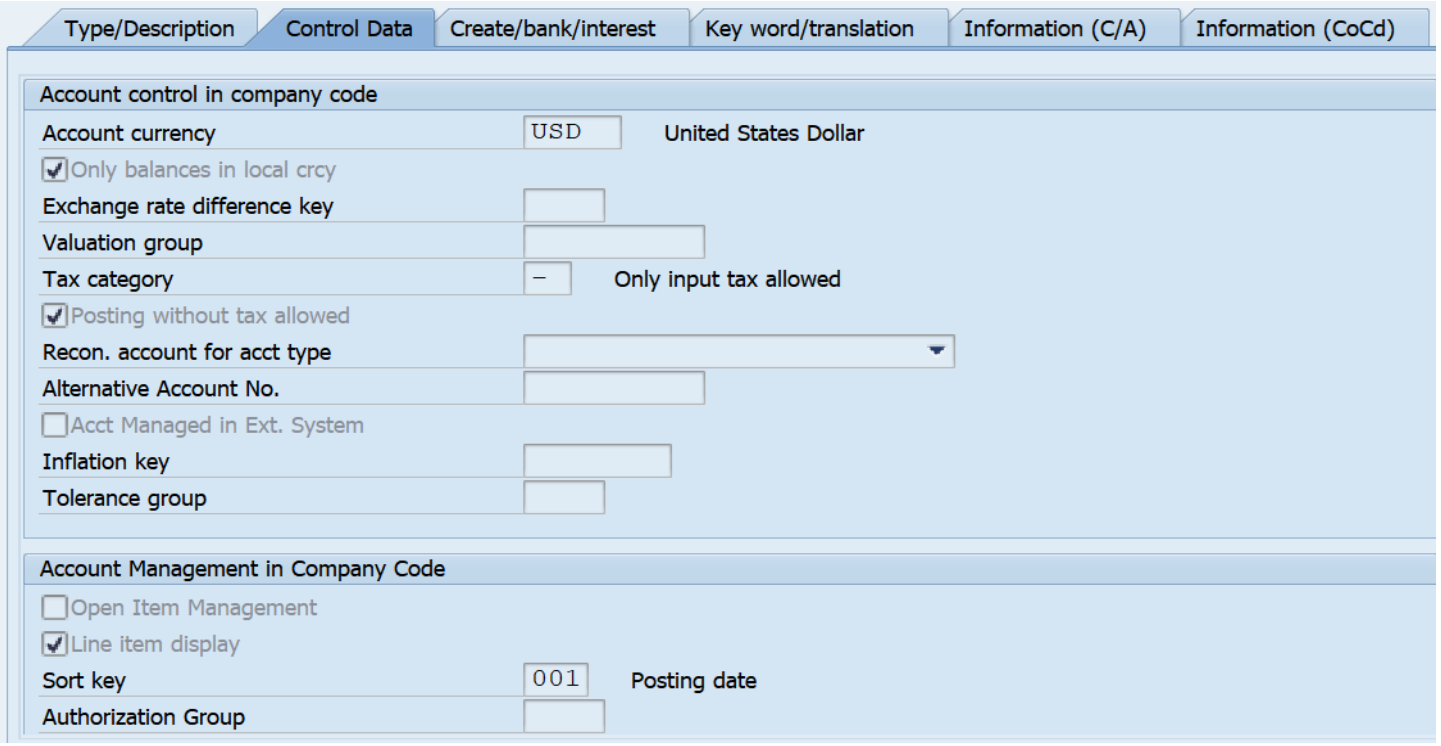
- Purchase order histories are converted from first local currency to parallel currencies
- Note that this only takes effect if you have parallel currencies in material ledger (i.e., ML Currencies are pulled from FI, CO or entered manually)
- If you plan to use only one currency in Material Ledger, the system will still go through all your PO history, it just will not do any conversion
- Therefore, you need to do the following (if possible) to reduce PO volumes:
    - Use transaction MR11 to perform account maintenance
    - Archive purchase order data that you no longer require (archiving object MM_EKKO)

Closing Existing Production Orders

- Up until recently, Production Orders were not converted with a Material Ledger conversion
- With SAP Note 1801449, Production Order histories are now converted as well
- Closing Existing Production Orders will therefore reduce the runtime of the conversion program
- Even if Production Orders are not converted, it is advisable to close them because of inconsistencies with Goods Movements before and after conversion with Actual Costing

“Balance in Local Currency” for GL Accounts

- Make sure that the exchange rates between the company code, Local and Parallel currencies are updated
- Failing to do so may lead to issues with the conversion program



Update Exchange Rates

- Make sure that the exchange rates between the company code, Local and Parallel currencies are updated
- Failing to do so may lead to issues with the conversion program

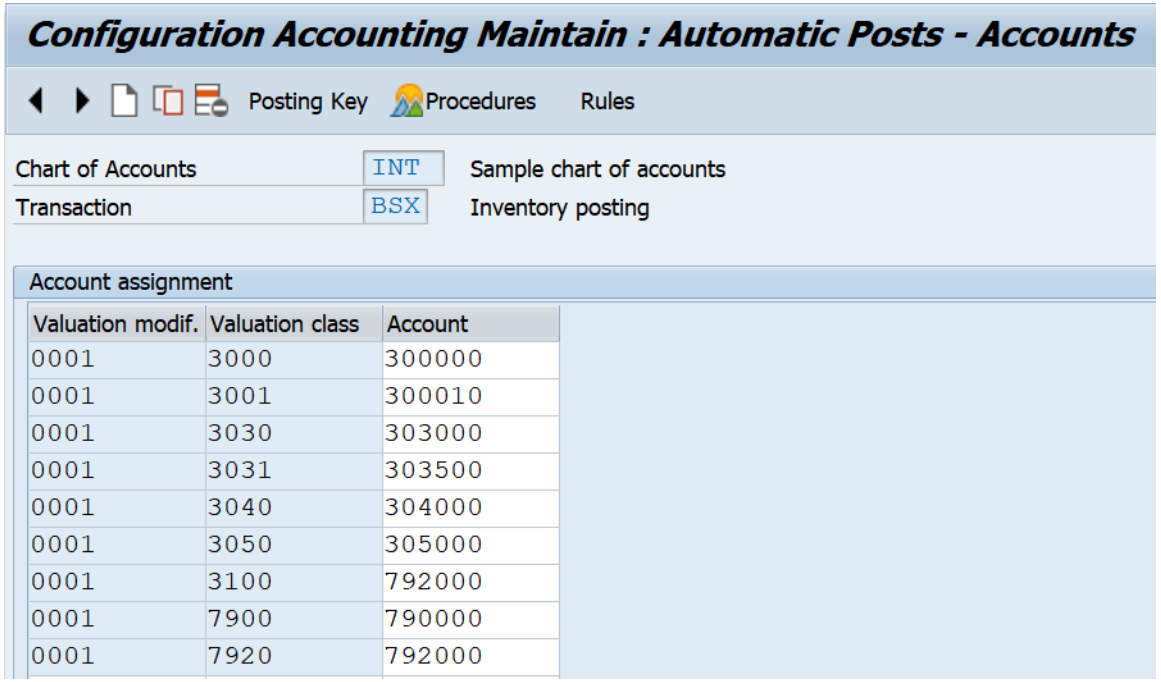
Change View "Currency Exchange Rates": Overview

New Entries

ExRt	ValidFrom	Indir.quot	X	Ratio(from)	From	=	Dir.quot.	X	Ratio (to)	To
M	03/08/2015	15.45750	X	1	MXN	=		X	1	USD
M	03/01/2015	15.27120	X	1	MXN	=		X	1	USD
M	02/22/2015	14.97610	X	1	MXN	=		X	1	USD
M	02/15/2015	15.00610	X	1	MXN	=		X	1	USD
M	02/08/2015	14.91790	X	1	MXN	=		X	1	USD
M	02/01/2015	14.80680	X	1	MXN	=		X	1	USD
M	01/25/2015	14.84950	X	1	MXN	=		X	1	USD
M	01/18/2015	14.64070	X	1	MXN	=		X	1	USD
M	01/11/2015	14.64780	X	1	MXN	=		X	1	USD
M	01/04/2015	14.64090	X	1	MXN	=		X	1	USD
M	12/28/2014	14.78920	X	1	MXN	=		X	1	USD
M	12/21/2014	14.70970	X	1	MXN	=		X	1	USD

