SAP® CO Controlling

V. NARAYANAN

SAP® CO

Controlling

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CONTROLLING

SAP® ERP ECC 6.0
SAP® R/3 4.70

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MERCURY LEARNING AND INFORMATION
Dulles, Virginia
Boston, Massachusetts
New Delhi

Publisher: David Pallai
Mercury Learning and Information
22841 Quicksilver Drive
Dulles, VA 20166
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www.merclearning.com
1-800-758-3756

V. Narayanan, SAP® CO: Controlling.
ISBN: 978-1-937585-68-6

Library of Congress Control Number: 2012956348

131415321 Printed in the United States of America
This book is printed on acid-free paper.

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To my dear wife, Meena.

DISCLAIMER

The contents of this book are the views of the author, together with inputs from the experience of colleagues in consulting for SAP projects. The views expressed in this book should not be construed as those of SAP AG. Any omissions or factual inaccuracies in this book, if any, in correctly depicting SAP methods, etc. are unintentional.

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PREFACE

My earlier book "*SAP FI/CO Demystified*" ("*SAP FI/CO Questions & Answers*" in the international market) is revised, enlarged and divided into separate volumes for different application areas like Financial Accounting, Controlling, Sales & Distribution, Material Management etc. Such an enlarged and revised volume on "SAP Financial Accounting" has already been published, and this is the second volume now brought out on "*SAP Controlling.*"

The book unravels *SAP Controlling* (within SAP ERP Financials) application and its component modules, through numerous "Questions & Answers" (451 to be exact!). The questions are explained and grouped in a logical way so that you progress seamlessly, from the basics to the advanced, in the respective application areas. To make you visualize better, there is help by way of numerous illustrations (200+) in the form of screen-shots, diagrams, tables and examples throughout the book. The screen-shots (from SAP ERP ECC6) will help you to comprehend as if you are in front of a computer running "SAP Controlling" application!

The content of the book is arranged into ten chapters:

1. General Controlling (CO)
2. Cost Element Accounting (CO-OEM-CEL)
3. Cost Center Accounting (CO-OM-CCA)
4. Internal Orders (CO-OM-OPA)
5. Activity Based Costing (CO-OM-ABC)
6. Product Cost Controlling (CO-PC)
7. Profitability Analysis (CO-PA)
8. At the Cross-Roads...
9. SAP Tables in Controlling
10. SAP Transaction Codes in Controlling

The chapter "*General Controlling* (CO)" has 64 questions covering the fundamentals of SAP Controlling. To help understand the CO organizational elements together with their assignment, an organizational map is provided before we even start the questions. Besides the organizational structure, the chapter also discusses the basics in CO like account assignment, business transactions, currency, number ranges, settlement, distribution, etc.

The "*Cost Element Controlling* (CO-OM-CEL)" chapter discusses the cost elements, cost element categories, cost element groups, accruals, overhead structure, etc. (in 17 questions), providing the necessary insight on all these.

The 3rd chapter focuses – through 73 questions - on "*Cost Center Accounting* (CO-OM-CCA)": cost center, cost center group, cost center category, standard hierarchy, activity types, statistical key figures , resources, planning profile, versions, distribution, assessment, allocation, budgeting, variances, summarization, etc., are all discussed here.

The chapter on "*Internal Orders* (CO-OM-OPA)" discusses individual orders, standing orders, statistical order, real order, order types, order categories, order manager, order management, archiving orders, etc., in a total of 20 questions.

The "*Activity Based Costing* (CO-OM-ABC)" is discussed in Chapter 5. There are 23 questions covering the definition, usage, benefits, approaches (push and pull), allocation, etc. You will also see questions on parallel and integrated ABC, planning aids, and ABC information system.

The "*Product Cost Controlling* (CO-PC)" is the largest chapter, with 184 questions, covering the four sub-components namely, Product Cost Planning (CO-PC-PCP), Cost Object Controlling (CO-PC-OBJ), Actual Costing / Material Ledger (CO-PC-ACT) and Product Costing Controlling Information System (CO-PC-IS). Here, you will find questions on terms / concepts, use / benefits of product costing, valuation variant, costing variant, reference variant, transfer / date / quantity controls, costing, costing run, cost estimates, cost component structure, cost component split, cost roll-up, product cost by order / period, standard / moving average price, price change, price control, valuation, variance, WIP, overhead, overhead calculation, costing sheet, collective orders, sub-contracting, results analysis, joint production, template, actual costing, revaluation, material ledger, mixed costing, prices and inventory values, value flow monitor, reports, etc.

The 7th chapter is devoted to "*Profitability Analysis* (CO-PA)." The questions (42) throw light on key terms, difference between PA and PCA (Profit Center Accounting), operating concern, characteristics, values fields, segments, currency, PA structure, master data, conversion, realignment, valuation, planning framework, planning methods, etc.

You will find the 8th chapter "*At the Cross-Roads...*" very interesting as it draws the most challenging real-life scenarios and situations encompassing the entire scope of Controlling. The solution(s) suggested to each of the questions in this chapter will certainly help you to resolve any similar situation in your work place. You will also get more help and comprehension from the screen-shots displayed along with the answers.

The "*SAP Tables in Controlling*" chapter lists 75 of the most important tables in SAP CO application area.

A total of 1,335 Transaction Codes are listed in the three sections (Overhead Cost Controlling, Product Cost Controlling and Profitability Analysis) in the chapter "*SAP Transaction Codes in Controlling*." Unlike an alphabetical listing of Transaction Codes / Tables which is the convention, here you will find something functional and useful: the information is arranged the way you need, as most of the time you may not know the Transaction Code or Table to look at, but you know the functionality or task for which you are trying to find the information.

So, how to use this book?

Read in any way you want.

Pick a chapter and read all the questions or simply pick a particular question, go to the relevant page and see the answer. Use the book as a reference or a study-guide or a just as reading material, but make sure you understand a particular question or concept before moving on to the next.

All of the 451 questions listed in this book will certainly improve your understanding of SAP Controlling: whether it is for job interviews in SAP, or just to use the application in a better manner in your current job either as a user, or a consultant!

V. Narayanan
January, 2013

ACKNOWLEDGMENTS

A book like this requires a great deal of input from experts so the end product will be accurate and authentic. I have been fortunate enough to have a number of SAP experts serving in various application areas as my friends and well wishers who were more than willing to provide me with helpful tips, clarifications, and reviews in formulating the questions in this book. I am not naming them here for fear that I may inadvertently leave out one or more names. Therefore, instead I extend a very loud “Thanks!” to all of them.

As you will see in this book (rather unusual in a book like this), many screenshots are provided to make the SAP application easier to understand. My thanks to Mr. Hariharan of Maagnus Infotech for allowing me to use its SAP system to generate these screenshots.

I also thank Mr. Manish Jain of BPB Publishers for encouraging me to write this book.

ABOUT THE AUTHOR

V. Narayanan has more than 25 years of experience in accounting, banking, finance, and information technology. A postgraduate in the sciences, a chartered financial analyst, and a project management professional, he trained in SAP FICO, and he is a practicing SAP FI/CO consultant and project manager. Mr. Narayanan has been instrumental in managing SAP implementations (new, rollouts, upgrades, etc.) for a number of international clients. Experienced in various versions of R/3 as well as mySAP ERP (currently SAP ERP) and new dimension products of SAP, he currently works in SAP consulting for a multinational IT consulting company. He attended Thames Valley University in the United Kingdom and is a professional trainer and visiting faculty member in the areas of ERP, SAP, and banking. He has written several best-selling books on SAP Finance and Controlling.

SAP® CO CONTROLLING

The **SAP ERP Central Component** (ECC 6.0) can be broadly sub-divided into three major application areas, namely:

- Financials
- Logistics
- Human Resources

SAP Financials is made up of:

- Accounting – General (AC)
- Financial Accounting (FI)
- Controlling (CO)
- Financial Supply Chain Management (FSCM)
- SAP Banking
- Investment Management (IM)
- Project Systems (PS)
- Enterprise Controlling (EC)
- Real Estate Management (RE)
- Public Sector Management
- Management of Internal Controls
- Country Versions

SAP Controlling is meant for providing the necessary information for management decision-making. Integrated with other applications like Financial Accounting (FI), Materials Management (MM), Sales and Distribution (SD), Production Planning (PP), etc., this facilitates coordination, monitoring and optimization of all processes in an organization, by recording both the consumption of production factors and the services provided by an organization. This application component contains the following modules:

- General Controlling
- Cost Element Accounting (CO-OM-CEL)
- Cost Center Accounting (CO-OM-CCA)
- Internal Orders (CO-OM-OPA)
- Activity Based Costing (CO-OM-ABC)

- Product Cost Controlling (CO-PC)
- Profitability Analysis (CO-PA)

The relationship between various organizational units within and outside CO is depicted in Figure 0.1. It is essential that you understand the structure to comprehend the functionality better.

The *company* (the smallest organizational unit for which individual financial statements can be drawn up according to the relevant commercial law, and can consist of one or more company codes) "09000" with an *operating concern* (part of an organization comprising of market or profitability segments for which you can calculate the operating profit) "9000," has two *Controlling areas* (an organization unit representing cost accounting within a company) namely "9000" and "9500." There are three *company codes* (the smallest organizational unit of Financial Accounting for which a complete self-contained set of accounts can be drawn up for purposes of external reporting) denoted as "9000," "9100," and "9500" attached to the company "09000": the company codes "9000" and "9100" are assigned to the Controlling area "9000," while the third company code is controlled by the Controlling area "9500." While the *credit control area* (an organizational unit that represents an area responsible for granting and monitoring credit) "CR95" caters to the company codes "9000" and "9100," the "CR95" controls the company code "9500" only. The company codes "9000" and "9100" are attached to the *FM area* (central organizational unit for Funds Management) "9000"; the third company code is attached to "9500."

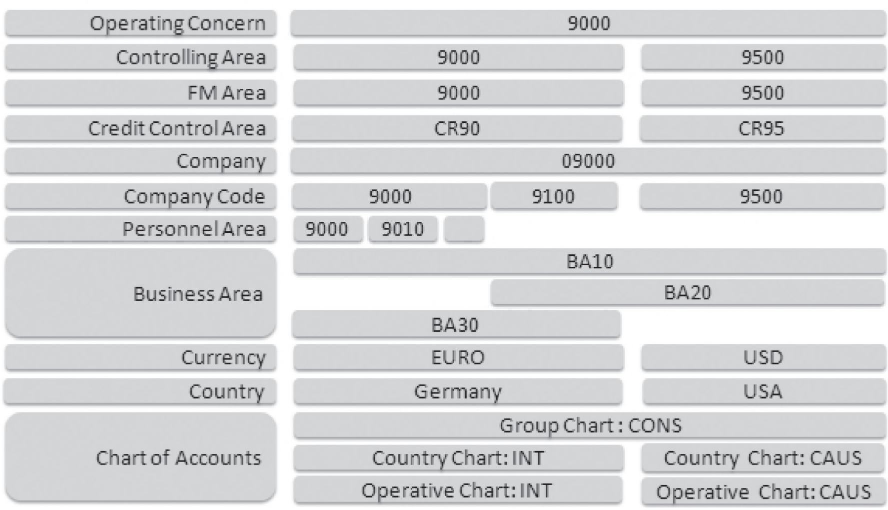


FIGURE 0.1: FI/CO Organization Structure

CHAPTER 1

GENERAL CONTROLLING (CO)

1. EXPLAIN "CONTROLLING (CO)" IN SAP.

SAP calls ***managerial accounting*** "**Controlling**" and the module is commonly known as "**CO**." The CO module is thus primarily oriented towards planning, managing, and reporting cost/revenue and is mainly used in *internal* decision making, focusing on determination variances. Facilitating coordination, monitoring, and optimization of all processes in an organization, CO involves recording both the consumption of production factors and the services provided by an organization. As in with any other application module in SAP, this also has (a) configuration setup and (b) application functionality.

The Controlling module focuses on the internal users, and helps the management by providing reports on cost centers, Profit Centers, contribution margins and profitability, etc.

The data flows regularly between Financial Accounting and Controlling: all the cost information flow automatically from **SAP** FI to CO; the system assigns the costs and revenues to various *CO objects* (internal orders, cost centers, projects, etc.); the required and relevant accounts of SAP FI are maintained as *cost elements / revenue elements* in CO, for easy and effective reconciliation between FI and CO.

2. WHAT ARE THE VARIOUS PHASES IN CONTROLLING?

The following are the phases within Controlling:

- Planning

- Monitoring
- Reporting
- Consulting
- Informing

3. ENUMERATE THE IMPORTANT "ORGANIZATIONAL ELEMENTS" OF CO.

The important organizational structure of Controlling includes:

- ***Operating Concern*** (the top-most reporting level for profitability analysis and sales and marketing Controlling)
- ***Controlling Area*** (central organization in "Controlling," structuring the internal accounting operations)
- ***Cost Centers*** (the lower-most organizational units where costs are incurred and transferred

FIGURE 1.1 Operating Concern, Controlling Area, and Company Code

4. WHAT ARE THE DIFFERENT "COMPONENTS" OF CO?

There are several sub-modules in CO as detailed below:

- CO-OM-CEL Cost Element Accounting
- CO-OM-CCA Cost Center Accounting
- CO-OM-OPA Internal Orders
- CO-OM-ABC Activity-Based Costing
- CO-PC Product Cost Controlling
- CO-PA Profitability Analysis
- EC-PCA Profit Center Accounting

FIGURE 1.2 Controlling module's components

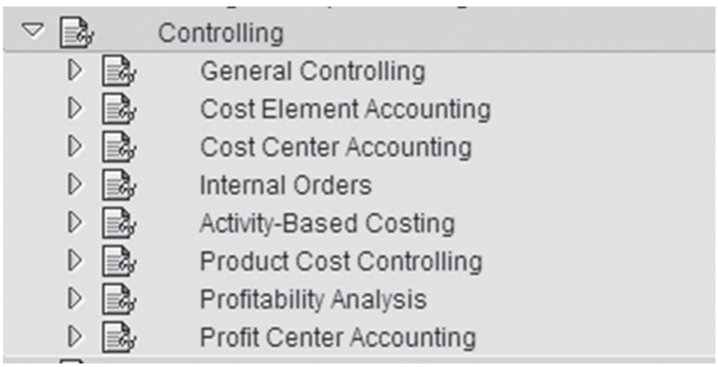


FIGURE 1.3 CO in SAP IMG

5. WHAT IS A "CONTROLLING AREA?" HOW IT IS RELATED TO COMPANY CODE?

A **Controlling Area** is the central organizational structure in "***Controlling***" (CO), and is used in cost accounting. The Controlling Area (table

TKA01), as in the case of Company Code, is a self-contained cost accounting entity for internal reporting purposes. The Controlling Area is assigned to one or more Company Codes, so as to ensure that the necessary transactions, posted in FI, are transferred to Controlling for ***cost accounting*** processing.

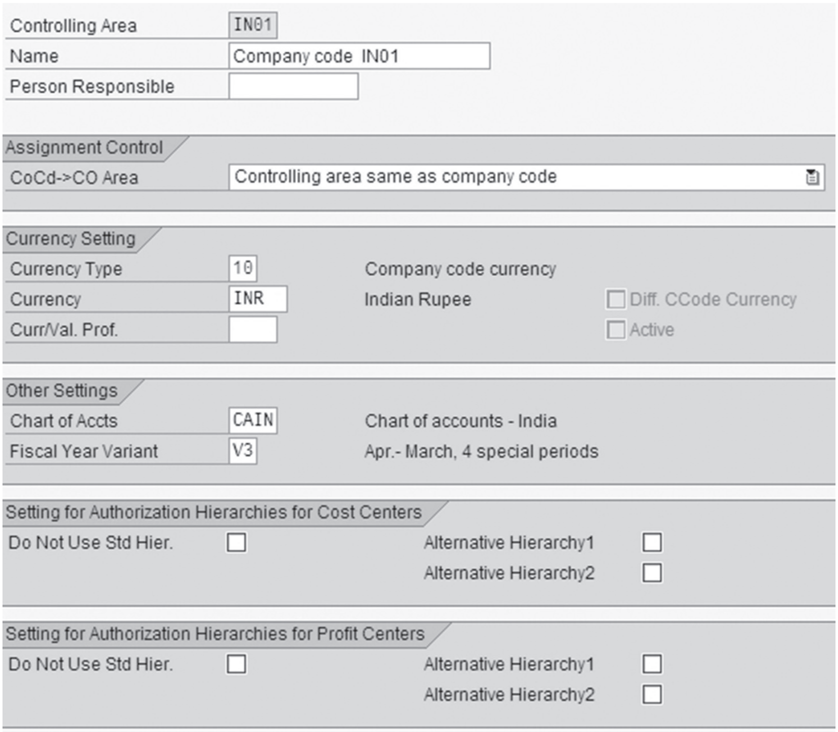


FIGURE 1.4 Controlling Area – Details

The internal business transactions like the primary costs are transferred from external accounting (FI) and classified according to managerial accounting (CO) perspectives, in the Controlling Area: all such primary costs (direct costs) are assigned to cost objects (projects, for example). All the secondary costs (overheads) are assigned to Cost Centers or overhead cost orders, which are then allocated using internal allocation techniques according to their source.

Transaction Code
OKKP

The relationship between a Controlling Area and other organizational units in SAP FI/CO can be summarized as below:

- One Controlling Area can be assigned one or more Company Codes
- One chart of accounts can be assigned to one or more Controlling Areas
- One or more Controlling Areas can be assigned to an operating concern
- One client can have one or more Controlling Areas

6. WHAT IS AN "OBJECT CLASS?"

An organizational element in SAP Controlling application, the **object class** categorizes CO objects according to their business function, enabling analysis of cost flows within CO from different business perspectives. In addition to the functional area, the object class determines or explains certain values in the external accounting components.

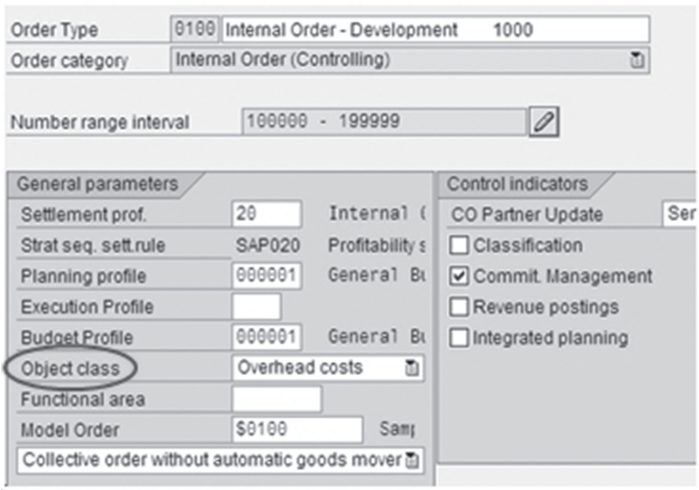


FIGURE 1.5 Object Class

The object classes include:

- Investment
- Overhead
- Production
- Profitability analysis and sales

While certain object types automatically belong to a particular class (say, Cost Centers belonging to the "overhead" class), others need to be explicitly assigned to an object class in their master record (this is the case with internal orders and WBS elements, for example).

7. WHAT IS KNOWN AS A "CO OBJECT?"

A **CO object** is an organizational element in the SAP Controlling application. The following are some of the CO objects you will come across:

- Activity type
- Business process
- Business transaction
- Controlling Area
- Cost Center
- Cost element
- Cost object
- Investment center
- Object class
- Operating concern
- Order
- Profit Center
- Profitability segment
- Project
- Revenue element
- WBS element

8. MENTION THE OPTIONS IN "COMPANY CODE – CONTROLLING AREA" ASSIGNMENTS.

There are two types of assignments possible between the Company Code and a Controlling Area (all the assignment information is stored in table TKA02):

- ***One-to-one:*** one Company Code corresponds to one Controlling Area. Both the financial and cost accounting views are identical because of the 1:1 relationship.

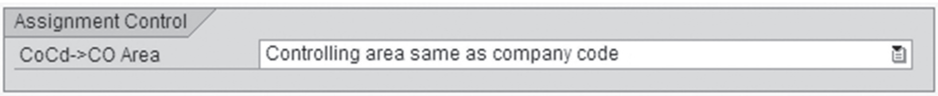


FIGURE 1.6 Company Code / Controlling Area Assignment: One-to-One

- ***One-to-Many:*** One Controlling Area is assigned to more than one Company Code. Also known as "*cross-Company Code Controlling*," all the Controlling data are collected in one Controlling Area and internal allocation is used to allocate costs / revenues across the participating Company Codes. This kind of assignment is suited for a global organization with several independent subsidiaries using a global managerial accounting.

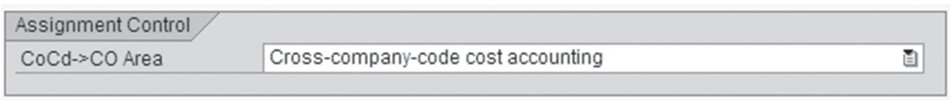


FIGURE 1.7 Company Code / Controlling Area Assignment: Many-to-One

9. COMPARE THE TWO TYPES OF "CONTROLLING AREA/ COMPANY CODE" ASSIGNMENTS.

Table 1.1 outlines the comparison between the two types of "Controlling Area / Company Code" assignments in SAP:

TABLE 1.1 Controlling Area / Company Code Assignments: A Comparison

Details	**1:1 assignment**	**1: many assignment (Cross-Company Code cost accounting)**
Chart of accounts	The chart of accounts should be the same between the Controlling Area and the Company Code.	The 'operative chart of accounts' of the Company Codes and the Controlling Area should be the same.

Details	1:1 assignment	1: many assignment (Cross-Company Code cost accounting)
Fiscal year variant (posting periods and special periods)	The number of special periods may be different, between the Company Code and the Controlling Area, but the number of posting periods should be the same. Also, the period limits of posting periods should be identical.	
Controlling Area currency	Same as that of the Company Code currency	You may use the same currency as that of the Company Code. You may also use another currency in Controlling.
Object currency	Additional currency, besides the Controlling Area currency, can be used for each account assignment objects in CO.	You can choose any object currency if all the assigned Company Codes have the same currency, which is the same as that of the Controlling Area currency. Else, the system automatically assigns the Company Code currency to the account assignment object as an object currency.
Transaction currency	Documents are posted in CO in the transaction currency.	
Allocations	Cross-Company Code cost allocation in CO is not possible	Cross-Company Code allocation in CO is possible.

10. WHEN WILL YOU USE "1:N" ASSIGNMENT BETWEEN CONTROLLING AREA AND COMPANY CODE?

SAP recommends the "1:n" (Controlling Area: Company Code) assignment to:

- Display cross-Company Code CO postings (like assessments, capitalization of internal activity in FI-AA, activity allocation, etc.) in the reconciliation ledger
- For multilevel product cost management across Company Codes
- Process cross-Company Code transactions (like production in an associate Plant) in a single Controlling Area
- Represent group costing
- Use CO-PCA and transfer prices

11. WHAT NEEDS TO BE TAKEN CARE OF IN A "1:N" ASSIGNMENT?

In cases you need to assign more than one Company Code to a single Controlling Area, ensure that you take care of the following requirements:

- As you need to treat each cost element in the same manner in all the participating Company Codes, use the same operative chart of accounts for all the Company Codes, even though you may use different country chart of accounts in SAP FI.
- The fiscal year variants of the Company Codes should match that of the Controlling Area.
- Execute the period-end closing in Controlling at the same time for all the Company Codes; else individual period-end closing for various Company Codes will be laborious and time consuming.
- Automatic creation of tax invoices is not possible as the system posts the reconciliation postings only without taxes across the Company Codes.
- Only one "operating concern" can be used with the single Controlling Area.
- Create a detailed authorization concept to prevent cross-Company Code postings in Controlling.

12. WHEN WILL YOU USE "1:1" ASSIGNMENT BETWEEN CONTROLLING AREA AND COMPANY CODE?

SAP recommends the "1:1" (Controlling Area: Company Code) assignment to:

- Represent consolidated analysis of settled transactions across Company Codes in CO-PA where you can assign more than one Controlling Area to an operating concern.
- Represent intercompany processes when the producing and the delivering Plant are the same.

13. EXPLAIN ASSIGNMENT BETWEEN A CONTROLLING AREA AND A PLANT.

As each Plant is assigned uniquely to a Company Code, it follows that each Plant (table T001W) is assigned uniquely to a Controlling Area.

Transaction Code
OX18

When assigning a Plant to a Company Code (table T001K), ensure that you assign the Plants to the Company Code situated in the same country. If not, you will face issues in tax postings when stocks are transferred between Plants situated in different countries.

14. CAN YOU WORK WITH DIFFERENT CONTROLLING AREAS USING MULTIPLE SESSIONS?

When you start working with your first transaction in Controlling, you need to set the desired Controlling Area before proceeding further. Note that you will not be able to work with different Controlling Areas even if you have multiple sessions opened: changing the Controlling Area in one session results in all other sessions also defaulting to the same Controlling Area.

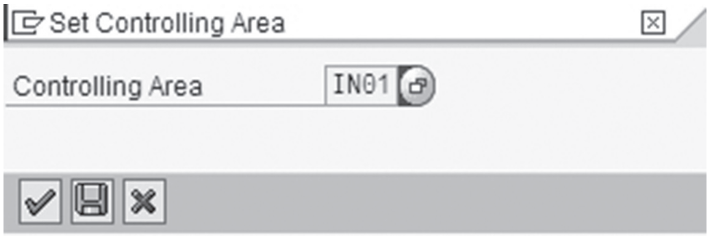


FIGURE 1.8 Set Controlling Area

15. IS IT REQUIRED TO MAINTAIN "BUSINESS AREA" IN CONTROLLING?

Normally, you create the financial statements at the Company Code level, to meet the external reporting requirements. However, when you want to create the balance sheet and profit/loss statement purely for internal purposes, then you will define the *business areas* in SAP FI.

It is required that you maintain the business area within Controlling as well by specifying the business area, when you create CO object master records (such as cost centers). When you post primary costs to a Cost Center, the system determines the correct business area automatically from the Cost Center master data, thereby reducing the instances of incorrect assignments.

16. WHAT IS A "PROFIT CENTER?"

A **Profit Center** is an accounting organizational unit reflecting a management-oriented structure of your organization for the purpose of internal control, for analyzing the operating results using either the *cost-of-sales accounting* or *period accounting* approach. It is also possible that by calculating the fixed capital, the Profit Centers can be modeled as *investment centers*. Like Cost Centers, the Profit Centers are also valid for specific time periods (that, is time-dependent).

Profit Center Accounting (EC-PCA) at the Profit Center level is based on costs and revenues: these are assigned statistically by multiple parallel updating to all logistical activities and other allocations of relevance for a Profit Center. To ensure that the data in EC-PCA is consistent with that in other areas, you must assign each Profit Center to the *Standard Hierarchy* in your Controlling Area. If the Profit Centers in your organization are closely linked to your Cost Centers, you can simply copy your Cost Center master data to create your Profit Centers.

17. WHAT IS THE ESSENTIAL DIFFERENCE BETWEEN "PROFIT CENTERS" AND "BUSINESS AREAS?"

While the **Profit Centers** are essentially used for internal control, the **business areas** are more to report and control from an external viewpoint.

18. WHAT IS THE ESSENTIAL DIFFERENCE BETWEEN "PROFIT CENTERS" AND "COST CENTERS?"

The **Cost Center** merely represents *costs*. The **Profit Center**, on the other hand, is a responsibility center for the profit which is nothing but the balance of *costs* and *revenues*.

19. WHY DO YOU NEED A "DUMMY PROFIT CENTER?"

The **dummy Profit Center** is always used during data transfer if the original assignment object (e.g. Cost Center, order, etc.) is not assigned to a Profit Center. This guarantees a complete dataset in Profit Center Accounting (EC-PCA). The data on the dummy Profit Center can be sent to the real Profit Centers using assessment or distribution. The name of the dummy Profit Center is displayed in the Controlling Area settings for Profit Center Accounting.

