Key User Training Document

PC301 - Material Ledger

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Course Information

Course ID	PC301
Course Description	Material Ledger
Course Duration	2 hrs.
Course Pre-requisite	PC201, PC202
Course Objective	• Understand the functions and features in Product Costing and Material Ledger

Course Information

Table of Content (สารบัญ)	• Actual Costing Material Ledger Overview • Material Price Analysis

Output (ผลที่คาดว่าจะได้รับ)	Better Understand the functions in Product Costing and Material Ledger

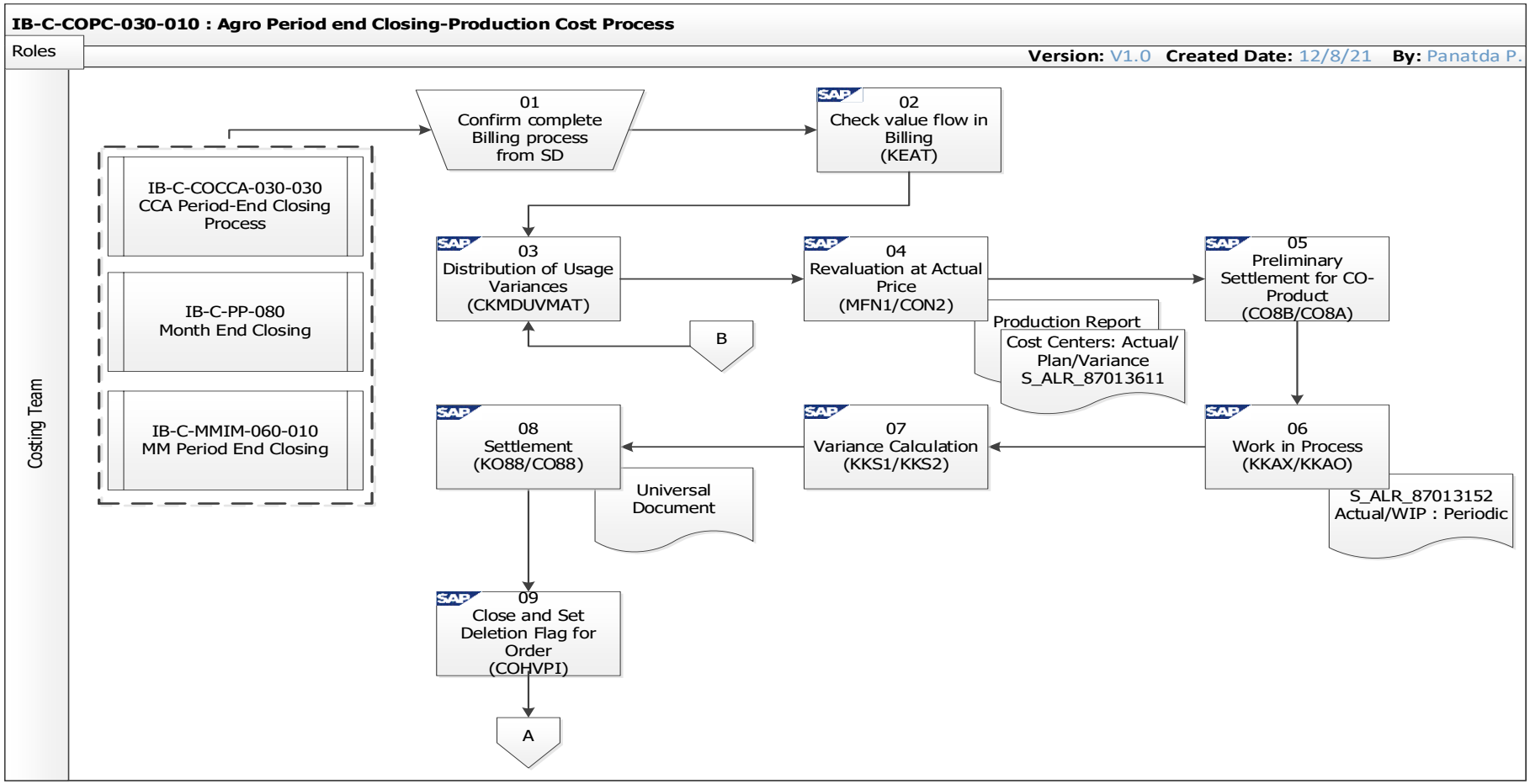
Course Outline

- **Course Overview**
- **Actual Costing Overview**
- **Material Price Analysis**
- **Material Price Change**
- **Q&A**

Course Overview

IB-C-COPC-030-010 Agro Product Costing Period-End Closing (1/2)

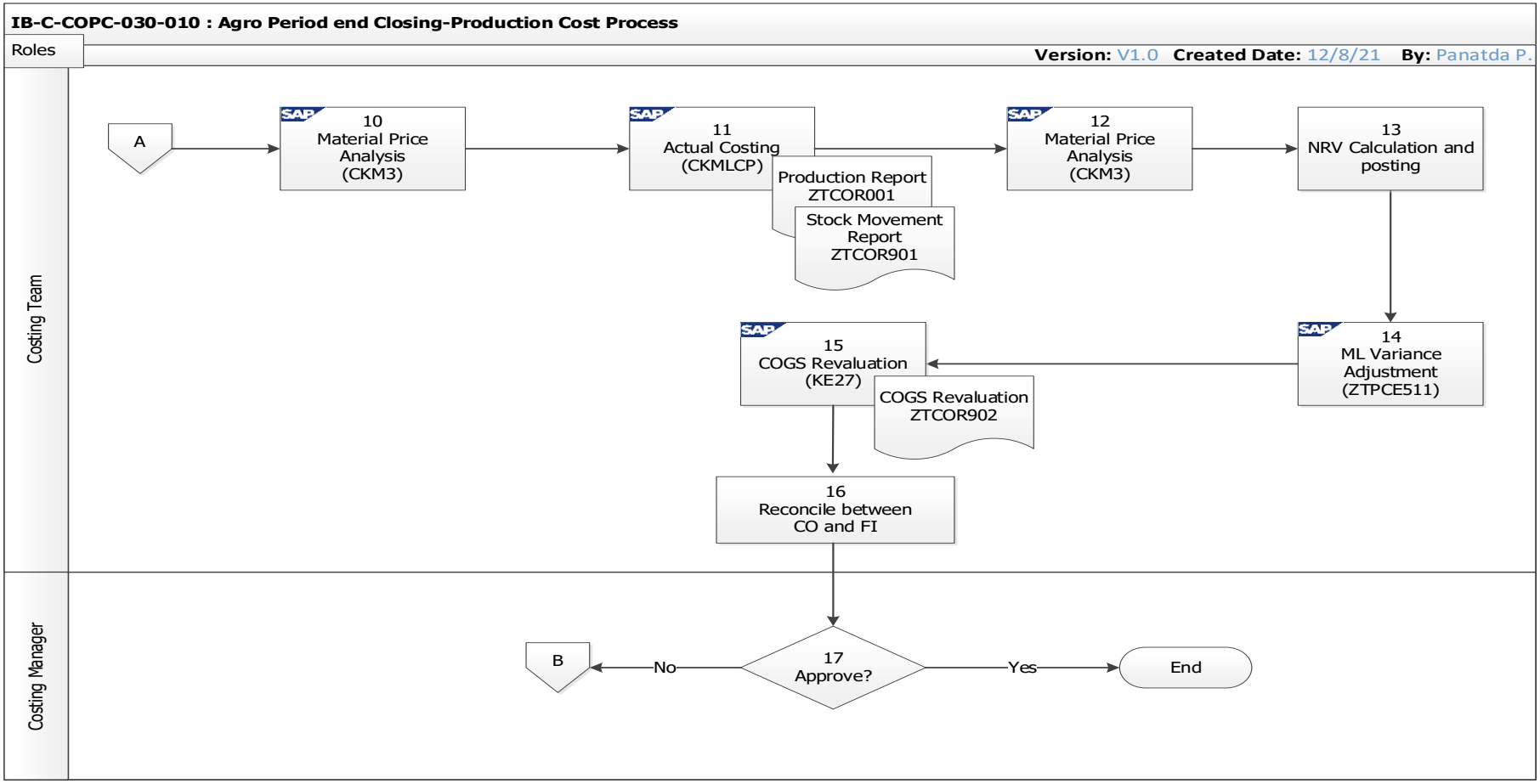
SAP Implementation Project
Module: Controlling



Course Overview

IB-C-COPC-030-010 Agro Product Costing Period-End Closing (2/2)

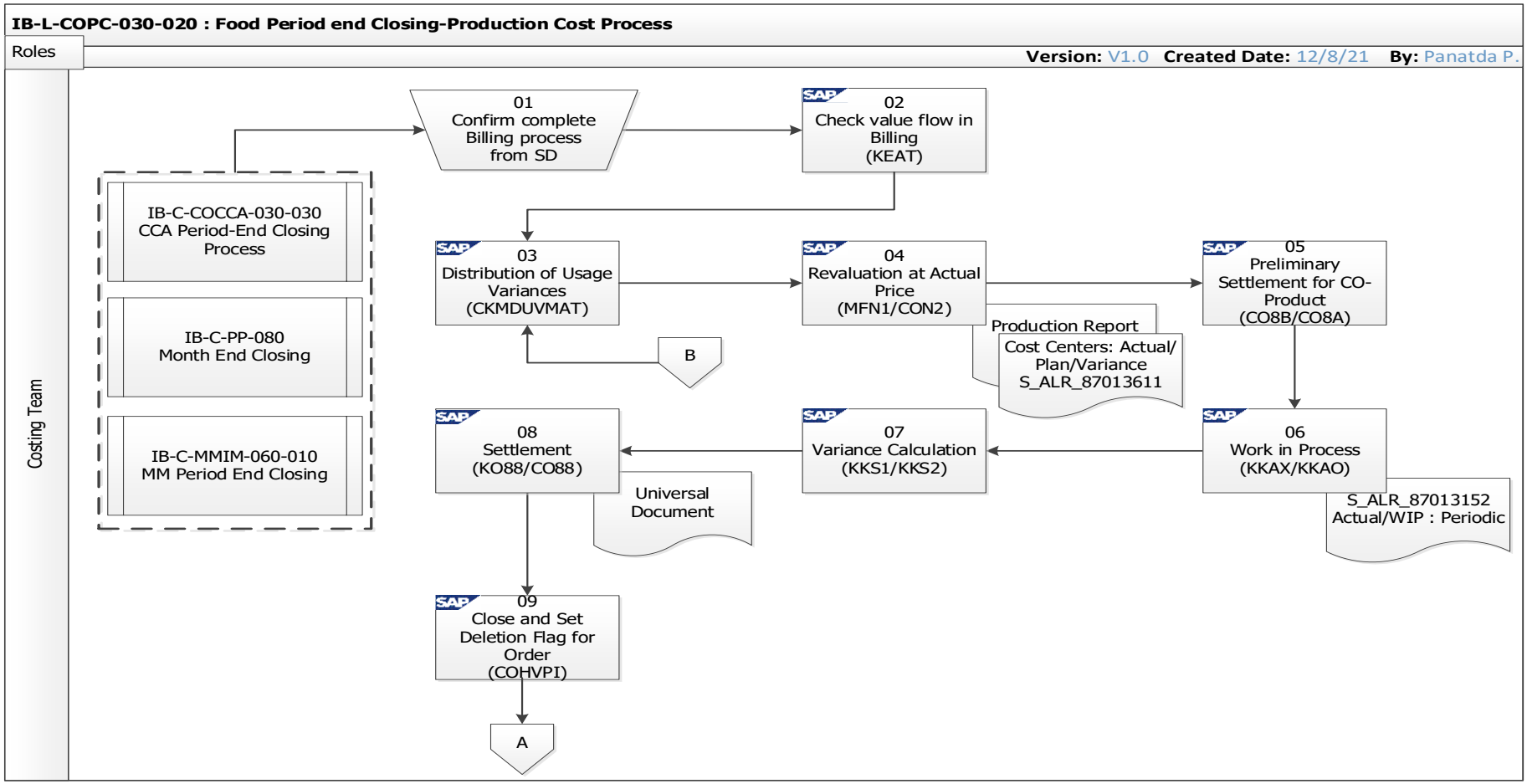
SAP Implementation Project
Module: Controlling