MM-FI Integration OBYC

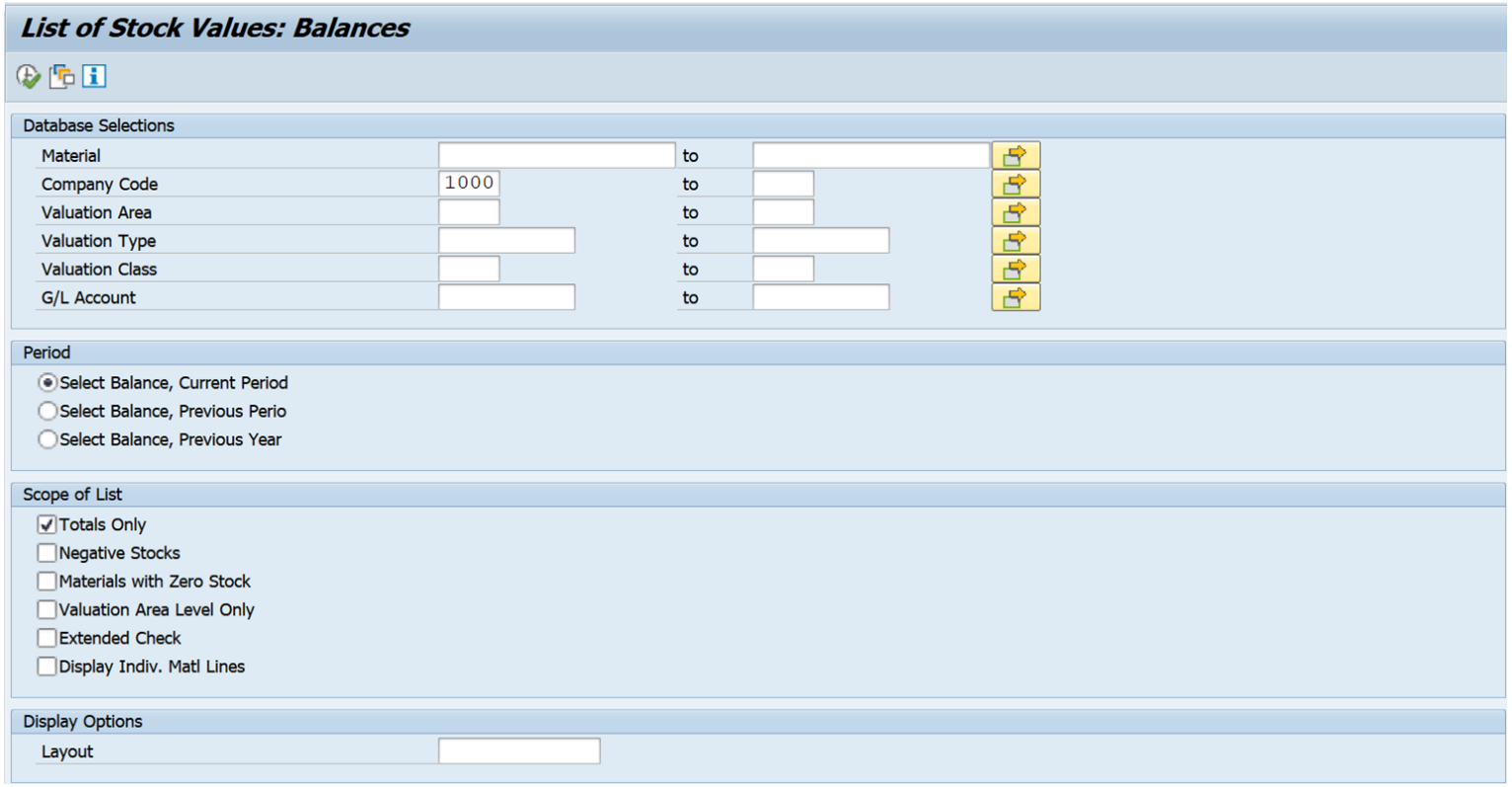
- Make sure that there are no missing General Ledger accounts in the Account determination between FI and MM (transaction OBYC)
- For example, an account that exists for a Valuation Class that has not been used, may not have been set up



Valuation modif.	Valuation class	Account
0001	3000	300000
0001	3001	300010
0001	3030	303000
0001	3031	303500
0001	3040	304000
0001	3050	305000
0001	3100	792000
0001	7900	790000
0001	7920	792000

MM-FI Balance Reconciliation

Before running the Material Ledger conversion program, make sure that the Inventory balances in FI and MM are reconciled by using transaction MB5L (or program RM07MMFI)



MM-FI Balance Reconciliation

If you have the New G/L you can use transaction FAGL_MM_RECON to display the reconciliation between MM and the General Ledger

Available from Release ECC 6.0 EHP5

Balance Reconciliation Between General Ledger and Materials Management

Material Details | Balance Display: General Ledger

Balance Reconciliation Between General Ledger and Materials Management

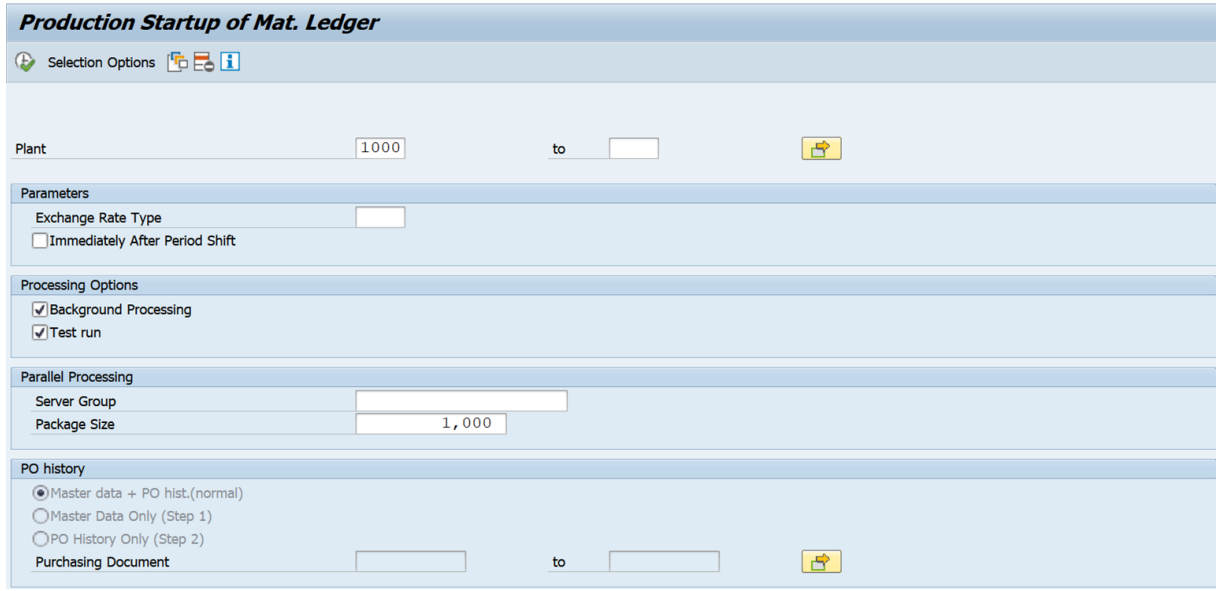
Data Source for Material Stock:Material Ledger
Company Code: 1000
Fiscal Year: 2012
Posting Period (MM): 12
General Ledger: 0L

G/L acct	Profit Center	Segment	Crcy type	Currency	Σ Material Stock	Σ GL Balance	Σ Difference
131000		BP01_C	10	USD	0.00	929.96	929.96-
	100	BP01_C	10	USD	0.00	13,878.93-	13,878.93
	200	BP01_B	10	USD	1,736.38	1,736.38	0.00
	200	BP01_C	10	USD	0.00	57,597.60-	57,597.60
	300	BP01_C	10	USD	7,132.11	6,447.91-	13,580.02
	MISCUS	BP01_A	10	USD	0.00	3,357,486.66	3,357,486.66-
	UNDEFINED		10	USD	5,495,421.06	1,801,811.15	3,693,609.91
	UNDEFINED	BP01_C	10	USD	0.00	420,249.84	420,249.84-
131000					**5,504,289.55**	**5,504,289.55**	**0.00**
133000		BP01_C	10	USD	0.00	0.15	0.15-
	100	BP01_A	10	USD	215,538.15	87,517.92	128,020.23
	100	BP01_C	10	USD	0.00	804.09-	804.09
	200	BP01_B	10	USD	1,025.46	30,060.26	29,034.80-
	300	BP01_C	10	USD	3,409,222.84	857,822.87	2,551,399.97
	100US	BP01_A	10	USD	0.00	128,020.22	128,020.22-
	200US	BP01_B	10	USD	0.00	124,519.28	124,519.28-
	300US	BP01_C	10	USD	0.00	2,397,845.89	2,397,845.89-
	MISCUS	BP01_A	10	USD	0.00	10,594.29	10,594.29-
	UNDEFINED		10	USD	10,920.52	1,130.18	9,790.34

Convert Existing Data into the Material Ledger

Once the Material Ledger configuration has been done, the transaction CKMSTART will need to be run, and this will do the following:

- Convert Material Master
- Convert PO History into Parallel Currencies
- Activate Actual Cost Component Split (if needed)



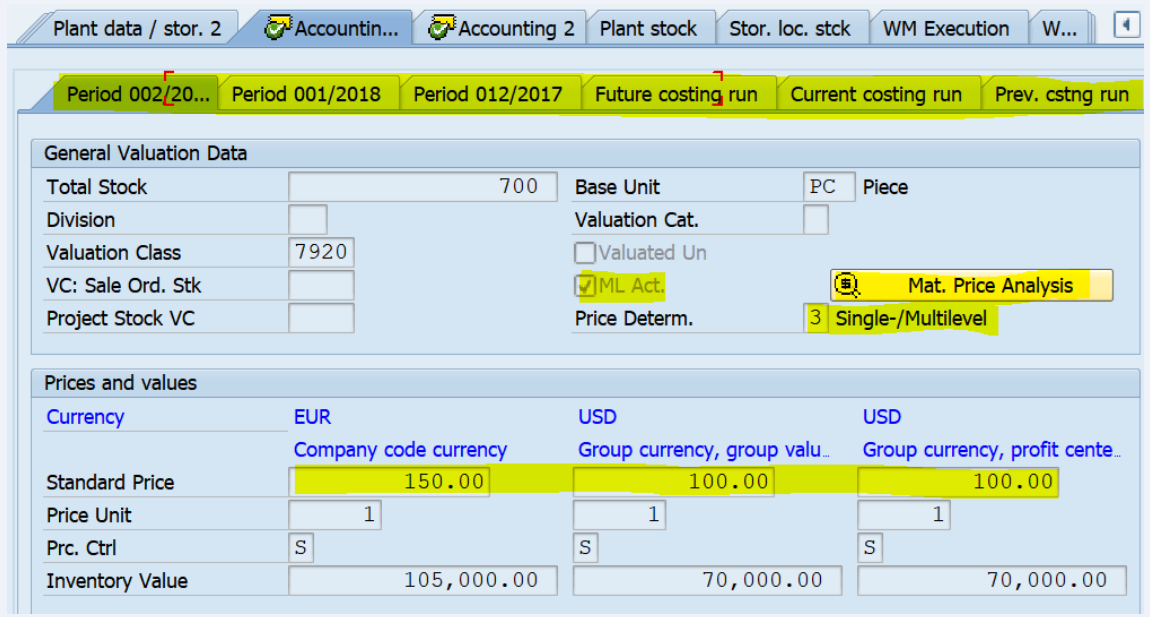
Material Ledger Table Replication in ECC

Material Valuation Tables	Material Ledger Tables
MBEW - Material Valuation OBEW - Valuated Stock with Subcontractor **EBEW** - Sales Order Stock Valuation **QBEW** - Project Stock Valuation	**CKMLHD** - Material Ledger: Header Record **CKMLPP** - Material Ledger Period Totals Records Quantity **CKMLPR** - Material Ledger: Prices **CKMLCR** - Material Ledger: Period Totals Records Values
Purchase Order History Tables	**Material Ledger Tables**
EKBE - History per Purchasing Document **EKBZ** - History per Purchasing Document: Delivery Costs	**MLWERE** - Conversion Table between Purchasing and Material Ledger **MLBE** - Material Ledger FS Item Table for GR/IR relevant transaction **MLBECR** - Material Ledger Currency Table for GR/IR relevant transact.

