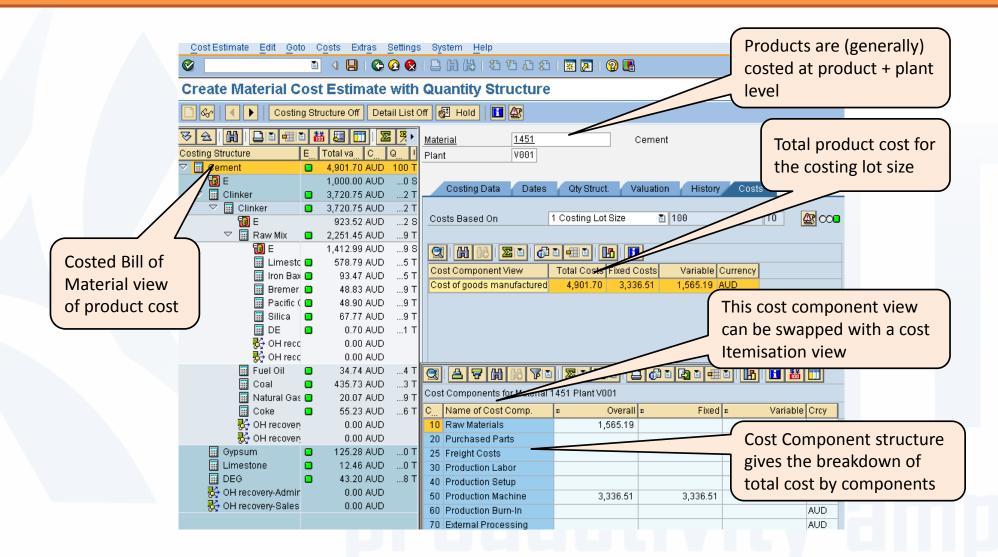
COSTING PRODUCTS IN SAP

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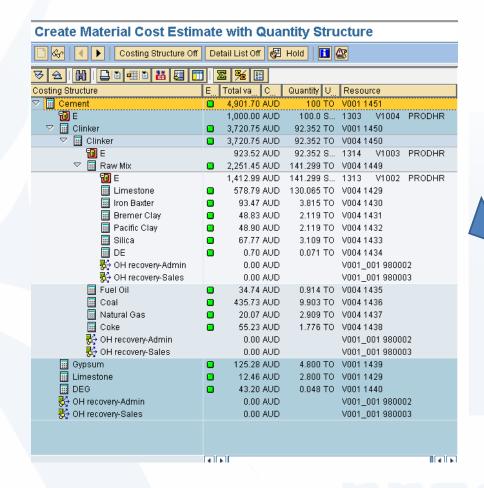
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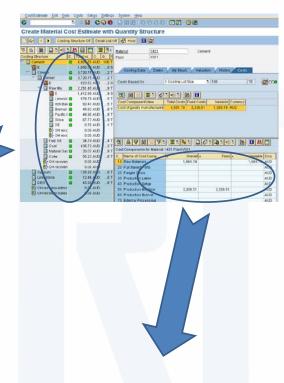
Overview of Product Costing

Screenshot of a product costed in SAP



Multiple views of the costed product in SAP





| temization for material 1451 in plant V001 | | | | | | | |
|--------------------------------------------|---------------------|------------|----------|----------|-------|----------|----|
| ItmNo | I. Resource | Cost Eleme | | | Currn | Quantity | Un |
| 1 | E 1303 V1004 PRODHR | 980004 | 1,000.00 | 1,000.00 | AUD | 100.0 | HR |
| 2 | M V001 1450 | 520070 | 3,720.75 | 2,336.51 | AUD | 92.352 | TO |
| 3 | M V001 1439 | 510000 | 125.28 | 0.00 | AUD | 4.800 | TO |
| 4 | M V001 1429 | 510000 | 12.46 | 0.00 | AUD | 2.800 | TO |
| 5 | M V001 1440 | 510000 | 43.20 | 0.00 | AUD | 0.048 | TO |
| 6 | G V001_001 980002 | 980002 | 0.00 | 0.00 | AUD | | |
| 7 | G V001_001 980003 | 980003 | 0.00 | 0.00 | AUD | | |
| | | | 4,901.69 | 3,336.51 | AUD | | |

Anatomy of a product's cost

| Structure | Component | Component | Component |
|--------------------|--------------------------------------------------------------------------------------------------------------------|-------------------|---------------|
| Quantity Structure | Bill of Material | Routing | Overhead |
| Valuation | Cost of input Material (defined in the master of the material – could be the standard cost or moving average Cost) | Price of Activity | Costing Sheet |

Components for Costing Products

Bill Of Material

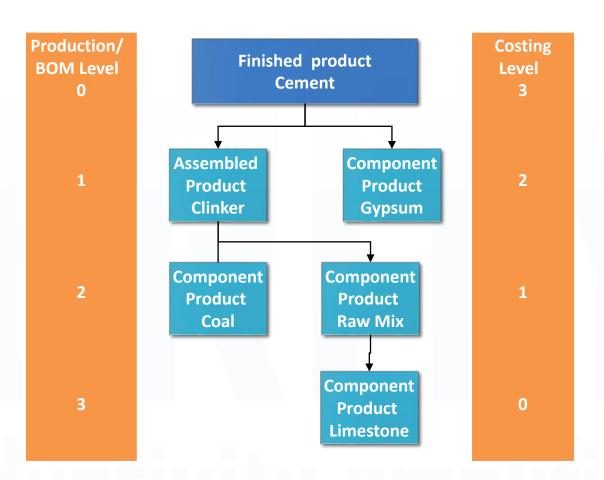
Bill of Material is the recipe of the materials that go into producing or making the (finished or assembly) product