Course Overview

IB-C-COPC-030-020 Food Product Costing Period-End Closing (1/2)

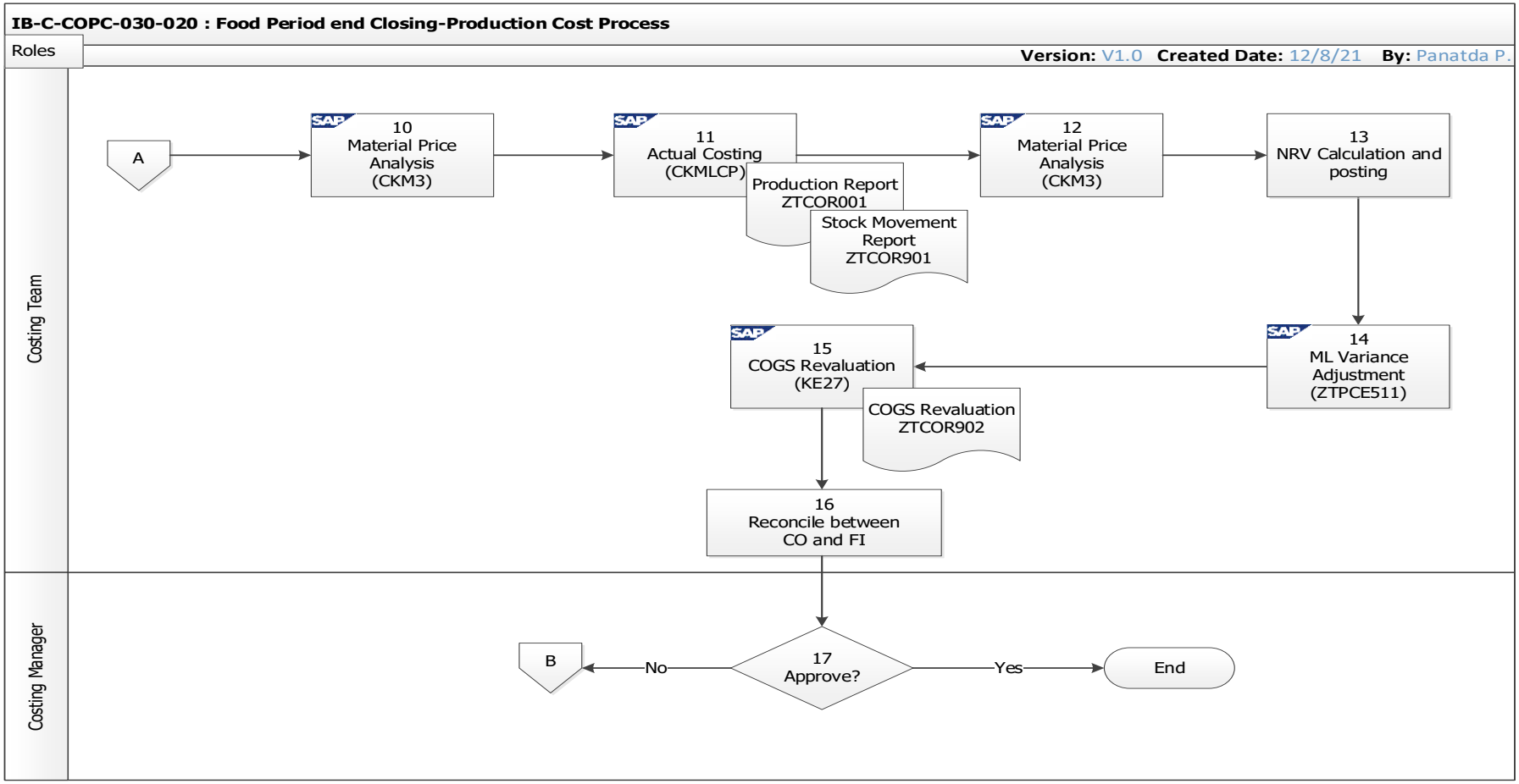
SAP Implementation Project
Module: Controlling



Course Overview

IB-C-COPC-030-020 Food Product Costing Period-End Closing (2/2)

SAP Implementation Project
Module: Controlling



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- **Actual Costing Overview**
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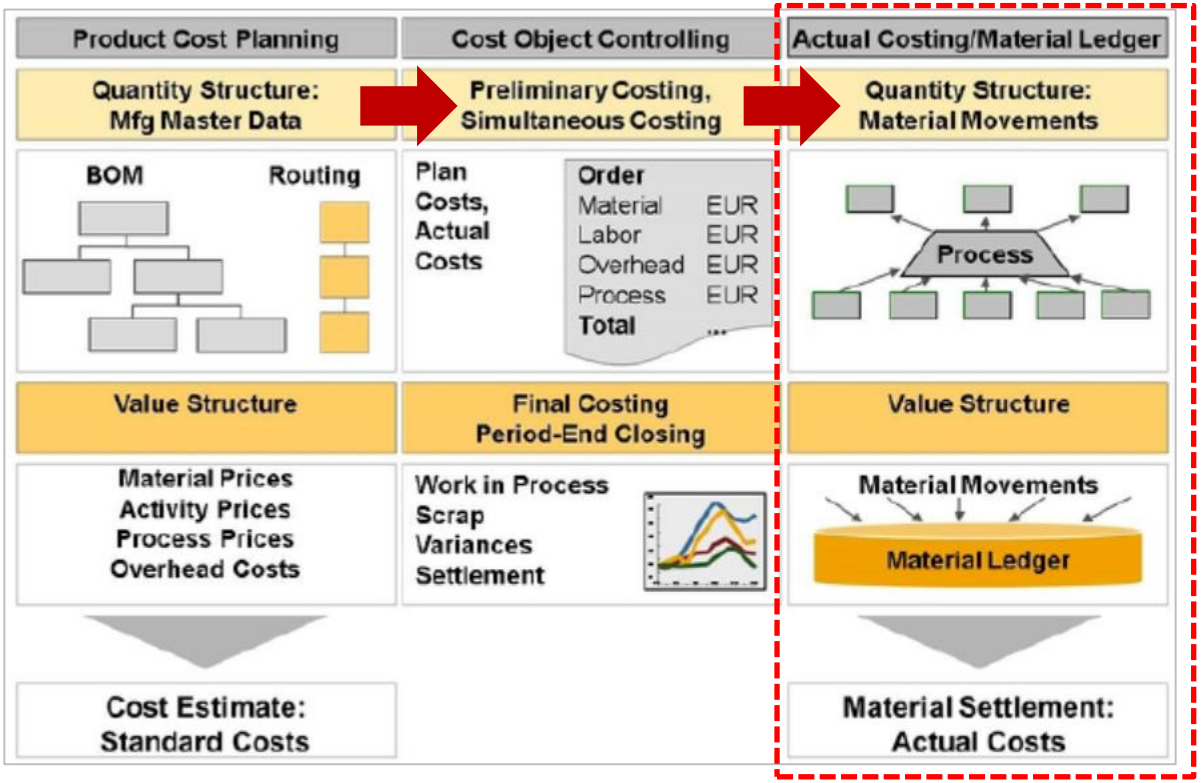
- Material Price Change
- Q&A

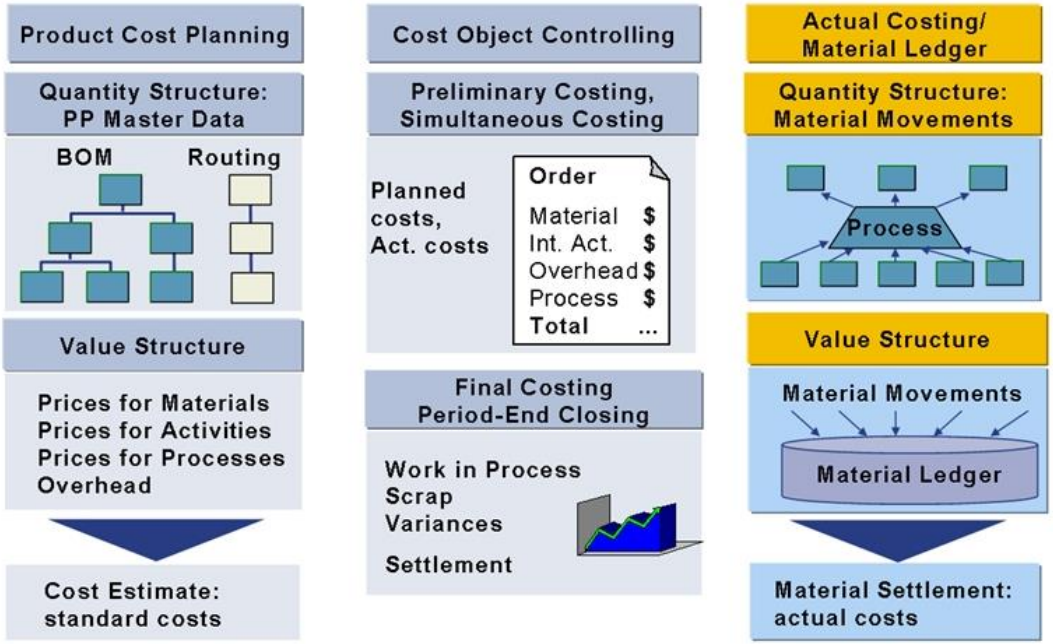
Material Ledger Overview

Actual Costing/Material Ledger



Actual Costing Overview

Actual Costing/Material Ledger



Actual costing is used to calculate the actual cost of goods manufactured at the end of the period.

