SAP

CONTROLING

MIX COSTING

STEP BY STEP

NOTES

- BY ASHRAF

Note: Please LeaveYour Valuable Comments To Improve This Material

Configuration Of Mixed Costing

Mixed costing is very important. For ex. it's the only way to release a standard cost estimate for each procurement alternative that is associated with a valuation type.
Mixed Cost estimates let you to combine the costs of different procurement alternates into an inventory value

When you have procurement alternatives for the same materials, such as two production lines or two vendors, you can use mixed cost estimates.

When you need inventory valuation to reflect the mixed procurement costs

The prerequisite for the mixed costing is as below:
 – A quantity structure type is configured in the customizing
 – This quantity structure type is associated to a costing version in the Customizing.
 – The Procurement alternatives for the material have bee defined
 – The mixing ratios for the procurement alternatives are defined based on the quantity structure type
 – The material is costed with the above-defined costing version.
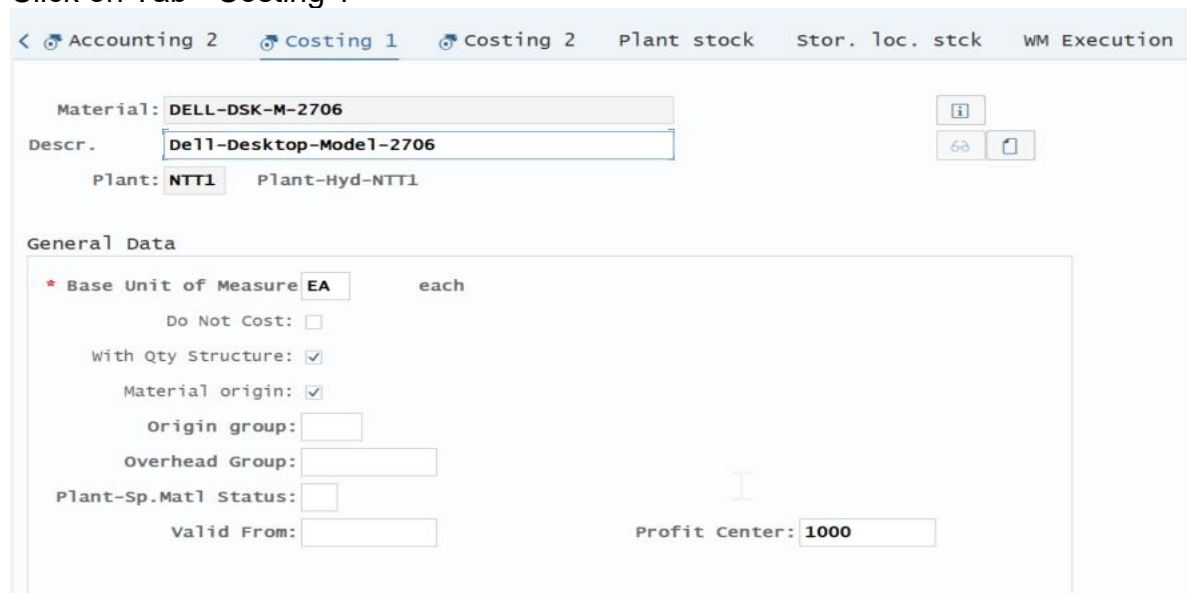
Case Study
Combination of 2 Products
01. Hardware - 80%
02. Software - 20%

01. Create Finished Product - MM01
Material - Dell -DSK-M-2706
Click on Tab - Costing 1

Scroll Down

Click on Version

Give the Following Information

02. Create Raw Material - Hardware
        Standard Value - 20,000
03. Create Raw Material - Software
        Standard Value - 10,000

04. Create Bill Of Material - CS01

Here we are going to Create 02 Bill of Materials for the Same Product I.e Finished Goods

Material - Dell-Dsk-M-2706
Plant - NTT1
BOM Usage - 1   Production
Alternative -
Valid From - <System Date - Automatic>
Press Enter