Bill of Material

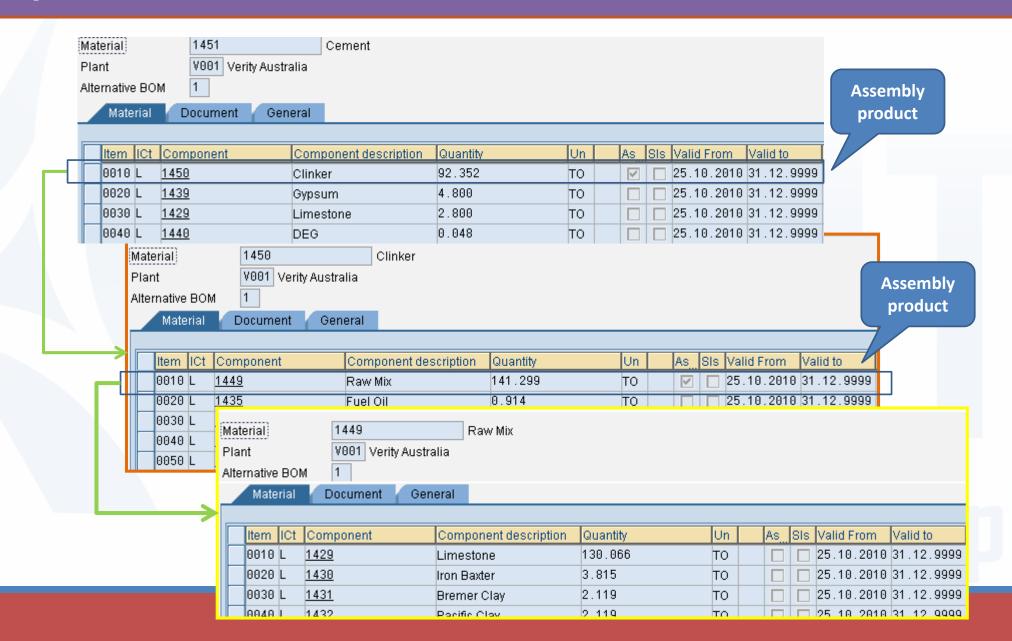
BOM (Bill of Material) is a structured list of components that make up a product or an assembly.

A single-level BOM comprises of components that make up a recurring production process. This BOM can be used multiple times to produce the same product.

A multi-level BOM comprises components and assemblies that make up a production process. The assembly has its own single-level BOM



Depiction of BOM in SAP

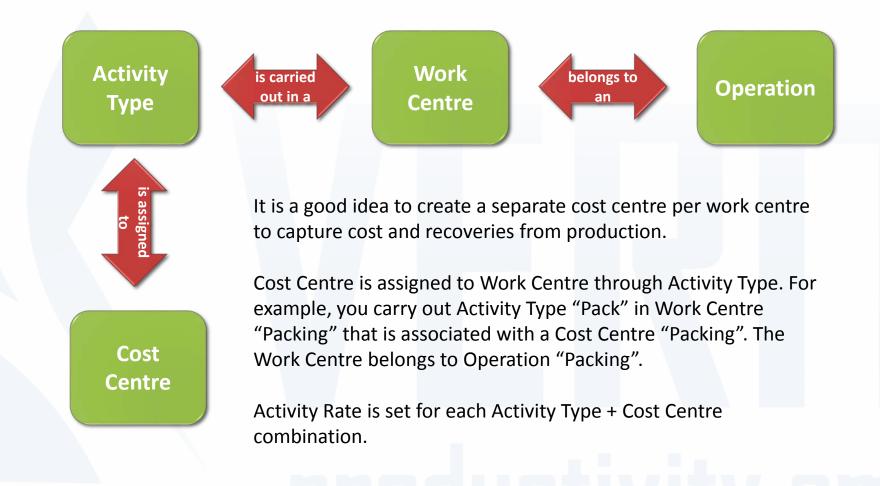


Routing

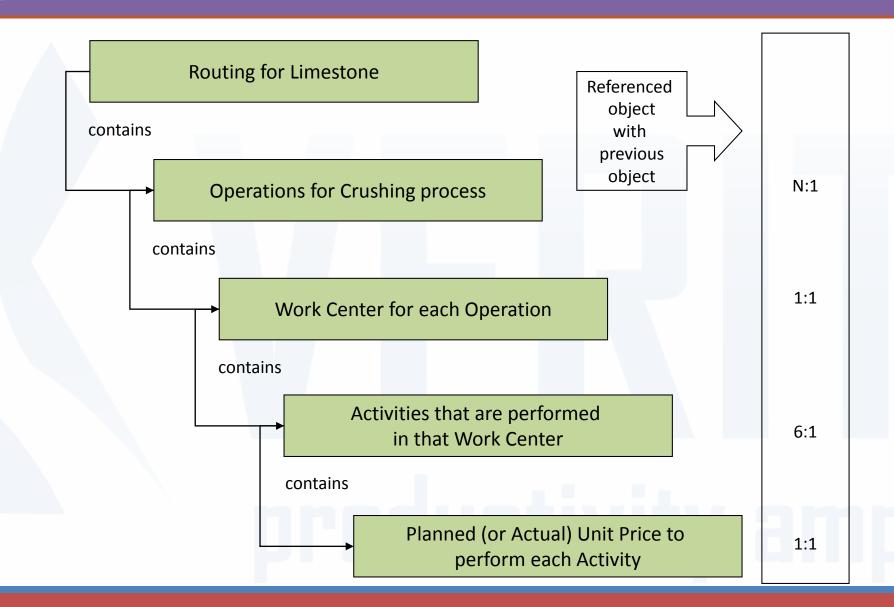
Routing is a list (and details) of operations that are carried out in the production process