The result can be saved in the material master as a periodic average price for the closed period. The quantity structure is derived dynamically from the material movements in the SAP S/4 HANA application.

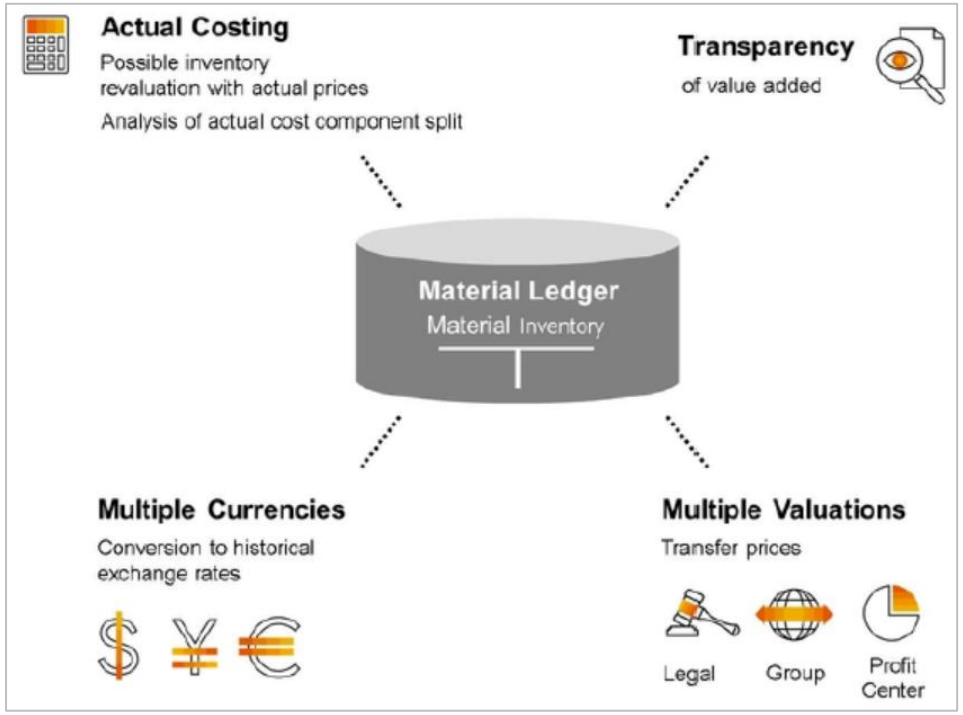
The values connected with these movements are collected in the material ledger. With multilevel settlement, you allocate variances over multiple procurement levels.

Betagro – IB Material Currencies as below:

- Company Code Currency (USD,LAK)
- Group Currency (THB)
- Hard Currency (USD)

Actual Costing Overview

Actual Costing/Material Ledger



Concept Behind Actual Costing

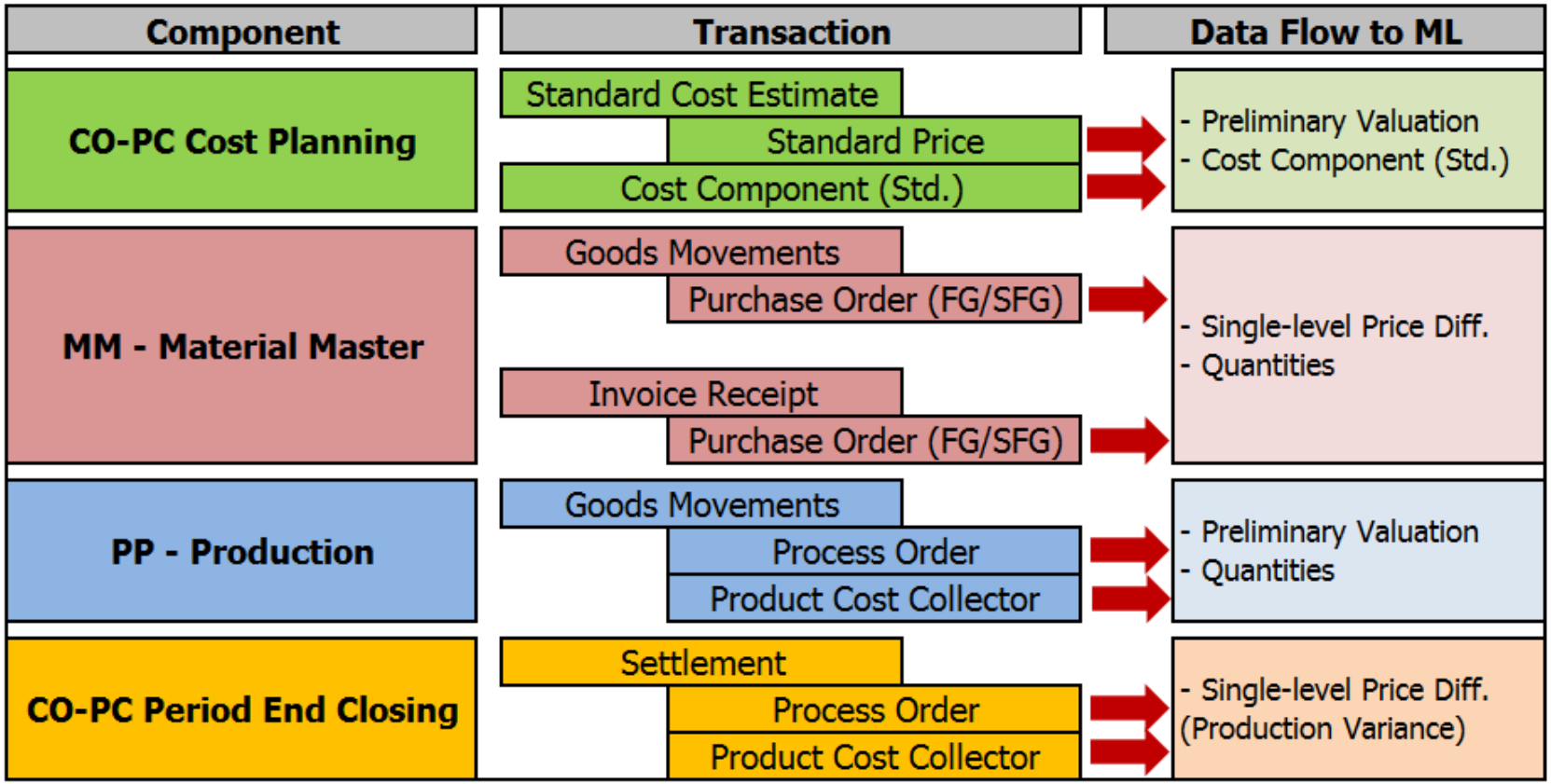
When you use actual costing, all goods movements within a period are valuated preliminarily at the standard price. At the same time, all price and exchange rate differences for the material are collected in the material ledger.

At the end of the period, an actual price is calculated for each material based on the actual costs of the particular period.

The actual price that is calculated is called the ***periodic unit price*** and can be used to revaluate the inventory for the period to be closed. In addition, this actual price can be used as the standard price for the next period.

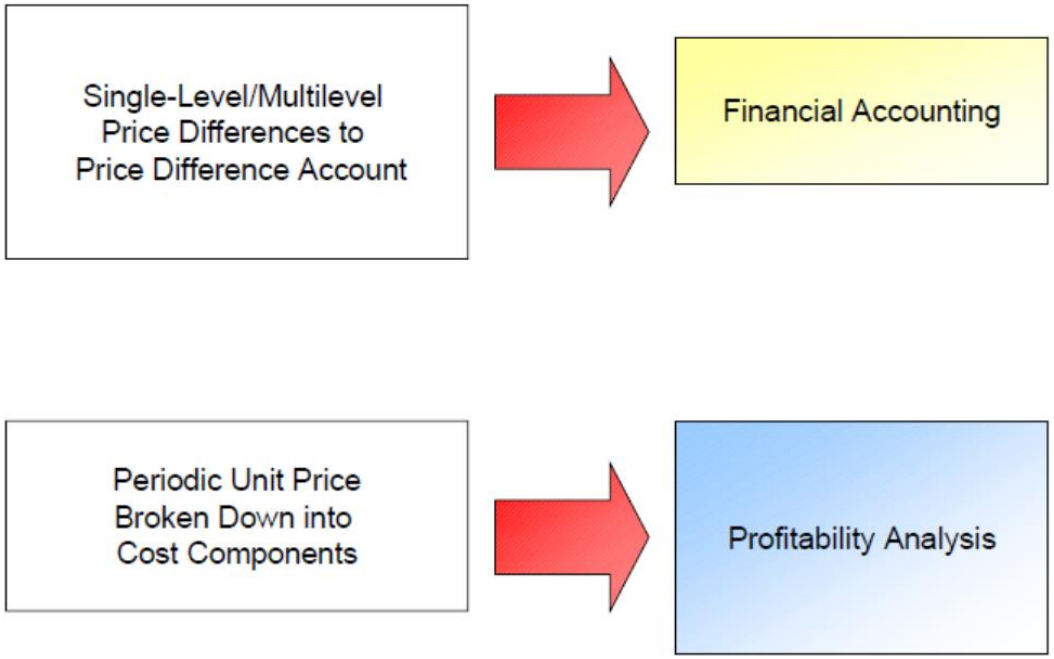
Actual Costing Overview

Value Flow into Material Ledger



Material Ledger Overview

Actual Costing/Material Ledger: Value Flow out of Material Ledger



Material Ledger Overview

Actual Costing/Material Ledger: Price Control and Price Determination

Combinations of Price Control and Price

Price Determination	Price Control Indicator S	Price Control Indicator V
3 single-/multilevel	**Standard price** (with the moving average price for information)	**Not an option** as the valuation price of the current posting period If you revaluate the material inventories at the time of the closing entry, the **periodic unit price** is stored as the valuation price for the closed posting period under price control indicator *V*.
2 transaction-based	**Standard price** (with the moving average price for information purposes)	**Moving average price**