Press Enter
Give the Following Details

Item	ICt	Component	Component description	Quantity	UoM	Asm	SIs	Valid From	Valid to	Change No.	P...	SortStrng	Item ID	Chg No. To	G.	F...	L...
0010	L	HARDWARE	Hardware	1	EA	☐	☐	05.01.2022	31.12.9999		☐		00000001		☐		

Material: DELL-DSK-M-2706 Dell-Desktop-Model-2706
Plant: NTT1 Plant-Hyd-NTT1
Alternative BOM: 1

Save
Msg: Creating BOM for Material Dell-Dsk-M-2706

05.Create Bill Of Material - CS01 (Create 02 BOM - Alternative BOM)
Msg: Alternative 2 Added to BOM - Press Enter and Ignore the Msg
Material - Dell-Dsk-M-2706
Plant - NTT1
BOM Usage - 02
Valid From -
Press Enter
Give the Following Details - Maintain Different Quantities

Material: DELL-DSK-M-2706 Dell-Desktop-Model-2706
Plant: NTT1 Plant-Hyd-NTT1
Alternative BOM: 2

Item	ICt	Component	Component description	Quantity	UoM	Asm	SIs	Valid From	Valid to	Change No.	P...	SortStrng	Item ID	Chg No. To	G.	F...
0010	L	SOFTWARE	software	1	EA	☐	☐	05.01.2022	31.12.9999		☐		00000002			☐
0020						☐	☐				☐					☐

Save
Msg: BOM for Material Dell-Dsk-M-2706 - Changed

☑ BOM for material DELL-DSK-M-2706 changed

06. Create Routing - CA01
Here we are going to Create 02 Routing for the Same Product I.e Finished Goods
Material - Dell-Dsk-M-2706
Plant - NTT1
Valid Key Date - <System Date - Automatic>
Press Enter
General Data
Usage   - 1
Overall Status   - 4
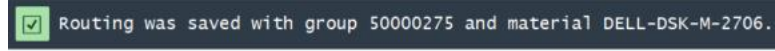Click on **Operations**
Give the following Data

| ☐ | SAP | | | | | | | | Change Routing: Operation Overview | | Reference | Work center | Allocation | Detail | Sequences | More ⌄ | Q | Q⁺ | Exit |

Group: 50000275   Group Counter: 1   Dell-Desktop-Model-2706
Material: DELL-DSK-M-2706   Dell-Desktop-Model-2706

Operation Overview

O...	SOp	Work c...	P...	C...	Stand...	Description	L...	PRT	C...	O...	P...	C...	S...	Base Quantity	U...	Fact...	U...	Acti...	Machine	Unit	Acti...	Labor
0010		ASSEMBLI	NTT1	PP01		Assembling	☐	☐	☐	☐	☐	☐	☐	1	EA				1	MIN	ASSEMB	
0020		QUALITY	NTT1	PP01		Quality Checks	☐	☐	☐	☐	☐	☐	☐	1	EA				1	MIN	QUALIT	
0030		PAKING	NTT1	PP01		Packing	☐	☐	☐	☐	☐	☐	☐	1	EA				1	MIN	PACKIN	
0040			NTT1				☐	☐	☐	☐	☐	☐	☐	1	EA							

Save

> ☑ Routing was saved with group 50000275 and material DELL-DSK-M-2706.

07. Create Second Routing for the Same Material

Material - Dell-Dsk-M-2706

Plant - NTT1

Valid Key Date - <System Date - Automatic>

Press Enter
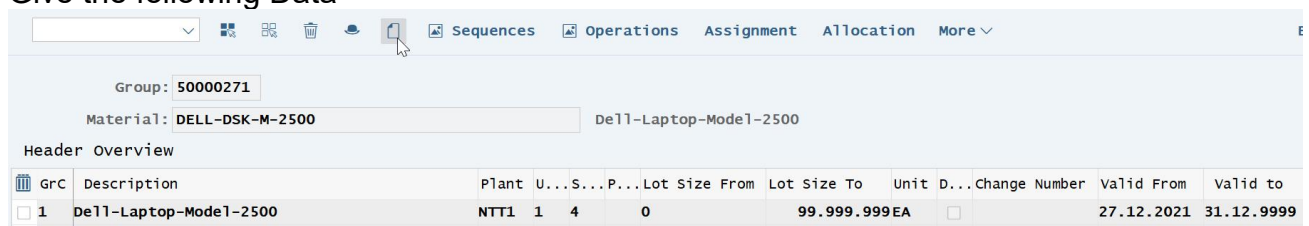
General Data

Usage   - 1

Overall Status   - 4

Click on **Operations**

Give the following Data

	⚙ ⚙ 🗑 🦑 📋	🔳 Sequences	🔳 Operations	Assignment	Allocation	More ∨	
Group: 50000271							
Material: DELL-DSK-M-2500			Dell-Laptop-Model-2500				