<11>

Components of Routing in SAP



Routing



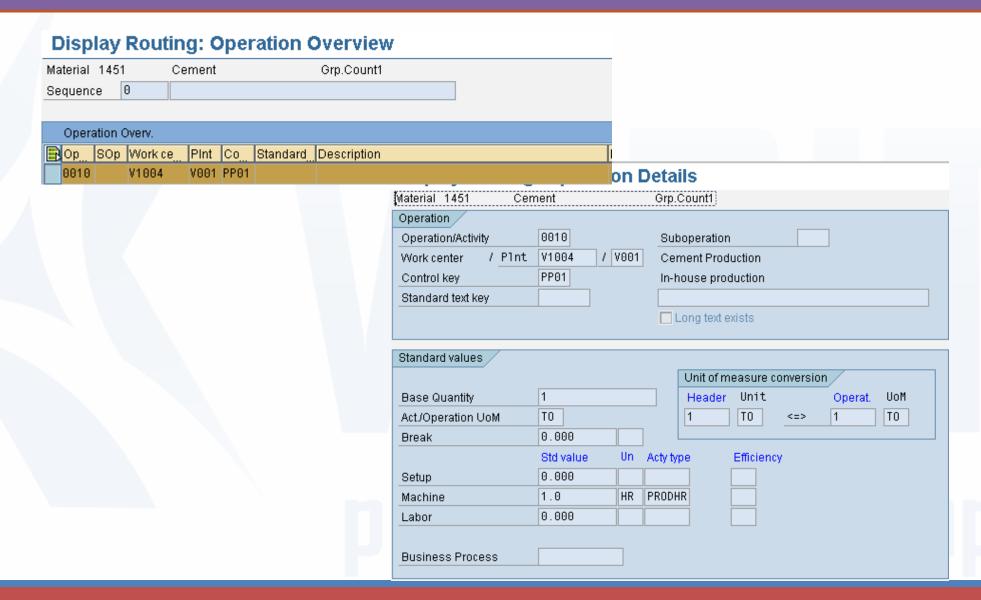
Routing in SAP

With routings, you can plan the operation steps to be carried out in production; the activities to be performed; the location where the activities will be performed; and the components required to perform the operation.

Below is an example of the data routings could hold.

| Operation | Work Centre | Activity | Activity quantity per ton | Components | Output |
|--------------|-------------|--------------|---------------------------------|-------------------|---------|
| Quality | Quality | Labour Hours | 1hr | Nil | Nil |
| Finish Grind | Finish | Labour Hours | 1.5hr | Clinker Gypsum | Cement |
| Kiln | Kiln | Labour Hours | 0.5hr | Raw Mix Coal | Clinker |
| Grind | Grind | Labour Hours | 2hr | Limestone | Raw Mix |

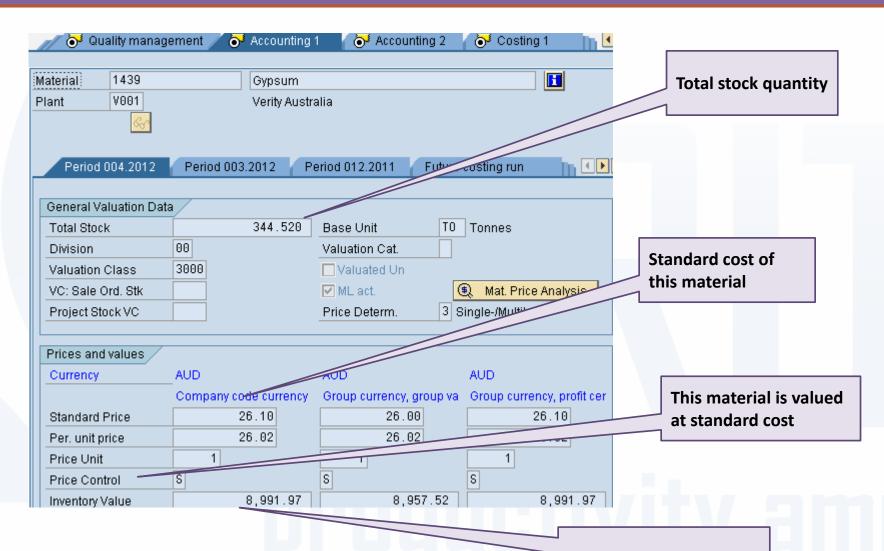
Depiction of Routing in SAP



Material Cost

Unit cost of Material is stored against the Material Master. Material Master in SAP stores standard cost and moving average price. The selection of basis of valuation ("Price Control" in SAP terms) will determine which price is used to valuate the material

Material prices in Material Master

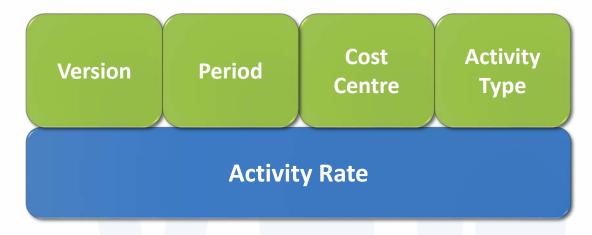


Total inventory value

Activity rate

Rate at which individual activity type is valued. Activity rate is fixed for a combination of activity type + cost centre + period/ year + version

Activity Rate in SAP



Rates for activity types can be calculated / entered on a periodic basis or on an annual basis.