You create the master record for the dummy Profit Center using this special transaction KE59. To change or display it, use the normal Profit Center maintenance functions.

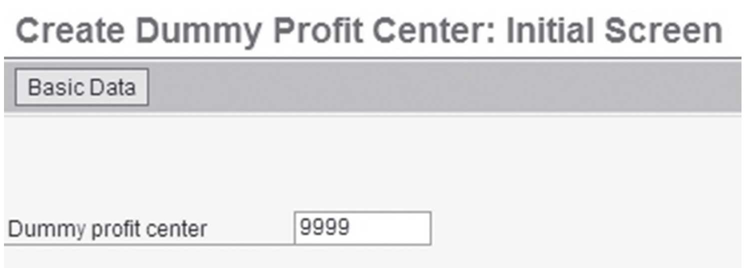


FIGURE 1.9 Create "Dummy" Profit Center

20. EXPLAIN THE USE OF "CURRENCY" IN CONTROLLING.

You need to specify a currency when you define a Controlling Area: the same as that of the Company Code currency or one of the parallel currencies of the Company Code or a currency which is not related to the Company Code. This way it is possible to have cross-Company Code cost accounting, even when the Company Codes use different currencies: the system can derive the Controlling Area currency automatically from the Company Code currencies or currencies of other organizational units.

The Controlling Area currency is dependent upon (a) the type of assignment between the Controlling Area and the Company Codes, and (b) the currency type – like group currency, index currency etc., specified in the "assignment control indicator" while defining the Controlling Area.

Note that once the Company Code assigned to the Controlling Area becomes *productive*, you will not be able to change the Controlling Area currency.

21. HOW MANY CURRENCIES ARE ALLOWED IN CONTROLLING?

Primarily, you will come across the following three currencies in Controlling:

- *Controlling Area currency*: This is the currency specified when you create the Controlling Area, and is based on the assignment indicator (1:1 or 1:n) and currency type.
- *Object currency*: You can use a different currency for the CO objects by specifying the same in the relevant master records. When you create an object in CO, the system defaults the Company Code currency as the object currency, which can be overwritten if the Controlling Area currency is the same as the Company Code currency. It is possible to maintain object currency for the sender as well as one for the receiver.
- *Transaction currency*: The transaction currency (for the documents posted in Controlling) can differ from the Controlling Area currency and the object currency: the system automatically converts the values to the Controlling Area currency at the exchange rate specified.

SAP enables you to use different currencies in evaluation, as all the above three currencies are saved in the "line items" and "totals records." However, you should configure Controlling for updating of all these currencies for that Controlling Area. Additionally, when there is cross-Company Code Controlling, the Company Code currency, group currency, global company currency, hard currency, or index-based based currency may also appear as the Controlling Area currency.

22. HOW DOES "CURRENCY TYPE" DETERMINE THE "CONTROLLING AREA CURRENCY?"

When the assignment is 1:1 between the Controlling Area and the Company Code, then the currency of the Controlling Area is the same as that of the Company Code. In cases where you (a) assign more than one Company Code to a Controlling Area (1:n assignment) or (b) define a currency for the Controlling Area which is different from the Company Code, then the Controlling Area currency is determined by the "*currency type*." The Table 1.2 illustrates how Controlling Area currency is determined by the currency type:

TABLE 1.2 Controlling Area / Company Code Assignments: A Comparison

CO Area : Company Code Assignment	Currency Type	Controlling Area Currency	Conditions of usage
1:1 (Controlling	10	Company Code	
Area is same as		currency	
that of the Company			
Code)			
1:n (Many Company	10	Company Code	All the Company Codes assigned to the
Codes are assigned		currency	Controlling Area should use the same
to a single			currency as the Company Code
Controlling Area)			currency. Any object currency is allowed in Controlling.

CO Area : Company Code Assignment	Currency Type	Controlling Area Currency	Conditions of usage
	20	Independent Controlling Area currency	It is possible to use any of the currencies defined in Customizing, as the Controlling Area currency.
	30	Group currency	You can use the 'group currency' as the Controlling Area currency if the assigned Company Codes use this as a 'parallel currency', and the currency is defined at the client level. Remember, in the case of more than one Company Code, all of them should use the same "group currency" as a parallel currency.
	40	Hard currency	You can use the 'group currency' as the Controlling Area currency if the assigned Company Codes use this as a 'parallel currency', and the currency is defined at the client level. Remember, in the case of more than one Company Code, all of them should use the same 'group currency' as a parallel currency.

CO Area : Company Code Assignment	Currency Type	Controlling Area Currency	Conditions of usage
	50	Index-based currency	You can use the 'index-based currency' as the Controlling Area currency if the assigned Company Codes (or the subsidiaries) are all in the same country, using this as a 'parallel currency', and the currency is defined at the client level. Remember, in the case of more than one Company Code, all of them should use the same 'index-based currency' as a parallel currency.
	60	Global company	You can use the 'global company currency' as currency the Controlling Area currency if the assigned Company Codes (or the subsidiaries) are all in the same country, using this as a 'parallel currency', and the currency is defined at the client level. All the Company Codes should belong to the same company; if the companies are different, then they should at least use the same hard currency. Remember, in the case of more than one Company Code, all of them should use the same 'global company currency' as a parallel currency.

23. HOW ARE "NUMBER RANGES" ARE ASSIGNED IN CONTROLLING?

For each posting in Controlling, the system creates a numbered document. The document numbers are unique in every Controlling Area as each number is only used once.

The number ranges in Controlling are defined in two steps:

i. Create individual *business transaction groups* for each Controlling Area. This way you can group all *business transactions* (like cost planning, overhead cost calculation, invoice posting, etc.) into a business transaction group and then assign it to a number range interval. In case you need a more detailed view, the number assignments can also be done at the *business transaction* level itself, by creating a business transaction group for each of these transactions.

ii. Assign business transaction groups to number range intervals. By doing this you will able to combine similar business transactions (say, planning transactions) into particular number range. SAP comes delivered with standard default assignment of number ranges to Controlling Area "0001" which can be copied to your own Controlling Areas.

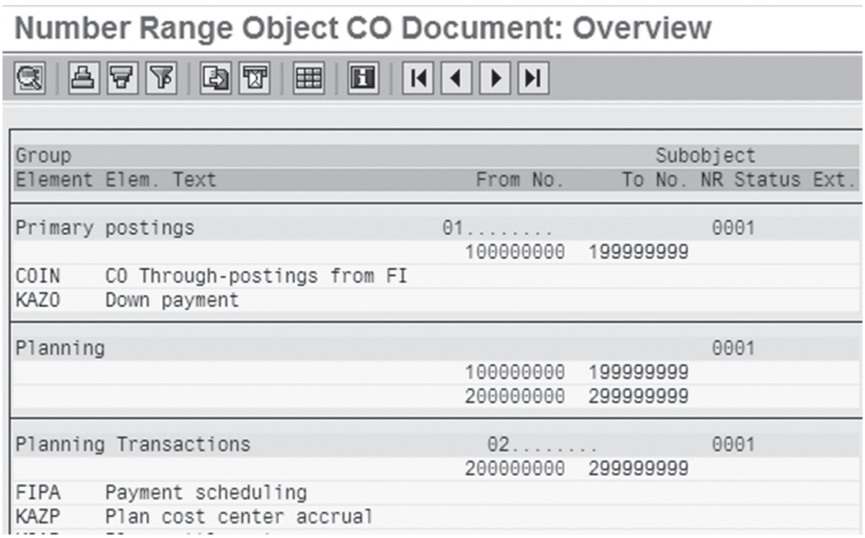


FIGURE 1.10 Number Range Assignment in Controlling

Transaction Code
KANK

24. EXPLAIN "BUSINESS TRANSACTIONS" IN CONTROLLING.

Each Controlling component has its specific business transactions (overhead cost calculation, for example), which can be grouped into a business transaction group for a streamlined number range assignment.

The business transactions are grouped into two major categories: (a) planning transactions and (b) other transactions. In planning transactions, you can again group them into (i) plan and (ii) actual. Within each of these subgroups, the transactions are classified either as period based or transaction based.

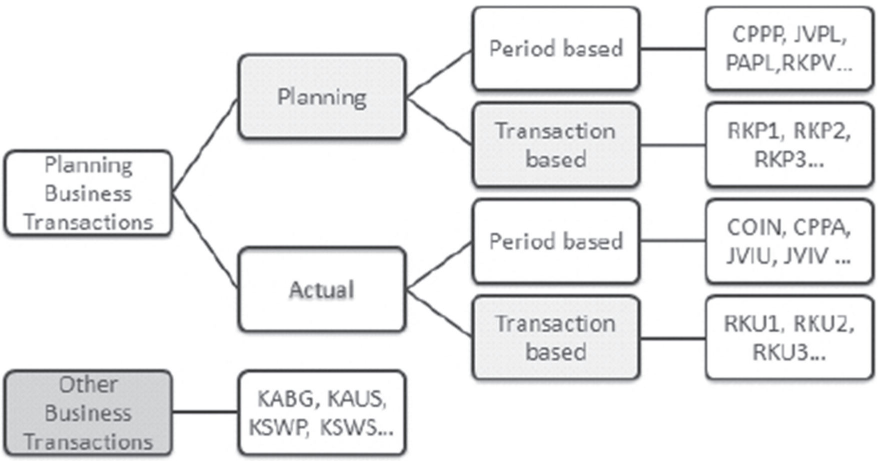


FIGURE 1.11 Business Transactions / Business Transaction Groups

Unless these transactions are associated with a valid number range, it will not be possible to call up that transaction. SAP recommends that you create separate transaction groups for planning and actual.

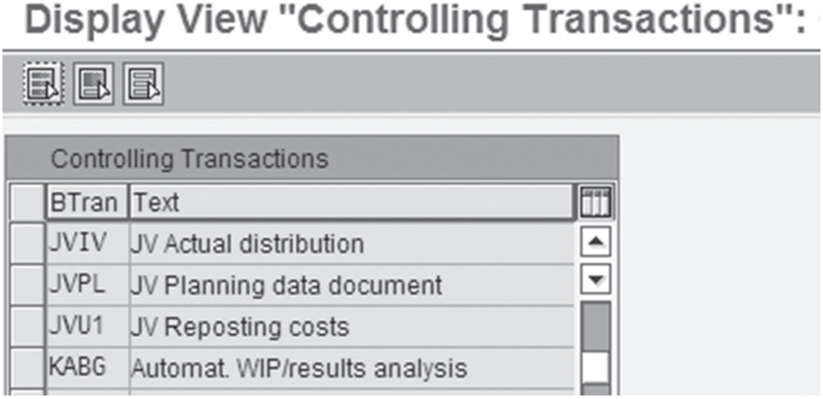


FIGURE 1.12 Business Transactions in Controlling

Transaction Code
OKC1

25. EXPLAIN "ENTERPRISE ORGANIZATION" IN CONTROLLING.

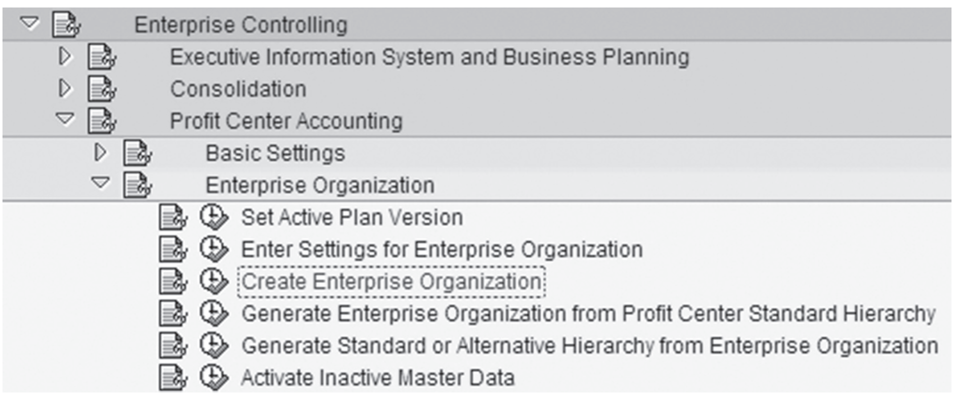


FIGURE 1.13 Enterprise Organization in Controlling

An **enterprise organization** is the representation of the structure of an organization according to logically related units like Controlling Area, Company Code, cost center group, Cost Center, Profit Center, HR organizational units, and so on in a tree-like structure. It provides an overview of the enterprise in terms of responsibilities for personnel, costs and revenues. The enterprise organization requires to be activated before using the same.

26. EXPLAIN USE OF "CHART OF ACCOUNTS" IN CONTROLLING.

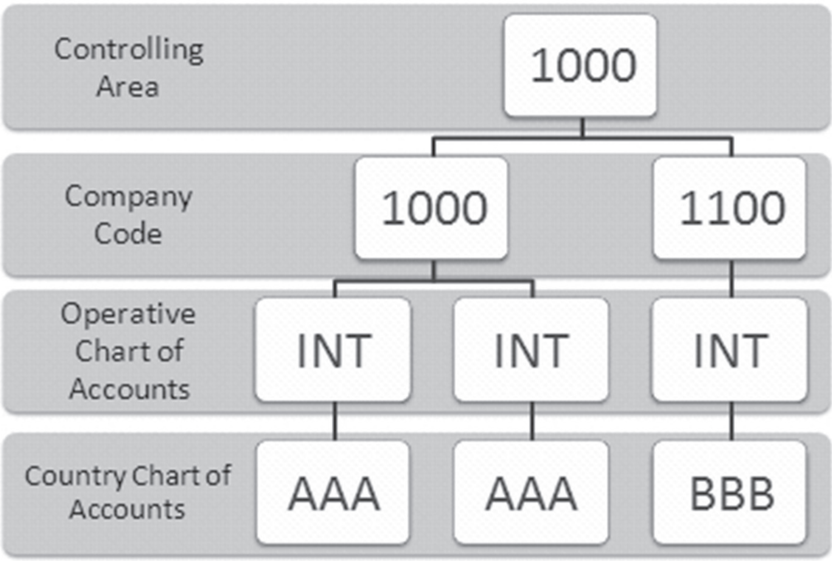


FIGURE 1.14 Chart of Accounts in Controlling

A Controlling Area makes use of the same "operating chart of accounts" used in a Company Code. The items in a chart of accounts can either be an expense or revenue on the FI side; on the Controlling side, they are denoted either as cost elements or revenue elements.

Because the Controlling adopts the chart of accounts of the assigned Company Codes, make sure that all the Company Codes assigned to the same Controlling Area (in the case of "1:n" assignment), use the same operating chart of accounts. Of course, it goes without saying that these Company Codes may use a country-specific chart of accounts which is different from the operating chart, as some of them may operate in different countries.

Table 1.3 outlines the usage of charts of accounts in a centralized and decentralized organizational environment:

TABLE 1.3 Charts of Accounts / Cost Accounting in Different Organization Models

Organization Model	**Cost Accounting**	**Operating chart of**	**Country-specific chart accounts**	**Group chart of accounts**	**Remarks**
Decentralized	At Company Code level (Controlling Area is same as that of Company Code)		Country-specific chart of accounts is the operating chart of accounts	Corporate group chart of accounts, for consolidation	Cross-Company Code cost accounting is not possible
Centralized	Cross- Company Code (Controlling Area is assigned to more than one Company Code)	Corporate group chart of accounts	For meeting the local requirements		Consolidation is done using operating chart of accounts which is also the corporate group chart of accounts

27. WHAT IS "ACCOUNT ASSIGNMENT" IN CO?

For all the SAP FI postings using a cost element as the account, you need to use a special account assignment logic, so as to enable the system to ensure that data is reconcilable with all the relevant application components. These rules for the account assignment logic always apply for postings in CO. The account assignment distinguishes between *true* and *statistical CO objects*. The true CO objects can be used as senders or receivers.

In addition to true CO objects, you can also specify statistical CO objects as account assignment objects. Though it is possible to make statistical assignments to any number of CO objects, you can not allocate costs on statistical CO objects to other objects.

28. GIVE EXAMPLES OF TRUE AND STATISTICAL CO OBJECTS.

Table 1.4 provides a listing of true as well as statistical Controlling objects available in the SAP system.

TABLE 1.4 Controlling Objects: True and Statistical

True Controlling Objects	Statistical Controlling Objects
• Business Processes • Cost Centers (for account assignment of costs) • Cost objects • Make-to-order sales orders • Networks • Orders (true) • Profitability segments • Projects (true) • Real Estate Objects	• Cost Centers (for account assignment of revenues) • Cost Centers, if a true account assignment object already exists • Profit Centers • Statistical Internal Orders • Statistical projects

29. ENUMERATE THE IMPORTANT RULES FOR ACCOUNT ASSIGNMENT IN CONTROLLING.

The following are some of the important rules you need to aware of for account assignments in Controlling:

- Specify a true CO object in each posting item. It is not possible to assign to objects such as a statistical project without specifying a true CO object.
- Specify in each posting item up to three statistical CO objects in addition to the true CO object. For example, you can post costs to a Cost Center, and also to a statistical order and yet another statistical project.
- Not possible to assign costs to more than one CO object of the same type in one posting item. For example, you cannot post to both a true order and a true project. The only exception to this is that you can assign to a Cost Center and one other true CO object. In this case, the posting is true for the additional CO object and statistical for the Cost Center.
- Not possible to specify the same CO objects as being true and statistical in the same posting item. For example, you cannot post to an order (true) and a statistical order in the same posting item.

- Possible only to make postings to Profit Centers in addition to true CO objects. This means that costs and revenues are only posted statistically to Profit Centers, as the Profit Centers are derived from true CO objects. When you enter a Profit Center, it must match the Profit Center that is assigned from the CO object.
- Create P&L accounts as a cost element if you wish to post to them and a CO object.
- True revenue postings are possible to a profitability segment, a make-to-order sales order, a project with revenues, an order with revenues, or a real estate object.
- Possible only to post revenues statistically to Cost Centers and Profit Centers. If you specify a Cost Center or a Profit Center for a revenue posting, the system treats the object as a statistical Controlling object. This means that you must also specify a true Controlling object to which the revenues are posted. Note that the system can automatically derive such an object if account-based profitability analysis is not active.

30. WHAT IS "COMMITMENT" IN CONTROLLING?

The **commitment** is a contractual or scheduled commitment (purchase orders, purchase requisitions, for example) that is not yet reflected in FI but that will lead to actual expenditures in the future. In other words, commitments reserve funds for costs that will be incurred at a future date.

You can enter commitments for the following CO objects:

- CO production orders
- Cost Centers
- Internal orders
- Maintenance orders
- Network activities
- Networks
- Production orders
- Projects (WBS elements)
- Sales orders

31. EXPLAIN IN "COMMITMENT MANAGEMENT" IN SAP CO.

The **commitments management** in SAP CO enables you to enter and analyze commitments at an early stage, and thus to account for them in Controlling. It processes the data from both the CO and MM application components:

- The commitments are created through purchase requisitions (PR) and purchase orders (PO). and the same are reduced by various business transactions such goods receipt (GR). The commitments data is transferred to CO.
- The commitments management is a part of the cost monitoring process, and the commitments are displayed either on internal orders, Cost Centers, or projects.

You need to activate commitment management for each of your Controlling Areas from the chosen fiscal year, for orders per order type, and for the cost centers per cost center type.

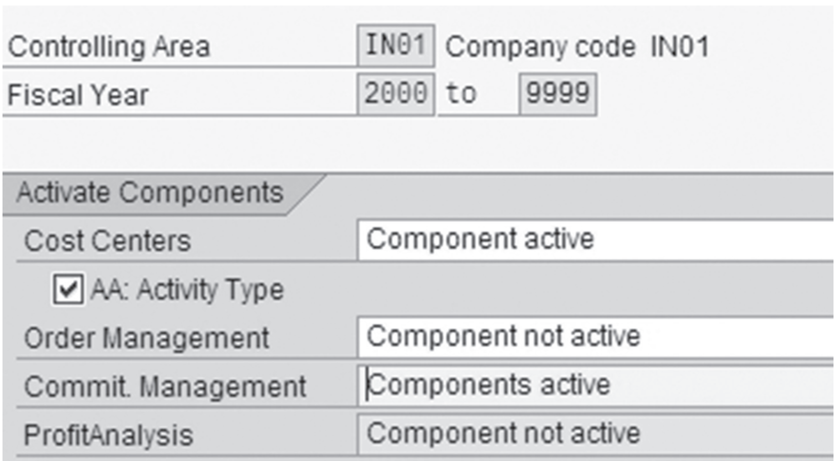


FIGURE 1.15 Activate "Commitment Management" for the CO Area

Transaction Code
OK01

The commitments management takes care of:

- *Creating commitments*: When you order specific goods for an internal order or a cost center, you create a commitment. Remember that the value of a PO commitment (say, $1,000) is equal to the value of the PO (say, $1,000).
- *Displaying commitments*: Though all the commitments are normally displayed with the value (say, $1,000), it is possible to display to the quantity (for the cost element) as well. You may also display the period/fiscal year when the committed costs will be incurred.
- *Reducing the commitment*: A commitment is reduced by business transactions (say, GR-goods receipt) and actual costs are incurred by the corresponding account assignment object. This continues until the original business transaction is closed (for example, PO-purchase order) and the "PO commitment" (say, $1,000) is reduced to zero. The *goods receipt indicator* in the PO determines when the commitment is reduced and actual costs are set up:
    - When the indicator is set, then the commitment is reduced when goods are received.
    - When the indicator is not set, then the commitment is reduced when invoices are received.
- *Commitment currency*: All commitments are executed in the original business transaction (say, PO) currency; the system then translates (using the PO currency exchange rate) the commitment amount into the CO area currency, Company Code currency, and the object currency.
- *Carrying forward the open commitments at year-end*: while closing the year-end, you can carry forward (for each CO area) all the open commitments to first period of the next fiscal year.

32. EXPLAIN "PO COMMITMENT," USING AN EXAMPLE.

a. Consider that you have created the purchase requisition for five pieces of LCD monitors, and assigned to an internal order. The system now creates a purchase order commitment for a value of $5,000 @ $1,000 per monitor. If there are shipping charges, for example, then that is also added to the commitment value. Let us consider that you have a shipping charge of $20 per monitor. The total of the commitment is $5,100.

b. Now, imagine that you have received two of the five monitors, and you are posting the goods receipt (GR). Because of this, internal order has now incurred actual costs equal to the purchase order value of the two monitors, plus the proportionate shipping costs equaling $2,040 ($2,000 @ $1,000 per monitor plus the proportionate costs of $40 for two monitors @ $20 each).

c. When you receive the invoice, you understand that the monitor's cost (at $1,200) is more than the initially committed value of $1,000 per piece. As a result, the outstanding commitment for the remaining three monitors increases by $600, to $3,660 (3 monitors @ $1,200 plus shipping at @$20 for 3 pieces).

d. Let us assume that the remaining three monitors have also been received, and you have posted the final GR. Now purchase order commitment has been reduced to zero, and the order costs are fully converted into actual value.

e. You receive an invoice for shipping charges to the tune of $150 against the originally committed value of $100 (step-a). This will increase the actual cost to $6,150 (Table 1.5).

TABLE 1.5 Commitment Management: An Illustration

Step	Narration / Business Transaction	Commitment $	Actual $	Assigned (actual + commitment) $	Remarks
a	PO for 5 LCD monitors at $1,000 each, plus shipping charges @ $20 per piece	5,100		5,100	
b	GR for 2 LCD monitors	3,060	2,040	5,100	Proportionate shipping (at $20 per monitor) is also included

Step	Narration / Business Transaction	Commitment $	Actual $	Assigned (actual + commitment) $	Remarks
c	IR (invoice receipt) for 5LCD monitors @ $1,200 per piece	3,660	2,440	6,100	The outstanding commitment for the remaining three monitors increases by $600. Proportionate shipping is also included.
d	GR for the remaining 3 LCD monitors	6,100		6,100	($2,440 already charged to the actual, $3,660 now). Proportionate shipping is also included.
e	The shipping charges are invoiced at $150	6,150		6,150	The actual costs have increased to $6,150 because of the additional shipping charges of $50.

33. WHAT IS KNOWN AS "PERIOD LOCK" IN SAP CONTROLLING?

The **period lock** is used to lock plan and actual business transactions for a combination of Controlling Area, fiscal year, and version. To maintain / display the period lock for the corresponding Controlling component, go to the menu in Cost Element Accounting, Cost Center Accounting, Cost Object Accounting, internal orders, or Activity-Based Costing and choose *Environment > Period lock > Change / Display*.

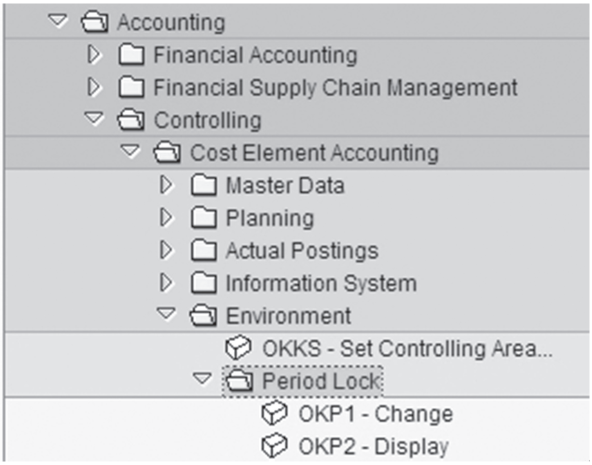
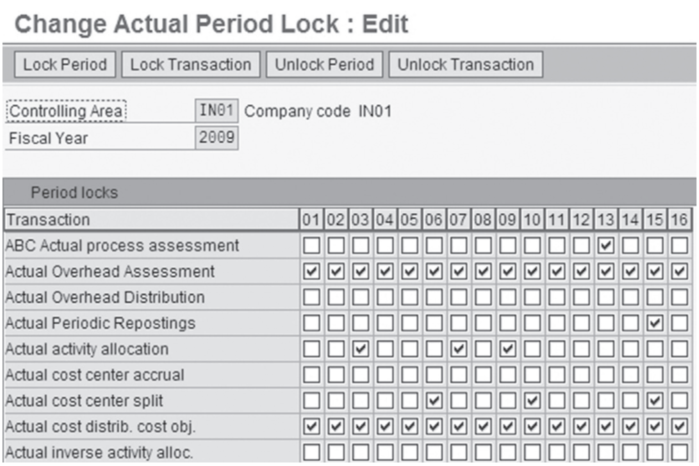


FIGURE 1.16 Period Lock Menu Path in Cost Element Accounting

From the initial screen of Transaction Code OKP1, you need to maintain the Controlling Area, fiscal year and version, then click either on "plan" or "actual" to decide whether to lock the plan or actual data, and accordingly you will be taken to the "edit" screen of the period lock settings.

Transaction Code OKP1



Transaction	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
ABC Actual process assessment	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐
Actual Overhead Assessment	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Actual Overhead Distribution	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Actual Periodic Repostings	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐
Actual activity allocation	☐	☐	☑	☐	☐	☐	☑	☐	☑	☐	☐	☐	☐	☐	☐	☐
Actual cost center accrual	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Actual cost center split	☐	☐	☐	☐	☐	☑	☐	☐	☐	☑	☐	☐	☐	☐	☑	☐
Actual cost distrib. cost obj.	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Actual inverse activity alloc.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

FIGURE 1.17 Edit Screen of "Actual" Period Lock

You may lock/unlock individual transactions in all periods of the fiscal year by positioning the cursor on any of the periods on a business transaction row, and clicking on "*Lock transaction*" or "*Unlock transaction*"; you may use "*Lock Period*" or "*Unlock Period*" for all business transactions for individual periods.