Header Overview

🗑 GrC	Description	Plant	U...S...P...	Lot Size From	Lot Size To	Unit	D...	Change Number	Valid From	Valid to
☐ 1	Dell-Laptop-Model-2500	NTT1 1 4	0		99.999.999	EA	☐		27.12.2021	31.12.9999

The following Data will be display - as we have already entered

Click **Create Button**

General Data

Usage   - 1

Overall Status   - 4

Click on **Operations**

Group: 50000275	Group Counter: 2	Dell-Desktop-Model-2706
Material: DELL-DSK-M-2706		Dell-Desktop-Model-2706

Operation Overview

O...	SOp	Work c...	P...	C...	Standa...	Description	L...	PRT	C...	O...	P...	C...	S...	Base Quantity	U...	Factory O...	U...	Acti...	Machine	Unit	Acti...	Labor
☐ 0010		ASSEMBLI	NTT1	PP01		Assembling	☐	☐	☐	☐	☐		☐	1	EA				1	MIN	ASSEMB	
☐ 0020		QUALITY	NTT1	PP01		Quality Check	☐	☐	☐	☐	☐		☐	1	EA				1	MIN	QUALIT	
☐ 0030		PAKING	NTT1	PP01		Packing	☐	☐	☐	☐	☐		☐	1	EA				1	MIN	PACKIN	
☐ 0040			NTT1				☐	☐	☐	☐	☐		☐	1	EA							

Save

> ☑ Routing was saved with group 50000275 and material DELL-DSK-M-2706.

Overall Look of Routings

Material - Dell-Dsk-M-2706

Plant - NTT1

Valid Key Date - <System Date - Automatic>

Click on Operations

Group: 50000275	
Material: DELL-DSK-M-2706	Dell-Desktop-Model-2706

Header Overview

🗑 GrC	Description	Plant	U...S...P...	Lot Size From	Lot Size To	Unit	D...	Change Number	Valid From	Valid to	Created On	Created by
☐ 1	Dell-Desktop-Model-2706	NTT1 1 4	1		99.999.999	EA	☐		05.01.2022	31.12.9999	05.01.2022	IN39101
☐ 2	Dell-Desktop-Model-2706	NTT1 1 4	1		99.999.999	EA	☐		05.01.2022	31.12.9999	05.01.2022	IN39101
☐												
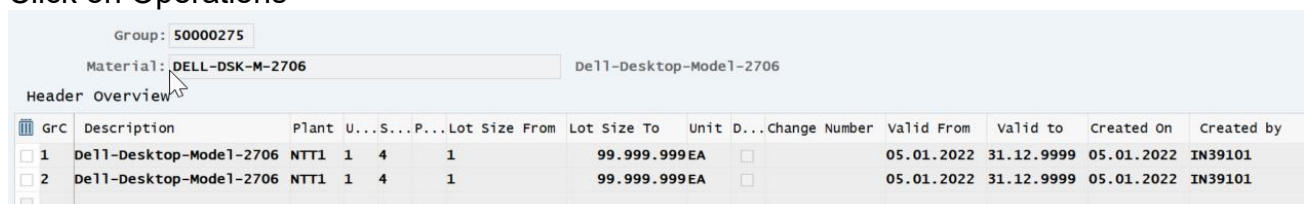
08. Define Procurement Alternatives - CK91N

Using **CK91N**. Here we need to create the Procurement Alt per material/plant.