Calculation of activity rate

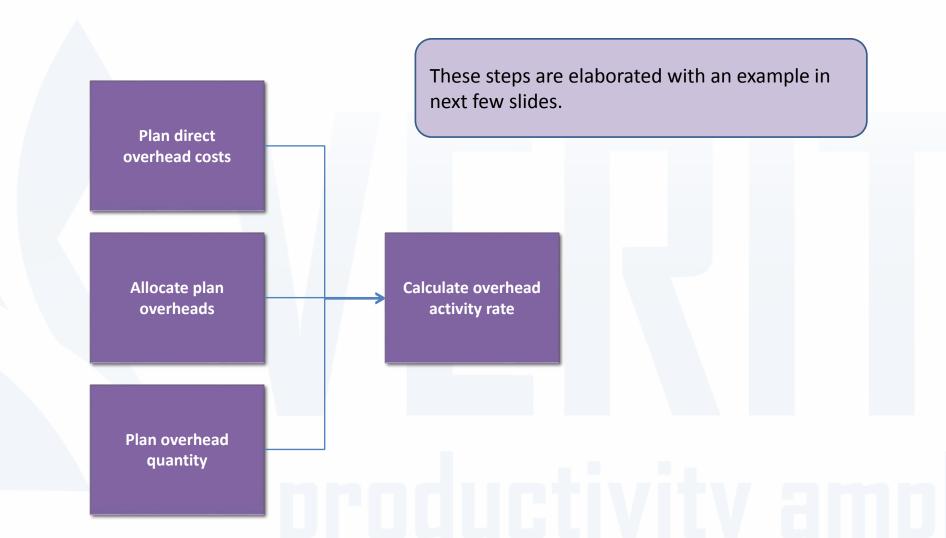
Estimated (Plan) Costs related to that activity

Plan Activity Rate per unit = ------

Estimated consumption of Activity in units

It is recommended that values planned (budgeted) at the beginning of the year be used to calculate activity rates. This will ensure annual budget values compare with actual.

Steps to generate an Activity rate/price

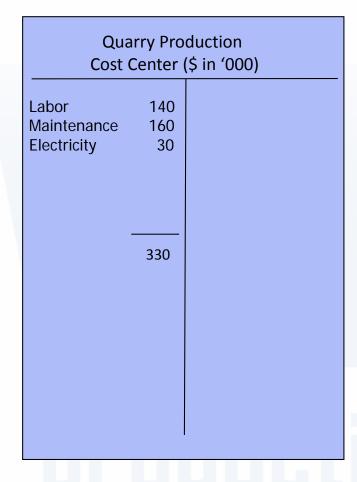


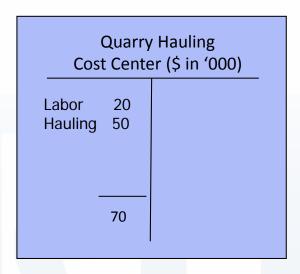
Plan direct overhead costs

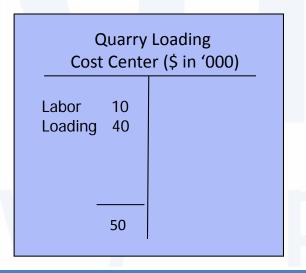


Direct overheads are planned against cost centre during the budgeting exercise

Hauling and Loading are cost centres that support the Production cost centre



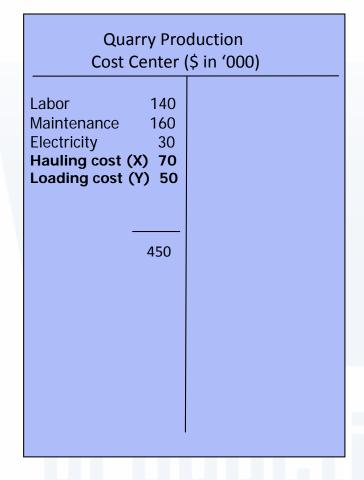


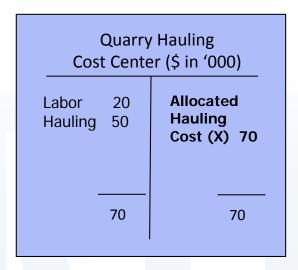


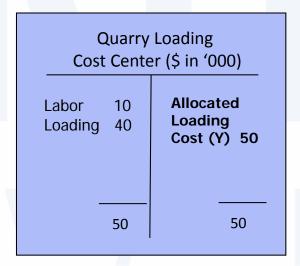
Allocate Plan Overhead Costs



 Support cost centre costs are swept/ allocated to main
 Production cost centre



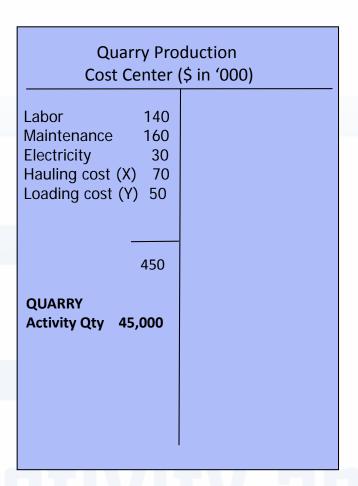




Plan Activity Rate manually



- Activity quantity will represent the quantity of units for the activity that is carried out in the cost centre. In this example, the activity quantity of 45,000 quarrying hrs is entered against Quarry Production cost centre and "Quarry" Activity Type
- As a part of the budgeting exercise, the quarry Manager knows his planned production volumes (eg. 10,000 TO) and the unit of Quarry activity required per unit of production (eg 4.5 HR per TO). He will arrive at the Activity Quantity using these 2 variables.



Calculate Overhead Activity Rate

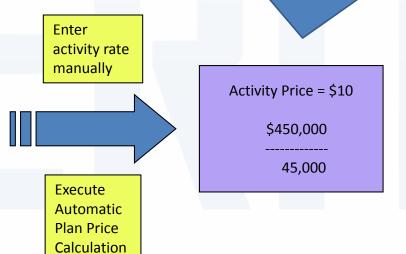


Quarry Production
Cost Center (\$ in '000)

Labor 140
Maintenance 160
Electricity 30
Hauling cost (X) 70
Loading cost (Y) 50

QUARRY
Activity Qty 45,000

This works fine if there is one activity type planned on one cost centre. Costs are considered to be "activity independent costs" and hence, activity rate can be easily calculated



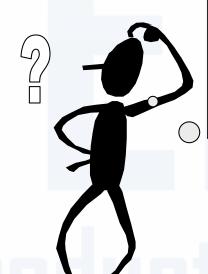
Multiple Activity Types on one cost centre

The Quarry Manager wants to plan overhead costs and activities using 2 activity types: Labour Hours and Machine Hours.