34. WHAT IS "SCHEDULE MANAGER?"

The "**Schedule Manager**" helps you to organize, execute and monitor complex and repetitive business transactions (like month-end processing) from easy-to-use workspace, which resembles an all-in-one "organizer" kind of utility containing:

- Calendar window
- Daily overview window
- Task overview window
- User notes window

The ***information window*** provides the details of what and how you can achieve the tasks by providing useful information with hyperlinks to processes and steps with in a process. This appears to the left of all other windows. Depending upon the requirement, this can be switched-on or switched-off.

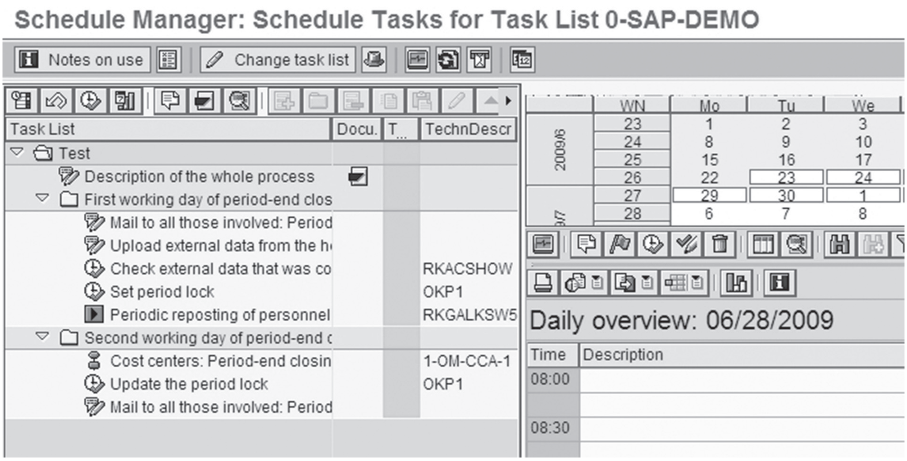


FIGURE 1.18 SAP Schedule Manager

The ***task overview window*** provides a complete "drill-down" facility in a tree-structure of all tasks entered and monitored by you. The tasks are grouped into an upper level task list, which can be scheduled, released and monitored using the "daily overview" window. Remember that the tasks maintained in the task overview window needs to be properly scheduled and released for execution: the mere listing of tasks here will not start a transaction or a program or a report.

The ***daily overview window*** is similar to an appointment column of any organizer, with fully customizable time intervals (in increments of, say, 30 minutes, 45 minutes, etc.). Ideally, the tasks appearing in the task list in "task overview" window, when scheduled and released, will appear here against the appropriate time slot. By selecting a task here, you can monitor the same using the "monitor" icon or from the menu. A look at this daily overview window at the beginning of a day will remind you of the tasks scheduled for that day.

The ***calendar window*** is a calendar utility to help you to be better organized. However, this goes beyond the regular calendar by displaying, in different colors like yellow or green, a particular date indicating that the status of tasks scheduled for that day. A green background indicates that every thing is OK, but a yellow background indicates that there are some warnings.

Transaction Code
SCMA

35. HOW CAN YOU USE THE "SCHEDULE MANAGER" IN SAP?

The Schedule Manager has the following functionalities built in:

1. Processes

- This is the functionality which helps you to define the ***task list*** (also called a ***task group***) and the individual ***tasks*** (a task is essentially a *transaction* or a *program / report*), which are later "scheduled," "released," and "monitored" using the special "***monitoring***" function available. Any number of task lists can be created and these lists are shown in a tree format for easy navigation. A task list may contain another task list or a ***chain of tasks*** within; and tasks are grouped into a task list.

- While defining the task itself, you can maintain who is the owner of the task, when this needs to be executed, etc. The scheduling of tasks is also possible by simply dragging them into the appropriate time slots in the "daily overview" window. You may also take the help of "***job wizard***" while scheduling. A task, by mere scheduling, is not started automatically unless the same is properly ***"released***." The tasks / task lists defined can be moved up or down in the hierarchy or deleted from a list. The tasks can also be documented using MS-Office Word or Excel, etc.

2. Scenarios

- The *Schedule Manager* gives you ***three options*** for scheduling and monitoring:

  a. ***Start transaction / program / report online and schedule the jobs (tasks) in the scheduler:*** Here, you can create or select a new task list in the schedule, enter these in the "daily overview" and monitor and control the tasks" execution in the "monitor."

  b. ***Start transaction / program / report online and schedule the jobs (tasks) / job chain (task chain):*** This is similar to (a) above except that you have the option of inserting a "***job chain***" defined in "***flow definition***" into the task list.

  c. ***Start transactions / reports online, schedule job or job chain, work-list:*** Here, you can also execute and monitor a complete work-list, involving several processing steps with all the step sequences. Besides scheduler, monitor, and flow definition, you can use the "***work-list monitor***," for monitoring the processing status.

3. Help Functions

The Schedule Manager supplements with useful functions like:

- Runtime analysis
- Working with variables
- Releasing jobs

36. WHAT ARE THE ADVANTAGES OF “MULTILEVEL WORKLIST” IN THE SCHEDULE MANAGER?

In the earlier releases of SAP, the period-end closing process consisted of a series of batch jobs. The sequence of the processing steps was established by the order in which the jobs were called. The objects were selected separately for each job. Through the selection criteria, it was possible to specify a unified scope of selection. This scope of selection had to be re-specified for each processing step (that is, for each individual function of period-end closing). When an object was processed, errors that occurred in previous processing steps were not taken into account. For this reason, it was necessary to check the objects with errors after completion of a job. Any errors had to be corrected and then the job restarted for the entire scope of selection. In some areas (such as the period-end close in *Product Cost by Period*), it was already possible to create a single-level worklist for the individual processing step. With this single-level worklist, the objects with errors could be called up for each processing step, and the causes of the errors determined. The processing step could then be performed again for the object after the error was corrected. This worklist did not prevent objects with errors from being processed in the subsequent processing step (that is, in the subsequent job).

The worklist of the Schedule Manager is a **multilevel worklist**. This means that the worklist is generated for a sequence of processing steps rather than for just one processing step. Thus, the worklist makes possible an efficient execution of processing step sequences. Processes such as period-end closing can be performed much more efficiently with a multilevel worklist.

The multilevel worklist has the following advantages:

- **Faster processing of “processing step sequences”** (such as period-end closing)
    - Manual processing after completion of each job is no longer necessary. Manual processing is only necessary after executing a sequence of processing steps that consists of multiple jobs (for example, complete closing of an application component).
- **Repeat processing steps only for objects with errors:** With the multilevel worklist, the processing steps are repeated only for the objects that have errors. If you had an object with errors in the single-level worklist, it was often necessary to carry out the following processing steps again for the entire scope of selection.

- **Decreased CPU time** as the object selection only takes place once for each processing step sequence instead of for each single processing step. Objects are selected before the first processing step is executed.
- The multilevel worklist provides **performance benefits** particularly with complex structures in which dependencies between objects must be taken into account (such as complex project structures)
- **Direct notification to (business) owners for correcting errors.** Jobs are planned and monitored by members of the EDP team. In many cases they are not responsible for actually correcting the errors shown in the error logs. With the multilevel worklist, the actual employees (say, the business owners) responsible for correcting the errors can be informed directly, through workflow-triggered mail messages.

37. EXPLAIN "SETTLEMENT" IN SAP CONTROLLING.

In SAP, the settlement of business objects happens with the same logic across the applications. During settlement, some or all of the plan or actual costs incurred on an object are allocated to one or more receivers with the system automatically generating the offsetting entries to credit the sender object. The debit postings assigned once to a sender object remain in place, even after settlement to a receiver (and can therefore be displayed). The costs settled are updated on the corresponding receiver object and displayed in reporting.

The settlement process is controlled using settlement parameters like:

- Allocation Structure
- PA Transfer Structure
- Settlement Profile
- Source Structure

Settlement occurs in parallel in all valuations: the only exception being the settlement to fixed assets and profitability segments. In the case of fixed assets, the system takes the settlement amount used in legal valuation, and in the case of profitability segments the system moves back the operational valuation to the profitability segment.

38. WHAT ARE THE "SETTLEMENT TYPES?"

Table 1.6 outlines the **settlement types** defined in the SAP system.

TABLE 1.6 Settlement Types

Indicator	Name of Settlement Type	Details
PER	Periodic settlement	Settles costs by period. It only includes the costs of the settlement period.
FUL	Full settlement	Settles all costs on a sender object that were incurred up to the period of settlement.
AUC1	Capitalization of assets under construction	Settles capital investment measures to assets under construction by period. The system sets this settlement type.
PRE*	Preliminary settlement	Settles debits posted on capital investment measures to CO receivers before periodic settlement to assets under construction.
LIS*	Line item settlement for AuC	Enables line item settlement of AuC for which line item management has been defined. The system sets this settlement type (not for capital investment measures).

*for investment management.

39. WHAT ARE THE "SETTLEMENT RULES?"

You need to create a **settlement rule** to settle the actual costs of a sender object. The settlement rule contains the *distribution rules* (outlining which costs of a sender should be settled to which receiver(s), and when the settlement should occur), and the *settlement parameters* for the sender object.

Each settlement rule will have at least one distribution rule. It is possible to have one or more distribution rules assigned to a sender; however, there will be only one distribution rule for each of the receivers. The settlement rule needs to be defined before the first settlement of the sender object, as subsequent changes are only possible to a limited extent. The system creates automatic distribution rules for some sender objects, such as networks. The system always generates rules for settlement to materials automatically: you cannot enter them manually.

Unlike in the past, it is now possible to generate the settlement rules automatically for the internal orders.

40. WHAT IS A "SETTLEMENT PROFILE?"

A **settlement profile** is required for creating a settlement rule. The settlement profile is defaulted (say, the settlement profile is transferred from the order type for Internal Orders) on the basis of the entries made in Customizing. You need to define the settlement profile before entering a settlement rule for a sender object.

In each of the settlement profile, you need to define the following parameters:

- ***Allowed (permitted) receivers***: Define which receivers you can settle to. For example, for overhead orders, you can stipulate that settlement may be made to Cost Centers and orders, but not to fixed assets. You need to select one of the three options (settlement optional, allowed, or not allowed) for all the valid receivers.
- ***Maximum number of distribution rules***: Each settlement rule will have at least one distribution rule. You can have more than one distribution rule assigned to a sender; however, there will be only one distribution rule for each of the receivers. You will not be able settle to receivers without distribution rules.
- ***Document type***: What is the document type defined for the accounting related or balance sheet relevant settlements?
- ***Residence time****:* Be careful when maintaining the residence time (in calendar months) for the settlement documents, as they take up additional storage capacity. Though you can clear the settlement documents when a posting period is finally locked against further postings in FI and CO, you should build in a safety margin as you may need some of these documents if you have to cancel any settlements or repeat the period end close.
- ***Default values****:* Maintain the default values (for allocation structure, source structure, PA transfer structure and object type) which will be transferred when you create the settlement rules.

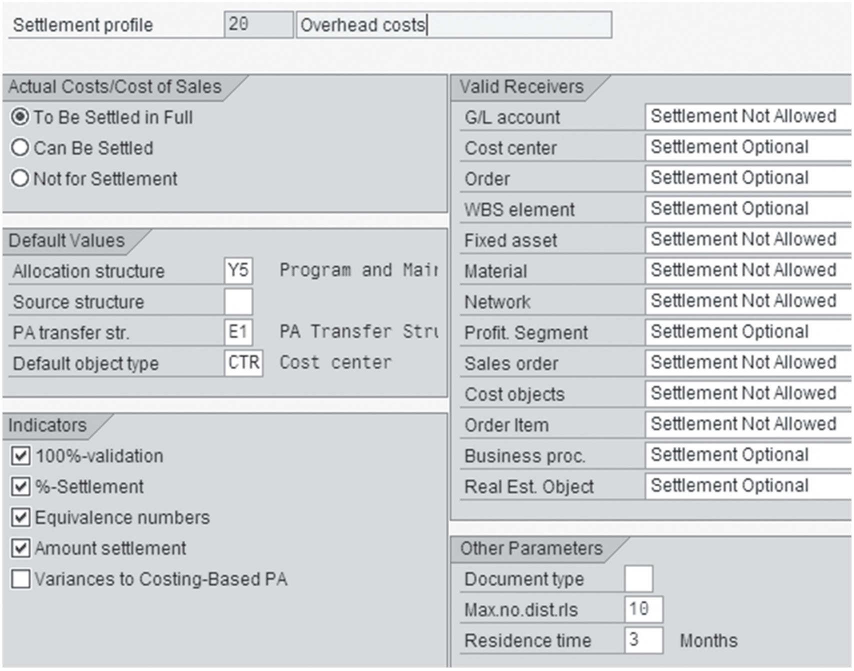


FIGURE 1.19 Settlement Profile: The Parameters

- ***Indicators:*** You need to specify how the settlement is to be handled (as a percentage or using amounts or equivalence numbers). You can also specify whether the system is to validate whether or not 100% is settled during periodic settlements.

41. EXPLAIN THE "INDICATORS" IN A "SETTLEMENT PROFILE."

You need to maintain the indicators to enable the system how the settlement amount is to be handled, and whether the variances –if any – are to be passed to on to the PA:

- The settlement as a ***percentage*** and/or using ***equivalence numbers*** or whether costs can be settled according to ***amounts.***
- ***100% validation***: During periodic settlement, whether you want to settle 100% or less than 100%. If the indicator is set, the system issues

a warning if the total is <> 100%. If the indicator is not set, then also system issues a warning if the total is > 100%. However, you can ignore and save the rule; but you need to correct the same before you run the settlement.

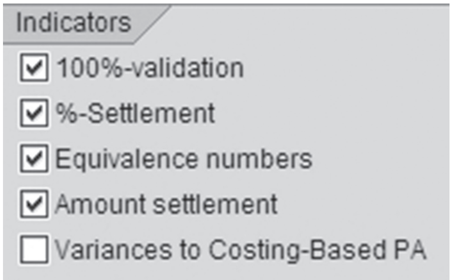


FIGURE 1.20 Indicators in a Settlement Profile

- ***Variance to Costing-based PA***: Whether variances should also be recorded in the costing-based profitability analysis. When set, the system passes the variances on to costing-based Profitability Analysis during order settlement.

42. ELABORATE THE "DEFAULT VALUES" IN A "SETTLEMENT PROFILE."

You need to maintain the default values, for the following, which will be transferred when you create the settlement rules:

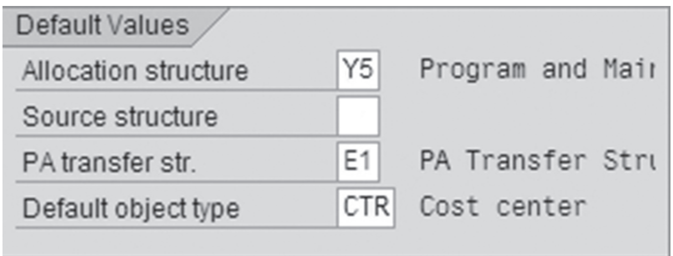


FIGURE 1.21 Default Values in a Settlement Profile

- ***Source structure:*** Used to settle costs incurred on the sender to various receivers, split by cost element, to retain the source information.

Alloc. Structures	
Alloc.str.	Text
A1	CO allocation structure
A2	No split
Y1	Cap Inv Measures
Y3	Expenses
Y4	Cost center Allocations
Y5	Program and Maintenance
Y6	Interim Tooling

FIGURE 1.22 Allocation Structure in a Settlement Profile

- ***Allocation structure:*** This is a tool that allocates the costs incurred on a sender by cost element or cost element group. You can combine the primary and secondary cost elements into groups, in which debits are then posted to the sender objects, when you create the settlement allocation structure. Then, for each group, you can specify whether (for settlement to a given receiver type) settlement is performed by cost element or using a settlement cost element.
- ***PA transfer structure***: Required only when you settle objects to CO-PA. You can use it to assign the fixed and variable costs incurred in one cost element (or cost element group) to different value fields in the operating concern.

Structure	Text
BK	STC: Cumulated Operating Costs
BP	STC: Periodic Operating Costs
C0	Allocate Activities/Processes
E1	PA Transfer Structure

FIGURE 1.23 PA Transfer Structure in a Settlement Profile

- ***Object type:*** Enter an object type that serves as a default value for account assignment (for example, CTR for cost center).

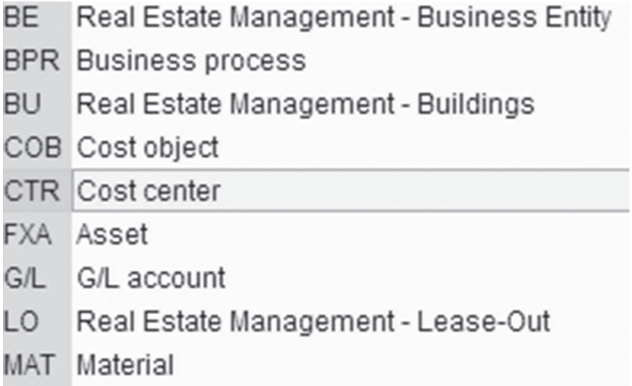


FIGURE 1.24 Default Object Type in a Settlement Profile

43. WHAT IS "SETTLEMENT HIERARCHY?"

The **settlement hierarchy** ensures that all objects are fully settled following the settlement run, and in the correct sequence. On the basis of the entries in the settlement rules, the system automatically determines the processing sequence for the settlement objects so that all objects are settled completely. Each object is given a hierarchy number between 0 and 999: the object with the highest number is settled first (in the illustration in Table 1.7, the "repair order" with the hierarchy number 200) and the object with the lowest number is settled last (for example, "powerhouse order"). This is to make sure that an object already settled does not receive costs later from another object during the same settlement run. If that is the case, then the costs received later would not be settled in that particular run.

TABLE 1.7 Settlement Hierarchy

#	Hierarchy	Order description Number	Settlement sequence
1	000	Powerhouse order	4
2	080	Cooling tower order	3
3	100	Turbine order	2
4	200	Repair order	1

If it is not possible for the system to determine a settlement hierarchy for a settlement run (in which all settlement objects can be completely settled), the system displays a message: you can then enter a hierarchy number for your settlement objects, if required.

44. EXPLAIN "AUTOMATIC GENERATION" OF "SETTLEMENT RULES."

To enable the system to **automatically generate a settlement rule** for an internal order:

- Use a strategy which defines which settlement receivers should be generated from the master data of an internal order. Use SAP supplied or your own strategies.

Sender type ORC Internal order

SAP Strategies for Automatic Generation of Settlment Rules

Str	Text
01	No autom. calculation / manual maintenance
02	Settlement to a profitability segment
03	Settlement to a requesting cost center

FIGURE 1.25 Default SAP Strategies

- Assign a strategy sequence to the order (use SAP defaulted strategy sequences in customizing or use a user-defined strategy sequence).

Overview:Chnge Strategy Sequences

Strat seq.	Name
SAP010	No generation
SAP020	Profitability segment (100%, PER and FUL)
SAP025	Profitability segment (100%, FUL)

FIGURE 1.26 Default SAP Strategy Sequences

- Assign this strategy sequence to an order type, to ensure that all orders created at a later date (for this order type) receive this strategy sequence. Note that you can manually maintain the strategy sequence retrospectively in the order master data.

Assignment of Strategy Sequence to the Order Type

Ord...	Short text	Strat s...	Name	Modifiable	Status
0100	Internal orders: Developm	SAP020	Profitability segment (100%	Do Not Overwrite	Created
0200	Internal orders: Constructi	SAP030	Requesting cost center (1(	Only Overwrite Unus	Created

FIGURE 1.27 Assignment Strategy Sequence to Order Type

- Specify what time the automatic generation of the settlement rule should occur, and the change behavior of the settlement rule.

45. WHAT IS A "SETTLEMENT METHOD?"

There are two **settlement methods**:

- ***Individual settlement***: Used to analyze settlement results in greater detail.
- ***Collective settlement***: For processing a large number of sender objects, this is useful in during period-end closing to start settlement in the background.

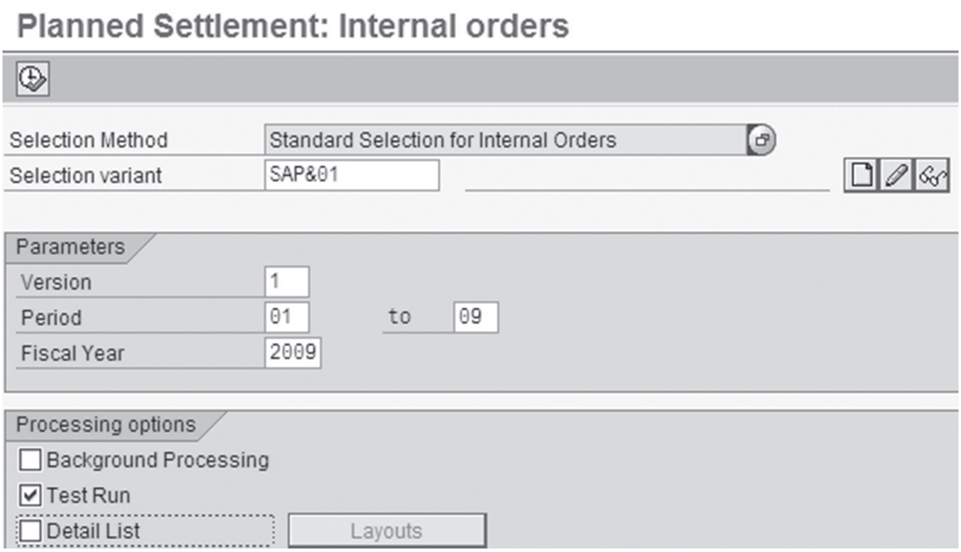


FIGURE 1.28 Collective Settlement

When running a settlement, you can do a test run ("simulate") an "update" run. Also, you can run the settlement in the background or get the system to display the settlement results in a detailed list.

Transaction Code
KO9G

46. WHAT IS THE USE OF "SUMMARIZATION?"

To ensure efficient Controlling, you need more than the simple cost structure analysis (of individual internal orders, production orders, etc.). This can be achieved through **summarization** wherein you group the various account assignment objects with common attributes to analyze them collectively. This will result in a greater degree of detail with more transparency of cost flows across the organization. Use *characteristics* to define the individual levels of the summarization hierarchy. These characteristics refer to the fields in the master data for the account assignment object.

The following are the standard summarization reports available in SAP:

- Summarization objects: Actual/plan/variance
- Summarization objects: Actual/plan/commitment
- Summarization objects: Curr. Period/Cum./Total

Transaction Code
KRC (Internal Orders)

47. EXPLAIN "OVERHEAD COST CONTROLLING (CO-OM)."

The **overhead cost Controlling** component enables you to plan, allocate, control, and monitor overhead costs. The overhead costs are assigned to the Cost Centers where they were incurred, or to the jobs that triggered them. SAP provides several methods for overhead allocation, according to their origin: some of the overhead can be assigned to cost objects with minimum effort, and converted to direct costs. At the end of a posting period, when all allocations have been made, the plan (target) costs are compared with the corresponding actual costs, based on the operating rate, and use the analyses for further managerial accounting measures within Controlling.

48. WHAT ARE THE DIFFERENT AREAS WITHIN CO-OM?

The Overhead Cost Controlling is divided into the following areas:

- Cost Element Accounting (CO-OM-CEL)
- Cost Center Accounting (CO-OM-CCA)
- Internal Orders (CO-OM-OPA)
- Activity Based Costing (CO-OM-ABC)

49. EXPLAIN "INTEGRATION OF CO" WITH ITS COMPONENTS, AND OTHER SAP MODULES.

The different CO application modules are integrated with FI, FI-AA, SD, MM, PP, and HR as outlined below:

- FI is the main source of data for CO. All expenses, posted in FI, flow to CO through the "primary cost elements" to the appropriate "cost centers." Similarly, the postings in FI-AA (Asset Accounting) like depreciation are also passed on to CO.
- Revenue postings in FI would result in postings in CO-PA and also in EC-PCA.
- SD, MM, and PP modules have many integration points in CO. Goods issue (GI) to a Controlling object or goods receipt (GR) from "production order" are some of the examples of integration. These modules are tightly integrated as consumption activities, cost of goods issued, overhead charges, material costs etc. are passed on to the production objects like PP production order or sales order. The WIP (Work-In-Progress) and the variances, at periods end, are settled to CO-PA, CO-PCA, and also to FI. Revenues are directly posted when you generate billing documents in SD, if the sales order is a cost object item.

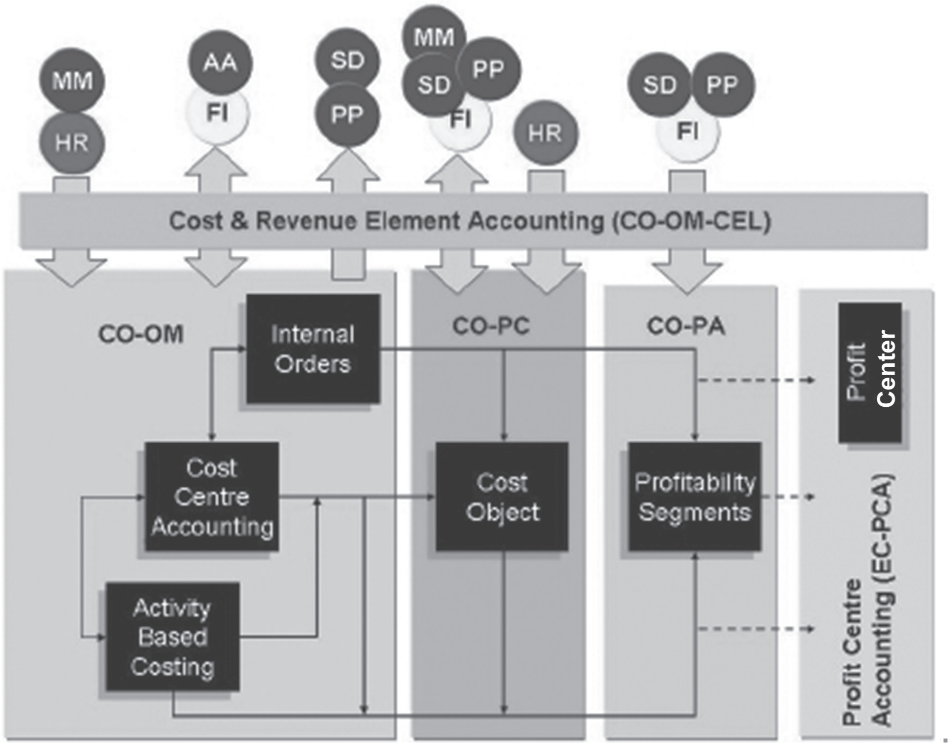


FIGURE 1.29 Integration of CO components within and outside CO

- HR module generates various types of costs to be posted in CO. Planned HR costs can also be passed on for CO planning.

Table 1.8 illustrates how the various components of CO are integrated.

TABLE 1.8 Flow of Costs among CO Components

CO-OM	**Overhead Cost Controlling**
	External costs can be posted to Cost Centers (CO-OM-CCA) / internal orders (CO-OM-OPA) from other SAP modules. Cost Centers can then allocate costs to other Cost Centers, orders, and business processes in Activity Based Costing (CO-OM-ABC). Internal orders can settle costs to Cost Centers, other internal orders and to business processes in ABC. ABC, in turn, can pass on costs to Cost Centers and orders.

CO-OM	Overhead Cost Controlling
CO-PC	**Product Cost Controlling** Direct postings from FI to the cost objects (like production orders). Cost from cost centers can be posted to the production orders, as overhead cost allocation. Costs settled from internal orders can be passed on to the production orders.
CO-PA	**Statistical cost postings from all CO components** Cost assessments from cost centers / ABC. Costs settled from internal orders. Production variances from CO-PC.

50. EXPLAIN "OVERHEAD COSTS."

Overhead costs are the costs that cannot be assigned directly to cost objects. They are divided into direct and indirect overhead costs. Though it is possible to assign indirect overhead costs to cost objects, it would be too time-consuming.