SAP Menu > Accounting > Controlling > Product Cost Controlling > Product Cost Planning > Material Costing > Master Data for Mixed Cost Estimate > CK91N - Edit Procurement Alternatives

Material - Dell-Dsk-M-2706
Plant - NTT1
Valuation Type-
Click on **Create Button**
Process Cat - **BF - Production**
Select **X - BOM/Routing**
Bill Of Material
Usage - 1
Alternative - 1
Routing
Task List - N
Group - <System Will Auto update>
Group Counter - 1
Costing Data
Cstg Lot Size - 1
Confirm

Scroll Down

Click on confirm

<u>Repeat The Same Process</u>
<u>Bill Of Material</u>
Usage - 1
Alternative - 2
<u>Routing</u>
Task List - N
Group - <System Will Auto update>
Group Counter - 2
<u>Costing Data</u>
Cstg Lot Size - 1
Confirm
Save

Scroll Down

Routing

Task List Type: **N**   Routing

Group: **50000275**   Dell-Desktop-Model-2

Group Counter: **2**

Costing data

Cstg Lot Size: **1**   EA

Save

It will look like this

Display Procurement Alternatives

* Material: DELL-DSK-M-2706   Dell-Desktop-Model-2706
* Plant: NTT1   Plant-Hyd-NTT1
Valuation Type:

List of Procurement Alternatives	Lot Size	Unit
Production		
Process-1	1	EA
Process-2	1	EA

Save

09. Define Mixing Ratios - CK94
SAP Menu > Accounting > Controlling > Product Cost Controlling > Product Cost Planning > Material Costing > Master Data for Mixed Cost Estimate > Mixing Rations > **CK94 - Create/Change**

Material - DELL-DSK-M-2706
Plant - NTT1
Mixing Ratio
Period -
Fiscal Year - 2021
QtyStrut. Type - MIX
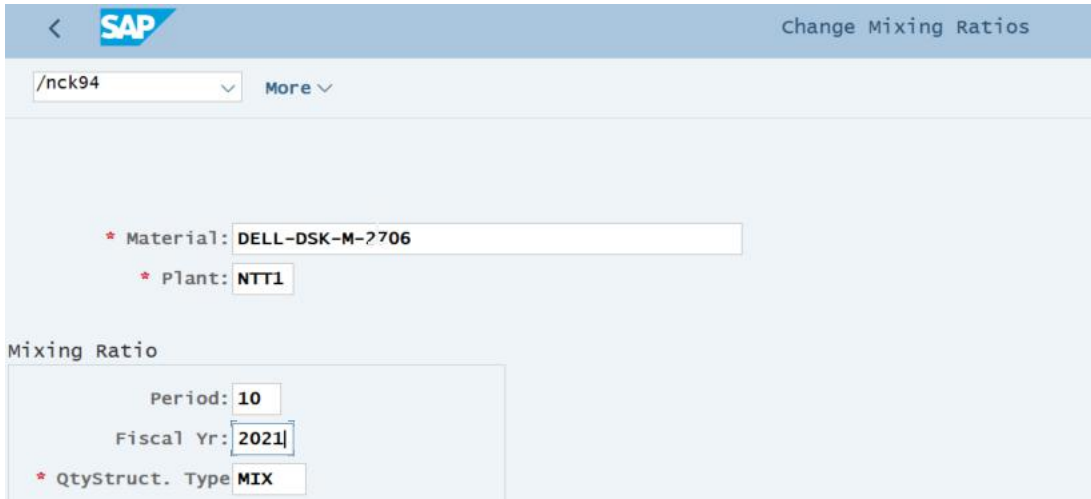
Press Enter