However, all overheads are only collected in 1 cost centre – Quarry Production

Quarry Production Cost Center (\$ in '000)

Labor 140
Maintenance 160
Electricity 30
Hauling cost (X) 70
Loading cost (Y) 50



Quarry Production
Cost Center

LABOUR
Activity Qty 20,000
MACHINE
Activity Qty 15,000

NOW how do I assign Costs to activity quantities to arrive at activity rate?

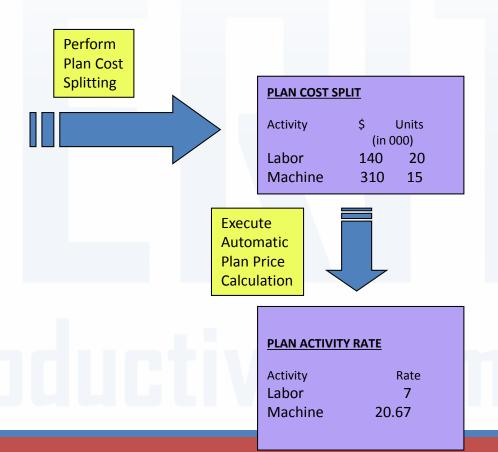
Plan cost splitting – Activity Dependent costs

CONCEPT: Plan cost splitting "splits" activity independent costs and assigns activity to each cost; thereby all costs are now activity dependent

System configuration settings:

- Cost against Labor GL = Labor Activity
- Cost against all other GL Accounts = Machine Activity

| Quarry Production Cost Center (\$ in '000) |
|----------------------------------------------------------------------------------|
| Labor 140 Maintenance 160 Electricity 30 Hauling cost (X) 70 Loading cost (Y) 50 |
| 450 |
| LABOUR Activity Qty 20,000 MACHINE Activity Qty 15,000 |

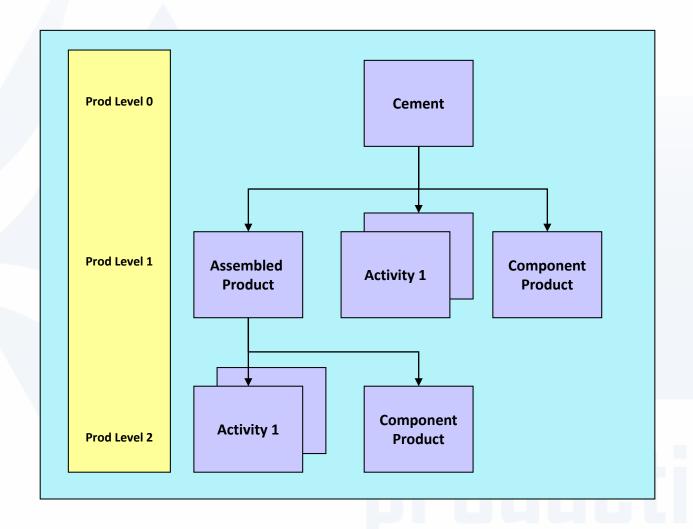


Cost roll up

Cost roll up

Cost roll up refers to roll up of cost bottom-up from component to finished product. During cost roll up SAP costs the components and activities at the lowest level of the production BOM and increments the cost by rolling it up to higher level till the highest level of product is costed.

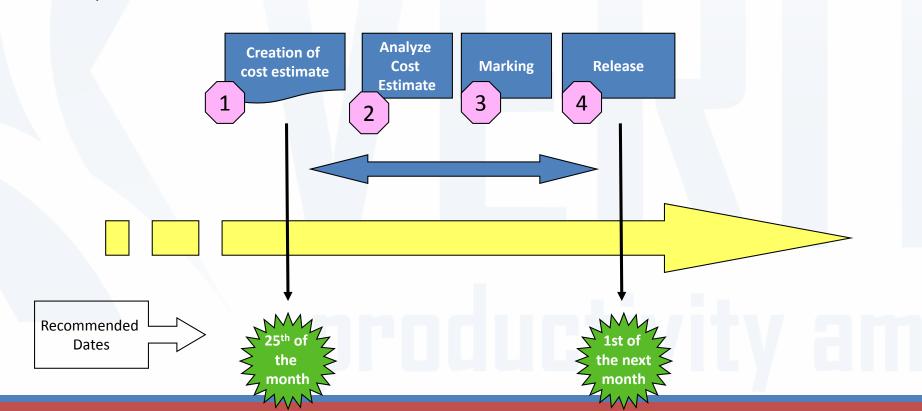
Product Cost roll up



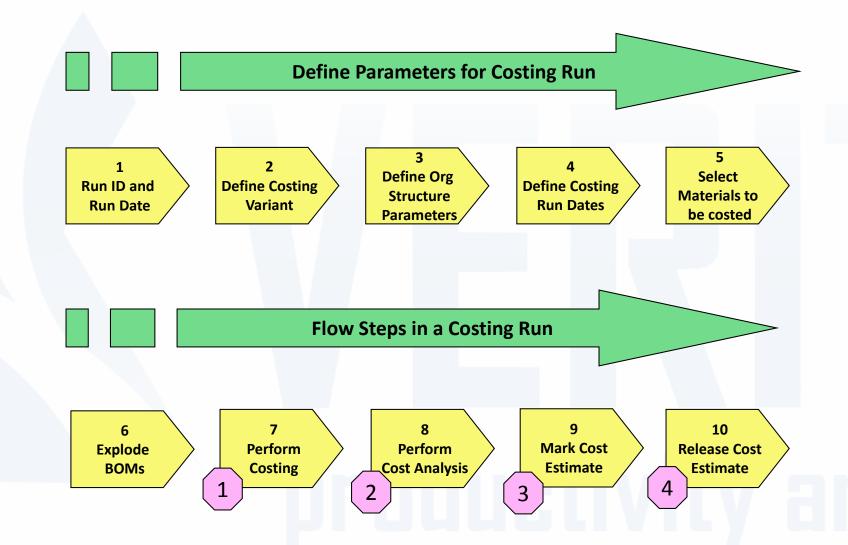
With a multi-level quantity structure, standard costs roll up from lower-level (example level 2) to the higher-level material (example level 0).