51. WHAT ARE THE "COST ACCOUNTING METHODS" SUPPORTED IN SAP CONTROLLING?

SAP Controlling supports all the standard **cost accounting methods**, and you do not need to implement them separately; use the methods which are best suited to your requirements. In overhead cost Controlling, SAP supports the following popular methods of cost accounting:

- Cost assessment method
- Overhead calculation
- Static standard costing
- Marginal costing
- Activity based costing

52. WHAT IS KNOWN AS "COST ASSESSMENT" IN COST ACCOUNTING?

The **cost assessment method** is all about the cost accounting based on full costs (plan or actual); the costs are not split into fixed and proportional. The system "allocates" these overhead costs to cost collectors or products, based on certain keys.

53. EXPLAIN "OVERHEAD CALCULATION."

Similar to cost assessment method, in **overhead calculation** also the costs are not split into fixed and proportional. The wage costs are calculated based on fixed hourly rates determined in cost center planning, to valuate the activity quantity structure of the work plan. The remaining overhead costs are then allocated by the system through overhead cost calculation to the cost collectors or products.

54. WHAT IS "STATIC STANDARD COSTING?"

Here also, the costs are not split into fixed and proportional. However, unlike the cost assessment and overhead calculation methods, in **static standard costing**, the system uses the tracing factors and Activity Types to allocate the activities.

55. WHAT IS "MARGINAL COSTING?"

Based on the cost center structure divided up into Activity Types, the costs are split into both the fixed and proportional costs in **marginal costing**. The planned cost rates (determined by price calculation) are included in the costing to valuate the activity quantity structure from the work plan. By using marginal costs you can, for example, determine short-term, lower-limit prices. The cost splitting into fixed and proportional costs helps to display the true contribution margin on the basis of marginal costing, in the CO-PA.

56. EXPLAIN "VALUE FLOW" IN "MULTIPLE VALUATION APPROACH" IN CO-OM.

SAP enables working with multiple value flows in overhead cost Controlling. The value flow in **multiple valuation approaches** that are relevant in overhead cost Controlling include:

- *Distribution, Assessment, and Periodic Reposting* is executed in parallel for the actual data for all valuations. The costs to be allocated are taken from the relevant valuation, and the values of operational valuation are taken as the tracing factors. The overhead assessment from Cost Centers to CO-PA happens in two valuation approaches: legal and Profit Center valuations.
- *Internal Activity Allocation* is used in operational valuation. The system distributes the actual costs to Activity Types on the basis of the planning in the operational valuation.
- *Actual and Overhead*: The operational valuation forms the basis for accrual calculation and overhead rates. The amounts calculated are valid for all valuations.
- *Settlement* occurs in parallel in all valuations, with the exception of settlement to fixed assets and profitability segments. For settlement to fixed assets, the system uses the Company Code currency. For settlement to CO-PA, it uses the operational valuation.
- *Reposting* is not possible for multiple valuation approaches.

57. HOW DO YOU DEFINE "NUMBER RANGES" IN CO?

You will be required to define, for each of the Controlling Areas, **number ranges** for all transactions that will generate documents in CO. Once done for a Controlling Area, you may copy from one Controlling Area to other Controlling Areas when you have more than one such area.

To avoid too many documents, SAP recommends grouping of multiple but similar transactions, and then assigning number ranges to this group. Further, you may create different number ranges for *plan* and *actual* data. As in FI, the number ranges can be *internal* or *external*. The document number ranges in CO are independent of fiscal years.

58. HOW DOES "MASTER DATA" DIFFER FROM "TRANSACTION DATA" IN CO?

The **master data** remain unchanged over a period of long time, whereas the **transaction data** relate to the short-term. The transaction data are assigned to the master data.

Though you normally create the master data from transactions, note that you will be able to create these records from configuration side as well. When you need to create a large number of master data, you may use the "*collective processing*" option to create related master records in one go. SAP deals master data in "groups" for easy maintenance.

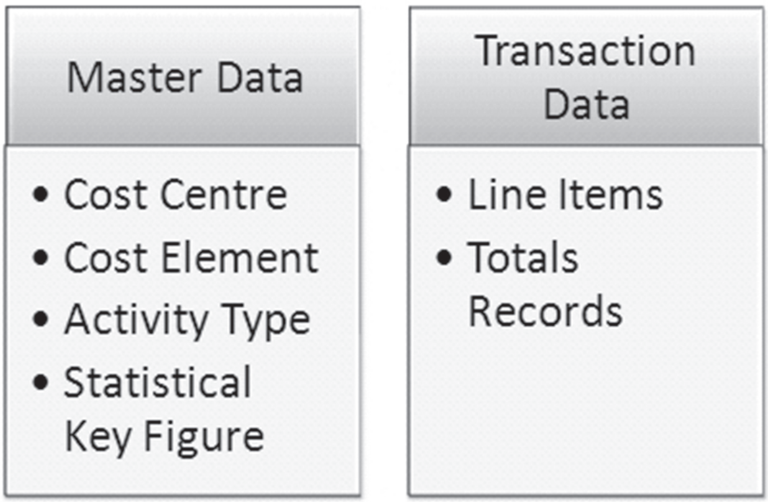


FIGURE 1.30 Master and Transaction Data in CO

In case of master data of cost center / cost elements / Activity Types, once they are created, you will not be able to change the date, and SAP calls this feature as the "*time dependency*" of master data. If necessary, you can extend the "time," by creating a new one and attaching the same to the existing objects (use "master data maintenance" to create a master data record for the affected extension period - you can use the existing master data record as a reference and thereby avoid repeatedly filling out the master data fields). This kind of "time-based data" results in multiple database records for a singular master record: for example, in the Cost Center master record, the person in charge field is time-dependent, allowing you to identify the different Cost Center managers throughout the life of the Cost Center. In case of *resources*, though the master data are time dependent, the system will allow you to delete these objects. The *statistical key figures (SKF)* are not time-dependent: once defined they are available in the system forever. If you want to extend the validity period of an existing master data record, you can indicate whether certain fields are to be "time-based" or not in Customizing. There are certain fields, like the assignment of a Cost Center to a Company Code, business area, Profit Center, etc., that are defined by SAP to be time-dependent and cannot be modified. The assignment of the Cost Center to the standard hierarchy area is also a time-dependent field: if the assignment is changed, historical as well as current Cost Center information will be reported based on current assignment, to ensure comparability across reporting periods.

59. WHY DO YOU NEED "RECONCILIATION LEDGER" IN CO?

When more than one Company Code is assigned to a single Controlling Area, you can allocate costs from one Cost Center to another assigned to a different Company Code (cross Company Code accounting). Such cross-company allocations result in an imbalance between CO totals and FI totals. All transactions that have cross Company Code allocations in CO must be reflected in FI, so as to ensure correct legal reporting in FI. The **reconciliation ledger** helps to keep track of these transactions: a reconciliation posting can then be made at the end of the period to re-synchronize FI and CO. It can be configured to post these differences to FI automatically, or it may be used for informational purposes (and subsequent manual adjustment). Portraying transaction figures in a summarized form, the reconciliation ledger, in CO, thus helps to reconcile FI and CO.

It provides the reports with which you can monitor the reconciliation for each account. It can also show value flows that were posted in Controlling across Company Codes, functional areas, or business areas. The reconciliation ledger reports also provide an overview of the costs and are thus a suitable starting point for analysis. The reconciliation ledger contains information about data flows as illustrated in Table 1.9.

TABLE 1.9 Data Flow in a Reconciliation Ledger in CO.

Data Flow	Explanation with Example
What is the *business transaction* causing the data flow?	RKL - Internal Activity Allocation
What quantities and *values* are to be allocated?	100 administrative hours, of value $7,500 @ $75 per administrative hour
What *cost elements / accounts* to which the quantities and values are to be posted to?	620000 (Internal Activity allocation)
What *organizational units* (Company Code, Controlling Area) and *object classes* do the sender and receiver belong to?	Sender: Cost Center 12000, Company Code: AAAAReceiver: Cost Center 6000: Company Code: BBBB Object class: GKOST, for both the sender and receiver
What is the *object type* the sender and receiver belong to?	Cost center, in both the cases
What *functional area* the sender and receiver belong to?	Sender: Administration; Receiver: Production

However, you do not need a reconciliation ledger if you are already using the new G/L accounting together with the real-time integration, as G/L is always reconciled with the G/L in this case.

60. EXPLAIN THE STRUCTURE OF "RECONCILIATION LEDGER."

When you use the reconciliation ledger, the system summarizes information about which costs were incurred on which objects (CC-Cost Centers, OR-orders BP-business partners and so on), besides summarizing data for objects of the same object type, Company Code, business area, object class, and functional area.

The postings in the reconciliation ledger are differentiated according to criteria like Company Code, business area, functional area, origin, object type (say, Cost Center, internal order, project and the like), object class, etc. It is possible to use this ledger to evaluate the amounts crossing Company Code and business area borders.

All sender / receiver information from the affected documents for value flows occurring in CO (due to reposting, internal activity allocation, assessment, distribution, etc.) are stored by the system in the reconciliation ledger. The system also updates records according to the posted business transaction and according to debit and credit records, and all these are done in three currencies (Controlling Area currency, Company Code currency, and group currency).

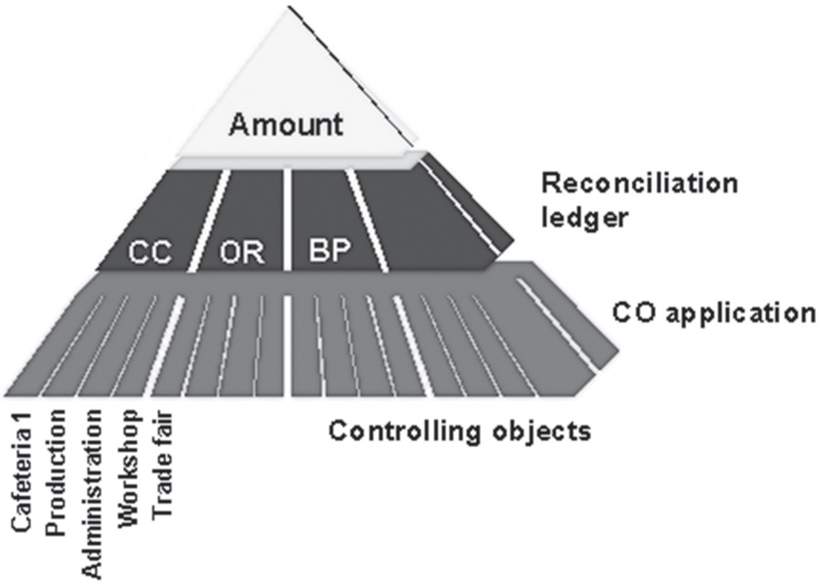


FIGURE 1.31 Structure of Reconciliation Ledger (Image ©SAP)

61. EXPLAIN THE "POSTING LOGIC" IN A "RECONCILIATION LEDGER" IN CO.

You can make a reconciliation posting at the end of a period or any other time between CO and FI: the system posts all internal CO postings that apply to all Company Codes, business areas, or functional areas in summarized form and posts them to FI.

The posting process flow runs as below.

i. The system selects the relevant cost flows (in CO) that are already summarized in the reconciliation ledger (reconciliation ledger totals records).
   - For each of these totals records, for postings that apply to all Company Codes, business areas and/or functional area

boundaries, the system executes account determination, and determines a G/L account for each cost element.

- Cost flows are selected for the reconciliation posting using a "Boolean Rule." It is also possible to select the cost flows interactively: in this case, the system provides a selection list of the totals records from the reconciliation ledger that are relevant for reconciliation.

ii. The system continues to summarize the totals records from the reconciliation ledger, whereby the business transaction, object type and object class, and partner functional area are not used as summarization criteria.

iii. For each summarized record in the reconciliation ledger, the system creates an FI document.

iv. The system then updates the totals records in the reconciliation ledger. For all the further reconciliation postings, the system only determines the reconciliation postings delta, and transfers this value to FI, so as to prevent CO data from being transferred twice to FI.

v. Before transferring to FI, the system continues to summarize the totals records in the reconciliation posting, enabling the number of FI documents created to be kept at a minimum. If the summarization of the totals records from the reconciliation ledger is zero, then the system does not create an FI document - it just creates a line item for the reconciliation ledger.

vi. At the end of the posting, the system displays a list of the created documents. During the update run for the reconciliation posting, the system also displays the document numbers of the reconciliation ledger documents that were created.

62. WHEN MAY YOU NOT NEED THE "RECONCILIATION LEDGER" IN CO?

You do not need the reconciliation ledger in the following situations:

- No profit and loss accounting using cost of sales accounting occurs
- There is no interest in cross-application reports
- There is no interest in evaluating cross-company code and cross-business area postings

You may activate or deactivate the reconciliation ledger, using the following transaction codes:

Transaction Code
KALA (Activate)
KALB (Deactivate)

63. ENUMERATE THE "MONTH-END CLOSING" ACTIVITIES FOR CO.

The following are the suggested month-end closing activities:

- All the expenses, including amortization, prepaid expenses, Preliminary expenses, and accruals have been booked.
- Complete Bank Reconciliation (Transaction FF67).
- Make sure that Sum of Inter Company balances is zero.
- Suspense Accounts should be cleared regularly.
- Ensure all documents related to MM & SD have been entered in the system (Transaction F-22 and Transaction F-43).
- Ensure that all billing documents are released to accounting.
- Calculate Overheads on all process Orders (Transaction CO43).
- Technically complete all process orders which are fully processed (Transaction CORM).
- Calculate Variance (Transaction KKS1) (relevant only if Standard cost is calculated).
- Settle all process orders which are technically complete (Transaction CO88).
- Close all settled Process Orders.
- Close MM period (Transaction MMPV).
- Carry out GR/IR clearing (Transaction F.13).
- Ensure depreciation run (Transaction AFAB) has been carried out for the month.

- Close FI Posting period after the month end closing activity is over (Transaction OB52).

64. ENUMERATE THE "YEAR-END CLOSING" ACTIVITIES FOR CO.

The following are the suggested year-end closing activities:

- Calculate production work in progress on process orders which are not technically complete (Transaction CO88).
- Carry out Assessment cycle for Cost Centers. (Transaction KSUB).
- All month end closing Activities should be carried out.
- Carry forward balances to next year (Transaction F.16).
- Copy the number ranges to next year (Transaction OBH2).
- Open next year periods by selecting the Posting Period Variant (Transaction in F-02).

CHAPTER 2

COST ELEMENT ACCOUNTING (CO-OEM-CEL)

1. EXPLAIN "COST ELEMENT ACCOUNTING."

The **cost element accounting (CO-OEM-CEL)** is not an accounting system as such, but a detailed recording of data forming the basis for cost accounting, and is used to structure and track the costs incurred during a settlement period. Cost element accounting collects and summarizes postings that arise within CO in a reconciliation ledger.

2. WHY DO YOU NEED "COST ELEMENT ACCOUNTING?"

Cost element accounting (CO-OM-CEL) helps you to classify costs / revenues posted to CO. It also provides you the capability to reconcile the costs between FI and CO. CO-OM-CEL provides the structure for assignment of CO data in the form of cost / revenue carriers called c*ost elements* or *revenue elements.*

Accrual is calculated here for valuation differences and additional costs. Cost Accounting and Financial Accounting are also reconciled in Cost Element Accounting. This means that the tasks of Cost and Revenue Element Accounting stretch beyond the bounds of Overhead Cost Controlling.

3. WHAT IS A "COST ELEMENT?"

The **cost elements** represent the origin of costs. There are two types of cost elements:

- Primary Cost Elements
- Secondary Cost Elements

4. WHAT IS A "PRIMARY COST ELEMENT?"

The **primary cost elements** represent the consumption of production factors like raw materials, human resources, utilities, etc. The primary cost elements (like material costs, wages, etc.) have their corresponding G/L accounts in FI: all the expense / revenue accounts in FI correspond to the primary cost elements in CO. Before you can create the primary cost elements in CO, you first need to create them in FI as G/L accounts.

The primary cost elements are required for the costs to flow into CO from other modules: a posting to a primary cost element requires a cost object (= Controlling object) such as a Cost Center, to identify the origin of the cost.

Note that SAP treats *revenue elements* also as primary cost elements in CO processing. The only difference is that all the revenue elements are identified with a *negative sign* while posting in CO. The revenue elements correspond to the revenue accounts in FI, and they fall under the Category 01 / 11 of *cost element category*.

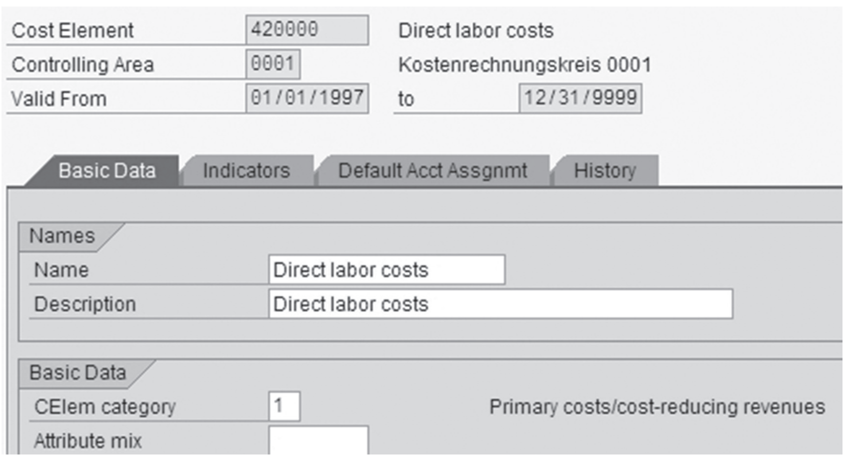


FIGURE 2.1 Primary Cost Element: An Example

5. WHAT IS A "SECONDARY COST ELEMENT?"

The **secondary cost elements** represent the consumption of production factors provided internally by the enterprise itself, and the elements are present only in CO. They are actually like cost carriers, and are used in *allocations and settlements* in CO. The movement of costs between CO cost objects are carried out through the use of secondary cost elements.

Unlike the primary cost elements, the secondary cost elements do not have corresponding accounts in Financial Accounting. While creating these secondary elements, you need mention the *cost element category* which can be any of the following:

- *Category 21*, used in *internal settlements*
- *Category 42,* used in *assessments*
- *Category 43,* used in *internal activity allocation*

6. WHAT IS A "COST ELEMENT CATEGORY?"

All the cost elements need to be assigned to a **cost element category**, to determine the transactions for which you can use the cost elements. It has a technical function, and determines whether you can post to a cost element directly or not. It is possible to post directly to all the primary cost elements.

7. ENUMERATE THE "PRIMARY COST ELEMENT" CATEGORIES.

Table 2.1 outlines the cost element categories that can be used with the primary cost elements.

TABLE 2.1 Cost Element Categories for Primary Cost Elements

Cost Element Category	Name of Cost Element Category	Explanation	Remarks
01	Primary cost element	Can be debited with all primary postings, for example, in FI or MM.	
03	Accrual cost element / percentage method	Only be used in Cost Center Accounting (CO-OM-CCA) with the percentage method of accrual calculation. You can post directly in FI to register when actual costs are incurred. The system uses this cost element category to post accrued costs in Cost Center Accounting.	If you do not want to consider actual costs (for example, additional costs), you can create this category of cost elements exclusively in Controlling. You define the account in the chart of accounts, but you do not need to create the account as a G/L account in Financial Accounting.
04	Accrual cost element / actual = target method	Used only in the target =actual method of accrual calculation with Cost Center Accounting. You can post the cost directly from FI to register when actual costs are incurred. The system uses this cost element category to post accrued costs in Cost Center Accounting.	
11	Revenue elements	Used to post revenues. Revenues are displayed in CO with a negative sign (-). An exception to this is Profitability Analysis (CO- PA). In CO-PA revenues are displayed with a positive sign (+).	

Cost Element Category	Name of Cost Element Category	Explanation	Remarks
12	Sales deduction	Used to settle order, project, or cost object costs to objects outside of Controlling. CO external objects can be, for example, assets (AM), materials (MM) or G/L accounts (FI). The system always creates an accounting document when you settle to external objects.	You cannot use this cost element category for settlement to objects within CO (such as Cost Centers, orders, or projects). Use secondary cost element category 21 for internal settlement. In contrast to settlement to CO-external objects, no accounting documents are generated by the system for settlement to CO internal objects as the value flow occurs exclusively within CO.
90	Cost element for B/S accounts in FI	Are generated automatically when you create cost elements in CO that have asset reconciliation accounts, that is, special B/S accounts, as corresponding G/L accounts in FI.	You cannot change this cost element category in CO master data maintenance.

CECt	Description
1	Primary costs/cost-reducing revenues
3	Accrual/deferral per surcharge
4	Accrual/deferral per debit = actual
11	Revenues
12	Sales deduction
22	External settlement

FIGURE 2.2 Primary Cost Element: Category

8. WHAT ARE THE TWO METHODS OF CREATING "COST ELEMENTS?"

You can create the cost elements by two methods:

- *Manual method*: Used creation of both the primary and secondary cost elements, this manual creation can be either through individual or collective processing.
- *Automatic method*: This method may be used to simultaneously map several G/L expense accounts to primary cost elements. However, note that since primary cost elements use the G/L account for identification, the associated G/L expense account must be in place before the primary cost element can be created.

Though the primary and secondary cost elements are stored in different tables, they share the same number ranges (Table 2.2).

TABLE 2.2 Cost Element Tables

Table	Description
CSKA	Data dependent on chart of accounts
CSKB	Data dependent on Controlling Area
CSKU	Cost element texts

9. EXPLAIN AUTOMATIC CREATION OF "COST ELEMENTS"

You will be able to create "cost elements" automatically by specifying (i) the cost element, (ii) the cost element interval and (iii) cost element category for the cost elements. All these are achieved by making *default settings*. The creation of cost elements is done in the background.

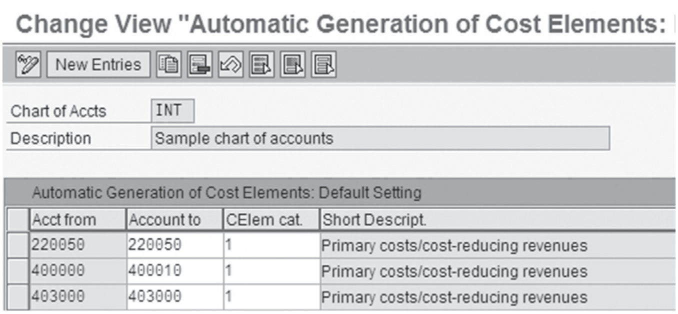


FIGURE 2.3 Automatic Creation of Cost Elements

The primary cost elements can be created only when you have the corresponding G/L accounts in the chart of accounts of the Company Code (If no account exists, you can go directly from the cost element initial screen to the master data maintenance screen in Financial Accounting by choosing *Environment > Create G/L account*. You can then create a G/L account in the chart of accounts or in the Company Code). Even though the G/L account names are used as the names of the primary cost elements thus created by the system, you have the option of changing these names in CO. If you use the reconciliation ledger and you want to use reconciliation reports to compare the data in FI with that from CO, note that the primary cost elements in question must be valid on January 1 of the corresponding fiscal year.

All the secondary cost elements are created in CO; the naming of these cost elements comes from the *cost element category*.

Transaction Code
OKB2

10. WHAT IS A "COST ELEMENT GROUP?"

The **cost element groups** are used to collect all the cost elements with similar characteristics. These groups can be used in the information system: you can use the cost element group structure to define the row structure of your reports.

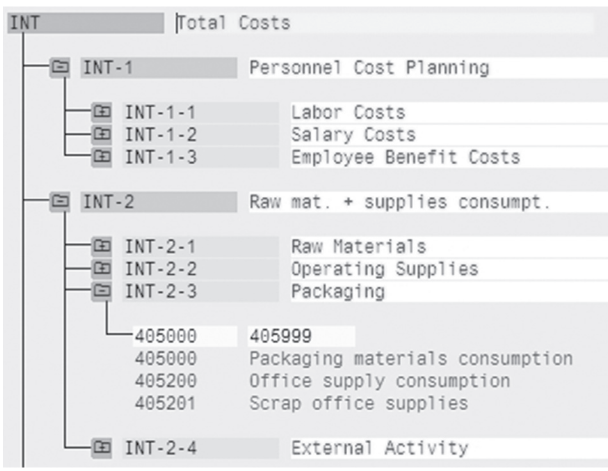


FIGURE 2.4 Cost Element Groups

Totals are calculated in the report for each node. It is easier to process several cost elements in one transaction (say, in cost center planning, distribution, etc.) if you resort to cost element groups.

Transaction Code
KAH1

11. WHAT ARE "ACCRUED COSTS?"

The **accrued costs** are the costs that have not been categorized as a business expense (additional costs), or are all the costs that are valuated differently or distributed across periods differently in cost accounting than in FI. These *imputed costs* may be calculated in the CO module if it is not (or cannot) be performed in the FI module:

- In case of a cost that has no direct equivalent in FI: there is no corresponding posting in FI, and thus it is not possible to perform accrued cost calculation in FI. Example: imputed rent.
- In case of a cost that has a different equivalent in FI: that is, it relates to the timing of cost recognition in CO which is different from that of FI. Example: the Christmas bonus is calculated and posted monthly in CO as an accrual, but posted only once in December in FI as an actual when it is paid. In this case the accrued cost calculation, however, could also be performed in FI instead of in CO, using the recurring entry method.

12. WHY DO YOU NEED "ACCRUAL CALCULATION" IN CO?

A business expense can only be transferred in CO with a partial amount. If costs are incurred in large batches for more than one period or for an entire year, then unacceptable cost fluctuations will arise from one settlement period to another affecting the prices. Because costs are posted in CO by period, you need the accrual calculation to avoid these fluctuations.

13. EXPLAIN THE METHODS OF CALCULATING THE "ACCRUED COSTS" IN CO.

You may use the following methods, to **calculate the accruals** on the costs posted in CO:

- Percentage method (create accrual cost elements and define an overhead structure)
- Target=actual method (no additional preparation is required other than maintaining accrual cost elements)
- Generate a recurring entry in FI

If you want to want to display the accruals postings in FI also, you need to ensure that subsequent postings are made in FI irrespective of the accrual calculation method you use in CO. Whatever the the method adopted, you must ensure that subsequent postings are made in the FI component if you want to display the accruals postings there as well.

14. EXPLAIN THE "PERCENTAGE METHOD" OF CALCULATING ACCRUAL COSTS.

You can calculate accruals in cost accounting using a **percentage method** (also known as "cost element percent method") on a "reference" cost element. The advantage of using a percentage method in cost accounting is that this allows you to arrive at the accruals on the basis of actual costs posted, and is particularly useful in cases where you need to calculate the non-salary (or non-wage) labor payments like bonus payments.

Execute the accrual calculations after (a) you define an "overhead structure" and maintain the relevant data for this structure, or (b) you maintain your "target=actual" credit postings.

It is possible to simulate the accrual calculation for testing or forecasting purposes: you can check the results of the accrual calculation without making any changes in the database. SAP allows you to reverse an accrual calculation: the system resets the "target=actual" credit postings and the accrual overhead rates. It is possible to reverse the accrual calculations for a given cost center / cost center group or for all the cost centers in a Controlling Area or for a given version or given period in a fiscal year.

Note that the following rules (Table 2.3) apply when you define the percentage method.

TABLE 2.3 Rules to be noted for the Percentage Method

Rule	Where the information is stored?
To which base cost elements does the overhead apply?	Base rows
Under which cost element is the overhead posted?	Overhead rows
What is the overhead rate?	Overhead rows
Which credit object (Cost Center or internal order) is to be credited?	Overhead rows

You can also use this structure in accrual of costing-based costs, as the structure and the rules entered to calculate accrual are very similar to those used in the Product Cost Controlling (CO-PC).