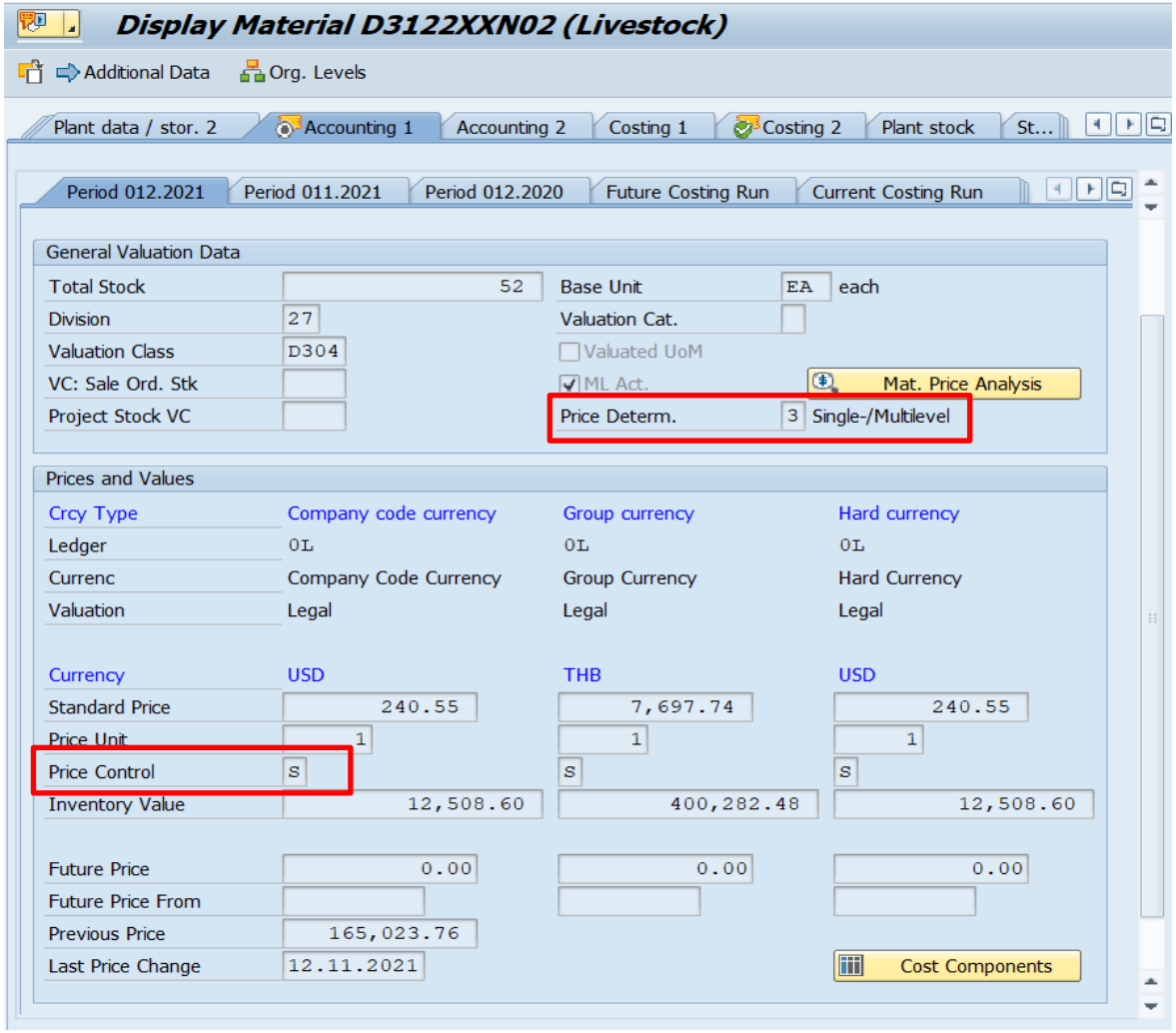
Price Determination indicator in the material master determines whether Price determination is:

- Transaction-based
- Single-level / multilevel

These control parameters are in the Accounting 1 view of the material's master record.

Actual Costing Overview

Material Master: Price Control and Price Determination

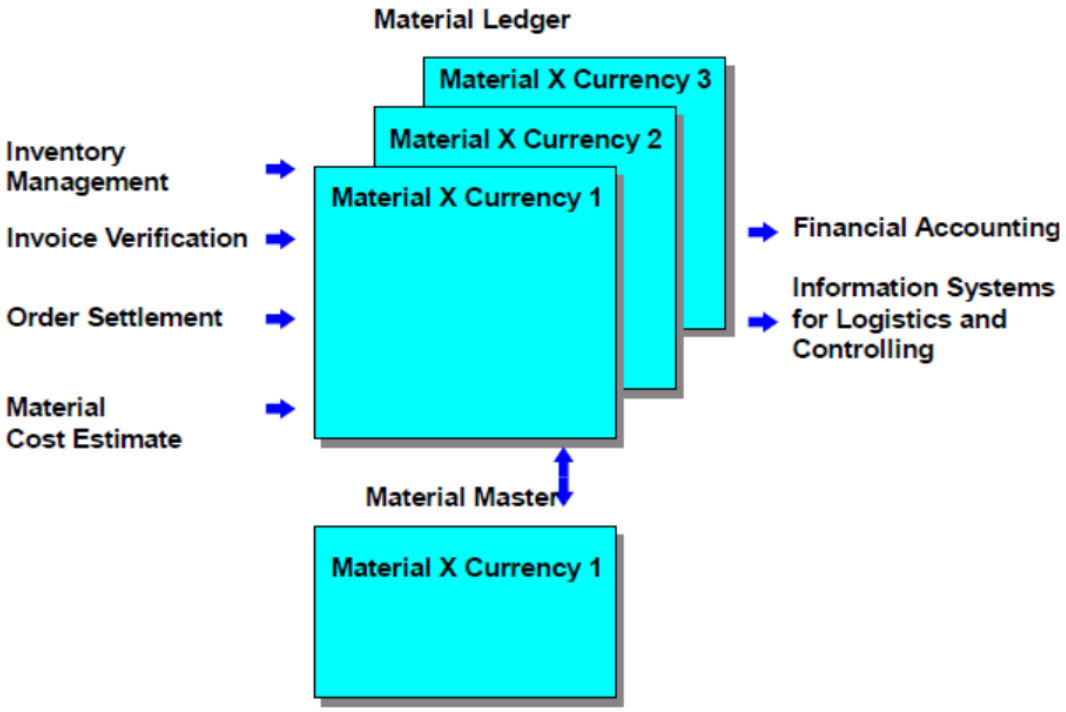


Certain prerequisites in Customizing must be met in order to valuate a material using the material ledger:

- The material ledger must be active for the material.
- The material must be assigned to a valuation class.
- The material type must allow the material's valuation to be updated.

Material Ledger Overview

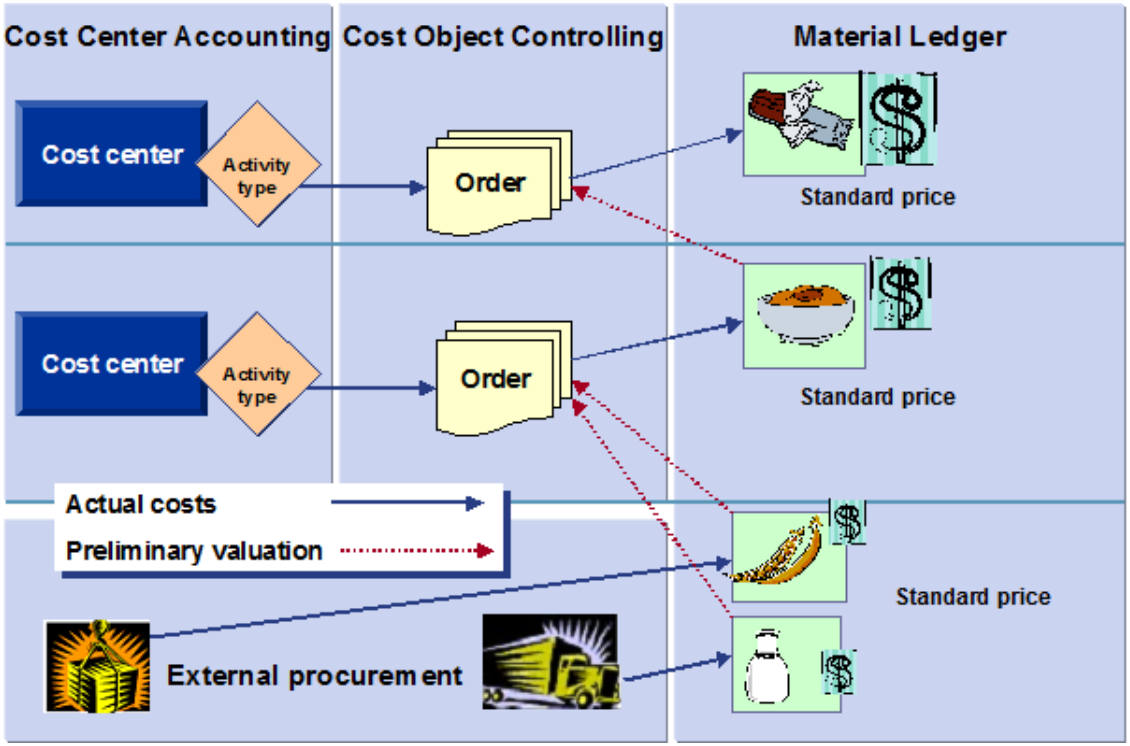
Actual Costing/Material Ledger: Actual Data of Material Ledger



When the material ledger is active, the system automatically collects specific information on valuation-relevant transactions and account postings from inventory management, invoice verification and order settlement, and uses this data during material price determination.