Convert Existing Data into the Material Ledger

Once the conversion is done, the Material Master changes are:

- Multiple tabs in Accounting 1 view for different periods
- “ML Active” Indicator is set
- Price Determination field is populated
- Multiple Currencies/Valuation for Standard Cost

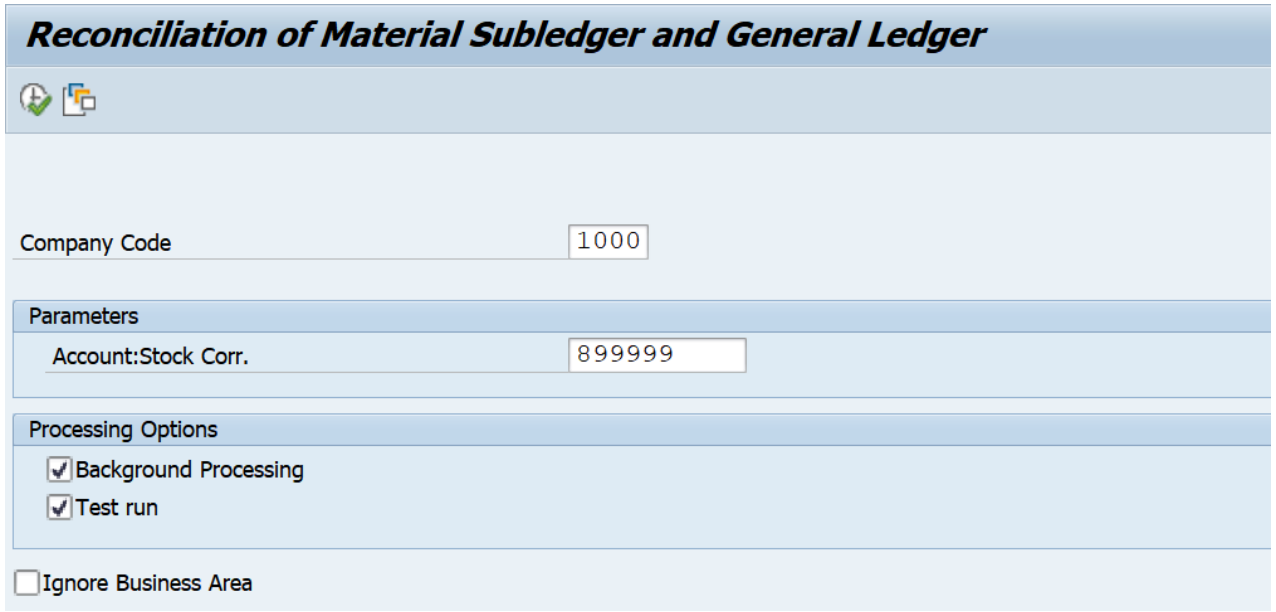


Translation to Parallel Currencies

- Reconcile first local currency to parallel currencies and display inconsistencies
- Material inventory values are translated on a key date from local to parallel currencies
- Transaction CKMADJUST is used to reconcile inventory values in parallel currencies to the G/L
- This transaction can be run even after inventory movements have been made

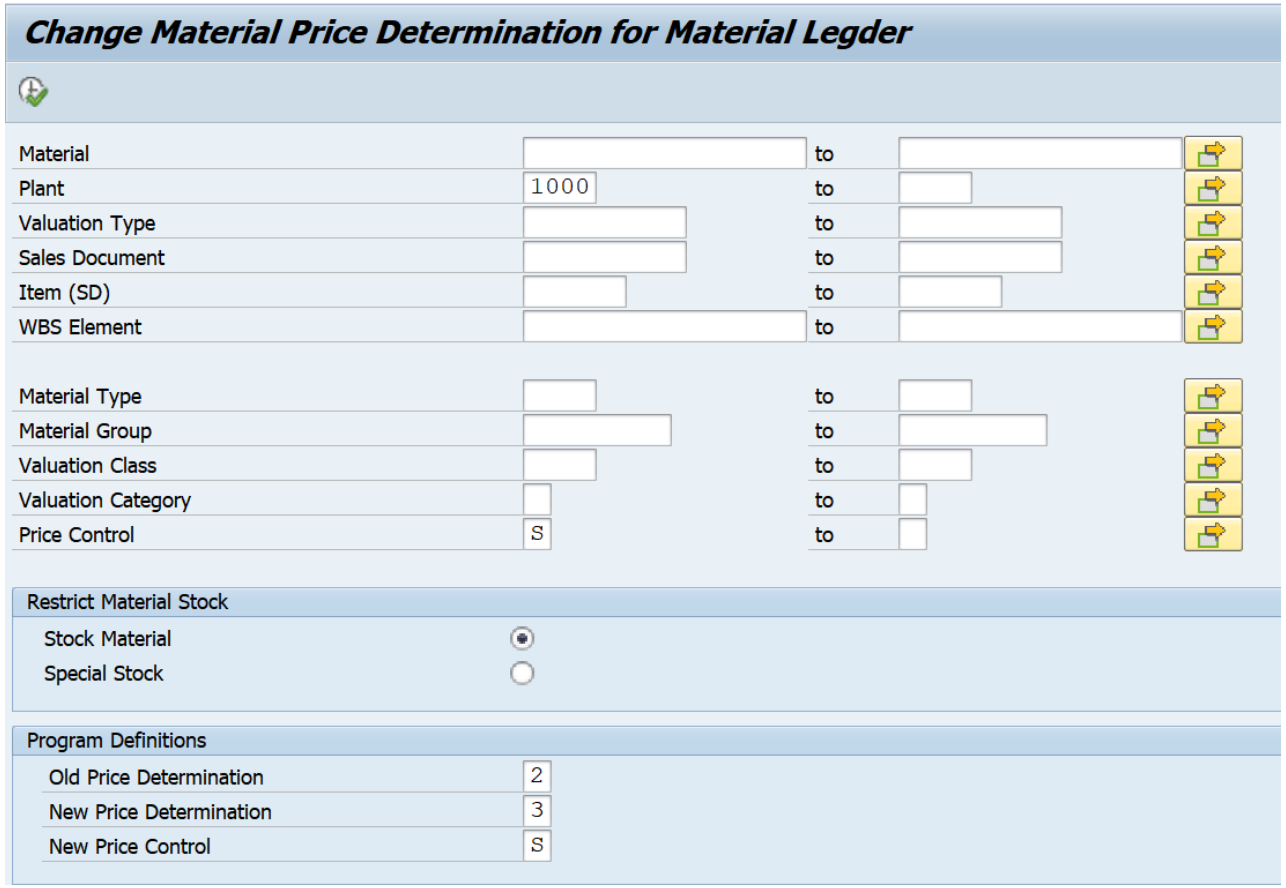
Reconciliation of Inventory Balances cont.

- If you plan to have parallel currencies in Material Ledger, the conversion program reconciles the first local currency to the second and third local currencies
- Transaction CKMADJUST (or FAGL_ML_ADJUST if you have New G/L) is used to reconcile these Currency Types



Change Price Indicator in the Material Master

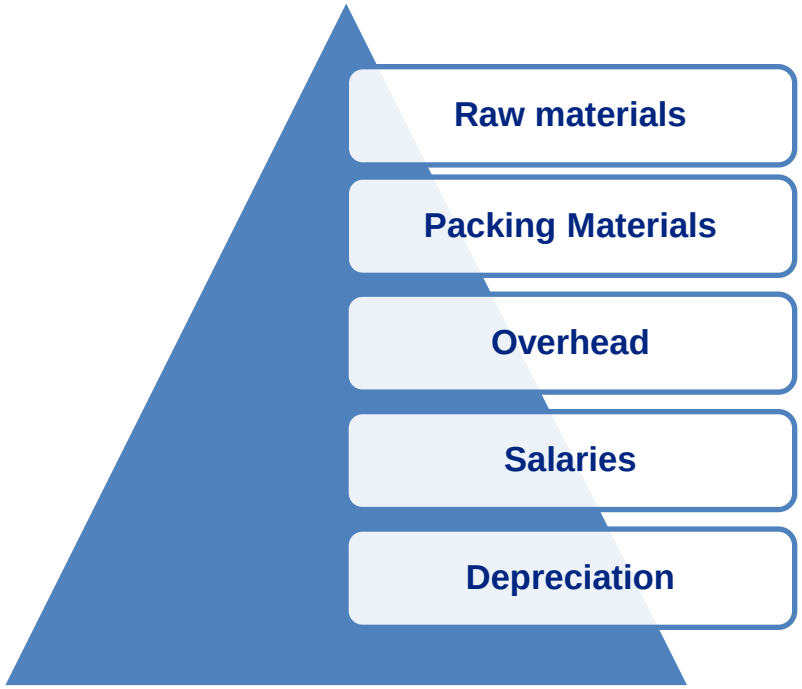
If you plan to use Actual Costing, you will need to change the Price Determination from “2” to “3” by running transaction CKMM



Actual Cost Components

Cost components break down the cost estimate into various factors

- Initialized by executing program MLCCS_STARTUP in transaction SE38
- All materials with price determination “3” get an initial cost component split by standard price