15. CAN YOU USE THE "PERCENTAGE METHOD" FOR ACTUAL VALUES?

The **percentage method** can only be used in planning, as actual values do not yet exist (in which target values could be placed). However, you can use the percentage method and the target=actual method for actual data. You also need to know that you can only define an overhead structure for the percentage method in cost element accounting.

16. WHAT IS AN "OVERHEAD STRUCTURE?"

Used in CO-CCA to calculate the accrual costs, the **overhead structure** defines the rules for calculation of the values to be posted. It consists of one or more of the following rows (Table 2.4):

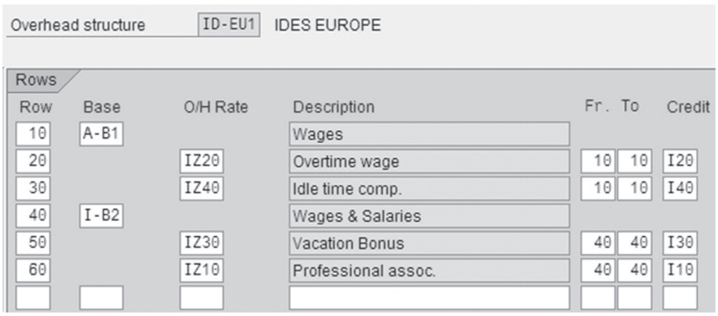
- Base row - the amount used as a basis for the overhead application
- Calculation row - the overhead percentage rate to be applied to the base row
- Totals row - the sum of the base and overhead amounts

TABLE 2.4 Overhead Structure: An Example

Row	Costs	Overhead	Amount	Row Type
010	Wages		200,000	Base row
020	Overheads			
021	Vacation bonus	10% on Wages	20,000	Overhead row-1
022	Holiday bonus	5% on Wages	10,000	Overhead row-2
023	Annual bonus	3% on Wages	6,000	Overhead row-3
090	Total		236,000	Totals row

Transaction Code KSAZ

You need to define the following keys (valid for all Controlling Areas) for the calculation base, overhead, and credit key. SAP comes delivered with the standard overhead structure "SAP000."



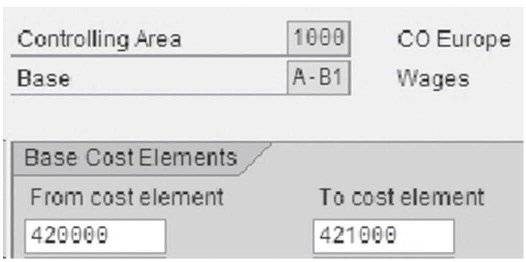
Overhead structure ID-EU1 IDES EUROPE

Rows

Row	Base	O/H Rate	Description	Fr.	To	Credit
10	A-B1		Wages			
20		IZ20	Overtime wage	10	10	I20
30		IZ40	Idle time comp.	10	10	I40
40	I-B2		Wages & Salaries			
50		IZ30	Vacation Bonus	40	40	I30
60		IZ10	Professional assoc.	40	40	I10

FIGURE 2.5 Overhead Structure

The calculation base key "A-B1" in the above structure represents the base cost elements:



Controlling Area 1000 CO Europe

Base A-B1 Wages

Base Cost Elements

From cost element 420000

To cost element 421000

FIGURE 2.6 Base Cost Elements

The "IZ40" contains the overhead rates:

Controlling Area	1000	CO Europe
Overhead Rate	IZ40	Idle time comp.

Dependency

Controlling Area/Company Code

Overhead Rates

CoCode	Valid fr.		Valid to		Plan Overhead		Actual Overhead	
1000	1	1998	12	2400	2,060	%	2,000	%
2000	1	1998	12	2400	2,000	%	2,000	%

FIGURE 2.7 Overhead Rates

17. EXPLAIN "ACCRUAL COST ELEMENTS."

All the **accrual cost elements** are primary cost elements.

In the case of *percentage method* of accrual calculation, you need to use cost element category 03 (accrual cost element, percentage). In this method, the overhead is posted under the accrual cost element.

CECt	Description
1	Primary costs/cost-reducing revenues
3	Accrual/deferral per surcharge
4	Accrual/deferral per debit = actual
11	Revenues
12	Sales deduction
22	External settlement

FIGURE 2.8 Accrual Cost Elements (Category 03/04)

In the case of "*target=actual method*," you will use cost element category 04 (accrual cost element, target=actual). These cost elements are used for the affected Cost Centers for executing activity-dependent primary cost planning. The system calculates the target costs during accrual calculation for the affected Cost Center and sets the target values in the actual values.

Transaction Code
KA01

CHAPTER 3

COST CENTER ACCOUNTING (CO-OM-CCA)

1. EXPLAIN "COST CENTER ACCOUNTING."

Cost Center Accounting deals with the difficult task of managing the "overheads" within your organization. Because *overhead costs* are something which you can not directly associate with a product or service and which you find difficult to control, cost center accounting provides you with the necessary tools to achieve this.

By creating and assigning cost elements to Cost Centers, you not only make Cost Controlling possible, but also provide data for other application components in Controlling, such as Cost Object Controlling. You can also use a variety of allocation methods for allocating the collected costs of the given Cost Centers to other Controlling objects.

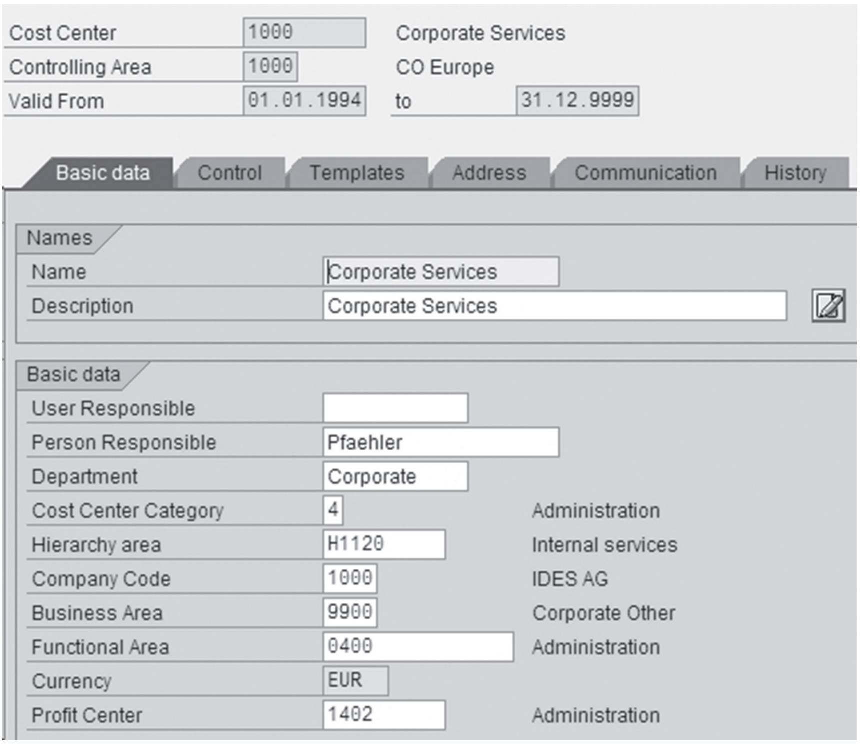
2. WHAT IS A "COST CENTER?"

A **cost center** is an organizational element within a Controlling Area, representing areas of responsibility where costs are incurred or where responsibility for costs may be assigned. They are the smallest unit of responsibility within the organizational structure of an enterprise.

You may define cost centers according to your specific needs: the definition can based on functional requirements, allocation criteria, physical location or responsibility for costs. The most common approach is to define a cost center for each of the bottom-most organizational units that are supposed to manage their costs. So, typical cost centers could be canteen, telephone, power, human resources, production, etc. There are other ways of designing cost centers: you may create cost centers representing geographical requirements, responsibility areas or activities or services produced, etc. You can define any number of Cost Centers.

Transaction Code
KS01

After defining individual cost centers, you may assign each one of the cost centers to any the *cost center categories*. All cost centers of a specific Controlling Area are to be assigned to a *standard hierarchy.*



Cost Center	1000	Corporate Services	
Controlling Area	1000	CO Europe	
Valid From	01.01.1994	to	31.12.9999

Basic data | Control | Templates | Address | Communication | History

Names

Name	Corporate Services
Description	Corporate Services

Basic data

User Responsible		
Person Responsible	Pfaehler	
Department	Corporate	
Cost Center Category	4	Administration
Hierarchy area	H1120	Internal services
Company Code	1000	IDES AG
Business Area	9900	Corporate Other
Functional Area	0400	Administration
Currency	EUR	
Profit Center	1402	Administration

FIGURE 3.1 Cost Center: An Example

3. EXPLAIN THE VARIOUS OPTIONS IN "ACTIVATING CCA."

When you configure the "Activate Components" for a Controlling Area, you have the following four options for Cost Center accounting:

- *Component not active*: CCA is not active. The Cost Centers are not validated. They cannot be used as account assignment objects
- *Component active*: CCA is fully activated, without any limitation. The Cost Centers are validated against the Cost Center master. They can be used as account assignment objects. The CO files are updated on posting.
- *Active for validations*: CCA is not active. Cost Centers are validated against the Cost Center master. The Cost Centers can be used as account assignment objects but the relevant CO files are not updated on posting. If CCA is implemented at a later date, you can subsequently post the cost-relevant business transactions in Cost Centers to the relevant CO files
- *Component active for existence of validations*: same as that of "active for validations," except that the Cost Centers are not created in full, but only in part using the "Rough entry" function.

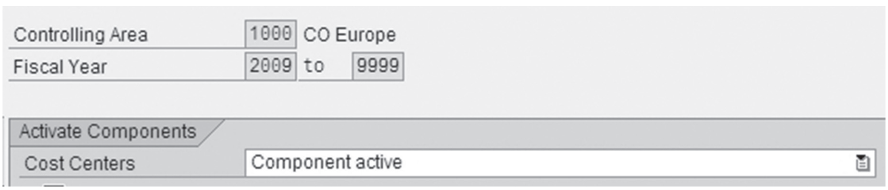


FIGURE 3.2 Activating Cost Center Accounting: The Four Options

Transaction Code
OKKP

4. WHAT IS A "COST CENTER CATEGORY?"

A **cost center category** is an indicator in the cost center master record to identify what kind of activities a particular cost center will be performing.

SAP comes delivered with default categories like administration, production, logistics, marketing, development, management, etc. If necessary, you may create your own categories.

Cost center categories

CCtC	Name	Qty	ActPri	ActSec	ActRev	PlnPri	PlnSec	PlnRev	Cmmt	Func
1	Production	☑	☐	☐	☑	☐	☐	☑	☐	0100
2	Service cost center	☑	☐	☐	☑	☐	☐	☑	☐	0100
3	Sales	☐	☐	☐	☑	☐	☐	☑	☐	0300
4	Administration	☐	☐	☐	☑	☐	☐	☑	☐	0400
5	Management	☑	☐	☐	☑	☐	☐	☑	☑	0400
6	Research & Develop.	☑	☐	☐	☑	☐	☐	☑	☐	0500
7	Services	☑	☐	☐	☑	☐	☐	☑	☐	

FIGURE 3.3 Cost Center Categories

The categorization is useful to assign certain standard characteristics to a group of cost centers performing similar activities; you may allow particular Activity Types only for specific Cost Centers. This serves as a precautionary measure to prevent production activities from being posted mistakenly to administrative Cost Centers. You may also use the Cost Center category for imputed cost calculation (the category may be used to determine the percentage of the overhead to apply to that Cost Center type).

SAP also allows you to store "*special indicators*" (like "*lock indicators*") for each of the cost center categories. These special indicators (like, lock primary postings, lock secondary postings, lock primary cost planning, etc.) serve as defaults when you create a new cost center.

5. IS IT POSSIBLE TO CHANGE THE "ANALYSIS PERIOD" FOR A COST CENTER?

The historically relevant time-dependent master data will allow for a new analysis period for a cost center, if there is change in the validity period. The default analysis period is always the original validity of the Cost Center when the master record was created. If you do not create the "*other analysis period*," then any changes to the time-relevant values (for example, Cost Center category) will be overwritten with the new values and you will not be able to analyze the changes.

- Suppose the original validity of a Cost Center (of category 4 – administration) has the original validity as 01-01-1994 to 31-12-9999. If you change the Cost Center category to "5-Management" on 01-01-2010, and define a new analysis period from that date onwards, then you will be able to analyze the activities for both the categories 4 (for the period 01-01-1994 to 31-12-2009) and 5 (for the period from 01-01-2010 to 31-12-9999).

- In the same scenario above, if you have just changed the category without defining the new analysis period, you will not be able to analyze the prior-period activities which would have taken place when it was in category 4 as the category will henceforth be 5.

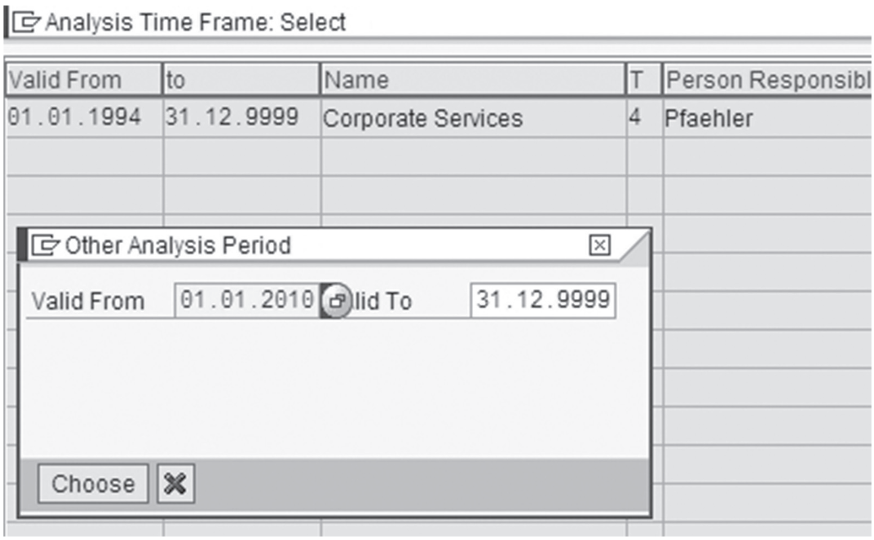


FIGURE 3.4 Cost Center: Other Analysis Period

6. WHAT IS A "STANDARD HIERARCHY?"

A tree-like hierarchy structure grouping all the cost centers, (of all the Company Codes belonging to a single Controlling Area) so defined, is known as the **standard hierarchy** in CO. This is a way of grouping all the cost centers in a Controlling Area which helps in analyzing the cost summary of the nodes of the hierarchy (cost center or cost center groups or at the top level). A cost center can be attached to any number of cost center groups, but you cannot assign the same cost center more than once within a cost center group.

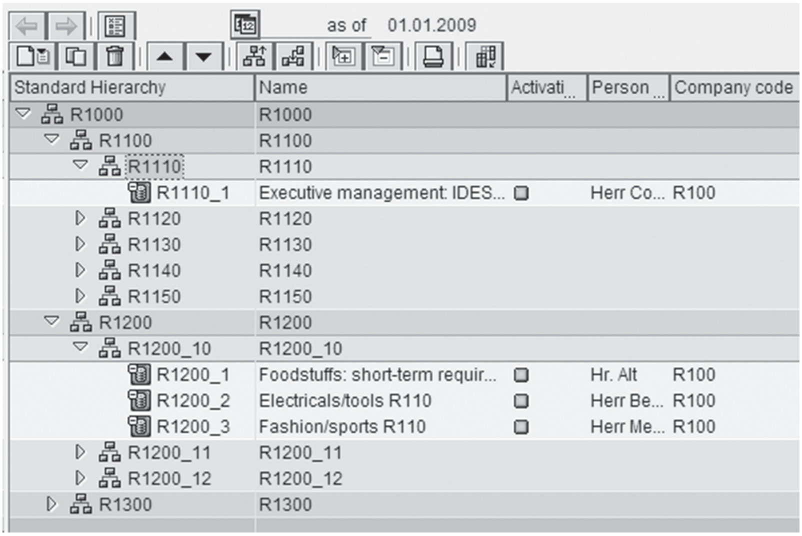


FIGURE 3.5 Standard Hierarchy

Transaction Code
OKEON

The standard hierarchy helps in easy maintenance of the cost centers / cost center groups for creation of new ones or changing the existing ones. It supports the *drag-drop* functionality. You may use *alternate hierarchies* to group cost centers according to your internal reporting requirements. You can have any number of alternate hierarchies but it is mandatory that you have one standard hierarchy. The alternate hierarchy is also known as *master data group.*

7. EXPLAIN POSTING OF COSTS TO "COST CENTERS."

When you create accounting transitions in FI / FI-AA / MM, you typically post to one or more GL accounts. While doing so, provided you have already configured in such a way, you may also require the user to input the cost center for that transaction, so that when the transaction is posted the values (costs) flow not only to the GL but also to CO to the appropriate cost center. The system will then be creating two posting documents: one for FI and another for CO.

Besides, you will also be able to post non-financial information like direct labor hours from HR or PP modules to cost centers in CO.

8. WHAT IS AN "ACTIVITY TYPE?"

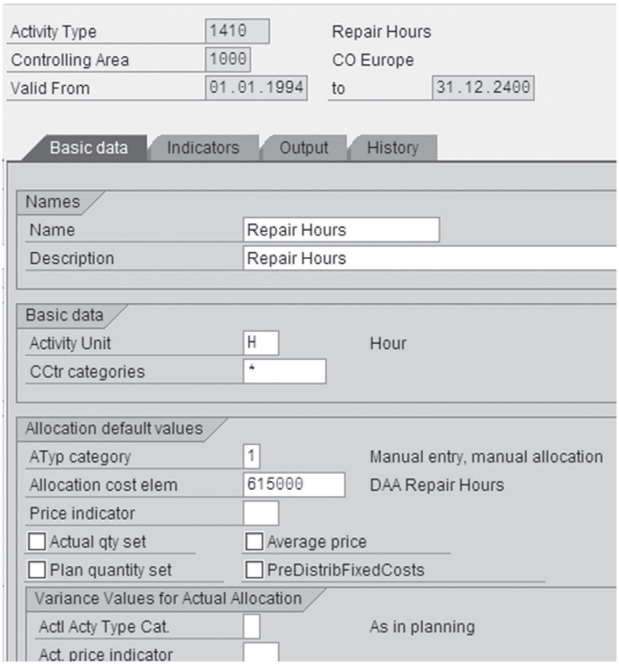


FIGURE 3.6 Activity Type

Activity type helps you to define the service or action (example: human labor, machine labor, repair hours, etc.) performed or provided by a cost center. It forms the "basis" for allocating costs to other cost centers or internal orders, etc.

Transaction Code
KL01

You may assign an activity type to an operation so that they are reflected in PP: a CO document is created with the costs of the operation allocated from the Cost Center that produced the operation to a production order, when the operation is completed in PP.

You can arrive at the *activity price* which needs to be attached to that particular activity type for planning or recording the actual: the price is calculated by dividing the total costs by the total planned or actual activity quantity (hours, units, etc.). The activity price (expressed as cost/activity type unit) of a Cost Center may be calculated by the system (based on either actual or planned costs) or may be manually input by the user (political price). Use of a political, or target price, will often result in variances due to over/under allocation of cost. Allocations are based on the quantity of a Cost Center's activity that was consumed by the receiving Cost Center.

It is not necessary that all the cost centers need to have Activity Types associated with them. If there is no output from a cost center, then there will be no activity type for that cost center.

You may group Activity Types into *activity type groups* for easy maintenance.

9. EXPLAIN "ACTIVITY TYPE GROUPS."

Similar Activity Types can be grouped into activity type groups, so that you can use these groups in information systems or to maintain multiple Activity Types in cost center accounting transactions (like planning, assessment, etc.).

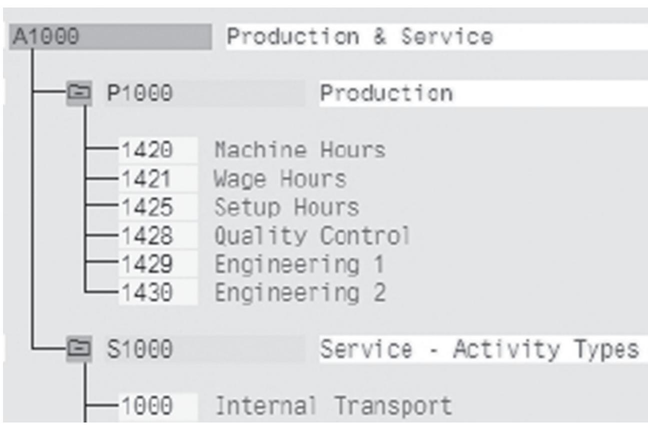


FIGURE 3.7 Activity Type Group

It is possible that you can create a hierarchy of Activity Types and groups where in the groups can be combined into further groups and so on.

Transaction Code
KLH1

10. WHERE DO YOU ASSIGN ACTIVITY TYPE IN COST CENTERS?

There is no direct assignment. You plan the output for a Cost Center first by using Transaction KP26**.** Then, plan the value of that Cost Center with the budget for a period in Transaction KP06. The "Planned Activity Expenditure" or "Planned Activity Quantity" gives the "Planned Activity Rate" which you can use to valuate your activity confirmations in manufacturing orders. You can also define your activity prices on your own, but you have to run the "price revaluation" if you want to revaluate your actual activity prices.

11. WHAT IS A "RESOURCE" IN CO?

Resources are goods or services consumed by CO objects like cost center / internal order / WBS element, which are supplied (internally or externally) to an organization in order to produce business activities. There are three types of resources:

- Type **B** (used in base planning object; the system takes the price of the costed base planning object to valuate the resource consumption)
- Type **M** (refers to a material, and the price is taken from the material master)
- Type **R** (exists only in Overhead Cost Controlling, CO-OM, the price of which is stored directly in the price table)

Transaction Code
KPR1

The resources are used only in planning and not for tracking the actual. Though you can plan resources during primary cost planning on Cost Centers/Activity Types, orders, or WBS elements, you cannot use resources for structure planning of orders and WBS elements.

12. WHAT IS A "STATISTICAL KEY FIGURE (SKF)?"

The **statistical key figure (SKF)** is used as the basis (*tracing factor*) for making allocations (*assessments / distributions*). They are all the statistical data like number of employees, area in square meters, etc. You will make use of SKF when you are faced with a situation where it is not possible to use any other conventional method or measure to arrive at the share of costs to be allocated to cost centers.

Suppose that you are incurring a monthly expense of USD 5,000 in the cost center cafeteria, the cost of which needs to be allocated to other cost centers. You can achieve this by SKF. Imagine that you want this to be allocated based on the "number of employees" working in each of the other cost centers like administrative office (50 employees) and the factory (200 employees). You will now use the number of employees as the SKF for allocating the costs. The following illustration helps you to understand how SKF is used:

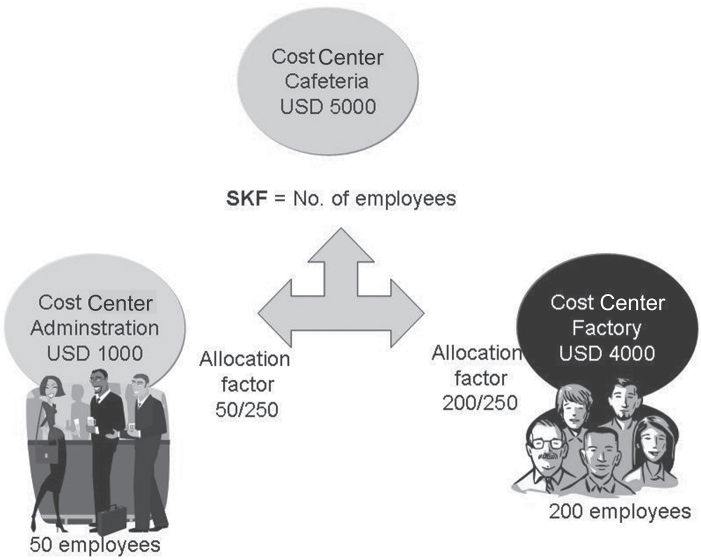


FIGURE 3.8 Statistical Key Figures

As in the case of Activity Types, you can also group the SKF into SKF groups for use in information system and cost center accounting transactions.

Transaction Code
KK01

13. WHAT ARE THE TWO TYPES OF "STATISTICAL KEY FIGURES?"

In SKF allocation, you have the flexibility of using two different SKF types namely, (i) *Total value* or (ii) *Fixed value*.

You will use *fixed value* in situations where the SKF does not change very often, as in the case of number of employees, area, etc. These fixed values are carried forward from the current posting period to all subsequent periods.

You will use *total value* in case the value is expected to change every now and then, as in the case of power usage or water consumption and the like. The total values are posted in the current posting period only.

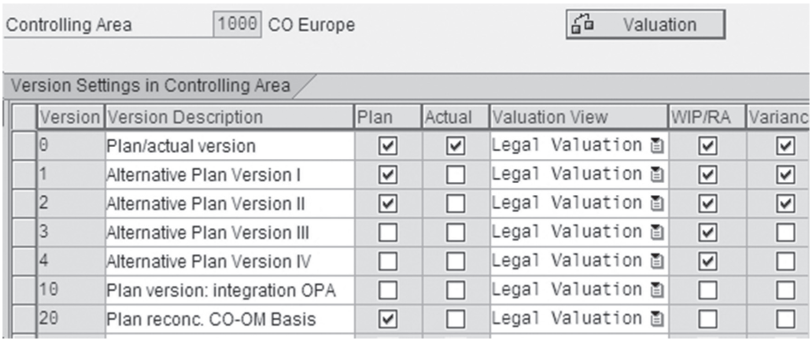
14. EXPLAIN THE "PLANNING" STEPS IN CO-OM-CCA.

The three steps involved in planning in cost center accounting include:

1. Configuration required for planning
    - Configure a *Version*
    - Create or Copy *Planning Layout*s
    - Create *Planner Profile*
    - Insert Planning Layouts into Planner Profile
2. Inputting the planned data
3. Completing the planning activity

15. WHAT IS A "VERSION?"

A **version** (known earlier as **plan version**) is a collection of planning data. The version controls whether the user will maintain plan data or actual data or both. You may create as many versions as you need, though SAP provides with the necessary versions in the standard system.



Controlling Area 1000 CO Europe Valuation

Version Settings in Controlling Area

Version	Version Description	Plan	Actual	Valuation View	WIP/RA	Varianc
0	Plan/actual version	✓	✓	Legal Valuation	✓	✓
1	Alternative Plan Version I	✓		Legal Valuation	✓	✓
2	Alternative Plan Version II	✓		Legal Valuation	✓	✓
3	Alternative Plan Version III			Legal Valuation	✓	
4	Alternative Plan Version IV			Legal Valuation	✓	
10	Plan version: integration OPA			Legal Valuation		
20	Plan reconc. CO-OM Basis	✓		Legal Valuation		

FIGURE 3.9 Versions in Controlling

Each version has information stored in the system per fiscal year period. The version "000" is automatically created for a period horizon of five years, and is normally the final version as this allows for storing actual information as well. You will be using the data in version "000" for all the planned activity price calculation. Once planning is completed, you need to "lock" that version so that no one will be able to modify the plan data.

The versions enable to you have independent sets of planning and actual data. You use versions in planning to configure alternative scenarios based on different assumptions; the different versions can represent different employment markets, price and wage increases, or sales programs. If you use parallel valuations and transfer prices, you define parallel actual versions alongside *operational version* 000 in order to separate different valuations. In Activity-Based Costing, you can manage actual data in different *delta versions of activity-based costing* by specifying a version that can be referenced. Once you have specified, the current version is marked as a *delta version.*

16. WHAT IS AN "OPERATIONAL VERSION?"

The **operational version is** the actual version that represents the "main" version in CO. This should be the version that represents your primary Controlling approach, and is the *only version* in which Controlling transactions involving activity allocation are stored. As well as this version, you can define up to two additional actual versions.