Here we can create the mixing ratios for the material per qty structure type.
Since our Qty Structure type "MIX" is based on fiscal year, here we only need to enter the "Fiscal Year" information.
If it's based on period, we need to create the mixing ratios for each period.
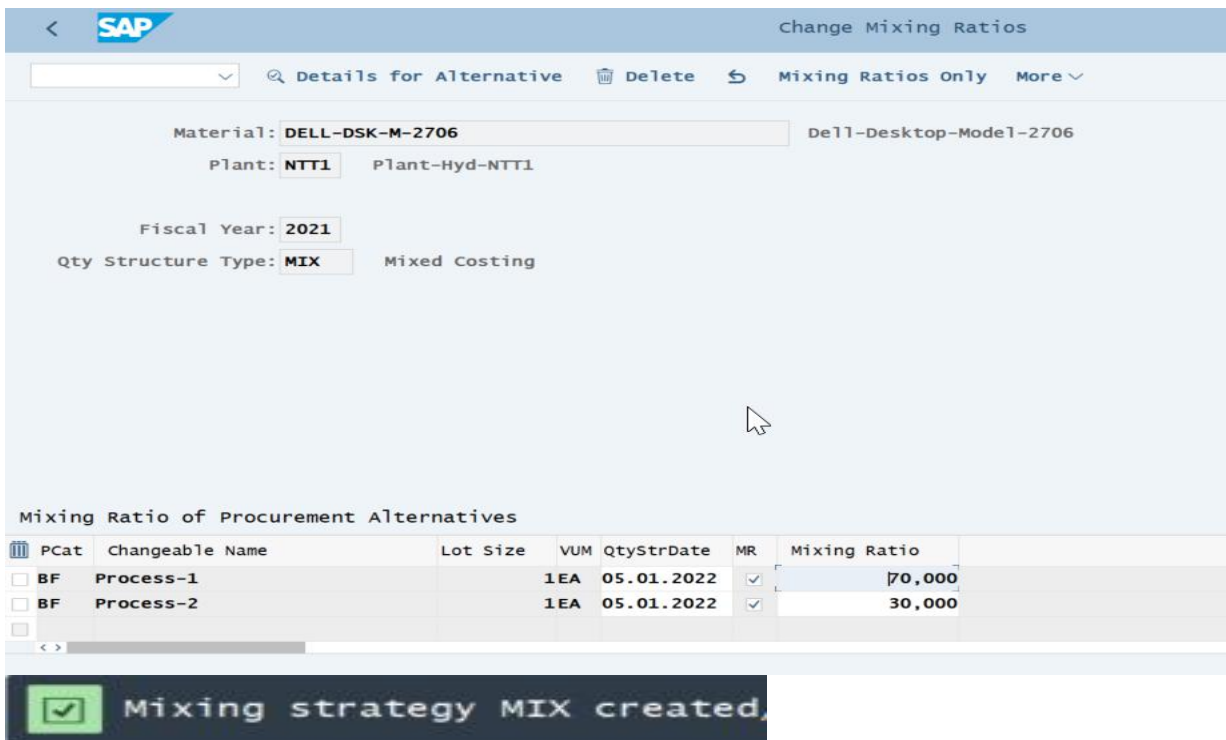
Save

10.Display Mixing Ratios For The Procurement Alternatives - CK95
Material - DELL-DSK-M-2706
Plant - NTT1
Mixing Ratio
Period -
Fiscal Year - 2021
QtyStruct Type - MIX

Here all the procurement Alt created via **CK91N** will be displayed.
And you can assign the mixing radio to them as you want.
– **MR indicator**
Set this indicator if you want to include a procurement alternative in mixed costing. It will ensure this procurement alt will be included in a mixed costing (even with a weighting of 0).
– Mixing Ratio
This is the most import figure in this transaction. You can enter equivalence numbers or percentages. But if "Percent validation" is ticked for the qty structure type, the sum of the existing mixing ratios must totals 100%.

For Process Category
Production
You can choose to create procurement alternatives for **in-house production** either with production versions or by using the **BOM and Routing**.

11. Creating Cost Estimate - CK11N
Material - DELL-DSK-M-2706
Plant - NTT1
Costing Data
Costing Variant - N1
Costing Version - 99
Costing Size -
Transfer Control - PC01

Press Enter

System Will Display the Following Screen

Note - The System Will Auto Update The Dates

Press Enter

Note - Change Cost Based On - 2 price Unit

Now Expand - Process-1 and Process-2

Select Process-2

Create Material Cost Estimate with Quantity Structure

Costing Structure Off   Detail List On   Hold   More ∨

Costing Structure
∨ ▥ Dell-Desktop-Model-27(
  ∨ ▥ Process-1
    ▥ Hardware
  ∨ ▥ Process-2
    ▥ software