Converting to Material Ledger in the SAP S/4HANA System

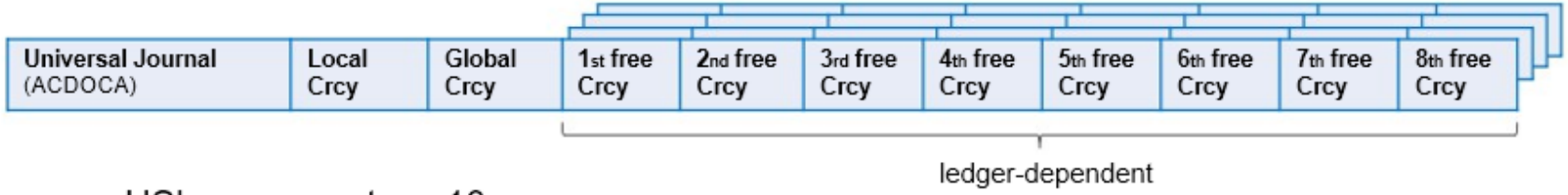
Material Ledger in SAP S/4HANA

- Migration of the Material Ledger is required in the following scenarios:
  - Migration from SAP ERP to SAP S/4HANA 1610 or higher
  - Migration from SAP Simple Finance to SAP S/4HANA 1610 or higher
- You always need to migrate the Material Ledger, even if you were not using the Material Ledger in the source system
- You always need to migrate the Material Ledger, even if you were not using it in the source system
- **Actual Costing is still optional!!**

SAP S/4HANA Currencies

SAP ERP

- 3 local currencies in FI (including New GL)
- 2 currencies in CO
- 3 currencies in Material Ledger

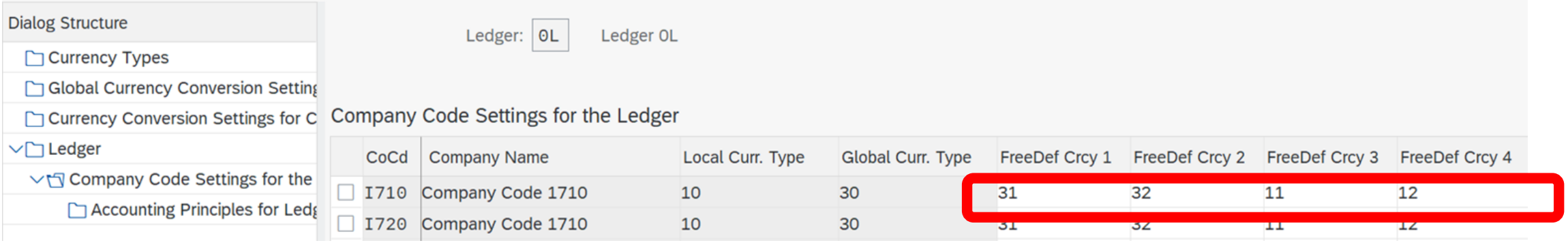


SAP S/4HANA Finance

- Local currency: ACDOCA field name = HSL, currency type 10
- Global currency: ACDOCA field name = KSL, currency type of controlling area
- Freely Defined Currencies 1 - 8
  - You can configure any currency type.
  - There is no dependency on the currency types of the leading ledger.
  - ACDOCA fieldnames OSL, VSL, BSL, CSL, DSL, ESL, FSL, GSL
- If you activate parallel valuations with transfer prices, then additional rules / constraints apply.

SAP S/4HANA Currency Types/Valuation Views

- Up to 8 additional Currency Types can be assigned to Company Codes
- Currency/Valuation Profile can be setup for Group and/or Profit Center Valuation



- ➢ If you had Group/Profit Center Valuation in ECC, the relevant currency type(s) will automatically transfer to S/4HANA
- ➢ You cannot introduce Group/Profit Center Valuation with a Brownfield implementation!

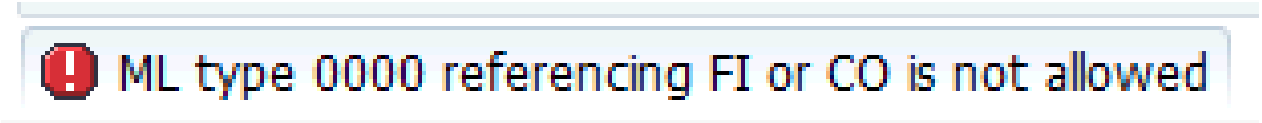
Currency Type	Description
10	Company Code Currency/Legal Valuation
11	Company Code Currency/Group Valuation
12	Company Code Currency/Profit Center Valuation
30	Group Currency/Legal Valuation
31	Group Currency/Group Valuation
32	Group Currency/Profit Center Valuation

What are the new Material Ledger tables?

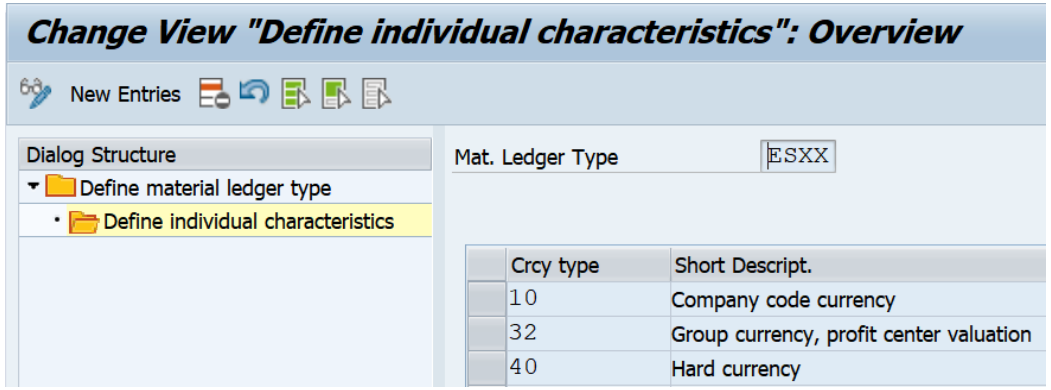
- Material Ledger Master data is created for all valuation areas/materials (CKMLHD, CKMLPP, CKMLCR)
- MATDOC combines MSEG, MKPF, plus information from MARC, MARD, MCHB, MKOL, etc.
- MBEW, EBEW, QBEW, OBEW, MBEWH EBEWH, QBEWH, OBEWH values and quantity migrated to ACDOCA, meaning one single source of data.
- MLDOC = MLHD, MLIT, MLPP, MLPPF, MLCR, MLCRF, CKMLPP, CKMLCR, MLCD, CKMLMV003, CKMLMV004, CKMLPPWIP etc.
- MLDOCCCS = MLKEPH, CKMLKEPH, (CKMLPRKEKO)
- MLDOC_EXTRACT
- MLDOCCCS_EXTRACT (cost component split report)
- CKLMLCR still source for Standard Price, Periodic Unit Price and Price Control
- CKMLPRKEKO and CKMLPRKEPH still valid for cost component split
- MLRUNLIST replaces CKMLMV011

Technical Changes in Material Ledger

- Core information is Now retrieved from ACDOCA.
  - V-2 Materials
- Custom ML Type must Now be defined as No default is available.
  Type 0000 is Not supported anymore.

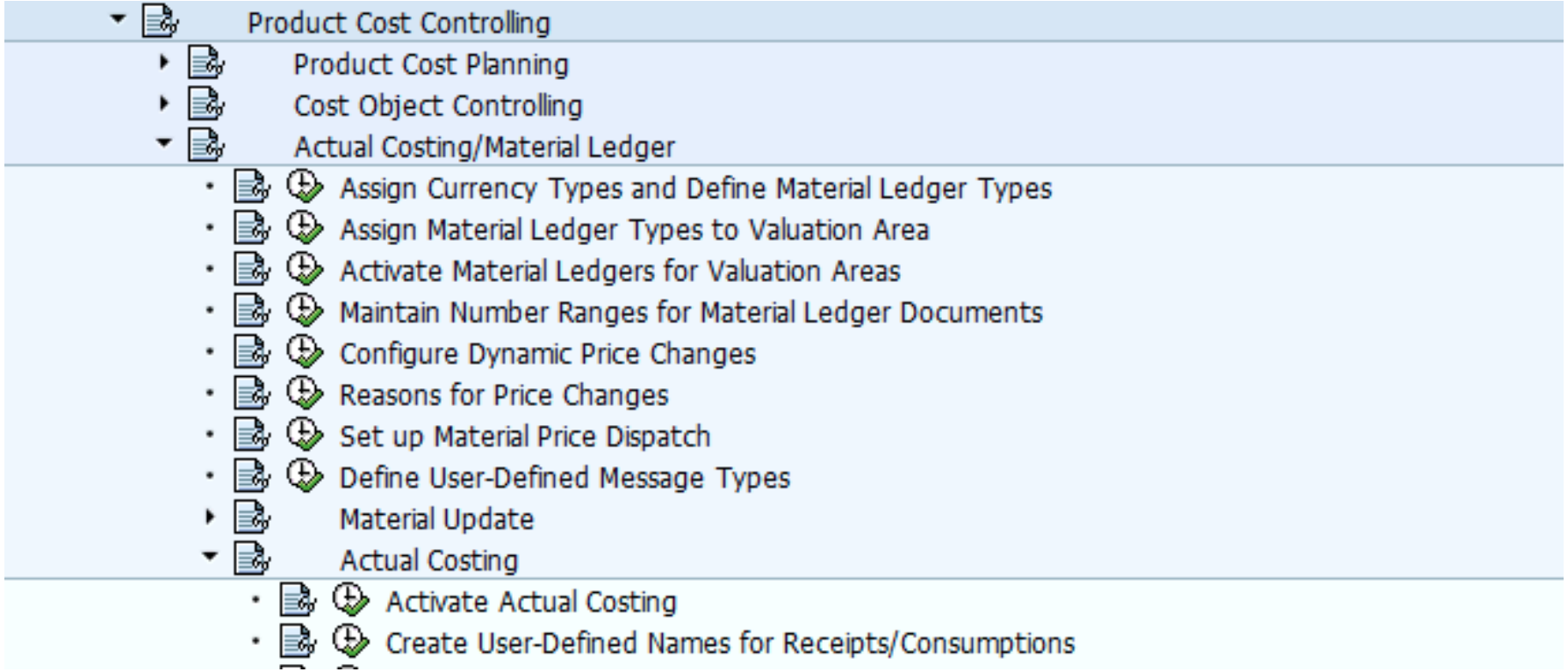


  - The main reason is that you can assign > 3 currencies to a company code and ML still has limit of 3.