17. WHAT IS A "MANAGER'S DESKTOP?"

Manager's desktop is a function originally developed in Human Resources to assist Cost Center managers in performing their administrative and planning tasks. Through this, you can access manual planning on Cost Centers directly and tailor this planning to your own requirements by specifying a selection of those planner profiles and planning layouts that you require. It offers direct access to manual planning, in which you find only those planning layouts with the parameters that you have pre-set. You will select these planning layouts by assigning a function code to each planner profile and planning layout. It is possible to restrict manual planning to particular parameters (like a version, fiscal year, or Cost Center, or to Activity Types and cost elements), if you enter particular default parameters in these planning layouts.

Manager's Desktop: Planning Layout per Fcode

Funct.code	PlnrProfil	Table	Layout
COCCA101	SAPALL	1P1	1-101

FIGURE 3.10 Manager's Desktop: Planning Layout

18. WHAT IS "INTEGRATED PLANNING" IN CO-OM-CCA?

The **integrated planning** helps you to transfer data from other SAP modules like PP, HR, FI-AA, etc. If you have planned data in these modules and just transferring these into CO without making any changes, then you do not need to plan again in cost center accounting. Before using integrated planning, you need to activate the integration in the planning menu. Note that integrated planning is possible only when there has been no data planned on that version before activating the integrated planning.

19. EXPLAIN "PLANNING LAYOUT."

A **planning layout** is nothing but a data entry screen or template which you will be using to input plan data. Using the planning layout you specify what contents appear in the header, rows, and columns (elements) of your planning screens depending on the specific management requirements made by Cost Center planning.

The SAP system contains standard SAP planning layouts that satisfy most planning requirements. In most of the situations, it would be more than sufficient to use SAP-supplied planning layouts; however, you may create your own by copying one of the existing layouts and altering the same with the help of *report painter*. While creating a custom layout, note that you have the flexibility to create up to nine *lead columns* (giving the details the nature of the data associated with the value columns), and any number of *value columns* (plan data like, amount, unit, etc., corresponding to the lead column).

You also have the option of using MS-Excel spreadsheets as the data input screen in lieu of the SAP planning layouts, but to achieve this you need to activate "integrating with Excel option" while assigning the layout(s) to a planner profile in IMG.

You need to define a planning layout for each of the three planning areas in CO namely:

i. Primary Cost and Activity Inputs
ii. Activity Output / Prices
iii. Statistical Key Figures

20. WHAT IS A "PLANNER PROFILE?"

A **planner profile** helps in controlling the whole process of planning by logically grouping the various plan layouts together. It determines the timeline for planning. You can have more than one planning layout per planner profile. The profile item determines the order of the planning layouts within a planning area and can be used to assign the same planning layout to a planner profile in multiple areas, but with a different default setting each time. Before you actually start inputting the data, you need to set the planner profile, so that the system knows what layout needs to be used for the planning exercise.

The standard system includes several defined planner profiles: the names of these profiles begin with SAP; these are protected (you cannot create custom profiles beginning with "SAP").

Profile	Description	Auth.group
SAP101	Release 3.0/3.1 CO-OM: Prim. Cost/ATyp/StKF	
SAP102	Release 3.0/3.1 CO-OM: Acty Input/ATyp/StKF	
SAP103	Rel: 3.0/3.1 PP Plan: Costs, Rev/ATyp, Price/StKF	
SAP104	Rel. 3.0/3.1 CO-OM: Sec.Ord.Costs/ATyp/A-Dep. StKF	
SAP800	EC-PCA: Planning Profit Center Group (Centralized)	
SAP801	EC-PCA: Profit Center Planning (Decentralized)	
SAPALL	CO Planning: All Planning Areas	
SAPEASY	CO-OM: Prim. Cost/ATyp/StKF -- Basic Layouts	
SAPFAGL	Planner Profile for Planning in Gen. Ledger (New)	

FIGURE 3.11 SAP Standard Planner Profiles

The planner profiles are hierarchically structured as follows:

- Planner Profile
  - General Controlling
    - Layouts Controlling
      - Default Parameters

The following screenshot depicts the planner profile "SAPALL," for a specific planning area within "general Controlling" displaying the "planning layouts" used there.

Planner profile SAPALL CO Planning: All Planning Areas
Planning area Cost ctrs: Cost element/activity inputs

Itm	Layout	Description	Deflt	Overw	Integrated ...	File de...
1	1-101	Cost Elements Acty-Indep./Acty-Depe				
2	1-102	Activity input acty-indep./acty-dep.				
3	1-102P	Process input: activity-dependent/ind				
4	1-104	Primary/secondary order costs				
5	1-104P	Primary/secondary order costs proce				

FIGURE 3.12 SAPALL: Planner Profile-Planning Area-Planning Layout

21. HOW DO YOU COPY "PLAN DATA" FROM ONE PERIOD TO ANOTHER?

SAP allows you to copy planning data, created manually earlier, from one fiscal year to the other or from one period to a different period within the same fiscal year. You have the options of (a) copying existing plan data to a future period as new plan data or (b) copying actual data from one period to another as the plan data.

22. EXPLAIN "RESOURCE PLANNING."

Resource planning (where only the quantities of used resources are known), enables you to plan primary activity-independent and activity-dependent costs, by multiplying the planned quantity by the resource price. The price calculation is based on the conditions method and enables you to control access to resource prices in line with your requirements. The price calculation depends on the following settings:

- Condition type
- Condition table
- Access sequence
- Costing sheet
- Valuation variant

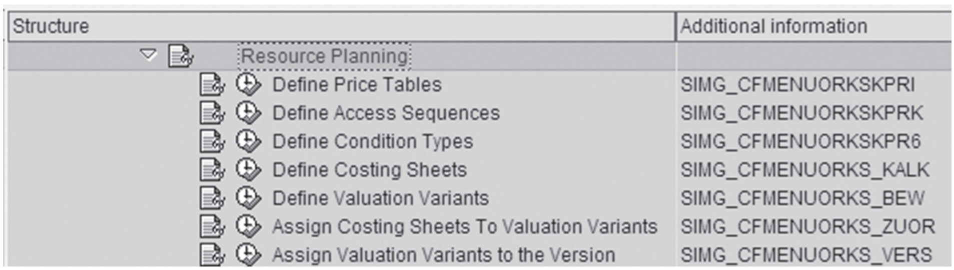


FIGURE 3.13 Configuration Steps for Resource Planning

23. WHAT IS "FORMULA PLANNING" IN COST CENTER ACCOUNTING?

Formula planning in Cost Center accounting is a tool for IT-supported planning of Cost Center costs using mathematical dependencies. The mathematical dependencies are represented by formulas and are stored in the planning template that is independent of the Cost Center so that more than one Cost Center can use the same formulas.

You need to complete the following configuration steps:

- Define Environments and Function Trees
- Define Templates (for planning primary costs and statistical key figures)
- Assign Templates for Cost Centers

24. WHAT IS THE RECOMMENDED PLANNING SEQUENCE IN CO?

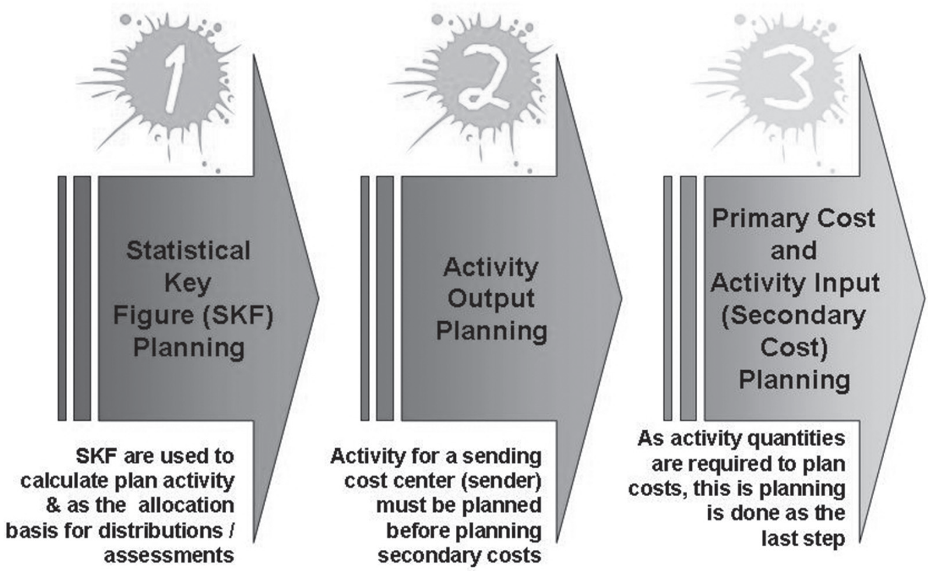


FIGURE 3.14 Planning Sequence for Cost Center Accounting

SAP recommends three steps in the planning. In all three steps, the planning can be carried out *manually* or *automatically*.

You may use assessment, distribution, and indirect activity allocation or imputed costs for planning. You can also have centralized planning (cost element planning for all the cost centers) and decentralized planning (planning for individual cost centers) in your organization.

25. WHAT ARE THE TWO OPTIONS OF ENTERING PLAN DATA?

SAP provides you with a choice of two options to enter your plan data:

i. Form based entry
ii. Free entry

In **form based** entry, all you need to do is to fill in the plan data in the rows corresponding to the characteristic values (cost centers, cost element, etc.) displayed on the screen. In **free entry**, you have the freedom of inputting even the characteristic values.

26. WHAT ARE THE "PLANNING AIDS?"

SAP provides you with the **planning aids** like:

- Revaluation
- Periodic reposting
- Accrual calculation

27. EXPLAIN "REVALUATION."

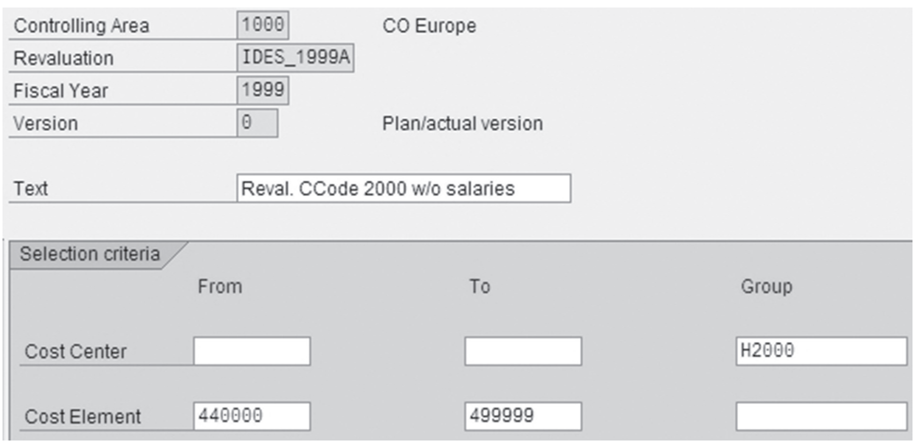


FIGURE 3.15 Revaluation-Initial Screen

You can **revalue** "versions" according to various criteria; the system determines a revaluation amount from the percentage rate of the revaluation. This revaluation amount is then added to or subtracted from the initial amount of costs, consumption quantities, etc. You can revalue data as often as you wish and the data can be reset using the reversal function. You can execute the revaluation for the whole fiscal year and for individual periods. You can use Cost Center groups or cost element groups for the revaluation.

All currency fields for which values were determined in planning are revaluated by the system. As of now, all cost elements that can be planned using primary cost / revenue planning can be revaluated; these are activity-independent and activity-dependent respectively:

- Primary cost elements (category 1)
- Revenue elements (categories 11 and 12)
- Primary order cost elements (category 22)

Note that you will not be able to revalue accrual cost elements (categories 3 and 4), cost elements for internal activity allocation (category 43), and assessment cost elements (category 42).

The best practice is to perform the revaluation in a version created specifically for it.

Transaction Code
KPU1

28. DIFFERENTIATE "ACTIVITY DEPENDENT" AND "ACTIVITY INDEPENDENT" COSTS.

As you might be aware already, there are two types of costs, namely *variable costs* and *fixed costs*.

Variable costs, like material costs, factory labor, etc., are always dependent and vary upon the activity. The greater the activity, the greater will be the expenditure towards variable costs. In short, these costs are directly proportional to the level of activity. In SAP CO, these costs are known as **activity dependent costs**.

In contrast to the variable costs, **activity independent costs** or the *fixed costs* do not normally vary with the level of activity: you may need to incur these costs irrespective of whether there is an activity or otherwise. Example: cost of security, insurance premium, etc.

29. WHAT IS A "MIXED COST?"

There are instances when you will come across a costing situation where the costs can not be strictly segregated either as fixed or variable costs. These costs are known as **semi-fixed costs** or **semi-variable costs** or **mixed costs,** as a portion of the total costs is fixed and the remaining portion variable.

The classic example is the charges towards electricity in a production environment, where there is a basic minimum charge payable to the electricity provider which remains fixed irrespective of the fact whether there is some production activity or not. When there is production, then you will use more electricity that varies with the level of production.

30. EXPLAIN "MANUAL PRIMARY COST PLANNING."

Manual primary cost planning is used to plan for costs associated with the external procurement of goods and services. You will plan both the fixed and variable costs, and also mixed costs, if necessary. You will plan costs like salaries and wages, etc., as activity dependent costs; the costs towards security, etc., will be planned as activity independent costs.

You need to note that planning for fixed primary costs is not vastly different from that of planning for variable primary costs. When you plan for the variable primary costs you need to mention the activity type associated with that. You may further break down this cost into fixed and variable proportions. The "fixed primary costs" or "activity independent primary costs" are planned using the primary cost elements on various cost centers, based on the activity performed on a particular cost center.

You may use any of the following SAP supplied planning layouts:

- **1-101** – Cost elements: Activity independent or activity dependent primary costs
- **1-103** – Cost / revenue elements: Activity independent costs
- **1-152** – Cost elements: comparison of 4 quarters

- **1-153** - Cost element planning in 2 versions
- **1-154** - Cost element, values of previous years
- **1-156** – Cost element central planning

31. EXPLAIN "AUTOMATIC PRIMARY COST PLANNING"

SAP provides you with two ways of handling **primary costs planning** namely:

- Imputed (accrual) Costs Calculation
- Distribution

Imputed costs calculation (refer to questions in Chapter 2)

Distribution helps in planning primary costs from one cost center to the other. The cost center from where the costs are distributed is known as the *sender* (or *pooled cost center* or *clearing cost center*) and the other cost centers to which the costs are distributed or where the costs are received are known as *receiver*.

Note that you will be able to distribute planned / actual primary costs only. Also note that the pooled cost center does not incur any of these costs but acts as only as the "clearing center" for distribution to other cost centers. During the process, you will be using the SKF or the regular percentage method as the *distribution rule* for achieving the distribution. The *distribution cycle* helps to carry out the whole planning exercise.

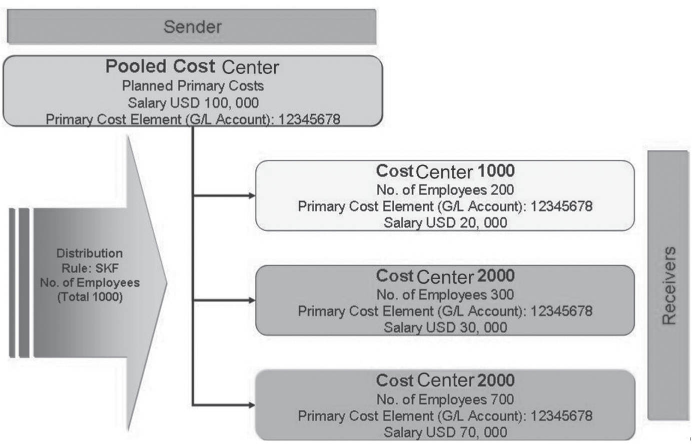


FIGURE 3.16 Distribution (Automatic Primary Costs Planning)

32. WHAT ARE "DISTRIBUTION KEYS?"

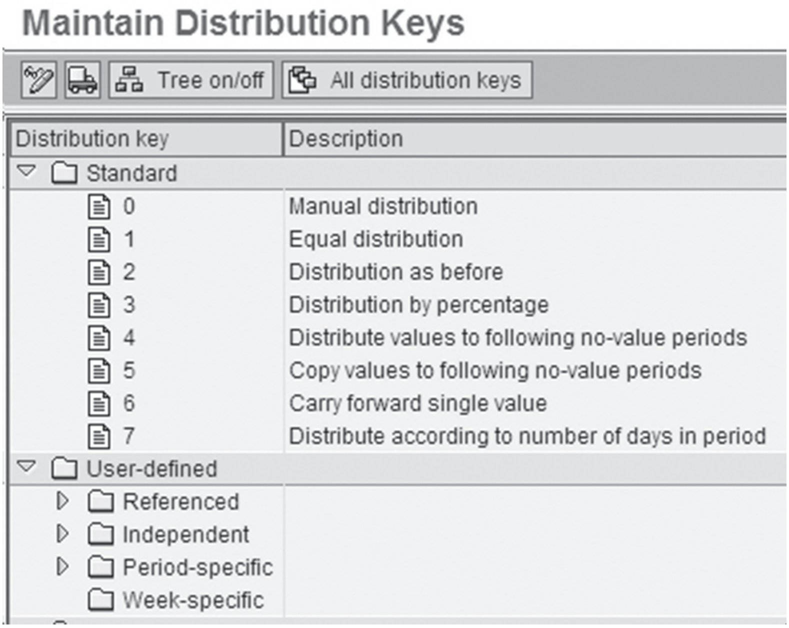


FIGURE 3.17 Distribution Keys

The SAP system uses **distribution keys** to distribute planned values across various planning periods, based on certain rules.

With the nine standard distribution keys (Table 3.1) supplied by SAP, you will be able to achieve the type of distribution you will require.

TABLE 3.1 Distribution Keys

Key	Description	Explanation
0	Manual distribution	Enter the values manually for each period
1	Equal distribution	Given plan value is distributed equally to the plan periods
2	Equal distribution as before	Given plan value is distributed according to the previous distribution
3	Distribution as percentage	The value entered is interpreted as a percentage and applied to the previous values

Key	Description	Explanation
4	Distribute values to following no-value periods	The periods containing a value not equal to zero are distributed to the following empty periods
5	Copy values to following no-value periods	The periods containing a value not equal to zero are copied to the following periods
6	Carry forward single value	The period value entered is copied to the following period
7	Distribute according to number of days in a period	The total value is distributed to the periods according to the number of calendar days in each period
11		Used only in the Cost Center Controlling component for activity-dependent cost planning or activity-dependent statistical key figure planning

For example, if you have planned annual value of 12000, by using the key "1" you will be able to distribute 1000 each as the monthly values. If you had plan values for last year which were something like 1000 for January to June, 500 for July, 1500 for August, and 1000 each for September to December, then by using the key "2," you will be able to copy the same amounts to the next fiscal year. The distribution key "5" will copy values to future periods only if there are no values already available for those periods.

In case you are going in for "user-defined" distribution keys, you have the option of having the keys:

- Referenced (references to one of the standard distribution keys)
- Independent
- Period-specific
- Week-specific

33. EXPLAIN "MANUAL SECONDARY COST PLANNING."

Manual secondary cost planning is required when you need to plan consumption quantities of a sender cost center's' planned activity from the view of receiving cost center. The activity inputs may be planned either as

(i) activity dependent costs (variable) or as (ii) activity independent costs (fixed).

The "activity dependent primary cost planning" is used only when you need the services like, for example, repair hours on a specified activity type. On the other hand, you will use "activity independent primary cost planning" when you need the services like, for example, maintenance hours which are not restricted to a particular activity.

The system uses the "planned calculated activity price" for posting the secondary cost. It is possible to carry out "manual secondary cost planning" for Activity Types categorized as *Category-1* (manual entry / manual allocation). Note that it is important that you perform reconciliation of planned consumption of an activity at the receiver cost center to the volume planned at the sender"s level; otherwise you will get a warning in the system when the system calculates the activity price.

34. EXPLAIN "ASSESSMENT" IN SECONDARY COST PLANNING.

One of the methods of allocation, the **assessment** is used in "automatic planning of secondary costs" in cost center accounting. You will typically use this method when you need to allocate costs from one cost center to other cost centers. The original costs from the cost center, even if they are primary, are grouped and reclassified as secondary while allocating the same to other cost centers (imagine you are collecting primary costs like postage, telephone, courier expenses, fax charges, etc., into a cost center called 1000; now group these costs for assessment using a secondary cost element to receiver cost centers: 2000 and 3000).

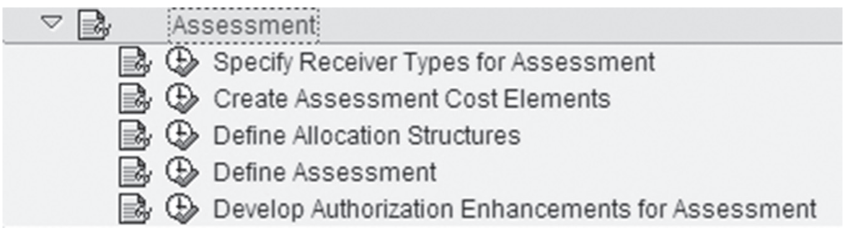


FIGURE 3.18 Assessment

You need to define an *assessment rule* (either "percentage" or "SKFs" or "fixed amounts") for affecting assessment. You would have now noticed that this is almost similar to the distribution used in "primary cost planning."

So, why you need an assessment? Assessment is required when you need to allocate secondary costs, and when you do not need the details which otherwise you get from distribution.

35. WHAT IS "ALLOCATION STRUCTURE?"

You need to define or use a secondary cost element, called "assessment cost element," while you carry out the "assessment" in "automatic secondary cost planning." Instead of defining individual assessment elements (for a group of primary cost elements) in individual segments, every now and then, you may define various assessment elements in an **allocation structure**, and use this repeatedly.

An allocation structure for the assessment consists of at least one assignment, stating the assessment cost element to which the source element is assigned. The original cost elements will already have assignments in the source.

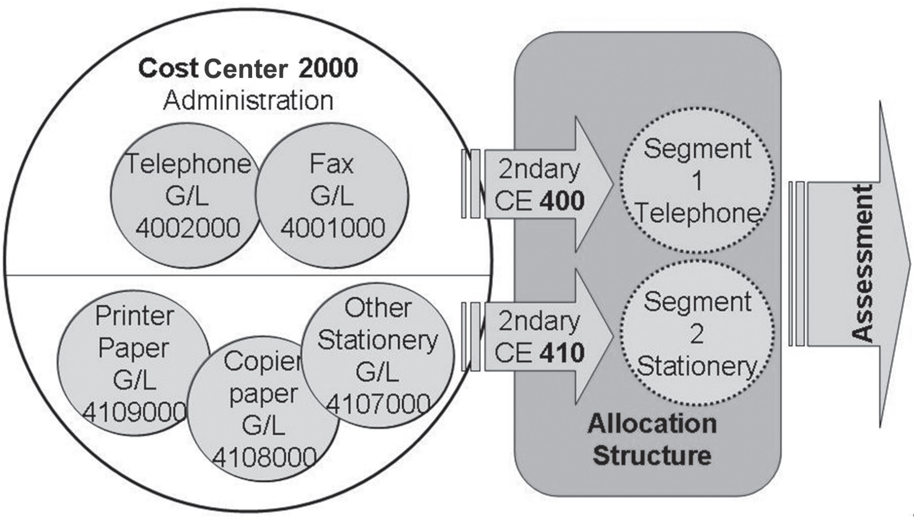


FIGURE 3.19 Assessment (Automatic Secondary Cost Planning)

36. EXPLAIN "SEGMENTS" AND "CYCLES."

A **segment** is one processing unit required to complete an automated allocation of distribution or assessment or reposting of planned/actual costs in Controlling in SAP.

A segment is made up of:

- Segment header
- Senders / receivers
- Sender values
- Receiver tracing factors

When you combine multiple segments into a single process, you call that the **cycle**. A Cycle helps you to process various segments in a chain-like fashion one, after another. A "Cycle" consists of *header data* (valid for all Segments in a Cycle) and one or more *Segments*, with *summarized rules and settings* enabling allocation. The *Segments* within a "Cycle" can be processed *iteratively* (one segment waits for the results of another) or *non-iteratively* (all the segments are processed independently) or *cumulatively* (to take care of variations in receiver *Tracing Factors* or sender amounts).

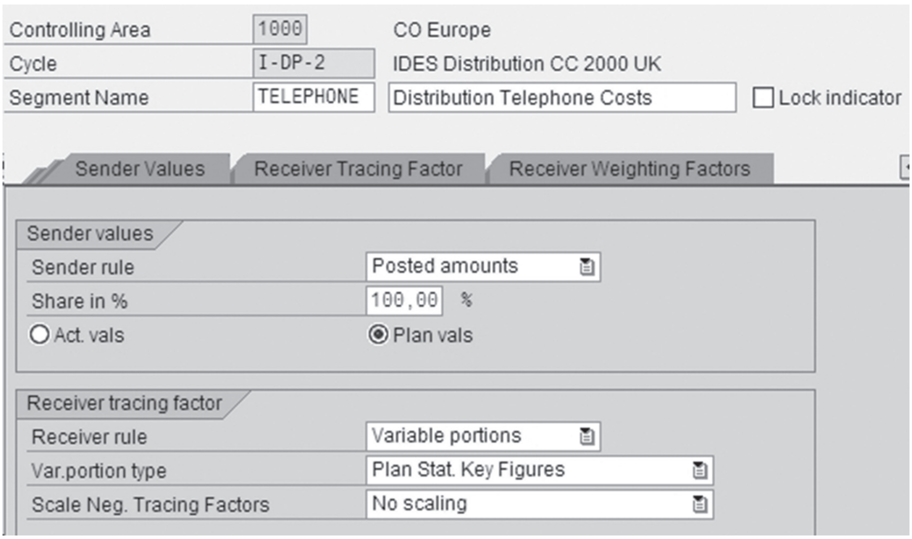


FIGURE 3.20 A Segment

Typically, when you start the cycles you will star them in a "test" mode so as to see the allocations before actual postings. Technically, you can run the cycles in "production" mode at any point, but the system will carry out the allocation postings only on the first day of a period. The utility of the cycle lies in the fact that you can run these period after period.

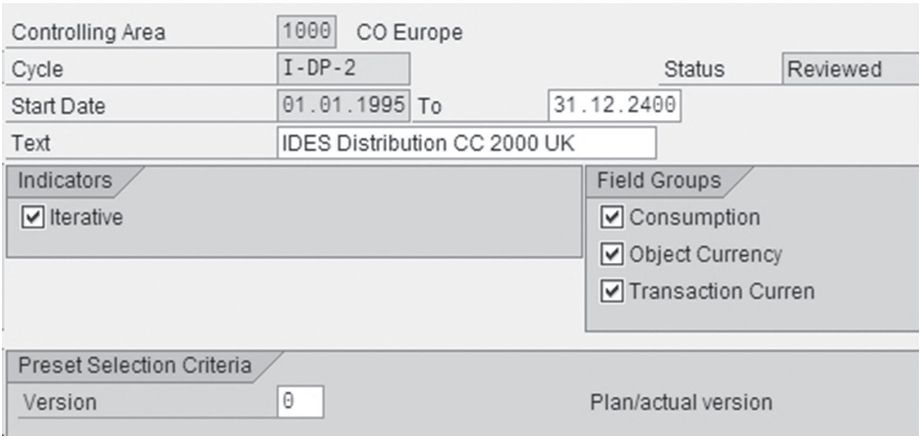


FIGURE 3.21 "Cycle"- Header Data

37. WHAT IS "ITERATIVE PROCESSING OF CYCLES?"

Iterative processing is nothing but the repetitive processing of sender/receiver relationships until the sender's entire cost is transferred to the receiver(s). Under this, you will not be able to use "fixed amounts" as the "sender rules"; you will also not be able to define a percentage to remain on the sender. You will be able to use both plan and actual data while using the iteration.