* Material: DELL-DSK-M-2706   Dell-Desktop-Model-2706
* Plant: NTT1
Proc. Alt.: Process-2
Val. Type:

Costing Data   Dates   Qty Struct.   Valuation   History   Costs

* Costs Based On: 2 Price Unit   ∨ 1   EA

Cost Component View	Total	Fixed	Variable	Crcy
Cost of Goods Manufac..	14.916,00	3.366,00	11.550,00	INR
Cost of Goods Sold	14.916,00	3.366,00	11.550,00	INR
Sales and Administrat..	0,00	0,00	0,00	INR
Inventory (Commercial)	14.916,00	3.366,00	11.550,00	INR
Inventory (Tax-Based)	14.916,00	3.366,00	11.550,00	INR

1 Cost of Goods Manufactured   ∨ Partner

Select Process-1 - Hardware

Create Material Cost Estimate with Quantity Structure

Costing Structure Off   Detail List On   Hold   More ∨

Costing Structure
∨ ▥ Dell-Desktop-Model-27(
  ∨ ▥ Process-1
    ▥ Hardware
  ∨ ▥ Process-2
    ▥ software

* Material: HARDWARE   Hardware
* Plant: NTT1
Val. Type:

Costing Data   Dates   Qty Struct.   Valuation   History   Costs

* Costs Based On: 2 Price Unit   ∨ 1   EA

Cost Component View	Total	Fixed	Variable	Crcy
Cost of Goods Manufac..	20.000,00	0,00	20.000,00	INR
Cost of Goods Sold	20.000,00	0,00	20.000,00	INR
Sales and Administrat..	0,00	0,00	0,00	INR
Inventory (Commercial)	20.000,00	0,00	20.000,00	INR
Inventory (Tax-Based)	20.000,00	0,00	20.000,00	INR

1 Cost of Goods Manufactured   ∨ Partner

Select Process-2 - Software

12. Analysis Report
Material - Dell-DSK-M-2706
Raw Material-1 - Hardware - Cost is Rs.20,000
Process-1 Cost - 26,466

Raw Material-2 - Software - Cost is Rs.10,000
Process-2 Cost - 14,916

Final Mixed Cost for DELL-DSK-M-2706
Process-1 - 70% = 26,466 x 70% = 18,526.20
Process-2 - 30% = 14916 x 30% =   4,474.80

                 Total   = 23,001.00
                          ============

Please Check The Price Before Update
Material - Dell-DSK-M-2706

Mark and Release Cost Estimation - CK24

SAP Menu > Accounting > Controlling > Product Controlling > Product Planning > Material Costing > Price Update

Click on **Mark Allowance**
Select You CoCd - NTT1
Give
Costing Variant - N1
Costing Version - 99

Back
Scroll Down

Execute

Remove Test Run and Re-Execute

Check The Material Price
Material - Dell-DSK-M-2706
Note - The Price is Updated in Planned Price

Back - CK24
Click on Release and Execute

Execute

Back - It will Display the Following Screen

Exe.	Material	Plant	Valuati…	Costin…	Standard price	Price unit	Currency	Valuation View	Document Number	Description	Val…	Le…	Le…
■	DELL-DSK-M-2706	NTT1		FR	23.001,00	1	INR	Legal Valuati…	3000000337	Dell-Desktop-Model-2706	EA	OL	10

Check The Material Price
Material - Dell-DSK-M-2706
Note - The Price is Updated From Planned Price To Standard Price

Create Production Order - CO01

Save

Release The Order

Once You Click the Release

Purchase order
Enter a vendor and the relevant purchasing org in the initial screen.

In the cost estimate for a procurement alternative with reference to a vendor, strategy **"L"** (price from purchasing info record) is always automatically set to highest priority strategy.

You can also create an unspecified procurement alternative.
To do this, do not enter a vendor or a purchasing organization. The material is then valuated with the prices in the material master and not using the purchasing info record.
Subcontracting
In this case the system will require you to enter the information on the BOM, Vendor and Purchasing org.
Stock transfer
You'll be required to enter the source plant

1. Define The Quantity Structure Type - OMXA

SPRO > Img > Controlling > Product Cost Controlling > Product Cost Planning > Selected Function in Material Costing > Mixed Costing > Define Quantity Structure Types > Define Quantity Structure Types for Mixed Costing > New Entries

Time Dependency
This controls the time period in which the quantity structure will be used. It can be time independent, based on fiscal year, or based on each period.