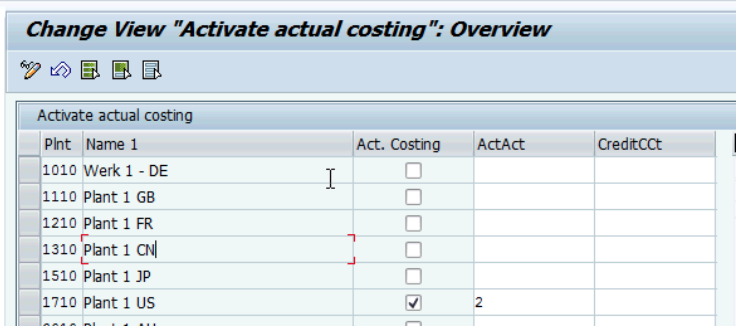
Is Actual Costing Mandatory in SAP S/4HANA?

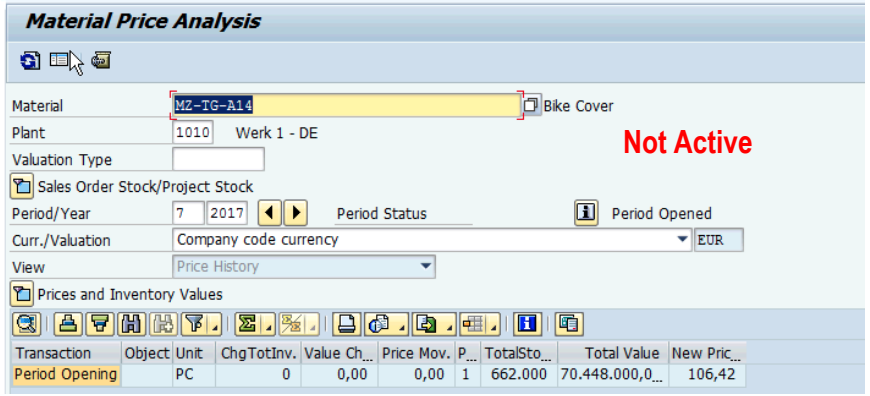
- Material Ledger is mandatory in SAP S/4HANA
- Actual costing is not mandatory

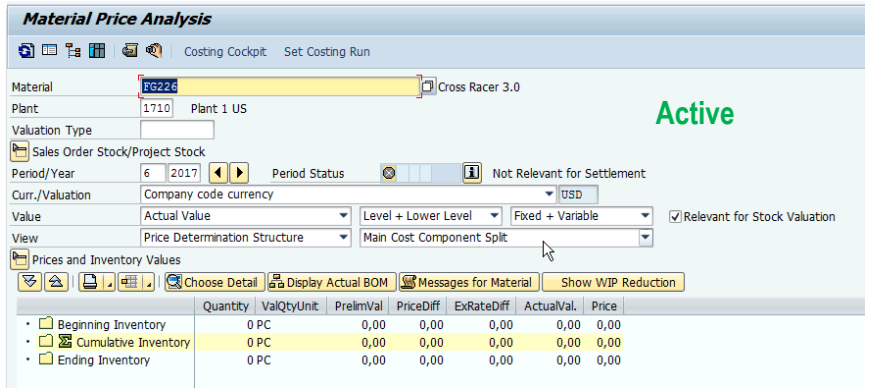


Is Actual Costing Mandatory in SAP S/4HANA?

- Actual costing
  - Not mandatory
  - CKM3 is available with limited functionality
  - Not actual cost component split



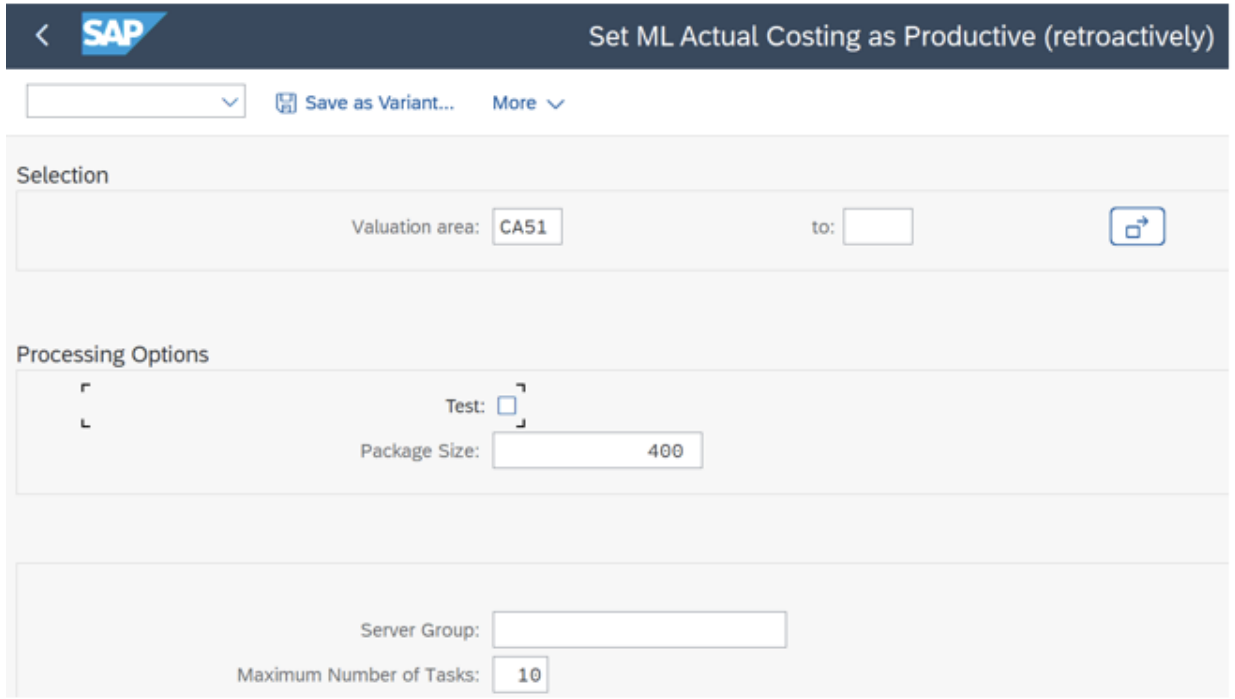


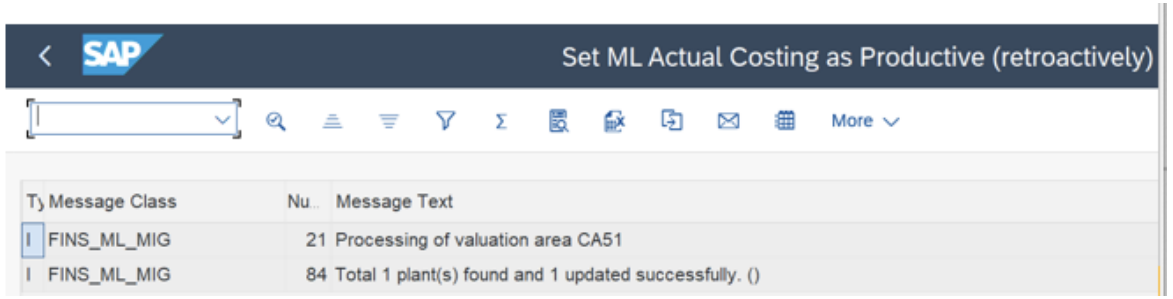


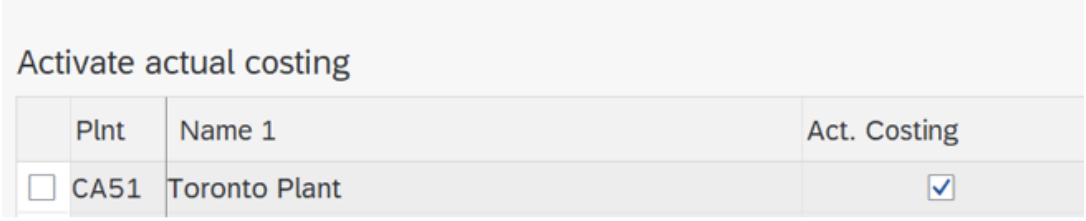
Activating Actual Costing Retroactively

To activate actual costing after moving to SAP S/4HANA:

- Activate Actual Costing for the relevant plant(s)
- Execute program FCML4H_STARTUP