Actual Costing Overview

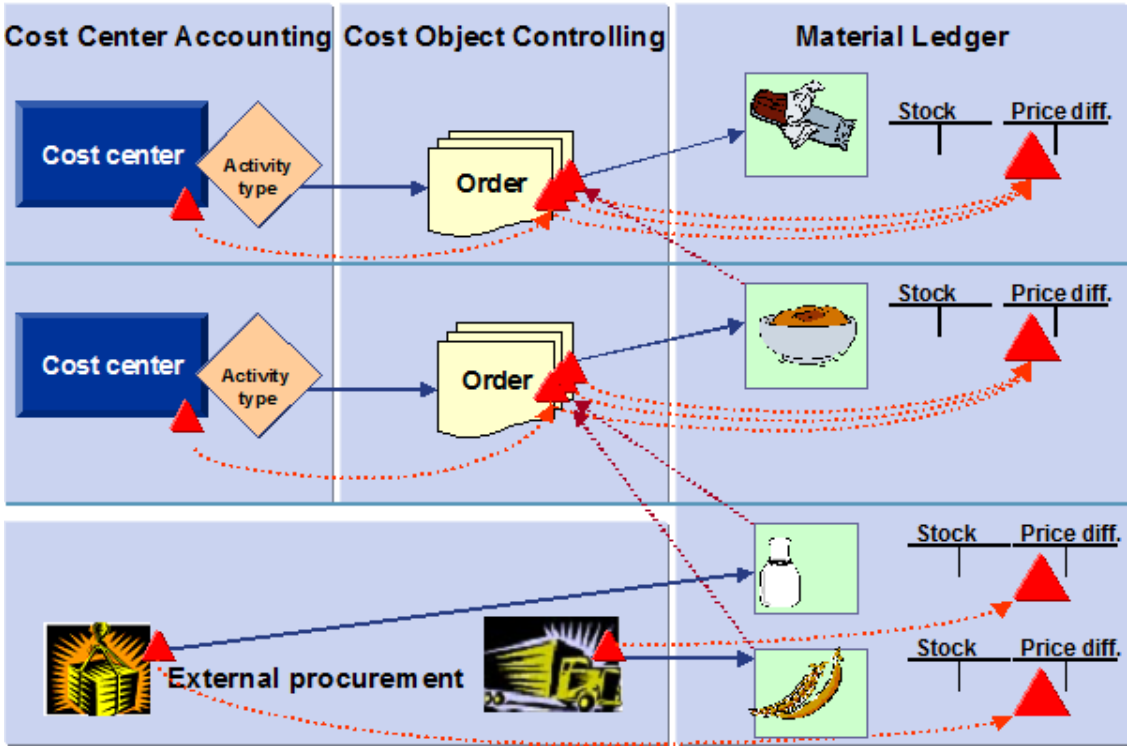
Preliminary Valuation Price



Preliminary Valuation is Value of the material with the indicator "Price determination 3" in the material master. The transaction was posted at the standard price with this value.

Actual Costing Overview

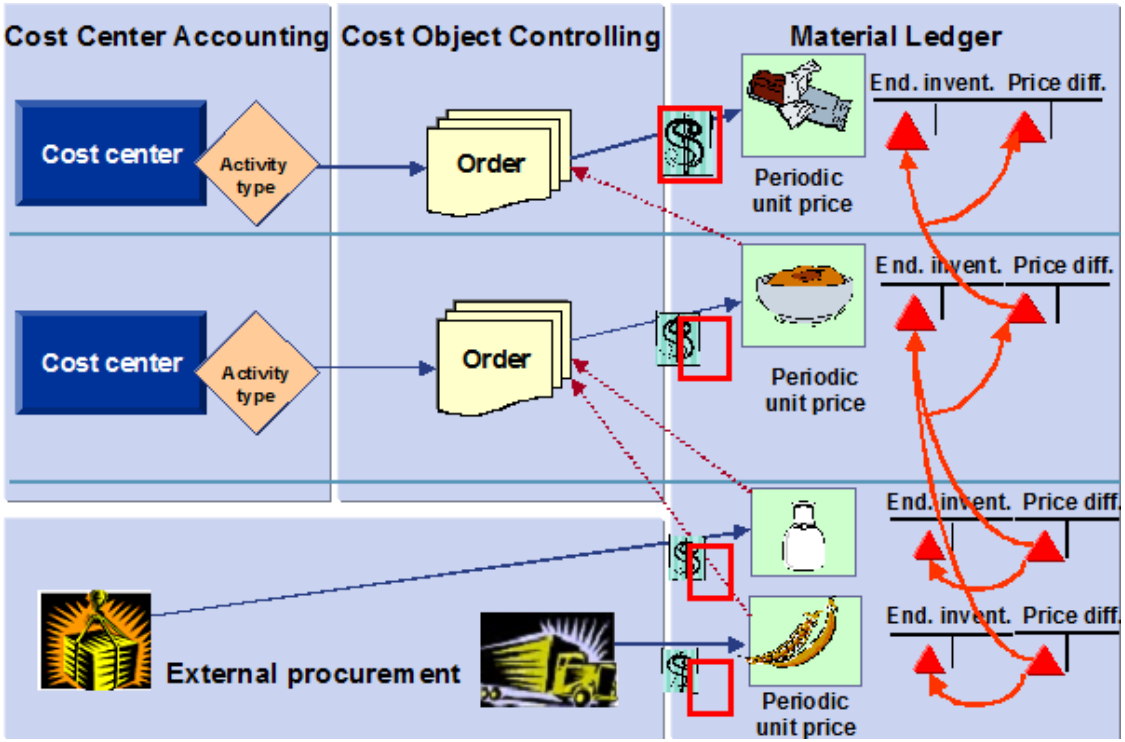
Single-Level Price Determination



Single-level price variance is the price variance of the Material from Procurement or Process order/Product cost collector settlement.

Actual Costing Overview

Multi-Level Price Determination



Multi-level price variance is the variance to allocate to next production process. So Single-level price variance of raw materials will allocate to Semi-FG then price variance of Semi-FG will allocate to FG follows Production process step.

**For Betagro ,Raw materials has price control = "V" (Moving average) so there is NO Single-level price variance for raw material. No price variance from RM allocates to Semi-FG.

The Cost of raw material will be included in Semi-FG by moving average price of the transaction date.

Actual Costing Material Ledger: Transactions

Actual Costing Material Ledger Transaction consists of:

T-Code: **CKM3**
Display Material Price Analysis

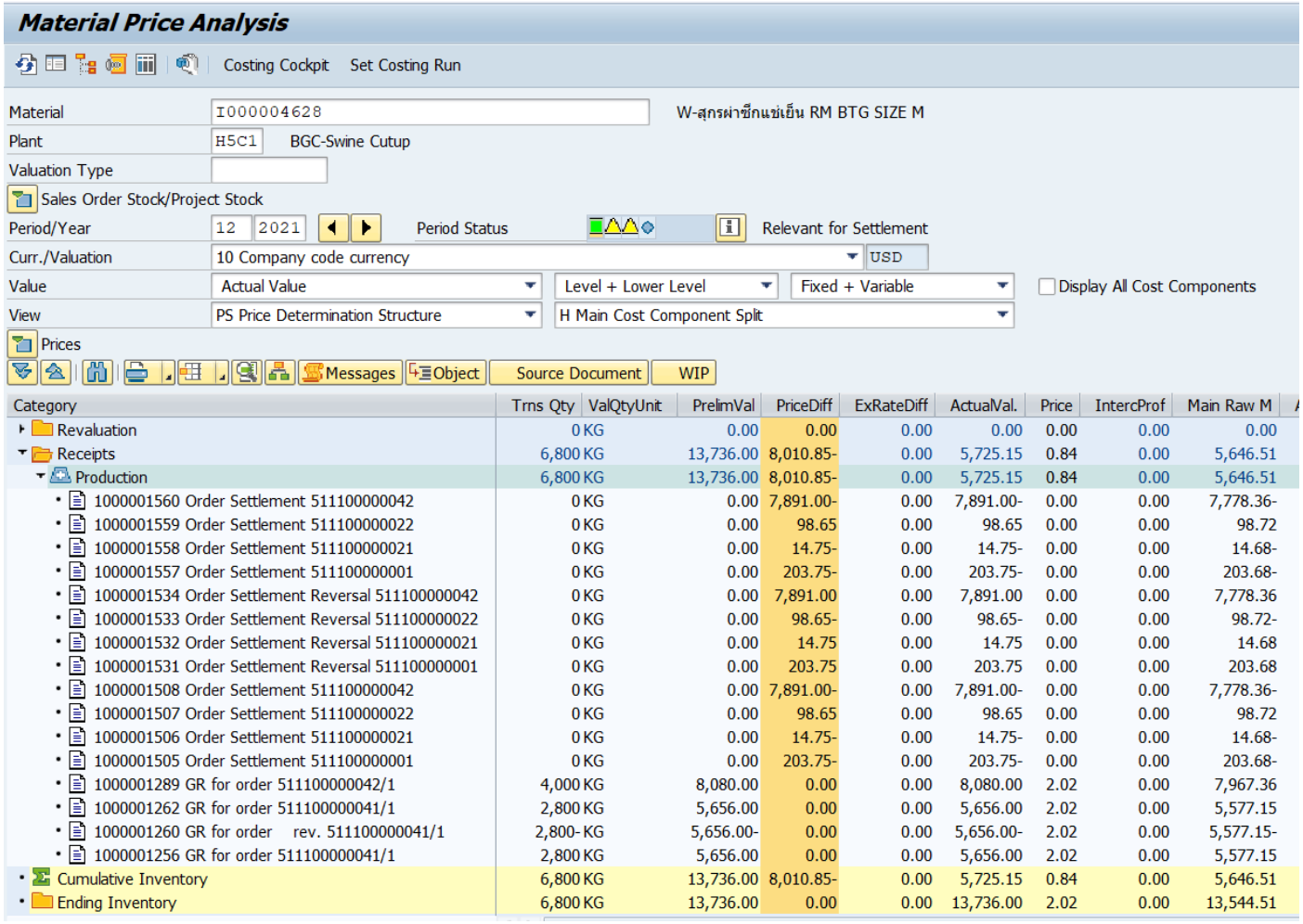
T-Code: **MR22**
Actual Cost (Debit/Credit Material)

Course Outline

- Course Overview
- Actual Costing Overview
- **Material Price Analysis**
- Material Price Change
- Q&A

Actual Costing Material Ledger

CKM3 – Material Price Analysis (1/3)



Material Price Analysis

Costing Cockpit | Set Costing Run

Material	I000004628	W-สุกรผ่าซีกแช่เย็น RM BTG SIZE M
Plant	H5C1	BGC-Swine Cutup
Valuation Type		

Sales Order Stock/Project Stock

Period/Year: 12 / 2021 | Period Status | Relevant for Settlement

Curr./Valuation: 10 Company code currency | USD

Value: Actual Value | Level + Lower Level | Fixed + Variable | Display All Cost Components