Process of Product Cost roll up

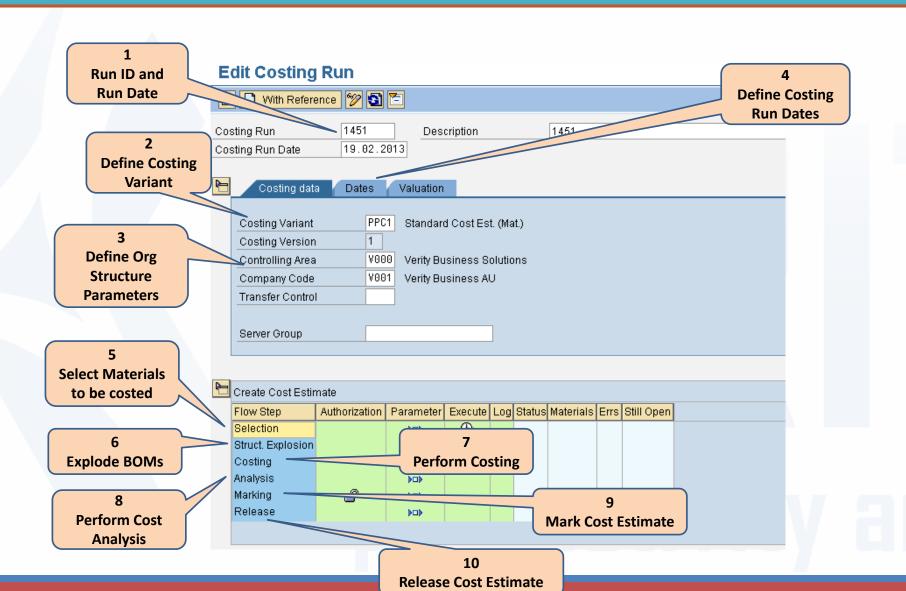
- 1. Cost Estimate is a proposed cost estimate for the intermediate and finished good.
- 2. Business analyzes the cost estimate for accuracy. Changes (if any) are made to quantity or valuation structure. Cost Estimate is re-run.
- 3. Once "approved", costs are MARKED (i.e. marked as proposed or future cost estimates).
- 4. The marked cost estimates are RELEASED (i.e. made effective for all goods movement subsequent to that release).