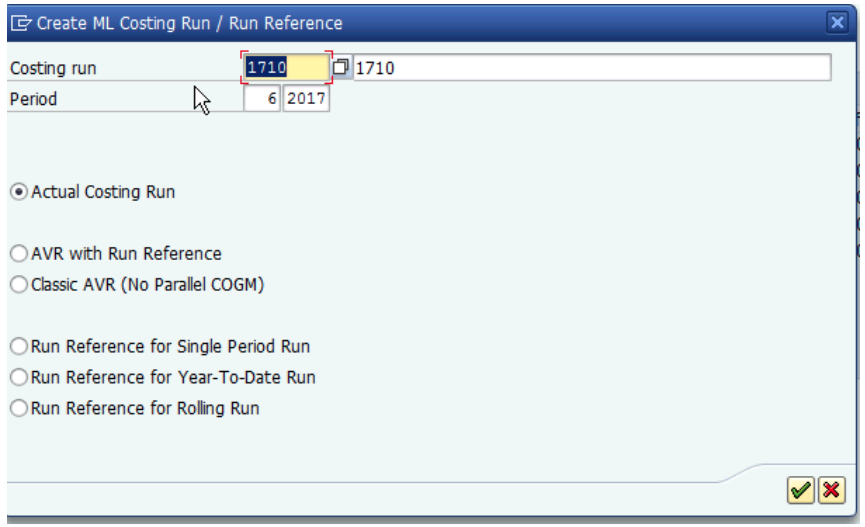


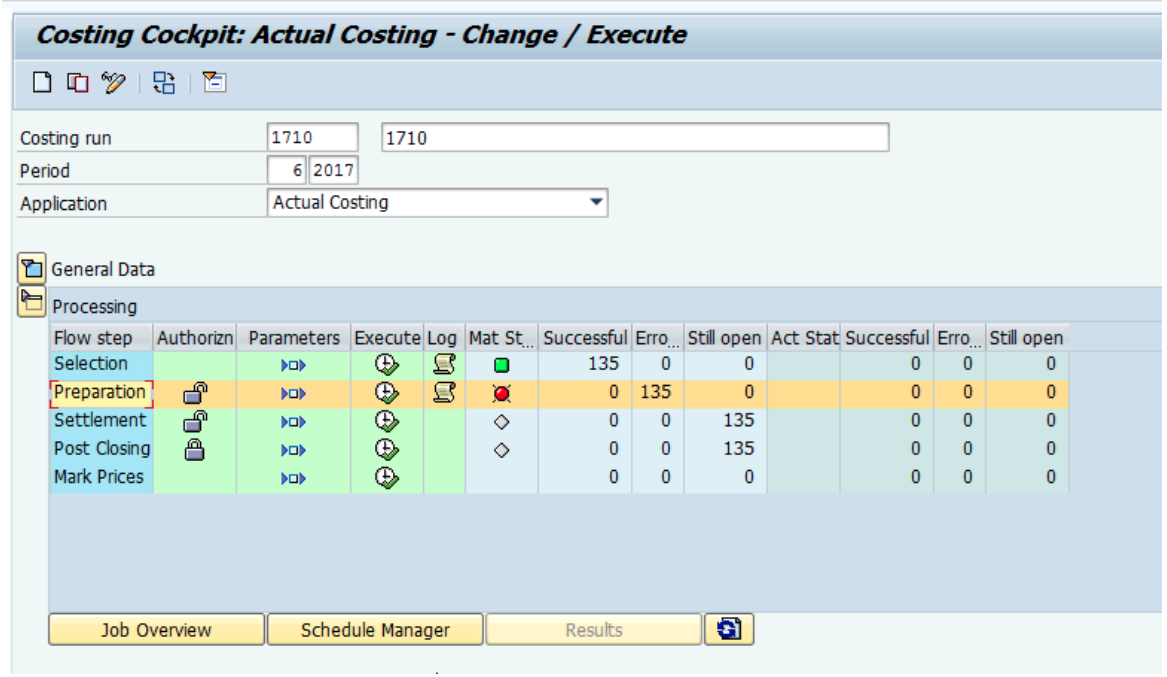


Additional Features with SAP S/4HANA

CKMLCP

- Same transaction for actual closing and AVR, instead of CKMLCP and CKMLCPAVR
- New process called preparation
- Single Level Price Determination, Multilevel Price Determination, Revaluation of Consumption and WIP Revaluation have been replaced by the new step settlement

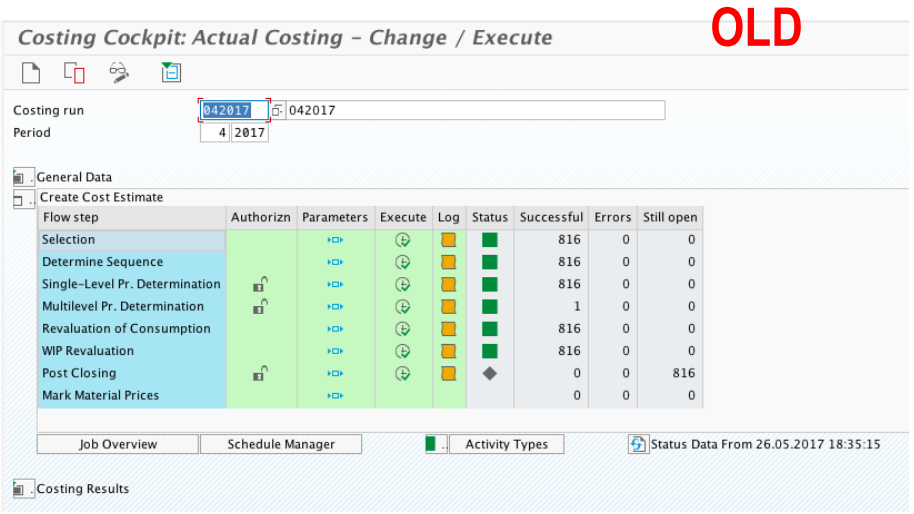


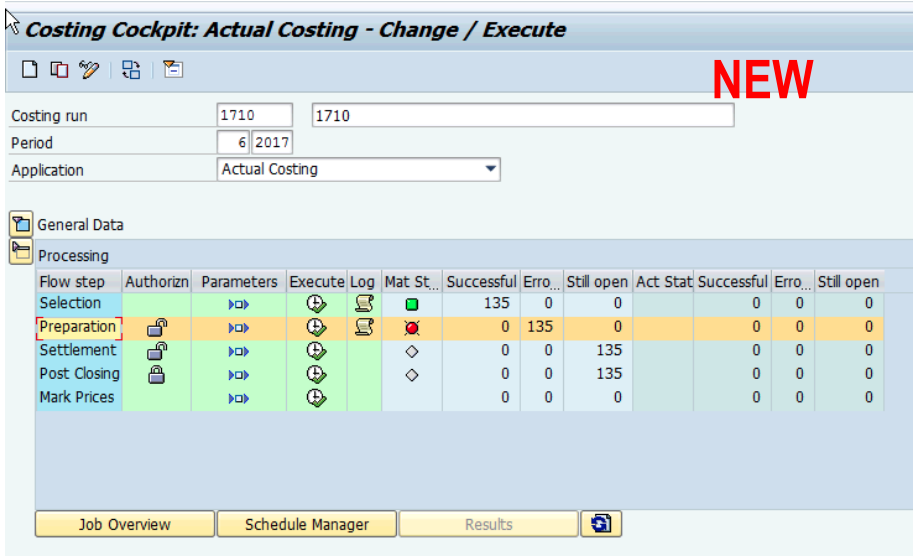


Additional Features with SAP S/4HANA cont.

- CKMLCP
  - Selection (program FCML4H_SELECTION)
  - Preparation (program FCML4H_PREPROCESSOR)
  - Settlement (program FCML4H_SETTLEMENot)
  - Post Closing (program FCML4H_POST_CLOSING)

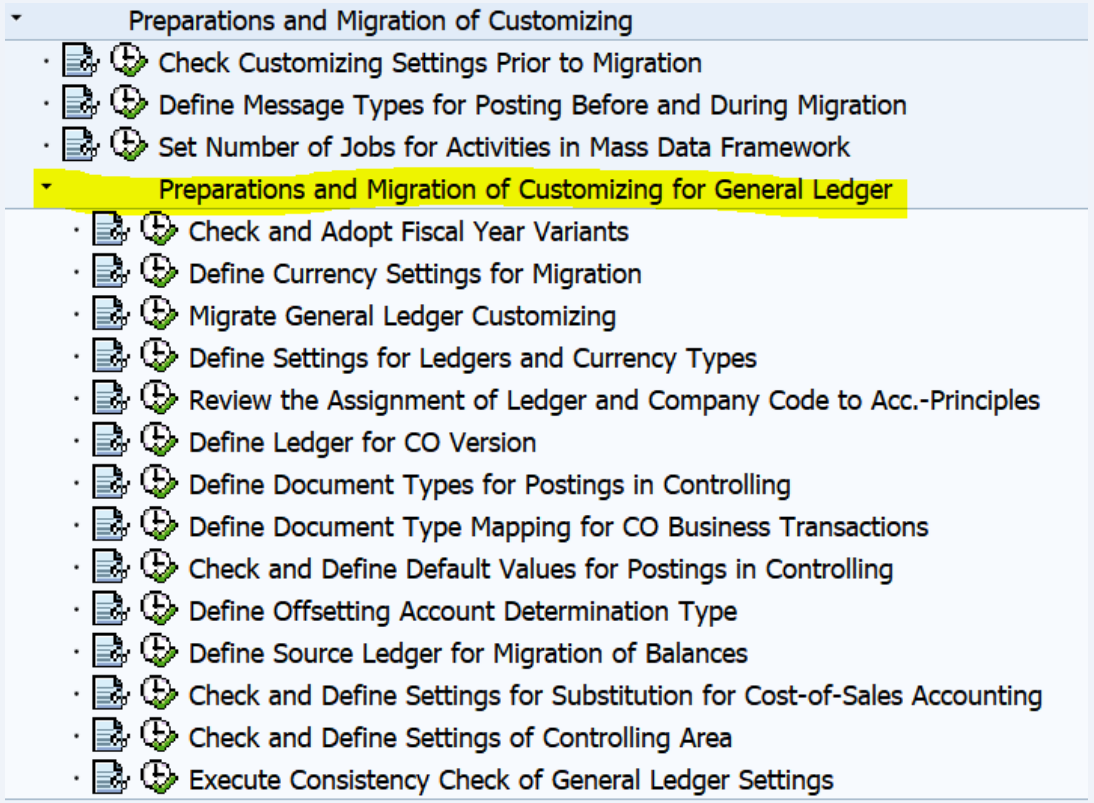
- Does not distinguish anymore between single and multilevel price difference in accounting
  - PRV and KDV are obsolete
  - AUI must be without valuation class
  - New Key PRL





Preparations and Migration of Customizing for General Ledger

- There are two Data Preparation activities that need to be completed before you start the process for converting to Material Ledger
- The first is the “Preparations and Migration of Customizing for General Ledger”



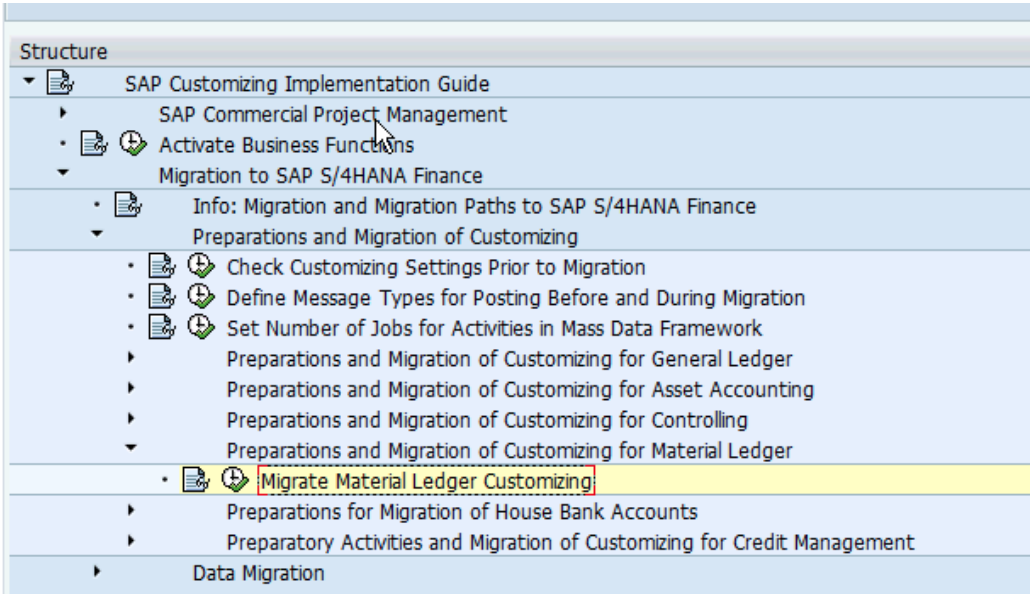
Preparing Migration of Customizing for Material Ledger