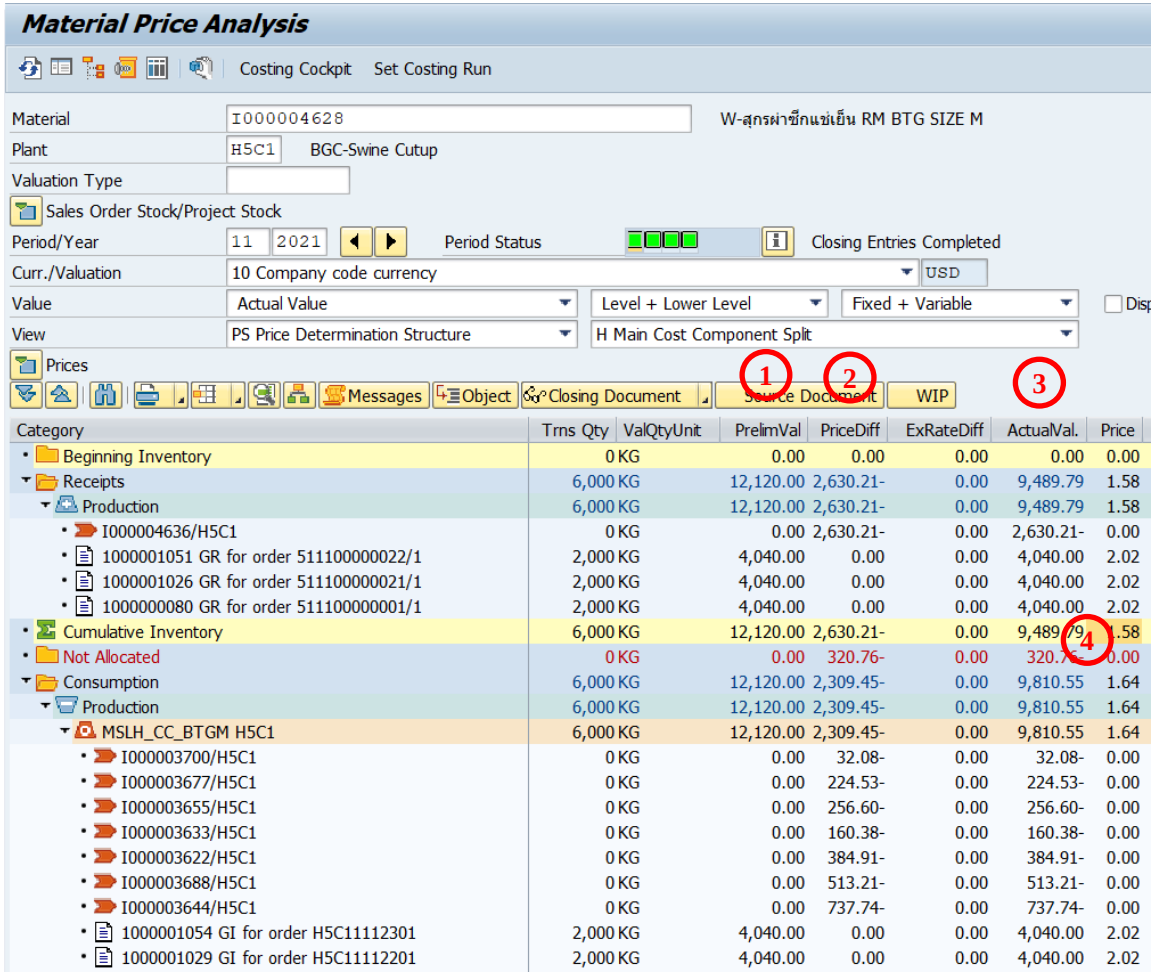
View: PS Price Determination Structure | H Main Cost Component Split

Prices

Messages | Object | Source Document | WIP

Category	Trns Qty	ValQtyUnit	PrelimVal	PriceDiff	ExRateDiff	ActualVal.	Price	IntercProf	Main Raw M
Revaluation	0	KG	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Receipts	6,800	KG	13,736.00	8,010.85-	0.00	5,725.15	0.84	0.00	5,646.51
Production	6,800	KG	13,736.00	8,010.85-	0.00	5,725.15	0.84	0.00	5,646.51
1000001560 Order Settlement 511100000042	0	KG	0.00	7,891.00-	0.00	7,891.00-	0.00	0.00	7,778.36-
1000001559 Order Settlement 511100000022	0	KG	0.00	98.65	0.00	98.65	0.00	0.00	98.72
1000001558 Order Settlement 511100000021	0	KG	0.00	14.75-	0.00	14.75-	0.00	0.00	14.68-
1000001557 Order Settlement 511100000001	0	KG	0.00	203.75-	0.00	203.75-	0.00	0.00	203.68-
1000001534 Order Settlement Reversal 511100000042	0	KG	0.00	7,891.00	0.00	7,891.00	0.00	0.00	7,778.36
1000001533 Order Settlement Reversal 511100000022	0	KG	0.00	98.65-	0.00	98.65-	0.00	0.00	98.72-
1000001532 Order Settlement Reversal 511100000021	0	KG	0.00	14.75	0.00	14.75	0.00	0.00	14.68
1000001531 Order Settlement Reversal 511100000001	0	KG	0.00	203.75	0.00	203.75	0.00	0.00	203.68
1000001508 Order Settlement 511100000042	0	KG	0.00	7,891.00-	0.00	7,891.00-	0.00	0.00	7,778.36-
1000001507 Order Settlement 511100000022	0	KG	0.00	98.65	0.00	98.65	0.00	0.00	98.72
1000001506 Order Settlement 511100000021	0	KG	0.00	14.75-	0.00	14.75-	0.00	0.00	14.68-
1000001505 Order Settlement 511100000001	0	KG	0.00	203.75-	0.00	203.75-	0.00	0.00	203.68-
1000001289 GR for order 511100000042/1	4,000	KG	8,080.00	0.00	0.00	8,080.00	2.02	0.00	7,967.36
1000001262 GR for order 511100000041/1	2,800	KG	5,656.00	0.00	0.00	5,656.00	2.02	0.00	5,577.15
1000001260 GR for order rev. 511100000041/1	2,800-	KG	5,656.00-	0.00	0.00	5,656.00-	2.02	0.00	5,577.15-
1000001256 GR for order 511100000041/1	2,800	KG	5,656.00	0.00	0.00	5,656.00	2.02	0.00	5,577.15
Cumulative Inventory	6,800	KG	13,736.00	8,010.85-	0.00	5,725.15	0.84	0.00	5,646.51
Ending Inventory	6,800	KG	13,736.00	0.00	0.00	13,736.00	2.02	0.00	13,544.51

Actual Costing Material Ledger
CKM3 – Material Price Analysis (1/3)



Category	Trns Qty	ValQtyUnit	PrelimVal	PriceDiff	ExRateDiff	ActualVal.	Price
Beginning Inventory	0	KG	0.00	0.00	0.00	0.00	0.00
Receipts	6,000	KG	12,120.00	2,630.21-	0.00	9,489.79	1.58
Production	6,000	KG	12,120.00	2,630.21-	0.00	9,489.79	1.58
I000004636/H5C1	0	KG	0.00	2,630.21-	0.00	2,630.21-	0.00
1000001051 GR for order 511100000022/1	2,000	KG	4,040.00	0.00	0.00	4,040.00	2.02
1000001026 GR for order 511100000021/1	2,000	KG	4,040.00	0.00	0.00	4,040.00	2.02
1000000080 GR for order 511100000001/1	2,000	KG	4,040.00	0.00	0.00	4,040.00	2.02
Cumulative Inventory	6,000	KG	12,120.00	2,630.21-	0.00	9,489.79	1.58
Not Allocated	0	KG	0.00	320.76-	0.00	320.76-	0.00
Consumption	6,000	KG	12,120.00	2,309.45-	0.00	9,810.55	1.64
Production	6,000	KG	12,120.00	2,309.45-	0.00	9,810.55	1.64
MSLH_CC_BTGM H5C1	6,000	KG	12,120.00	2,309.45-	0.00	9,810.55	1.64
I000003700/H5C1	0	KG	0.00	32.08-	0.00	32.08-	0.00
I000003677/H5C1	0	KG	0.00	224.53-	0.00	224.53-	0.00
I000003655/H5C1	0	KG	0.00	256.60-	0.00	256.60-	0.00
I000003633/H5C1	0	KG	0.00	160.38-	0.00	160.38-	0.00
I000003622/H5C1	0	KG	0.00	384.91-	0.00	384.91-	0.00
I000003688/H5C1	0	KG	0.00	513.21-	0.00	513.21-	0.00
I000003644/H5C1	0	KG	0.00	737.74-	0.00	737.74-	0.00
1000001054 GI for order H5C11112301	2,000	KG	4,040.00	0.00	0.00	4,040.00	2.02
1000001029 GI for order H5C11112201	2,000	KG	4,040.00	0.00	0.00	4,040.00	2.02

1. **Preliminary Valuation** is Value of the material with the indicator "Price determination 3" in the material master. The transaction was posted at the standard price with this value.

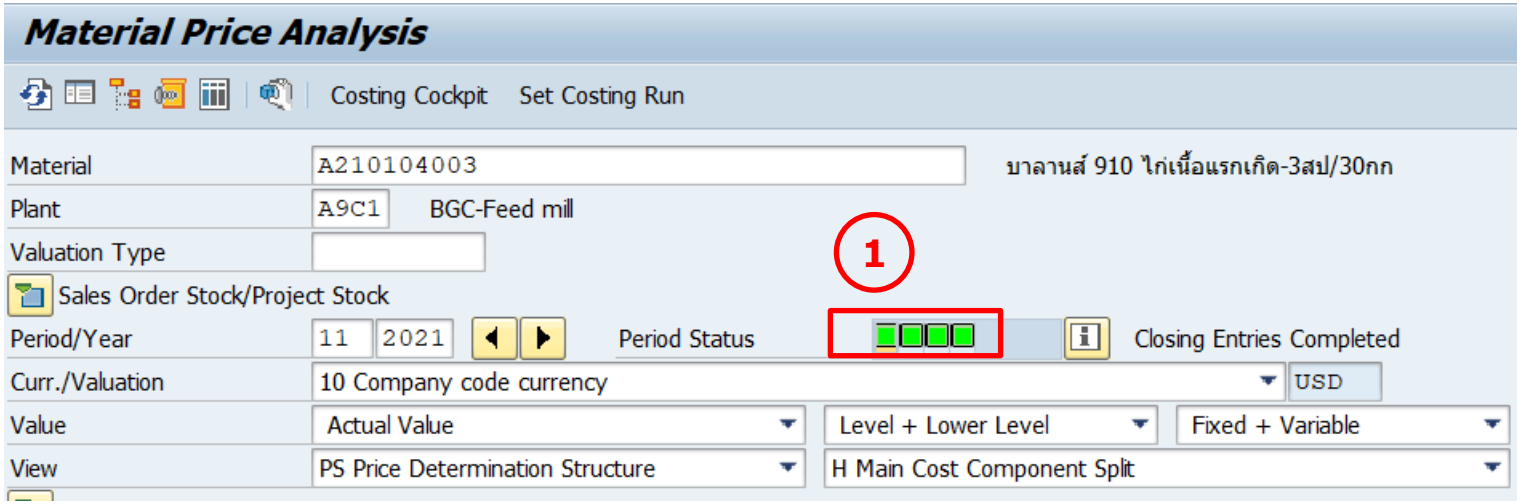
2. **Price Difference** is the difference value between total posted amount and preliminary valuation amount.