38. WHAT IS "SPLITTING?" EXPLAIN "SPLITTING STRUCTURE."

Splitting is a process used to assign "activity independent" plan/actual costs, both primary and secondary, of a cost center to the individual Activity Types within that cost center. But the important requirement is that you will use this when there is no account assignment to the Activity Types.

You may either use the (i) *Splitting rules* or (ii) *Equivalence number* to achieve this. When you split the costs from a cost center, the cost center temporarily *becomes* more than one cost center for the purpose of allocation but again becomes a single cost center when posting happens in the subsequent period.

In case you need to assign different cost elements or cost element groups to activities in more than one way, then you need to define a "*splitting structure*" containing "splitting rules" to determine the criteria of splitting "activity independent" costs to an activity type. If you have created the splitting structure in customizing and assigned the same to a cost center, then the system uses the splitting structure for cost apportioning; else it will use the equivalence number.

The "*splitting rules*" determine the amount or the proportion of costs to be allocated to various Activity Types of a cost center; and is based on the consumption of these Activity Types. The costs thus allocated may be a fixed sum, or a percentage, or it can even based on the tracing factors or SKFs.

The "*equivalence number*" is a basic method for splitting the costs when you manually plan for each of the Activity Types. By this, you will plan all activity independent costs according the equivalence numbers (default is 1).

39. WHAT IS "(ACTIVITY) PRICE CALCULATION?

The **activity price calculation** is the method used to calculate the prices of planned activities iteratively for combinations of Cost Center and activity type or for business processes, taking all activities performed for other Cost Centers or business processes into account. You will be completing the planning process only when you perform the (activity) price calculation based on planned activities and costs. By doing this you are valuating the planned secondary costs at receiving cost centers. If you do not want to use activity price thus calculated, you are free to use the political price for the activity type.

As you are aware, the activity price is used for plan / actual allocation and is determined by using either (1) the political price or (2) the system calculated activity price.

40. HOW DOES THE SYSTEM CALCULATE "(ACTIVITY) PRICE?"

The system calculates the **activity price** for each activity type and cost center by following the underlying rule:

$$\text{Planned}\left(\text{Activity}\right)\text{Price} = \frac{\text{Planned Primary Costs} + \text{Planned Secondary Costs}}{\text{Planned Activity Type Volume}}$$

Note that the system will continue to calculate the activity price even if you have set the price indicator of an activity type to "political price."

41. WHAT DO IS KNOWN AS "POLITICAL PRICE" FOR AN ACTIVITY TYPE?

The **political price** is the price determined outside the SAP system, and used in manual input using the required planning layout in planning.

42. WHAT IS "ALLOCATION PRICE VARIANCE?"

Allocation price variance is the difference between the "political price" of an activity type and the "system calculated activity price" of the same activity type.

43. WHAT IS "BUDGETING?"

Budgeting is used to augment the planning process at the cost center level. While planning is considered the "*bottom-up*" approach, budgeting is regarded as the "*top-down*" method to control costs.

Budget usually comes "down" from the "top (management)," and is used to guide the planning process at the cost center level. Note that budgeting is not integrated with postings: you will get an error when the system comes across a posting which will result the actual values exceeding the budget for that cost center.

44. WHAT ARE "DIRECT ALLOCATION" METHODS OF POSTINGS IN CO?

The **direct allocation** of postings in CO may be of (1) actual cost entry or (2) transaction based postings.

The actual cost entry is the transfer of primary costs from FI to CO on real-time basis through the primary cost elements. You may also transfer transaction data by making the cost accounting assignment to cost objects from other modules like FI-AA, SD, and MM.

- FI-AA: Assign assets to a cost center (to post-depreciation, etc.)
- MM: Assign GR to a cost center / internal order
- SD: Assign or settle a sales order to a cost center or internal order

Note that during actual cost entry, the system creates two documents when you post the primary costs from FI to CO: (1) A document in FI and (2) a parallel document in CO, which is summarized from the point of cost object / element.

The transaction based postings are executed within the CO, again on real-time basis, enabling you to have up-dated cost information on the cost centers at any point. You will be able to carry out the following transaction based postings in CO:

- Reposting
  - Line items
  - Transactions
- Manual cost allocation
- Direct activity allocation
- Posting of Statistical Key Figures
- Posting of Sender activities

45. WHAT IS THE "INDIRECT ALLOCATION" METHOD OF POSTINGS IN CO?

The **indirect allocation** of postings in CO may be used at the end of a period as a periodic allocation. This is done after you have completed all the primary postings. You may post the following periodic allocations using indirect allocation:

- Periodic Reposting
- Distribution
- Assessment
- Accrual Cost Calculation (Imputed Cost Calculation)
- Indirect Activity Allocation

46. EXPLAIN "CO AUTOMATIC ACCOUNT ASSIGNMENT."

For transferring primary costs to CO on real-time basis, you need to have **automatic account assignments** defined in the system. By doing this, you will always be able to post a particular cost to a specified cost center. You can also use this assignment for automatically posting the exchange rate differences (gain or loss), discount, etc., to CO.

You may also have additional account assignments at different levels like:

- Controlling Area / account / Company Code in the customizing
- Controlling Area / account / cost element in the master record
- Controlling Area / account / Company Code / business area / valuation area in customizing.

The system always goes through the route of customizing first, then to the cost element master record while accessing the account assignment rules.

47. HOW DOES "VALIDATION" DIFFER FROM "SUBSTITUTION?"

SAP uses *validations* and *substitutions* to check the integrity of data entered before posting a document. When you have both substitutions and validations defined, the system first completes the substitution then goes on to validate the entries. Note that only one validation and one substitution can be activated at a time for a Controlling Area per "*call-up point*."

A **Validation** uses *Boolean logic* for *checking* any type of combination of specified criteria (like account type/cost center combination) for ensuring the validity before allowing you to post a document.

EXAMPLE

- ***Validation Rule:*** If cost element is "120000," then the cost center is "1200."
- ***Document:*** You try posting a document containing cost element as "120000" and the cost center as "1400."
- ***System Response:*** The system will throw an error message after checking that the cost center value does not match the cost center value of the criteria for that given cost element value.

In contrast to validation which just checks for validity, **substitution** ensures that the system replaces a value assigned to one or more fields based on pre-determined criteria, using, again, "*Boolean logic*."

EXAMPLE:

- ***Substitution Rule: I***f cost element is "120000," then the cost center is "1200."
- ***Document:*** You try posting a document containing cost element as "120000" and the cost center as "1400."
- ***System Response:*** The system will replace the entered cost center value of "1400" with that of the correct value "1200."

48. WHAT IS A "CALL-UP POINT?"

A **call-up point** is a particular point in transaction processing triggering some action like substitution or validation.

49. WHAT IS "BOOLEAN LOGIC?"

Boolean logic is based on the simple logic to determine true or false of a given statement. The logic works on the basic principle that a statement can either be true or false. In a complex statement (created by using operators "*and* " / "*or* " / "*nor*," etc.) with many parts, the logic goes by assigning true or false from part to part, and then determines at the end whether the combination is true or false.

50. EXPLAIN "REPOSTING" IN COST CENTER ACCOUNTING.

Reposting is one of the "transaction based postings" in Cost Center Accounting, used to re-allocate costs that were incorrectly posted to another cost center earlier. Also called *internal reposting*, there are two types:

- Transaction Reposting
- Periodic Reposting

Posted in real-time, you will resort to the **transaction reposting**, when the original posting was incorrect. Here, the original FI documents is not referenced to in the new CO document created, though the original FI document remains unchanged.

Though similar to transaction-based reposting, in **periodic reposting** the costs being transferred are collected on a clearing Cost Center and then transferred at the end of the period according to allocation bases defined by the user. This ia a *planning aid*, used to correct multiple postings made to cost centers during a period. As such, this is similar to *multiple reposting* under "transaction based postings."

The periodic reposting is also similar to *distribution*, when you use this at the period end to transfer all the costs from a "pooled cost center" to other receivers. (Note that the "distribution" is meant for primary cost allocation, but periodic reposting is meant for correction the posting errors).

The following are the configuration steps:

- Determine Sender/Receiver Types for Periodic Reposting
- Define Periodic Reposting

51. EXPLAIN "MANUAL COST ALLOCATION."

Manual cost allocation – one of the "transaction based postings" - is used to post both primary and secondary actual costs (not the planned costs), and also to transfer external data. You may also use this to correct secondary costs which were incorrectly posted earlier. In the process of manual cost allocation, remember that you can use any type of cost element except *43*, as this is meant exclusively for activity allocation.

You may use this among cost centers, internal orders, networks, network activities, sales orders, sales order items, WBS elements, etc., identifying these cost objects as senders / receivers.

52. WHAT IS "DIRECT ACTIVITY ALLOCATION?"

Direct activity allocation – one of the "transaction based postings"- is used to record activities performed by a cost center and allocating simultaneously to "receiving cost centers." You will be able to use this "direct activity allocation" only when you know the activity volumes of the both the sender and the receiver. If it is not known, then use the *indirect activity allocation* at the period end.

You need to input the activity quantity, sender / receiver cost center and date to enable the system to allocate the costs: the system will automatically determine the *allocation cost element* and the *activity price* (either the *planned price* or the *actual price*). The system multiplies the activity consumed with that of the activity price to arrive at the allocated cost.

53. WHAT IS A "BUDGET PROFILE?"

A budget **profile** is a grouping of settings relevant to budget planning under a name of your choice. It helps to define:

- Budget planning horizon
- Planning period (past, future and start)
- Distribution keys for the planned values
- Display of the planned values

Transaction Code
OKF1

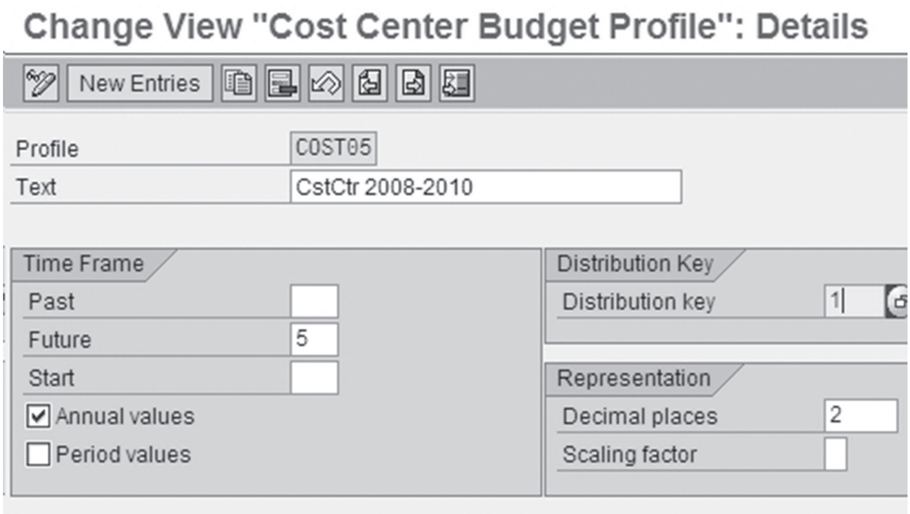


FIGURE 3.22 Budget Profile

54. WHAT "PLAN DATA" CAN BE TRANSFERRED TO CO?

You can **transfer plan data** from the following modules:

- *Depreciation and interest from AA (Assets Management)* - you can transfer the depreciation and interest that is periodically calculated for a fixed asset in Asset Accounting, together with the planned investments in an asset. You transfer these values to primary cost planning in Cost Center Accounting
- *Key figures from the LIS (Logistics Information System)* - To be able to transfer SKFs from the LIS to Cost Center Accounting (CCA), you need to create a link between the SKF in CCA and that in LIS. You can activate the interface in the master data of the relevant SKF in CCA, for automatic transfer of key figures from the LIS to CCA.
- *Personnel costs from HR (Human Resources)* - In pre-4.6A releases, the user initiates transfer of planning data from HR manually. As of 4.6A, the system transfers personnel costs to Cost Center accounting automatically provided a Cost Center is set in personnel cost planning.
- *Scheduled activity from PP (Product Planning)* - In PP, you carry out preliminary planning based on individual work center capacity. You can then copy PP scheduled activity to Cost Center Accounting, by specifying parameters for a version and a fiscal year at the CO area level. The parameters control the transfer of scheduled activity.

55. WHAT IS "VARIANCE ANALYSIS" IN CO-OM-CCA?

The **variance analysis** is the determination and interpretation of the difference(s) between the actual and planned (target) costs (within a cost center / cost center group) in cost center accounting. The analysis is intended to provide important clues to the top management so as to plan better later.

56. WHAT ARE THE TWO "CATEGORIES OF VARIANCES" IN CO-OM-CCA?

SAP helps to classify all the variances into two categories:

- Input Variances
- Output Variances

57. WHAT ARE THE DIFFERENT "INPUT VARIANCES?"

The **input variance** is the result from the mismatch of amounts / quantities of inputs planned and actually used. You will be able to identify the following *input side variances*, in the system:

- Input Quantity variance
- Input Price variance
- Resource-usage variance
- Remaining (input) variance

58. EXPLAIN "INPUT QUANTITY VARIANCE."

The **input quantity variance** is the difference between planned and actual quantity of activity consumption. The inference is that there is some production inefficiency leading to more consumption or there is some loss / shrinkage in the quantities.

EXAMPLE

The quantity of raw materials withdrawn (1200 kg) from inventory for a production order was higher than planned (1150 kg), or the activity quantity used (89 hr) at a Cost Center was less than planned (94 hr).

59. EXPLAIN "INPUT PRICE VARIANCE."

The **input price variance** is the difference between plan and actual price of an activity. The inference is that you may need to change the suppliers looking for lower prices or it is just a market condition. Input price variances are calculated by multiplying the difference between the planned value and the actual value by the quantity consumed.

60. DEFINE "RESOURCE-USAGE VARIANCE."

Resource-usage variance results from the usage of unplanned cost element or when there has not been a posting of a planned cost element. The inference is that there are some unidentified costs which may be planned in the next planning cycle, or just plain errors in postings.

61. WHAT IS "REMAINING INPUT VARIANCE?"

The **remaining input variance** is the miscellaneous variances where the system is not able to categorize a variance as input quantity variance, input price variance, resource usage variance, or scrap.

62. WHAT IS AN "OUTPUT VARIANCE?"

The **output variance** is the result when the actual costs allocated from a cost center differs from that the planned (or target) cost allocation from that cost center. The variances on the "output side" may be any one of the following categories:

- Output price variance
- Fixed cost variance
- Remaining variance

63. EXPLAIN "OUTPUT PRICE VARIANCE."

The **output price variance** occurs when the activity price used in the actual allocation is a *political activity price* (manually entered or plan price) differing from the *system calculated activity price (target price)*. In other words, this is the difference between the actual credit and target credit.

- In Overhead Cost Controlling (CO-OM), an output price variance arises when the activity price used is not the same as the monthly iterative price on the basis of the planned activity (for example, a manually entered activity price).
- In Cost Object Controlling (CO-PC-OBJ), an output price variance arises when the material manufactured is transferred to inventory at a price other than the standard price (for example, the moving average price).

64. EXPLAIN "FIXED COST VARIANCE"

The **fixed cost variance** is the difference between the planned fixed costs and the allocated actual fixed costs. Calculated only in Overhead Cost Controlling, this arises when a part of the planned fixed costs are not covered by the amount for which the Cost Center is credited (say, the interest, rent, and depreciation remain the same for a factory regardless of whether it produces anything).

The fixed cost variance is further divided into:

- Volume variance
- Secondary fixed cost variance

65. EXPLAIN "VOLUME VARIANCE"

The **volume variance** occurs when actual and planned activities (in terms of activity quantity and/or activity itself) vary. It identifies over-absorption and under-absorption of fixed plan costs per cost element for each activity type, showing whether the fixed Cost Center costs are covered by actual activity. The variance is always because of actual activity varying from plan activity.

It can be calculated:

- Volume variance = Plan Activity Cost – (Actual Activity Quantity * Planned Activity Price)
- Volume variance = Plan Activity Price * (Planned Activity Quantity – Actual Activity Quantity)

66. WHAT IS "SECONDARY FIXED COST VARIANCE?"

This is the difference between the fixed plan costs and the fixed target costs, occurring only when activity-dependent activity inputs are made for a Cost Center or business process. Here, a portion of the fixed target costs (variable target quantity * fixed price) varies with the operating rate.

67. WHAT IS KNOWN AS "REMAINING OUTPUT VARIANCE?"

The remaining output variance reflects the miscellaneous variance at the cost center level, identified by the system on the output side but remaining not categorized into any of the other output variances. The possible reason can be that you have deactivated the output variances in the *variance variant* configuration or the output variance is less than the "minor difference" you have defined in the "variance variant."

68. WHAT IS "VARIANCE VARIANT?"

The **variance variant** is the parameter that determines the variance categories that are calculated.

Transaction Code
OKVF

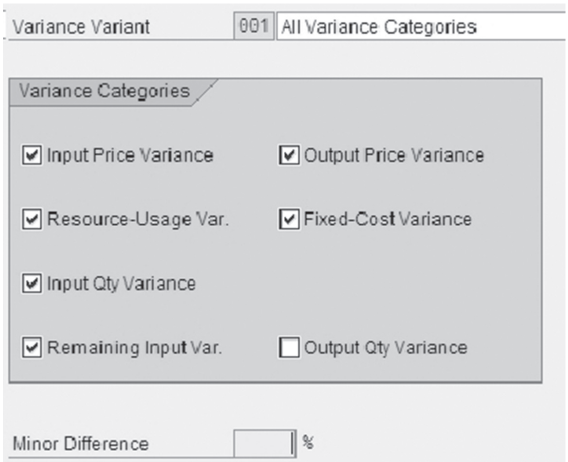


FIGURE 3.23 Variance Variant

69. HOW WILL YOU DEAL WITH "VARIANCES?"

Though the system identifies and calculates the variances, they are not automatically dealt with by the system. Hence, these variances will remain at the cost center as a *period-end balance* and you need to act on that.

- You may do actual activity price calculation to revalue all internal allocations with a newly calculated price (as against the initial planned activity price), and post the difference to all the cost centers which initially received the allocations. This will help you in clearing all or a portion of output price variances.
- You may "transfer" the variance balance to other modules (like CO-PA) for further analysis.

- You may make additional automated allocations with in CO-OM-CCA to one or more cost centers.

70. WHAT ARE ALL THE "STANDARD REPORTS" IN COST CENTER ACCOUNTING?

SAP comes delivered with a number of **standard reports** in Cost Center Accounting module. The reports are grouped as below:

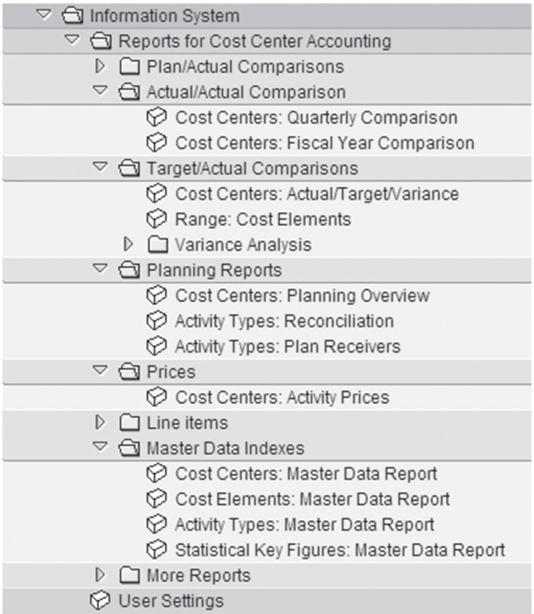


FIGURE 3.24 Report Tress in Cost Center Accounting

- Planning reports
- Comparison reports
- Line item reports
- Report for activity prices
- Reports for variance analysis
- Master data reports
- Document display

All the reports are arranged in a "*report tree*" with the hierarchical arrangement of reports under various nodes. Note that you will not be able to change the standard report tree supplied by SAP; if you need new reports, you may copy an existing one and make changes or define your own reports and then attach these newly defined ones to the new report tree you just defined.

71. WHAT SPECIAL REPORTS ARE AVAILABLE IN "MORE REPORTS?"

Besides the regular reports for plan/actual comparisons, target/actual comparisons, actual/actual comparisons, prices, etc., you are also provided with several other reports under "more reports" in Cost Center accounting.

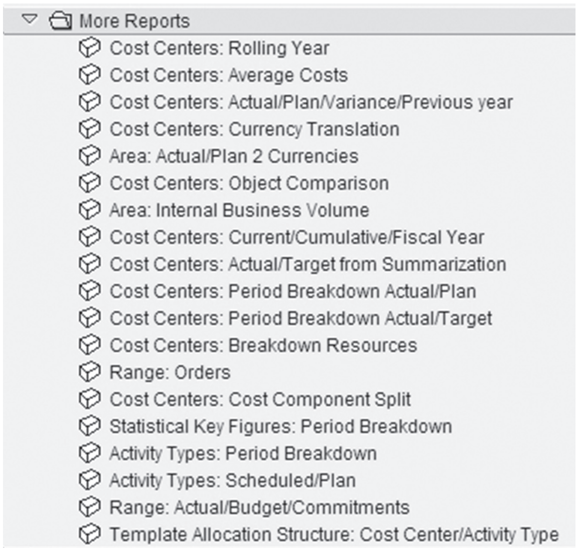


FIGURE 3.25 More Report in Cost Center Accounting

72. WHAT IS "SUMMARIZATION?"

The **summarization** helps to condense and store the transaction data at the "cost center group" level. You may do the summarization for the highest node of the "standard hierarchy" or any of the "alternate hierarchies." The hierarchy areas are summarized in steps from bottom to top. Due to technical reasons, each node must be assigned a representative Cost Center in master data maintenance.

This summarized Cost Center group data is updated as an additional data group in the totals records tables. Once summarized, you will be able to create a number of reports with report run-time vastly reduced as the summarization makes totals records available for Report Writer for each summarization level, in comparison to using totals records according to subordinate Cost Centers.

Transaction Code
KR01

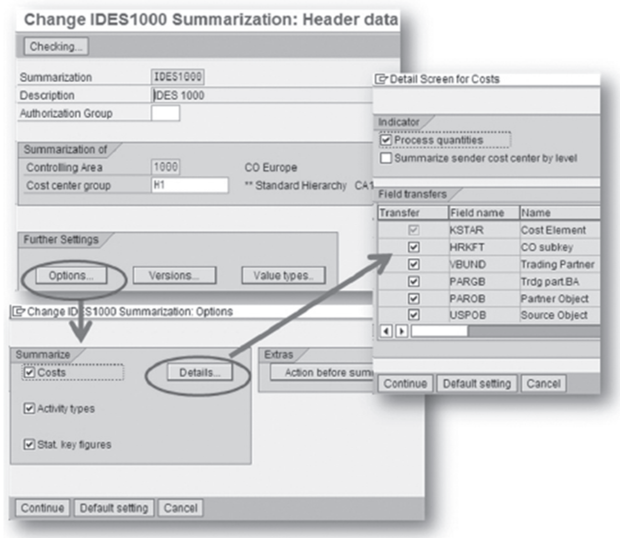


FIGURE 3.26 Summarization – Header, Options, and Details

73. WHAT IS THE RECOMMENDATION BY SAP REGARDING "SUMMARIZATION?"

Before deciding on summarization, you need to decide carefully whether you want to create an extract of report data or execute a summarization. This is because summarization generates far more additional data than creating an extract does.

If you require few reports, SAP recommends saving the reports for the entire Cost Center hierarchy periodically in the background, and then to use extracts online. However, if you work with many reports defined on the spur of the moment and want access to the entire Cost Center standard hierarchy, you should choose summarization.

CHAPTER 4

INTERNAL ORDERS (CO-OM-OPA)

1. EXPLAIN THE "INTERNAL ORDERS" AREA OF CO-OM.

The **internal orders (CO-OM-OPA)** – overhead orders – are used either to monitor overhead costs for a limited period, or overhead incurred by executing a job, or for the long-term monitoring of specific parts of the overhead.

Independent of the Cost Center structure, internal orders collect the plan and actual costs incurred, enabling you to control the costs continuously. You can also use internal orders to control a Cost Center in more detail. You can assign budgets to jobs.

2. WHAT IS AN "INTERNAL ORDER?"

Internal order is the general term for overhead cost orders, internal orders with revenues, accrual orders, and capital investment orders. Each order is assigned to an *order type* which in turn is assigned to *order category*.

These internal orders can be a:

- Single order / Individual order
- Standing order

The orders can also be a:

- Real internal order
- Statistical internal order

Please refer to note no. 45290 in OSS if you require more than 100,000 orders (including production and maintenance orders).

3. HOW DOES "INDIVIDUAL ORDER" DIFFER FROM "STANDING ORDER?"

An **individual order** is meant for collecting and settling costs of a one-time and unique business activity like new product launch. You will be settling the order in full at the end of the activity. Typically this type of orders are used for advertising campaigns, R & D costs, assets produced in-house, etc.

A **standing order**, on the other hand, is used in case of repetitive operations, the costs of which are generally smaller compared to one-time orders. You will settle the costs, form these orders, on a "periodic basis" (say, at the end of every month) and will keep the order open to receive future costs. You will be using this type of order for tracking costs on routine maintenance, telephone usage charges, etc. These orders do away with the need for creating a new order every time you need such a tracking; they are similar to the *standing instructions*.

4. WHAT ARE ALL THE TYPES OF INTERNAL ORDERS?

The **internal orders** can be grouped into the following types:

- *Overhead orders*
- A cost object used mainly for recording indirect costs associated with certain short-term unique events (like marketing campaigns, repairs, trade exhibitions, etc.) taking place within the company. With the overhead orders, you can collect plan and actual costs independently of organizational Cost Center structures and business processes for continuous cost control in the enterprise.
- *Investment orders*

- Tracking the costs incurred on fixed assets (*AuC*) like construction of a warehouse, etc., these are also termed as *capital investment orders*. You can perform preliminary costing on capital investment orders, make postings to them, and settle them to AuC. On completion of the task, the order is settled to one or more assets.
- *Accrual orders*
- You will use accrual orders when it is required to make an offsetting posting of accrued costs to a cost center in CO. They are used to monitor period-based accrual between expenses posted in FI and accrual costs in CO.
- *Orders with Revenue*
- These orders help you to carry out cost accounting functionality of SAP SD (*customer orders*), when you have not implemented SD module. By doing this, you will be able to track costs and revenues.

5. HOW DO "STATISTICAL ORDERS" DIFFER FROM "REAL ORDERS?"

A **statistical order** is used to collect costs for the purpose of information and reporting, as the costs "collected" on this order. You cannot settle a statistical order or apply overhead to it.

When you want to create such an order, you will be required to specify that the order is "*statistical*" in its master record. However, to make a posting to this kind of order, you need to have "real" or "true" cost object specified during the transaction.

When this indicator is set in a *model order*, it is used as a default value when you create new orders of that order type. It is possible to change this indicator in the order, if the order was not posted to or you have not yet created a settlement rule for the order.

A **real order**, on the other hand, is always used to settle costs to other cost objects. So, even if you specify a real cost object while making a posting to a real order, the system will consider that cost object as a statistical one as the internal order itself is a real cost object.