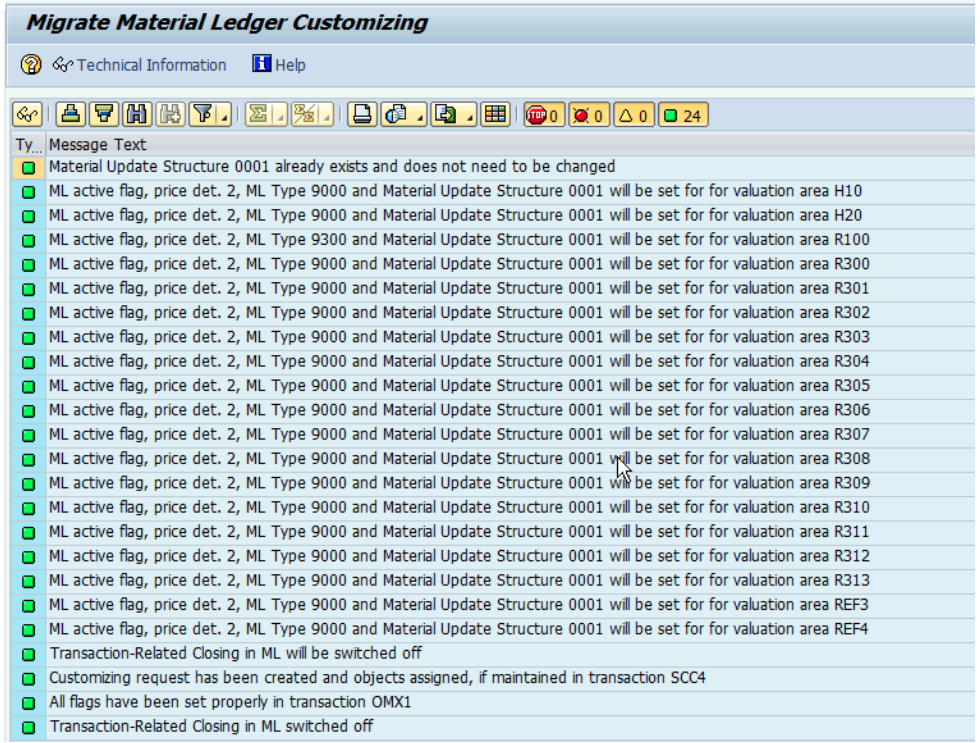
The second step is the “Preparations and Migration of Customizing for Material Ledger”

- Preparations and Migration of Customizing
  - Check Customizing Settings Prior to Migration
  - Define Message Types for Posting Before and During Migration
  - Set Number of Jobs for Activities in Mass Data Framework
  - Preparations and Migration of Customizing for General Ledger
  - Preparations and Migration of Customizing for Asset Accounting
  - Preparations and Migration of Customizing for Controlling
  - Preparations and Migration of Customizing for Material Ledger
    - Migrate Material Ledger Customizing
    - Check Assignment of Material Ledger Types to Valuation Areas

Migration Step for Material Ledger

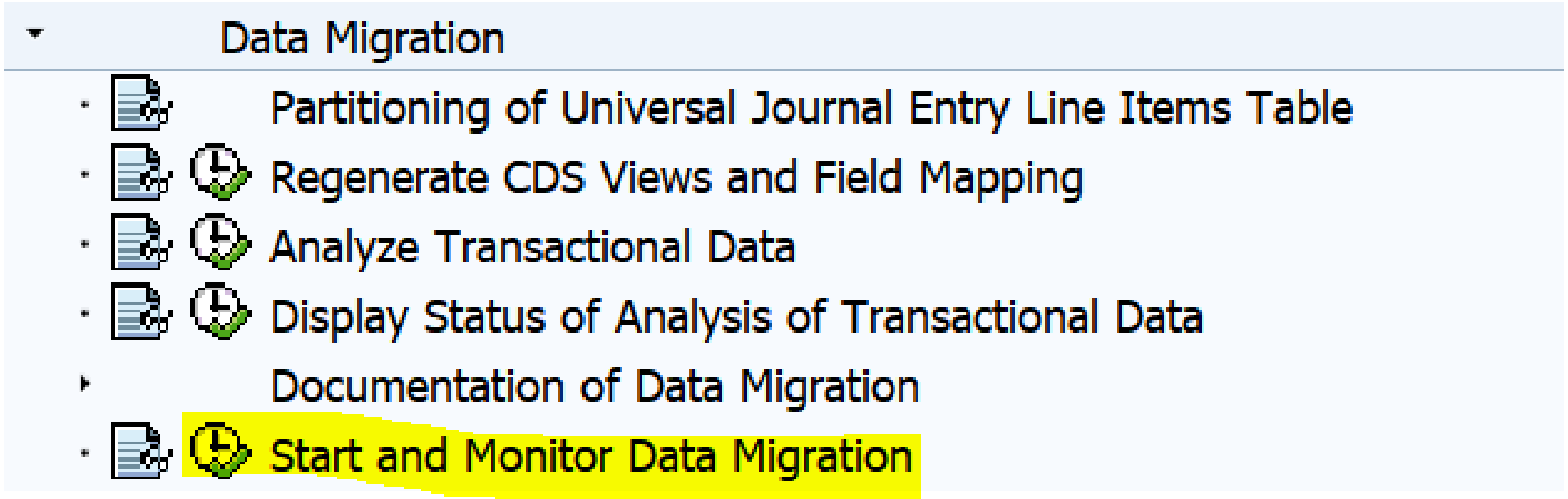
- Archive prior to migration is suggested
- Activate ML in ECC before moving to SAP S/4HANA also suggested to reduce the impact and to get knowledge of functionality before changing





Preparing Migration of Customizing for Material Ledger

Once these preparation activities are completed, then you can run the steps to Start and Monitor the Data Migration



M10: Migrate Material Ledger Master Data

- This activity populates data in the Material Ledger tables CKMLHD, CKMLPR, CKMLPP and CKMLCR in all Material Ledger currencies, from the last period of the previous year to the current period and activates Material Ledger in all Valuation Areas (Plants).
- Also, all the data in the Inventory Valuation tables xBEW(H) and Material Ledger tables CKMLPP and CKMLCR (if you already use Material Ledger) are migrated into the universal journal entry tables ACDOCA and ACDOCA_M_EXTRACT, from the last period of the previous year to the current period.

Existing Tables to Be Replaced With the New Tables

Old Table	New Table	Explanation
MLHD, MLIT, MLPP, MLPPF, MLCR, MLCRF, CKMLPP, CKMLCR, MLCD, CKMLMV003, CKMLMV004, CKMLPPWIP etc.	MLDOC & MLDOC_EXTRACT	These tables will be populated from Material Ledger transactional data updates and settlement.
MLKEPH, CKMLKEPH, (CKMLPRKEKO)	MLDOCCCS & MLDOCCCS_EXTRACT	These tables will update the cost component split in actual costing.
CKMLMV011	MLRUNLIST	This table will contain the material and activity type status from a costing run.

Existing Tables to Be Replaced With the New Tables cont.

Old Table	New Table	Explanation
MKPF, MSEG	MATDOC	This table will hold the header and item data of a material document
MBEW, OBEW, QBEW, MBEWH, OBEWH, EBEWH	ACDOCCA	This table will contain the inventory valuation transactional data

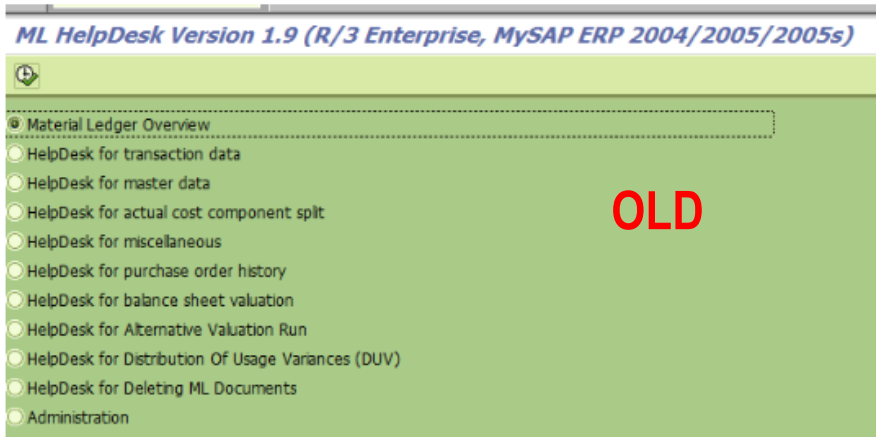
Other Migration Steps

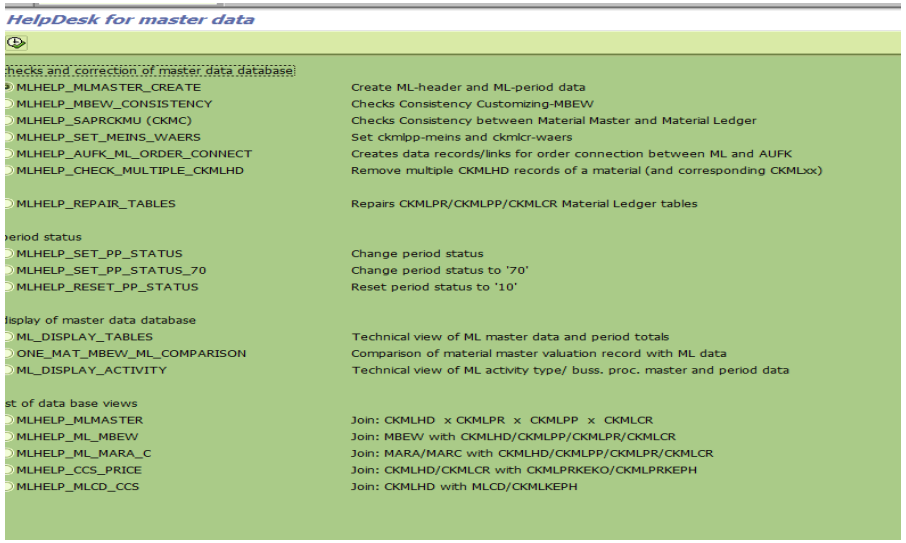
- M11: Migrate Material Ledger Order History:
  - This activity converts all existing purchase order history tables (EKBE, EKBEH, EKBZ, EKBZH) and production order history tables (MLAUFCR and MLAUFCRH) into the Material ledger currencies.
- M20: Check Material Ledger Master Data:
  - This activity checks and verifies the migrated data by comparing values from the inventory and material ledger tables with the Universal Journal table ACDOCA.
- M21: Check ML Production Order and Purchase Order History:
  - This activity verifies that all production and purchase order history records have been converted into the material ledger currencies.