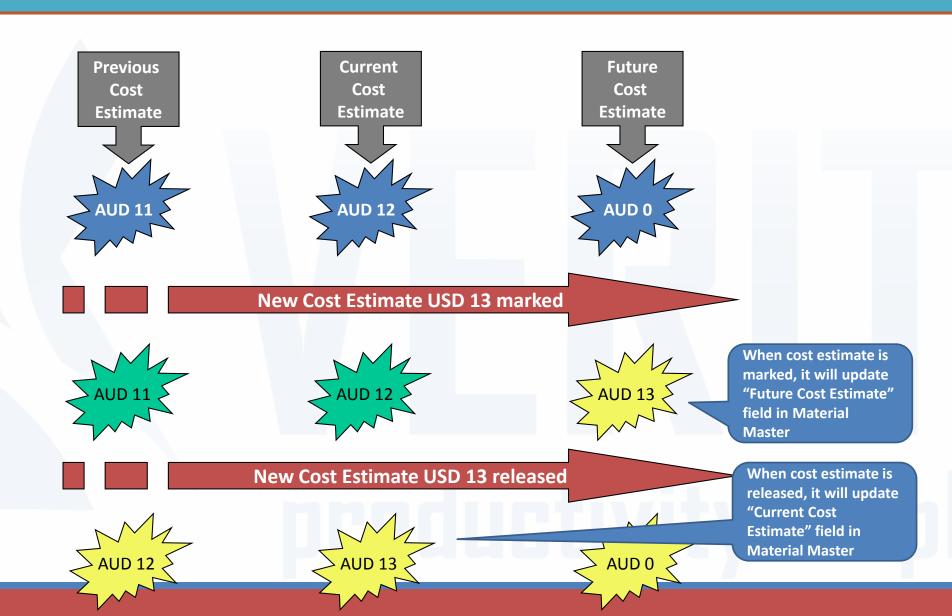
Steps in SAP for a Product Cost roll up



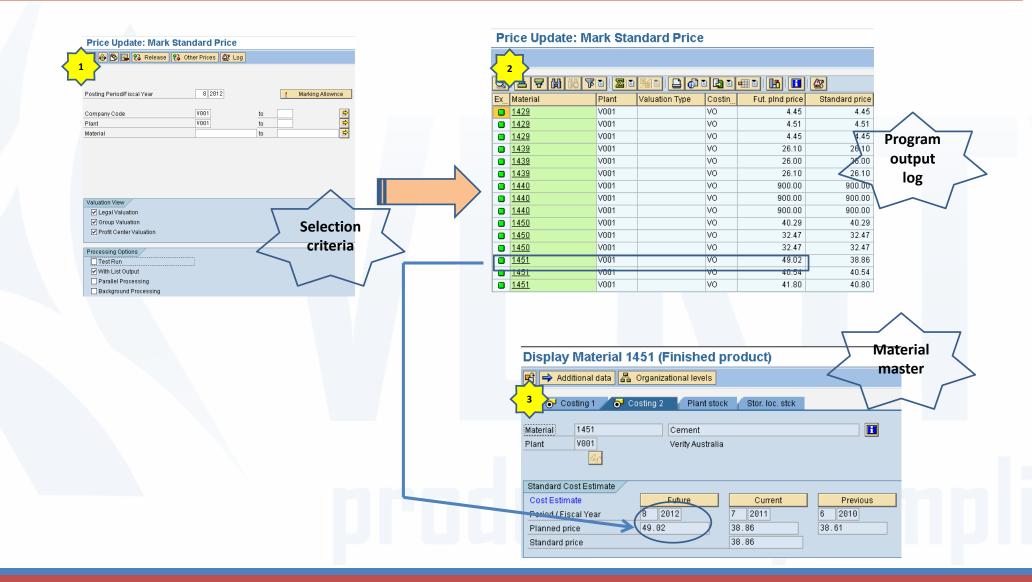
Define parameters for Costing Run



Price Update – Mark & Release



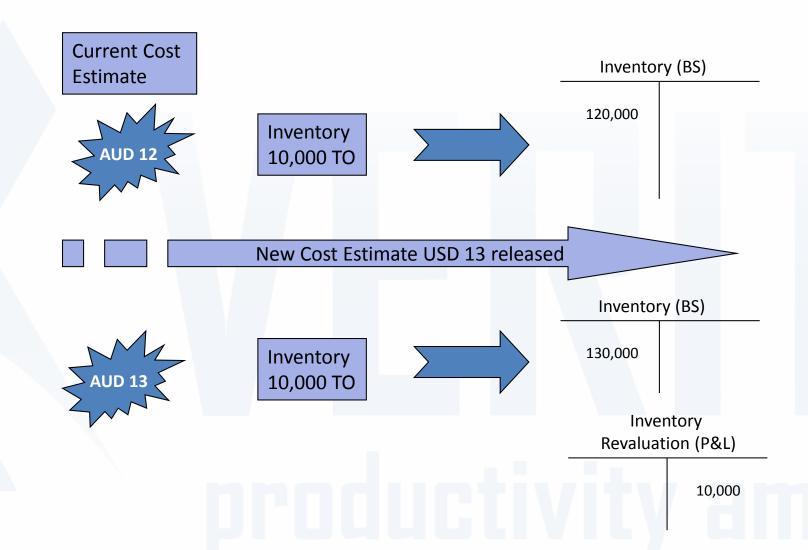
Price Update – MARKING



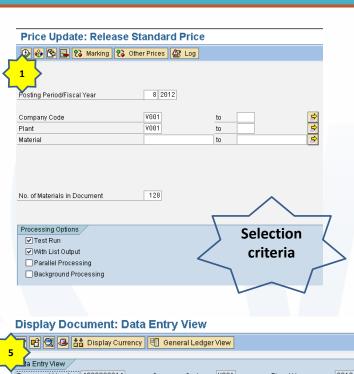
Accounting impact of Product Costing process

- When a Standard Cost Estimate is created, there are no accounting implications.
- When a Standard Cost Estimate is marked, there are no accounting implications. The new cost is updated in the field "Future Cost Estimate"
- When a Standard Cost Estimate is released,
 - The released cost is updated in the "Current Cost Estimate" field (from the "Future Cost Estimate" field)
 - The Inventory will revalue with the new Standard Cost Estimate. The revaluation difference is written off/ written back to P&L.

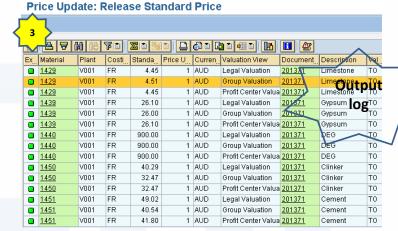
Accounting impact of RELEASE of Product Cost



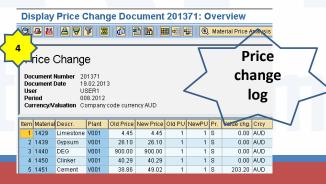
Price Update - RELEASE









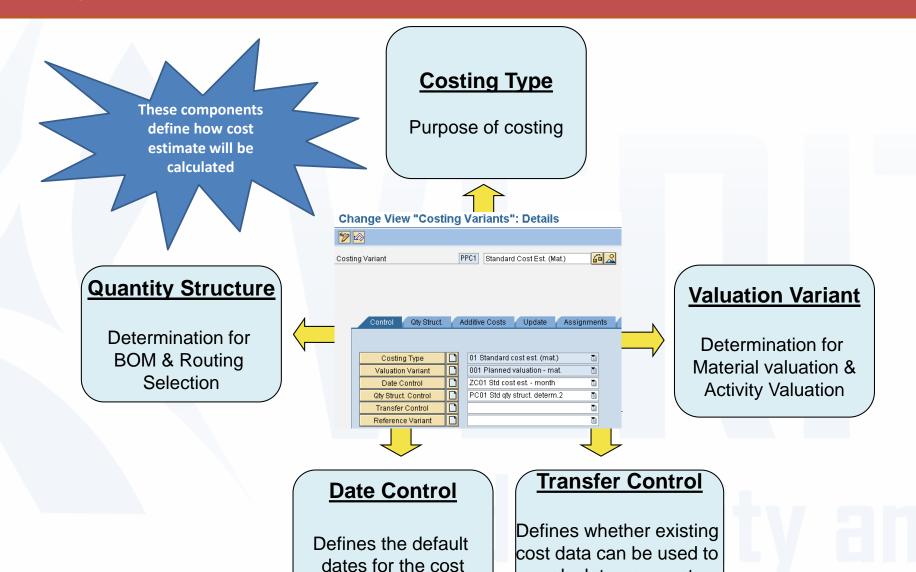


Design Driving The Costing Process

Costing variant

Costing Variant is the configuration engine that drives the derivation of a quantity structure and prices of components and assemblies; and rolls up their cost into the cost of the final product