3. **Actual Value** is the sum of "Preliminary valuation" and "Price difference".

4. **Periodic Unit Price** is "Actual Price" to valuate a material after the closing entry at the period-end.

Actual Costing Material Ledger

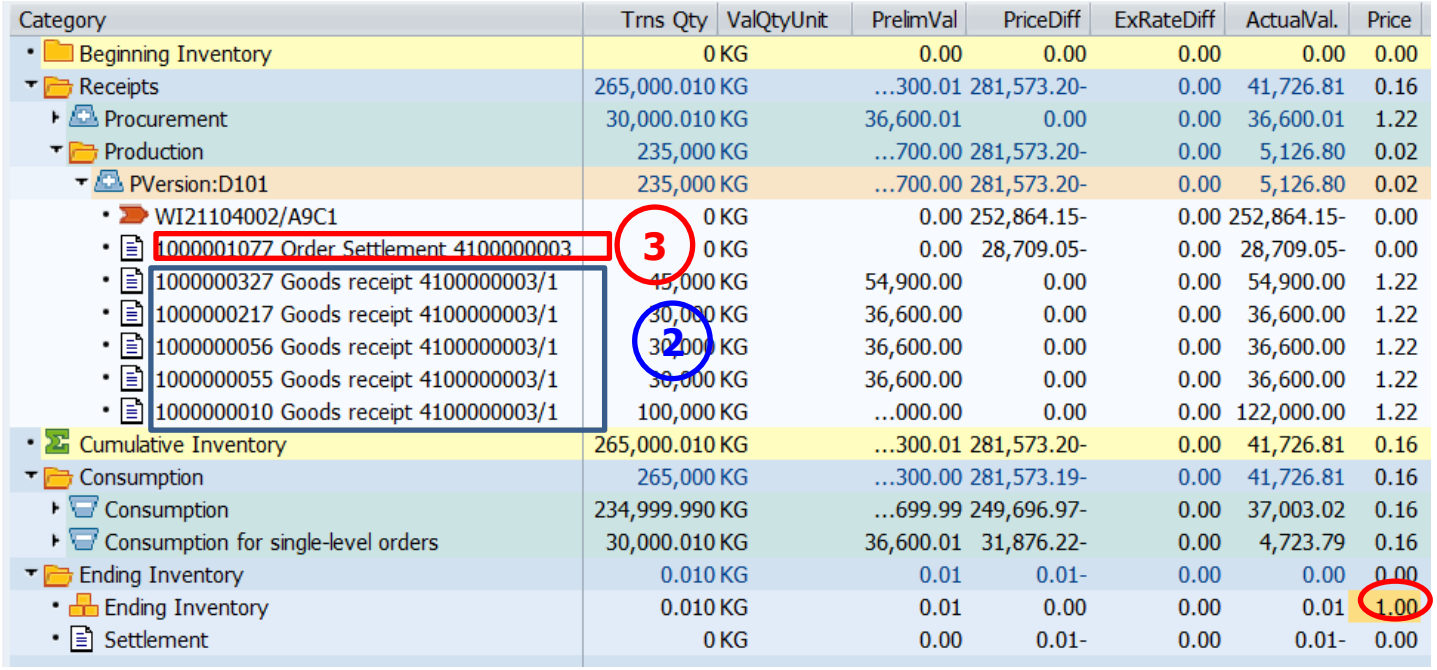
CKM3 – Material Price Analysis(2/3)



1. **Period Status** is the indicator to display Period End Closing of Actual Costing for each step as below:
   - Single-level Price Determination Completed
   - Multi-level Price Determination Completed
   - Revaluation of Consumption Completed
   - WIP Revaluation Completed
   - Closing Entry Completed

Actual Costing Material Ledger

CKM3 – Material Price Analysis (3/3)



Category	Trns Qty	ValQtyUnit	PrelimVal	PriceDiff	ExRateDiff	ActualVal.	Price
Beginning Inventory	0	KG	0.00	0.00	0.00	0.00	0.00
Receipts	265,000.010	KG	...300.01	281,573.20-	0.00	41,726.81	0.16
Procurement	30,000.010	KG	36,600.01	0.00	0.00	36,600.01	1.22
Production	235,000	KG	...700.00	281,573.20-	0.00	5,126.80	0.02
PVersion:D101	235,000	KG	...700.00	281,573.20-	0.00	5,126.80	0.02
WI21104002/A9C1	0	KG	0.00	252,864.15-	0.00	252,864.15-	0.00
1000001077 Order Settlement 4100000003	0	KG	0.00	28,709.05-	0.00	28,709.05-	0.00
1000000327 Goods receipt 4100000003/1	45,000	KG	54,900.00	0.00	0.00	54,900.00	1.22
1000000217 Goods receipt 4100000003/1	30,000	KG	36,600.00	0.00	0.00	36,600.00	1.22
1000000056 Goods receipt 4100000003/1	30,000	KG	36,600.00	0.00	0.00	36,600.00	1.22
1000000055 Goods receipt 4100000003/1	30,000	KG	36,600.00	0.00	0.00	36,600.00	1.22
1000000010 Goods receipt 4100000003/1	100,000	KG	...000.00	0.00	0.00	122,000.00	1.22
Cumulative Inventory	265,000.010	KG	...300.01	281,573.20-	0.00	41,726.81	0.16
Consumption	265,000	KG	...300.00	281,573.19-	0.00	41,726.81	0.16
Consumption	234,999.990	KG	...699.99	249,696.97-	0.00	37,003.02	0.16
Consumption for single-level orders	30,000.010	KG	36,600.01	31,876.22-	0.00	4,723.79	0.16
Ending Inventory	0.010	KG	0.01	0.01-	0.00	0.00	0.00
Ending Inventory	0.010	KG	0.01	0.00	0.00	0.01	1.00
Settlement	0	KG	0.00	0.01-	0.00	0.01-	0.00

2. Transactions from Single-level Price Determination
3. Multi-level Price Determination Transaction
4. Actual Price after Actual Costing Period End Closing is finished. The Price is called "**Periodic Unit Price**" (PuP)

System will uses PuP to valuate a material after the closing entry at the period-end.

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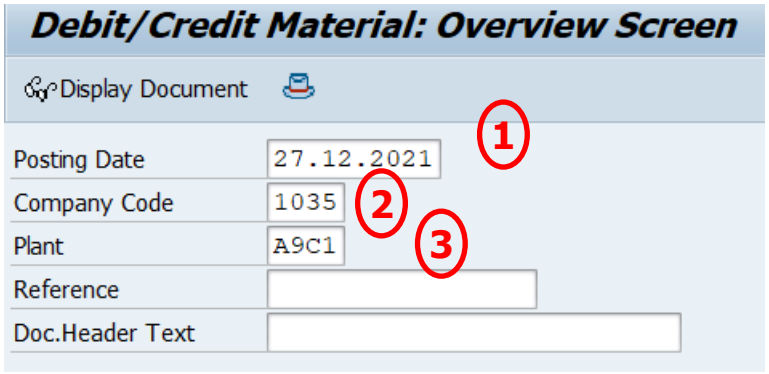
- Material Price Analysis
- **Material Price Change**
- Q&A

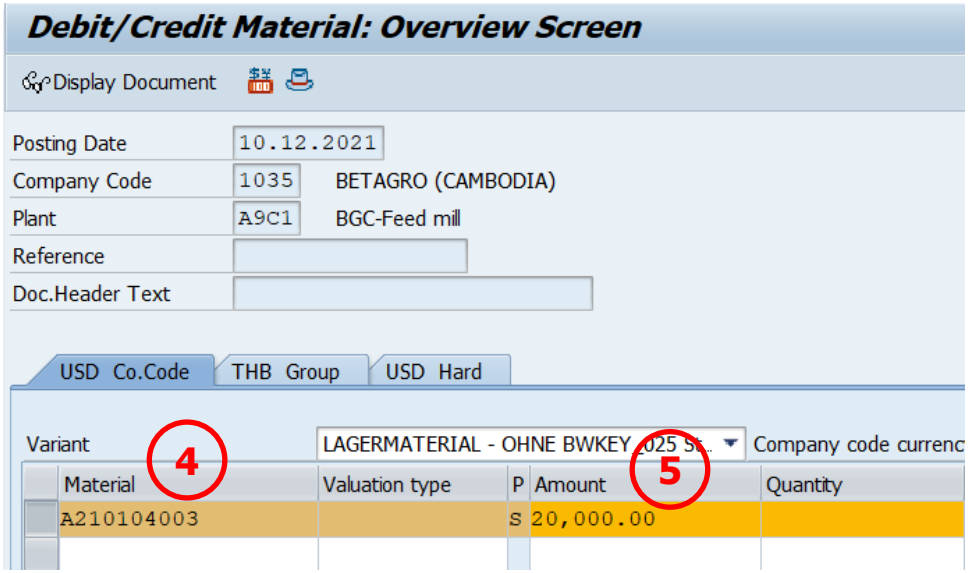
Actual Costing Material Ledger

MR22 – Material Price Change



1. **Posting Date**
2. **Company Code** Enter Company Code of Material
3. **Plant**