Percent validation
Tick this indicator if you want to ensure that the sum of the existing mixing ratios for a material and quantity structure type totals to 100%.

2. Define Costing Version
SPRO > Img > Controlling > Product Cost Controlling > Product Cost Planning > Selected Function in Material Costing > Mixed Costing > Define Costing Version > New Entries

The mixed costing will be called with the qty structure type MIX, when costing version = 1 & costing type = 19, or when costing version = 99 & costing type = 01 & valuation variant = 001.
The system will not do mixed costing for the other combinations of costing version & costing type & valuation variant.

In this transaction, you can also define:
 – Variant for transfer price determination
 – Exchange rate type for currency translation

The configuration for the costing version can also be checked via costing variant configuration (**OKKN**).

It's a more convenient way as the configuration is based on the combination.

Costing Variant: **N1**   **Standard Cost Est(Mat)**

Control   Qty Struct.   Additive Costs   Update   Assignments   Misc.

Costing Type	01 Standard Cost Est. (Mat.)
Valuation Variant	001 Planned Valuation: Mat-N1
Date Control	PC01 Std Cost Est. - Month
Qty Struct. Control	PC01 Std Qty Structure Ctrl 2
Transfer Control	PC01 Transfer w/ Plant Change
Reference Variant	

In the Assignment tab, click the costing version button.

Cost Component Structure
Costing Version
Cost Comp. Split in Contr. Area Currency
Cross-Company Costing

Assigned costing versions

Costing Version	Variant fo	Exch. R	QtyStruct. Ty	Description
88				Version w/o Customizing
89				Version w/o Customizing
90				Version w/o Customizing
91				Version w/o Customizing
92				Version w/o Customizing
93				Version w/o Customizing
94				Version w/o Customizing
95				Version w/o Customizing
96				Version w/o Customizing
97				Version w/o Customizing
98				Version w/o Customizing
99			MIX	

You'll see for the costing variant PPC1 (costing type 01, valuation variant 001), costing version 99 is assigned the qty structure type "MIX".

Check The Material Master - The Amount is not yet updated

Material - DELL-DSK-M-2700
Costing Data
Costing Variant - N1
Costing Version - **99**
Costing Size -
Transfer Control - PC01

Press Enter

Press Enter
Note - The System will Auto Update the Current System Date

Scroll Down above First Screen - To get the below values

Select and Double Click on - Process-1

Select Process and Double Click

MIX COSTING CONFIGURATION

Create Material Cost Estimate with Quantity Structure

Costing Structure Off   Detail List Off   Hold   i   More ⌄

Costing Structure
- Dell-Desktop-Model-26
  - Process-1
  - Process-2

Cost Component View	Total	Fixed	Variable	Crcy
Cost of Goods Manufac...	69.749	449	69.300	INR
Cost of Goods Sold	69.749	449	69.300	INR
Sales and Administrat...	0	0	0	INR
Inventory (Commercial)	69.749	449	69.300	INR
Inventory (Tax-Based)	69.749	449	69.300	INR

Itemization for material DELL-DSK-M-2600 in p

ItmNo	It	Resource	Cost Eleme	⌷	Total Value	⌷	Fixed Value	COCr	Quantity	Un
1	E	ASSEMBLING ASSEMBLI ASSEMB	970002		102		102	INR	1	MIN
2	M	NTT1 HARDWARE	400000		40.000		0	INR	2	EA
3	M	NTT1 SOFTWARE	400000		20.000		0	INR	2	EA
4	E	PACKING PAKING PACKIN	970002		102		102	INR	1	MIN
5	E	QUALITY QUALITY QUALIT	970002		204		204	INR	1	MIN
6	G	N1-PROCURE 980000	980000		3.000		0	INR		
7	G	COMM CC 980001	980001		6.341		41	INR		
				·	69.749	·	449	INR		