Costing Variant

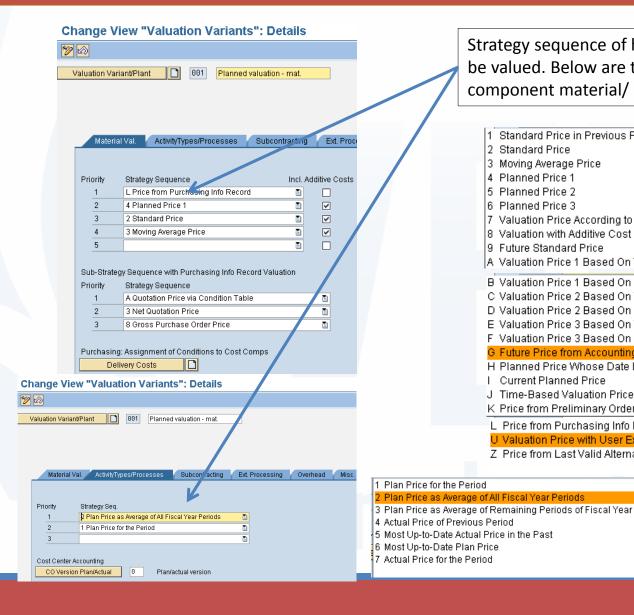


estimates

calculate new cost

estimate

Valuation Variant



Strategy sequence of how material / activity should be valued. Below are the prices that can be used to value component material/ activities

| 1 Standard Price in Previous Period | Т |
|----------------------------------------------------------------------------------------------|---|
| 2 Standard Price | |
| 3 Moving Average Price | |
| 4 Planned Price 1 | |
| 5 Planned Price 2 | |
| 6 Planned Price 3 | |
| 7 Valuation Price According to Price Control in Mat. Master | |
| 8 Valuation with Additive Cost Component Split | |
| 9 Future Standard Price | • |
| A Valuation Price 1 Based On Tax Law | ₩ |
| B Valuation Price 1 Based On Commercial Law | |
| C Valuation Price 2 Based On Tax Law | |
| D Valuation Price 2 Based On Commercial Law | |
| | |
| E Valuation Price 3 Based On Tax Law (Reserved) | |
| F Valuation Price 3 Based On Commercial Law (Reserved) | |
| G Future Price from Accounting H. Planned Price Whose Date Is Closest to the Valuation Date. | |
| | |
| Current Planned Price | |
| J. Time-Based Valuation Price According to Price Control | F |
| K Price from Preliminary Order Cost Est (Goods Receipts Only) | |
| L Price from Purchasing Info Record | |
| U Valuation Price with User Exit | Ļ |
| Z Price from Last Valid Alternative Valuation Run | - |
| | • |
| | |

Date Control

Date

Costing Date From

Quantity Structure Date

Costing Date To

Valuation Date

Change View "Date Control": Details Date Control ZC01 | Std cost est. - month

Default Value

S Current Date

Q Maximum Value
A Costing Date From

A Costing Date From

Manual Entry

~

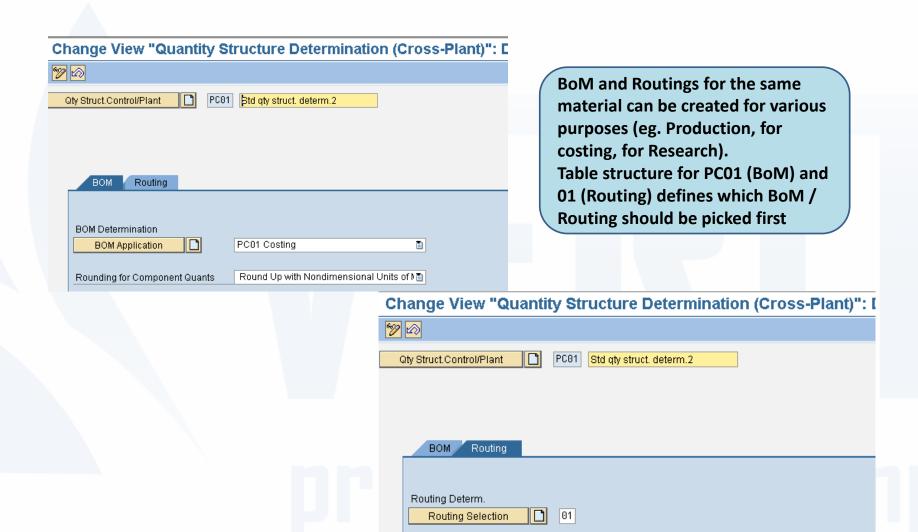
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V

BoM and Routing have validity dates. You can create a cost estimate using a future dated quantity structure.

For example, if the BoM is expected to change on 01/04/2013, create a new BoM with the start validity date as 01/04/2013 and end the validity of current BoM on 01/03/2013. That way, when you generate a cost estimate for Apr 2013 (in Mar 2013), it will pick the new quantity structure.

Quantity Structure Determination



Alt. Sequences

Verity Business Solutions



Verity provides the vision, and the framework for a successful Finance process and technology transformation and re-engineering.

We at Verity believe we have the experience to make success happen for our clients. This belief comes from our track record of successfully engaging customers in their pursuit of the best-of-class business solutions. We believe that this search with Verity is short because of our past experience, and fruitful because we do not simply deliver an end-result, but strive to deliver value-added service that earns us the trust and confidence of our customers.

Presented by Rajesh Shanbhag

Rajesh is an accomplished and successful Finance professional with over 20 years' experience in Finance processes and related technologies.



He is a qualified accountant, and he has worked in Finance departments of multinational companies. With this strong foundation in Finance, he has managed to successfully implement best-in-class Finance processes in IT (primarily SAP).

Over the last few years, Rajesh has led Finance teams on large SAP implementations and provided his insights and experience to provide a workable and an improved solution for his customers. Rajesh is a SAP Certified Application Professional.

Contact

- Contact me if have any questions, need clarifications or would like a demo of these features in an IDES SAP system.
- Do visit the blog related to these slides at <u>www.veritysolutions.com.au</u> (Category SAP > Product Costing)
- I will post blogs demonstrating solutions to complex Product Costing business scenarios. Subscribe to the blog at www.veritysolutions.com.au to keep yourself updated when a blog is published

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