Press ENTER to next process

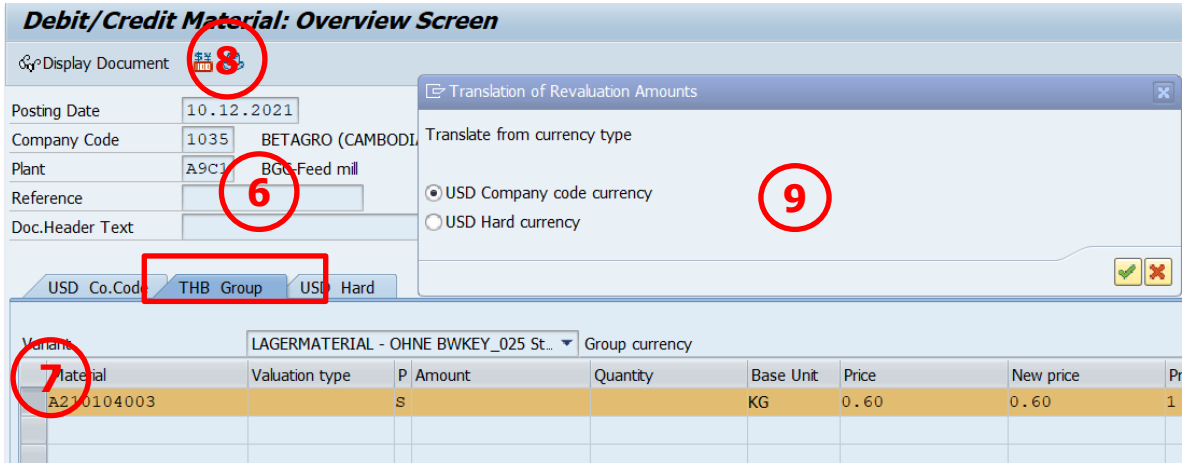


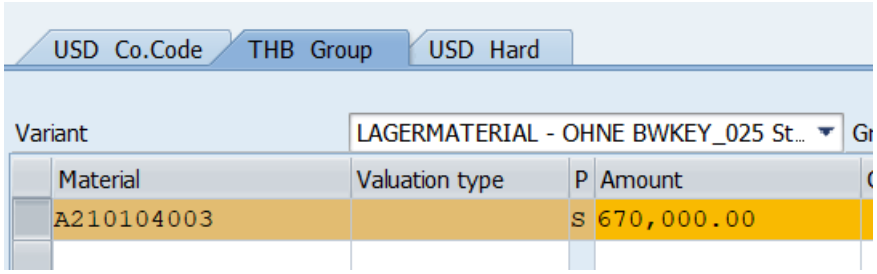
4. **Material** Enter Material
5. **Amount** Enter Amount to calculate the new PuP

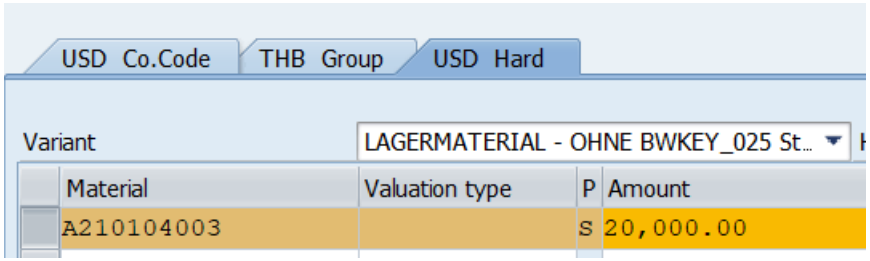
Please see the Example calculation Amount at the example slide

Actual Costing Material Ledger

MR22 – Material Price Change







After input amount in Tab "**USD Co.Code**" of Step 5, Material Ledger collect 3 Currencies , Company Code, Group and Hard currency. So you need to convert the amount for Group and Hard Currency also.

6. Click Tab "**THB Group**"
7. Press the grey square to select the line
8. Press to save and convert the amount
9. System pop up option for origin currency exchange. Select "USD Company code currency" system will automatically convert the amount.

Press ENTER system will automatically convert the amount.

Repeat step 6-9 for Tab "**USD Hard**" and SAVE.

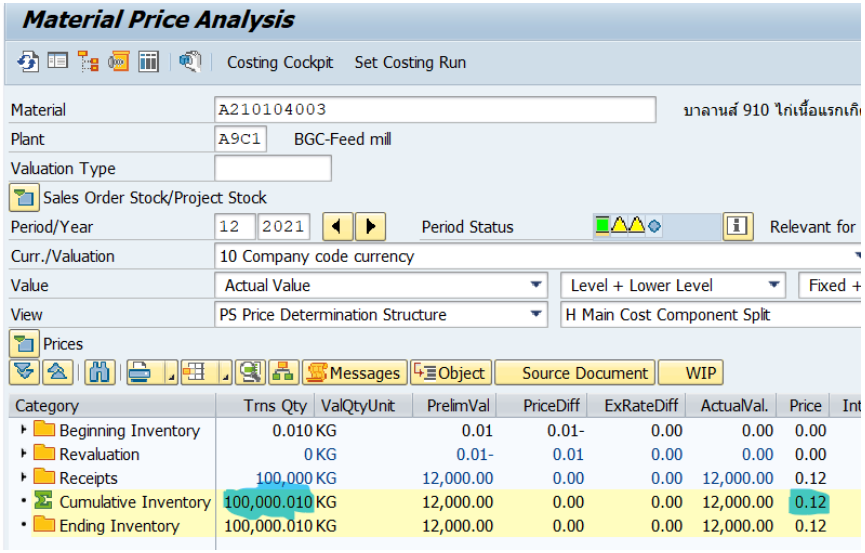
Actual Costing Material Ledger

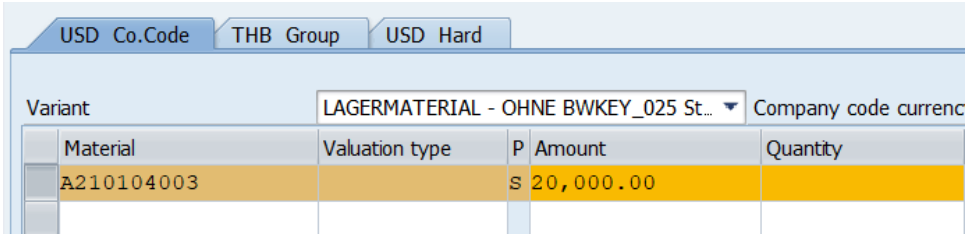
MR22 – Material Price Change

Example: Calculation of Amount to change Periodic Unit Price

Amount = (Desired PUP – PUP before change) x Cumulative Quantity

Material Price Analysis





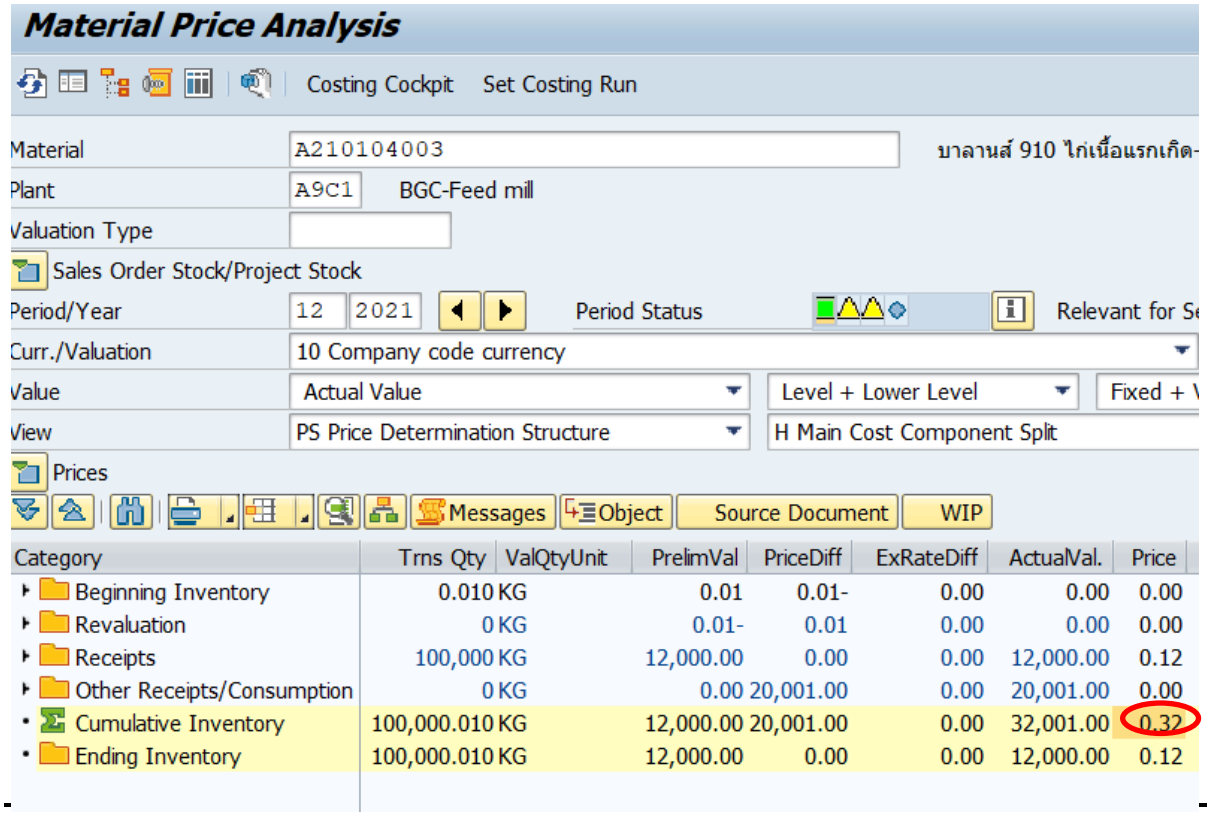
Actual Costing Material Ledger

MR22 – Material Price Change

Example: Calculation of Amount to change Periodic Unit Price

Amount = (Desired PUP – PUP before change) x Cumulative Quantity

Material Price Analysis – After Price change



The new PUP = 0.32

Exercise:

- 1. Price Change for Material A110101021 Plant A9C1
  - Current PuP = _____
  - New PuP = 750
  - Amount USD Co. Code = _____
  - Amount THB Group = _____
  - Amount USD Hard = _____

- 2. Price Change for Material A110201015 Plant 9C00
  - Current PuP = _____
  - New PuP = 1
  - Amount USD Co. Code = _____
  - Amount THB Group = _____
  - Amount USD Hard = _____

Exercise:

- 3. Price Change for Material A110401294 Plant 9C00
  - Current PuP = _____
  - New PuP = 0.5
  - Amount USD Co. Code = _____
  - Amount THB Group = _____
  - Amount USD Hard = _____

Course Outline

- Course Overview
- Actual Costing Overview
- Material Price Analysis
- Material Price Change
- Q&A

Q&A

Exercise and Test