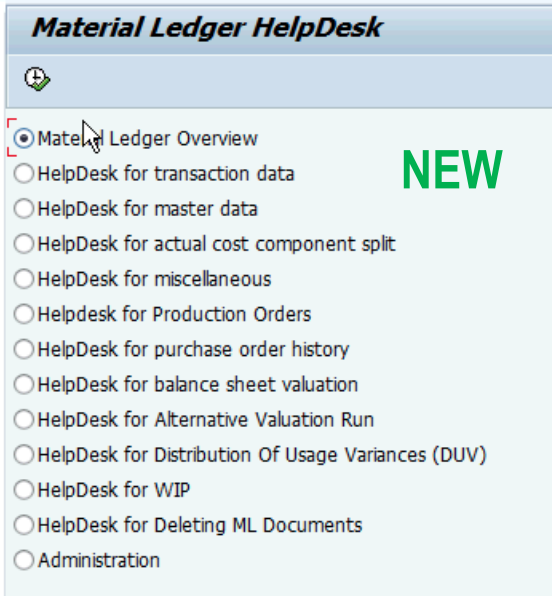
Material Ledger Helpdesk

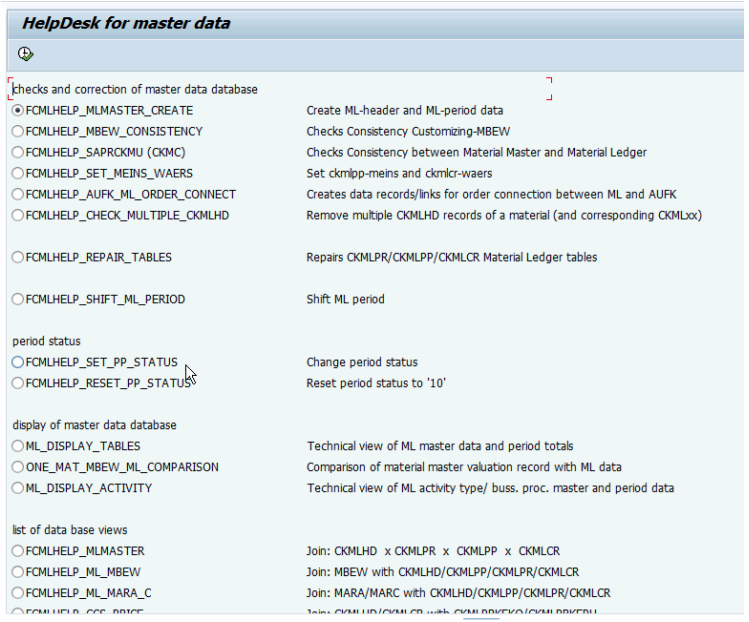
- Prior to S/4HANA 1610
  - SAP Note 364368 - Material Ledger help desk
  - CKMHELP
- SAP S/4HANA 1610
  - 2433733 - ML Helpdesk tool in SAP S/4HANA
  - Require password or debug access to change mode in execution
  - FCMLHELP

Material Ledger Helpdesk cont.









Questions You Need to Ask Before Converting to Material Ledger

- What currencies do we want to value inventory with, at a historical rate?
- Do we need to use transfer pricing and parallel valuation?
- Do we want our products to be valued at Actual Cost?
- Should we revalue our inventory at a FIFO, LIFO or some other basis?
- Should we value our inventory according to multiple GAAP approaches?
- Do we want our Cost of Sales to be valued at standard or actual cost?
- Can we reduce the impact of foreign exchange differences on our inventory values?

Timing Your Material Ledger Conversion

- Look out for other projects (particularly relating to inventory) that could take place around the same time
- If you are activating Actual Costing, plan for a 3 – 6-month project
- If you are activating Actual Costing, it is best to do it at the beginning of the month, otherwise not all variances will be used in calculation
- Allow a couple of months to work through kinks
- If you are not planning to move to SAP S/4HANA in two or more years, and there is a business justification, then consider activating Material Ledger sooner

Universal Parallel Accounting

New SAP features that allows end-to-end view of parallel accounting across different functions such as Asset Accounting, Overhead Accounting, Inventory Accounting and Product Cost Accounting.

Functionality

- Allows separate Valuation Views (Legal and Group) per Ledger (i.e., Single Valuation Ledger approach)
- Uses same Accounting Principle for Leading Ledger (for Legal Valuation) and Parallel Ledger (in Group Valuation)
- Consolidated View (in Group Valuation) eliminates intercompany revenue and COGS as well as intercompany profit in inventory (Advanced Intercompany Sales process)

Limitations

- Only available for greenfield implementations
- Only available in SAP S/4HANA Cloud (from 2105) and SAP S/4HANA 2022

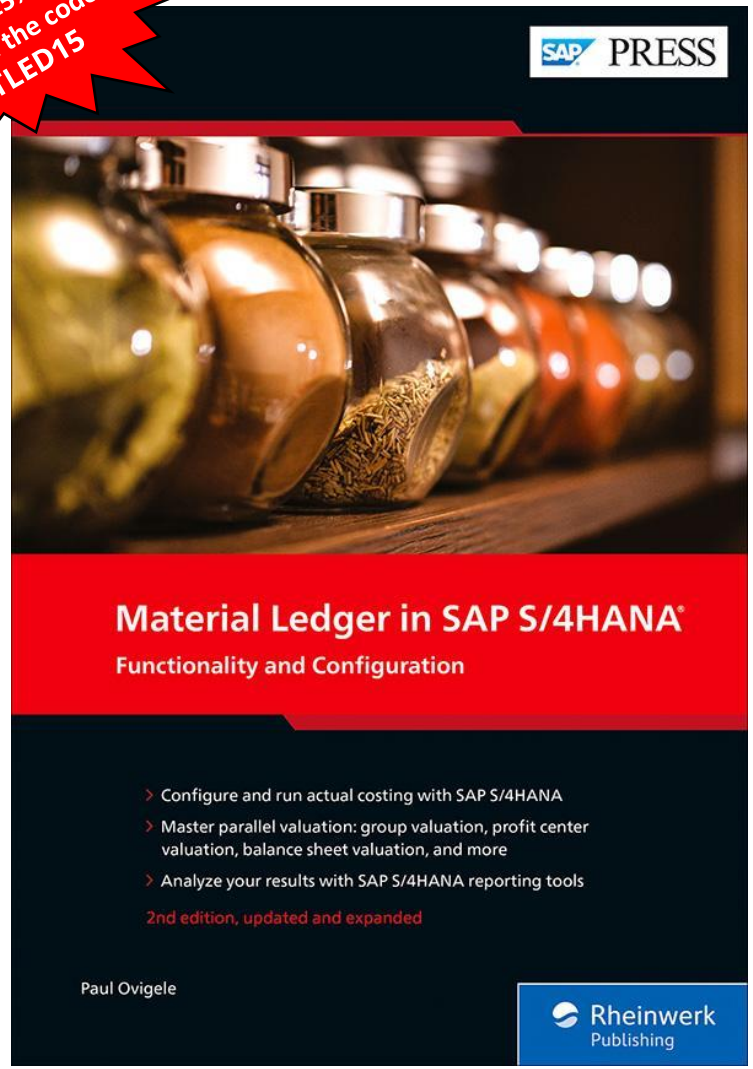
Wrap Up

Your Comprehensive Guide to the Material Ledger in SAP S/4HANA!

SAP PRESS

Save 15% with the code MTLED15

- Configure and run actual costing with SAP S/4HANA
- Master parallel valuation: group valuation, profit center valuation, balance sheet valuation, stock-in-transit, and more
- Analyze your results with SAP S/4HANA reporting tools



Purchase the print or e-book at sap-press.com/5565
Save 15% with the code **MTLED15** at checkout.

Material Ledger in SAP S/4HANA: Functionality and Configuration
Written by: Paul Ovigele
535 pages | 11/2022 | **E-book:** $84.99 | **Print:** $89.95 | **Bundle:** $99.99

Where to Find More Information

- https://www.erpfixers.com/blog-series
- ERPfixers Resources Page - Various blogs and articles on SAP S/4HANA and other topics
- https://www.erpfixers.com/ask-a-fixer-webcast
- ERPfixers Webcast Page – Monthly Webcasts on various SAP topics including Universal Allocation

Key Points to Take Home

- All Plants in a Company Code should be activated with Material Ledger in ECC
- Reduce as much data as possible before converting to ML in ECC
- Even in SAP S/4HANA a reduction of ML data will help the Migration process
- Material Ledger is mandatory in SAP S/4HANA, Actual Costing is optional
- Material Ledger conversion is one of the Migration Steps in SAP S/4HANA

Thank you! Questions?

Paul Ovigele

www.erpfixers.com

info@erpfixers.com

Twitter.com/erpfixers

Please remember to complete your session evaluation.

SAPinsider

SAPinsider.org

PO Box 982Hampstead, NH 03841
Copyright © 2023 Wellesley Information Services.
All rights reserved.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. All other product and service names mentioned are the trademarks of their respective companies. Wellesley Information Services is neither owned nor controlled by SAP SE.

SAPinsider comprises the largest and fastest growing SAP membership group worldwide, with more than 750,000 global members.