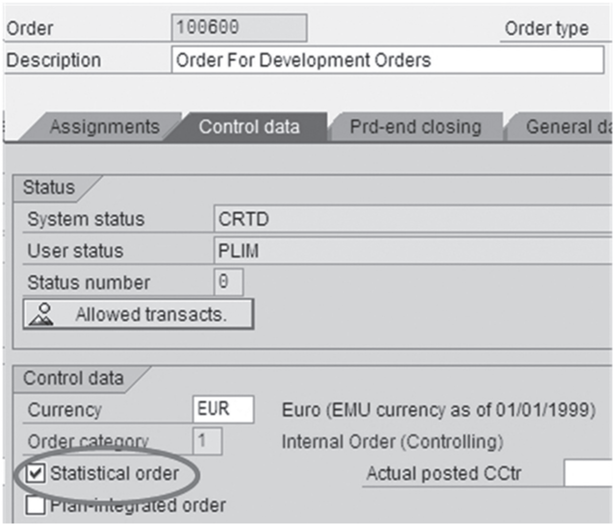


FIGURE 4.1 Indicator for "Statistical Order"

6. HOW DO YOU ACTIVATE "ORDER MANAGEMENT" FOR A SPECIFIC CO AREA?

To activate order management for a particular Controlling Area, proceed as indicated below:

- Select the desired Controlling Area

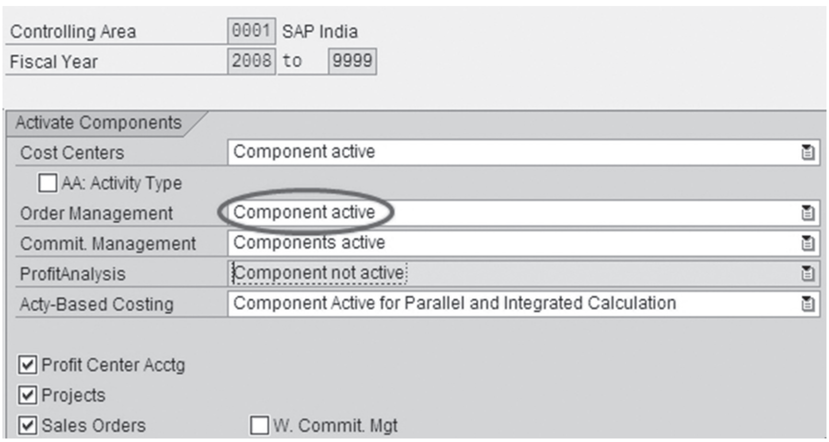


FIGURE 4.2 Activating "Order Management"

- Use Transaction OKKP “Activate components/Control indicators” and call up the control indicators (if the Controlling Area is valid for more than one year, highlight the required year from the overview of the years displayed).
- Select “component active” from the drop-down list for “Order management,” and “Save.”

7. EXPLAIN THE VARIOUS OPTIONS IN “ACTIVATING CO-OM-OPA.”

When you configure the “Activate Components” for a Controlling Area, you have the following four options for order management in SAP CO:

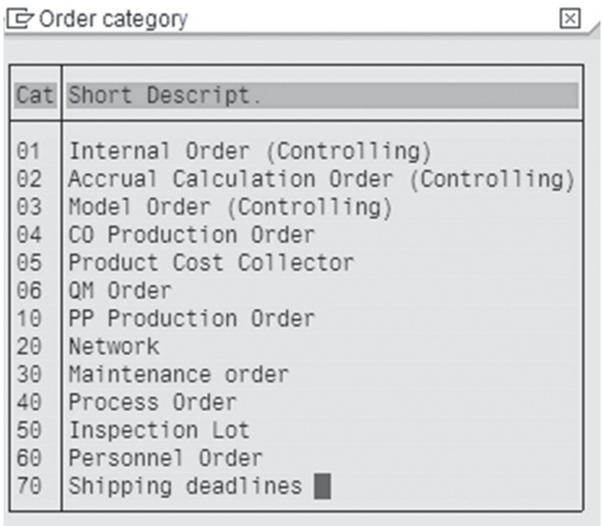
- *Component not active*: Orders are not validated; you cannot use internal orders as account assignment objects for internal CO postings. You need to deactivate the corresponding warning message in Customizing for postings in FI. They are then treated as true postings but not updated. Any Cost Center then posted accepts them as statistical postings only.
- *Component active*: Order management is fully activated, without any limitation. Orders are validated against the order master and can be used as account assignment objects. The CO files are updated in the corresponding posting transactions.
- *Active for validations*: Order management is inactive. As in the case of “component active,” the orders are validated against the order master and can be used as account assignment objects, but the corresponding CO files are not updated in posting transactions. If order management is implemented later, business transactions that are relevant to cost accounting can be posted to orders in the corresponding CO files.
- *Component active for existence of validations*: This is same as indicator “active for validations” except that orders are checked to see if they exist and not whether they are allowable for the relevant posting transaction.

FIGURE 4.3 Activating Order Management: The Four Options

Transaction Code
OKKP

8. WHAT IS AN "ORDER CATEGORY?"

The **order category** is a technical classification criterion for orders, which determines the SAP application to which an order belongs, and controls the functions by which an order can be processed. Each "order type" needs to be assigned to an order category. A single order category can have more than one order type. SAP comes delivered with several order categories.



Order category

Cat	Short Descript.
01	Internal Order (Controlling)
02	Accrual Calculation Order (Controlling)
03	Model Order (Controlling)
04	CO Production Order
05	Product Cost Collector
06	QM Order
10	PP Production Order
20	Network
30	Maintenance order
40	Process Order
50	Inspection Lot
60	Personnel Order
70	Shipping deadlines

FIGURE 4.4 Order Category

9. WHAT IS AN "ORDER TYPE?"

An **order type** contains the control information (including a range of default values that are used when you create a new order) required for order management. As mentioned already, you need to assign each order to an order type that transfers certain parameters to the order.

Because an order depends on the client, each order type can be used in all Controlling Areas. In you want to sort your order types by Controlling Area, note to create separate order types for each Controlling Area (example: order types 0100 to 0199 for Controlling Area “1000,” order types 0200 to 0299 for Controlling Area “2000,” etc.).

The order type determines:

- Order category (01-internal order, 03-model order, etc.)
- Number assignment
- Control indicators (whether commitment management is active, whether classification is active, whether revenue postings are permitted)
- Profiles (settlement, planning, budget, etc.)
- Reference order
- Status management
- Archiving (what the retention period should be)
- Master data display

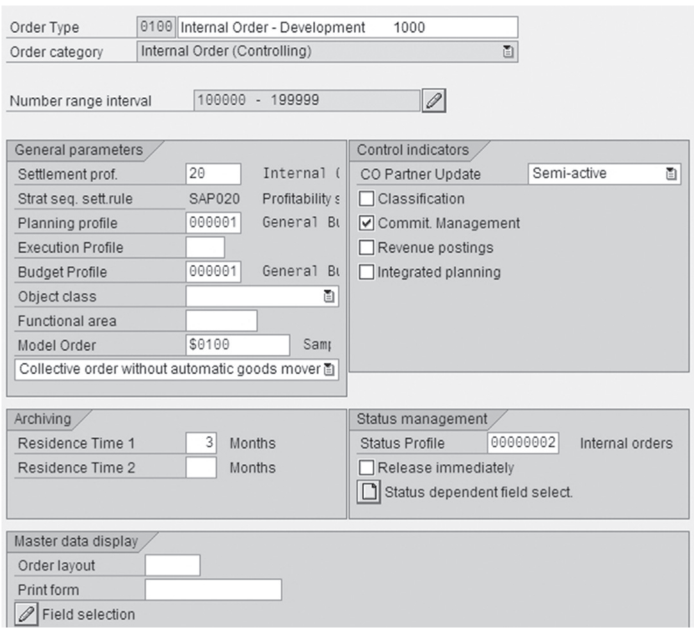


FIGURE 4.5 Order Type

10. WHAT IS A "MODEL ORDER?"

A **model order** is an instrument containing default values that you use as a template when creating an order. Note that you can not make any postings to a model order.

11. WHAT "FORM" YOU NEED TO USE TO PRINT AN ORDER?

Each "order type" can be assigned to its own form; if no form is stored, SAP uses the standard form "CO_ORDER." You may use either of the other two standard forms provided by SAP (copy these forms from client "000" to your target client, if not done already):

- CO_ORDER_CUST_1
- CO_ORDER_CUST_2

You may also use customer exit "COOPA004" to extend the form definition to meet your specific requirements. In case you want to include your company's logo in any of the user-defined forms, it is recommended that you read the documentation for CO_ORDER_CUST_1.

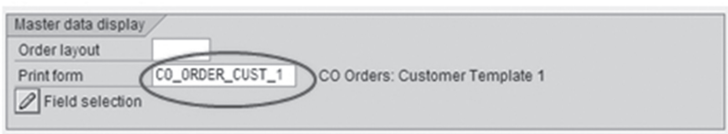


FIGURE 4.6 Print Form for Internal Orders

12. WHAT IS AN "ORDER GROUP?"

It is possible to combine several internal orders into an **order group**, thus forming a structure, so as to use the group for planning, overhead calculation, settlement, or evaluation. An order may be assigned to different groups at the same time, and you can set up these groups using as many levels as you want. The orders are always at the lowest level of the group. Note that the groups are client-dependent and you may use a group name only once.

Transaction Code
KOH1

13. EXPLAIN "ORDER MANAGER."

The **order manager** helps to manage order master data through an easy-to-use graphic user interface.

The *worklist* is the linking element between work steps, in the order manager. The worklist can be filled either by using a *selection variant* or selecting single orders (*personal worklist*). The worklist last used is saved specifically for its user and is available again next time the user logs on to the system. The worklist displays the master data fields for the selected orders in columns, in an ALV grid list with the functions like: sort, find, details, set filter, print, and your own display variants. You can save the layout either user-specific, or for all users. You can display or change single orders from the worklist. You can also create new orders, possibly as a copy of an order in the worklist.

You can also select single orders, and process them in the new collective processing for orders. The "*collective processing*" enables you to (for example) replace entries in individual fields in the selected orders with a common value. If you select individual columns as well as the orders in the worklist, and if these fields are allowed for collective processing changes, then these columns are available in collective processing as being changeable. If you do not select any columns, then the defaulted columns are changeable in collective processing.

Transaction Code
KO04

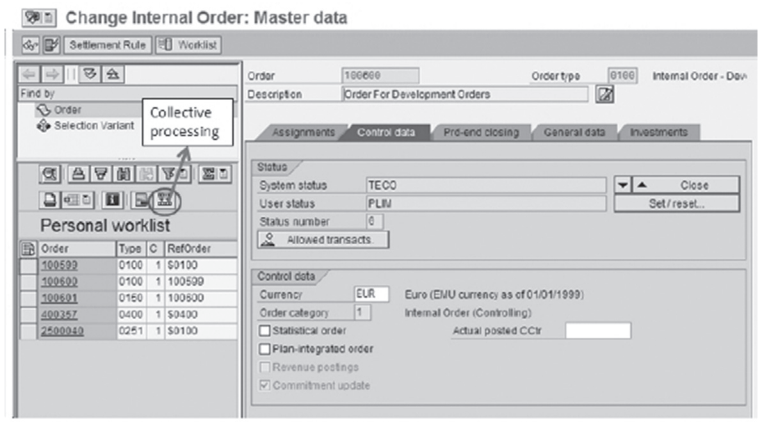


FIGURE 4.7 Order Manager

14. EXPLAIN "STATUS MANAGEMENT" FOR INTERNAL ORDERS.

As the internal order is not a static object, it has its own life cycle and passes through four statuses coinciding with the business transactions. A status is an indicator fulfilling two functions:

- It informs you that a particular status has been reached (say, the order has been "created").
- It influences the number of business transactions you can perform.

A status can be either active or inactive: A status can:

- Allow a business transaction
- Allow a business transaction with a warning
- Prohibit a business transaction

The statuses can be set in by the user or the system:

- **CRTD** (Created) – actual postings are not possible
- **REL.** (Released) – almost all the business transactions are allowed in this status
- **TECO** (Technically completed) – no planning change is possible
- **CLSD** (Closed) – no cost relevant business transaction is allowed

Besides the above, it is possible that the system sets further status (like the one mentioned below) depending upon the business transaction:

- **LOCK** (Locked) – no business transaction is allowed except resetting the lock

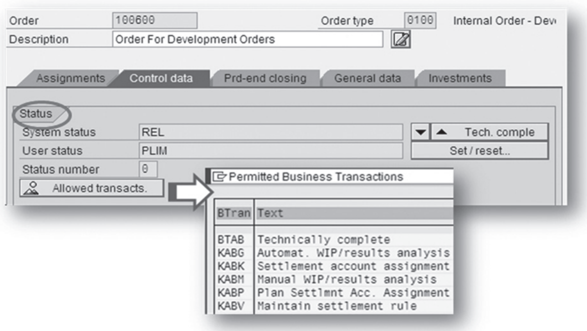


FIGURE 4.8 Status Management

The current status (active status) of an internal order (or the combination of all statuses) determines which business transactions you can perform on the internal order. You use status management to specify the current processing status of an internal order.

SAP uses the *status number* to define the sequence of the user statuses in a status profile. Statuses with a lower number are usually activated earlier than statuses with a higher number. The system usually works through the statuses in numerical order.

15. CAN AN INTERNAL ORDER HAVE MORE THAN ONE STATUS AT THE SAME TIME?

Yes, an internal order can have several statuses at the same time: but only one of these statuses may have a status number. If another status with a status number is activated, the old status with a status number is deactivated, providing the conditions defined in the status profile are met.

16. WHAT IS A "USER STATUS?" HOW IT IS DIFFERENT FROM THE "SYSTEM STATUS?"

It is possible to set a **user status** in addition to the existing system status: specify the user status in a *status profile*, which you create for each *order type* in customizing. Note that you can specify and activate any number of user statuses. For example, in a production order you can simultaneously set the *Released*, *Pre-costed*, *Printed*, and finally *Confirmed* statuses. You can use the user statuses to determine a sequence for the different steps involved in processing an object. For each step, you specify a user status and a *status number* (assign these status numbers in ascending order, and specify a lowest and highest status number for the user status).

The system sets a **system status** informing the user that the system has executed a certain business transaction for an object. The system status is influenced only by executing a business transaction that changes the status. For example, if you release an internal order, the system automatically sets the status as "REL."

Both the system status and the user status influence the business transactions in the same way.

17. WHAT IS "EASY COST PLANNING?"

Easy Cost Planning in CO is a method of costing based on costing models to enable costs to be planned quickly and easily, by the cost planner, for objects such as:

- Appropriation requests
- Internal orders
- Internal service requests
- Work breakdown structure elements

You need to establish a representation of the structure of planning objects in the system. These can then be used as planning forms by all cost planners. Easy Cost Planning is particularly efficient when more than one person in your organization plans costs, or when you frequently plan costs in a similar way.

Easy Cost Planning calculates the costs by using the unit costing function from Product Cost Planning (CO-PC-PCP), the characteristics function of the Classification system (CA-CL), and the template function from Activity-Based Costing (CO-OM-ABC).

To use Easy Cost Planning, it is required that you complete the following:

- Define Costing Variants
- Check Cost Component Structure
- Define Plan Overhead Rates
- Maintain Planning Profiles for Overall Planning
- Define Formula Element (for aggregated items)
- Define Pricing Key (for aggregated items)

For Easy Cost Planning of internal orders, you may follow either of the following menu paths:

- *Accounting > Controlling > Internal orders >Master data > Order Manager in the "Create order" mode*
- *Accounting> Controlling> Internal orders > Master data > Special functions > Order > Create*

Choose *Extras > Costing > Create*. A dialog box with two tab strips appears. You can now create a costing in several ways.

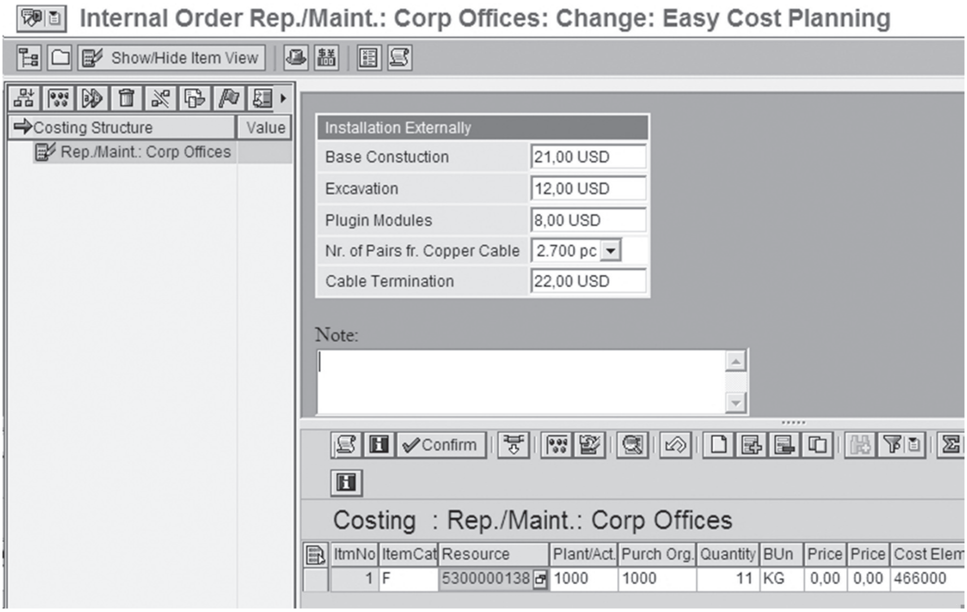


FIGURE 4.9 Easy Cost Planning

- Choose a "Planning Form" (nothing but the costing model) from Easy Cost Planning. Choose "Create cost estimate" to go to Easy Cost Planning.
- From there you can use "Choose planning form" and input the required details in planning details (upper right portion), then choose "Confirm."
- The results are displayed in the "Costing structure" (left-hand side dialog portion) for every node, broken down into costing items.
- The costing items are displayed in a non-hierarchical list in the item view (right-hand side bottom). This essentially corresponds to the display of the itemization. This means the respective costing items for the selected costing node are displayed. The standard SAP system provides a variety of itemization layouts.

When creating costing for internal orders using Easy Cost Planning, note that:

- You can only plan in plan version 0.
- Unit cost planning is no longer possible in overall planning.
- Plan-integrated objects are not supported.

18. WHAT IS "EXECUTION SERVICE?"

Execution Service is a process triggered by cost planning with the Easy Cost Planning function. Once you have planned the costs, you can trigger the following processes on the basis of the costing data (for internal orders, WBS elements, and internal service requests):

- Goods issues
- Internal activity allocations with and without workflow
- Purchase orders
- Purchase requisitions
- Reservations

The following configuration steps should have been completed to make use of the execution services:

- Define Execution Services Profile
- Define Settings for Execution Services
- Define Names for Execution Services
- Workflow for Internal Activity Allocation
    - Define Agent Assignment to Standard Tasks
    - Define Agent Assignment to Standard Role

19. EXPLAIN "MANUAL ACTUAL POSTINGS IN INTERNAL ORDERS."

The **manual actual postings** are the daily transaction-based postings of primary and secondary costs, resulting in totals records and line items. To be able to post actual costs on an internal order, it must be allowed by the relevant business transaction.

The manual actual postings consist of:

- *FI postings*: it is possible to assign postings of primary costs (including goods movements, if you are not using the MM component) directly to an internal order within FI.
- *Goods Movements in MM*: You can make the following *statistical* postings to internal orders:
    - Purchase requisitions

- Purchase orders (When you create a purchase order that is statistically posted to an internal order, a commitment is created on the order. The commitment is converted to actual costs when the goods are received).
- Goods receipts
- Reservations
- Goods issues (A goods issue that refers to a material reservation in which an internal order number is stored, automatically leads to the posting of actual costs on the internal order)

20. EXPLAIN "ARCHIVING OF INTERNAL ORDERS."

Use the CO_ORDER archiving object to archive internal orders and to delete all master and transaction data that fulfill specified conditions. The following selection criteria "Controlling Area / Order type / Order number" apply to the CO_ORDER archiving object. An order can only be archived if:

- It meets the selection criteria.
- It has one of the following order categories:
  - 01 Internal order (CO)
  - 02 Accrual order (CO)
  - 03 Model order (CO)
  - 04 CO Production order
  - 05 Production cost collectors, repetitive manufacturing
  - 06 QM orders
- Its deletion indicator is set.
- Its residence time 2 is expired.

CHAPTER 5

ACTIVITY BASED COSTING (CO-OM-ABC)

1. EXPLAIN "ACTIVITY-BASED COSTING (ABC)."

The traditional location-oriented view is provided by Cost Center Accounting, while the **Activity-Based Costing (ABC)** provides a process-oriented, cross-functional view of overhead and complements and enhances Cost Center Accounting. It provides assigning overhead costs to products, customers, and other objects in a way that is more correlated to cost drivers than traditional overhead allocation methods. ABC allocates process quantities based on resource and process drivers, enabling you to define cost allocation along the value-added chain more exactly than is possible with overhead rates. It also complements and enhances product costing (CO-PC) by assigning costs to the business processes where they originated. By integrating Activity-Based Costing into profitability analysis, you can create more realistic views of your revenue position.

ABC is expected to answer:

- What are the consequences of changing the distribution channel from direct sales to the retail sector?
- What effect will an increase of the production numbers have on the outgoing structure of the enterprise?
- Which cost-saving potential is is possible on the basis of changed production processes?

Hence the primary goal is not simply to lower costs in individual departments, but to optimize entire process chains; other goals include shortening lead times and improving quality.

2. OUTLINE THE "GOALS" OF ACTIVITY-BASED COSTING (ABC)

The following are the goals of ABC:

- Transparent overhead costing
    - Resource consumption through processes
    - Parallel quantity and value flow
- Increased efficiency
    - Resource leverage in overhead areas
    - Continuous efficiency control of internal processes
    - Interface management through process-oriented thinking
- Fair cost calculation
    - Source appropriate cost allocation of internal activities
    - Cost of complexity
    - Cost of product and process change
- Strategic decision making through better information
    - Reduce overhead cost through process optimization
    - Increase profitability through identification of non-profitable products and customers

3. WHAT IS THE BEST WAY OF USING ABC?

From Release 4.0 onwards:

- You can use the ABC component in parallel with your existing traditional cost accounting system, or
- You can use it as an operational component integrated with product costing (CO-PC) and profitability analysis (CO-PA)

4. ENUMERATE THE BENEFITS OF USING ABC

The **benefits** of using ABC include:

- Improves Product Costing and contributes to strategic decisions

- Multidimensional analysis capability
- Permanent monitoring of business processes analysis
- Quantity flow with minimized input effort through automatic use of existing cost driver information
- Transparency of overhead costs is improved

5. EXPLAIN THE VARIOUS OPTIONS IN "ACTIVATING ABC"

When you configure the "Activate Components" for a Controlling Area, you have the following four options for ABC:

- *Component not active*: ABC is inactive. Validation of business processes does not take place. They cannot be used as account assignment objects.
- *Component active for Parallel Calculation*: ABC is active, but may be used only as a parallel calculation. All allocations are not posted as "real" debit/credits, but as statistical postings along the lines of the delta version for ABC.
- *Component active for Parallel and Integrated Calculation*: ABC is fully activated, without any limitations. Business processes are validated using the business process master record and used as account assignment objects. During allocations, the participating objects are debited and credited as "real" and updated with the corresponding posting transactions. It is still possible to use allocations based on the concepts of the Activity-Based Costing Delta Version.

6. EXPLAIN THE APPROACHES IN ABC.

In ABC, the resources consumed by business processes are assigned according to the true origins of the costs. The characteristic unit of measure for this assignment is known as the *resource driver*. Next, these business processes are assigned to the assorted receiver objects (like products, customers, sales channels, and other types of profitability segment) based on their actual utilization of resources. The assignment of business processes takes place via *process drivers*, representing reasonable measurements of business process consumption.

The two different approaches used in ABC are:

- Push approach (Pure cost distribution)
- Pull approach (Quantity tracing)

You need to be careful in deciding which approach to follow as it will have far-reaching consequences for the use of ABC as a management tool.

7. WHAT IS A "BUSINESS PROCESS" IN ABC?

A **business process** in a company is one that uses resources and can involve the activities of different departments. It can consume the output of multiple Cost Centers in a Controlling Area. Generally, multiple Cost Centers participate in the execution of a business process. The business process demands various resources. These are made available from the Activity Types of Cost Centers or included in the process through a simple assessment method. Use a *template* to assign other business processes and Cost Center activities to a business process.

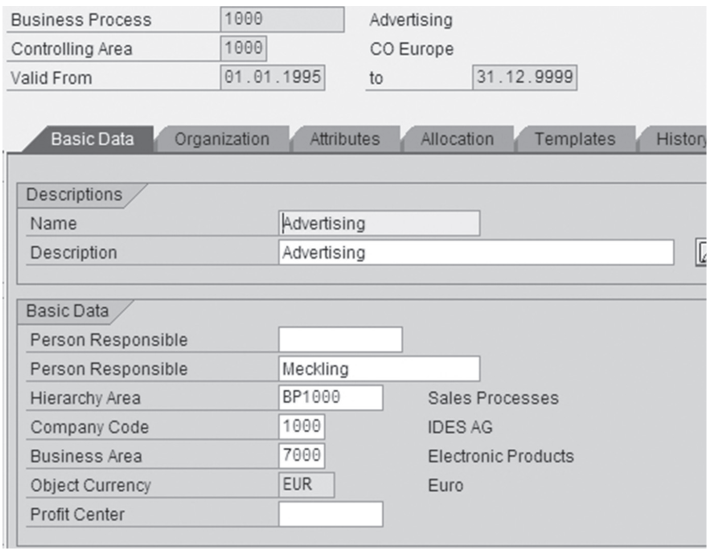


FIGURE 5.1 Business Process

Transaction Code
CP01 (Individual processing, create)
CP12 (Collective processing, Change)

As in the case of Cost Centers, Activity Types, etc., you can group the business processes into *business process groups*, which will form the sub-nodes in a standard hierarchy. A business process group can contain business processes or business process groups. Though a business process can be assigned to any number of alternative groups (not forming a part of the standard hierarchy), it can be assigned to only one standard hierarchy group.

Transaction Code
CPH1

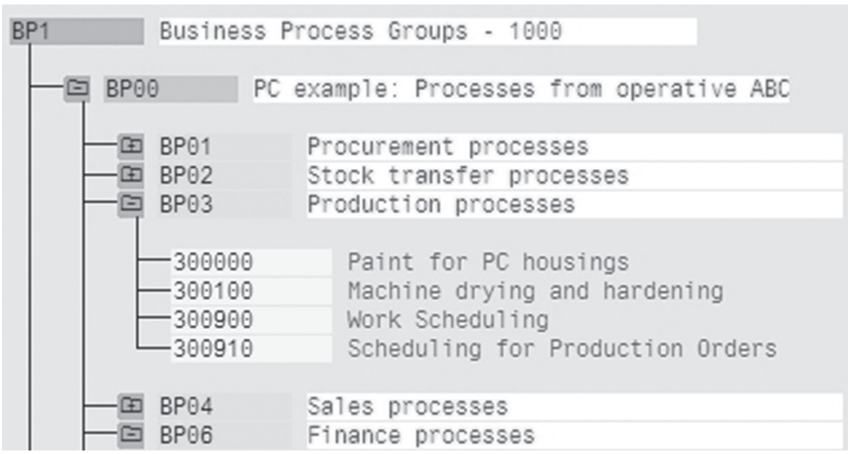


FIGURE 5.2 Business Process Groups

8. WHAT IS A "TEMPLATE" IN ABC?

The **template** is a dynamic tool, which uses functions, formulas and Boolean logic (true/false) to calculate values. It consists of a grid of columns and rows. It is used in overhead allocations, and planning of business processes, Cost Center/Activity Types, or Profit Centers.

Special *environments* exist for each template application. Select an environment before you create a template. The environment determines which row and column types are available.

```
CO Area                1000
Template               T-SOPPROD1 Painting and Drying
Program                I@8001000SOPT-SOPPROD1
  Item 1 : Painting
    Type
      Business Process
    Object
      ( SenderProcess
        = '000000300000'
      )
    Plan quantity
      CalculationRowResult( CalculationRowName = 'COLOR_COATS',
                            Column = '5' )
    Plan activation
      [SAP       103K_ABC_GET_MATERIAL_FEATURE_VAL]( [FEATURE] = 'T-COLOR' ,
      [KLART] = '001' , [MATNR] =
      [SAP       SOPSAUF_MATNR                    ] ) <> '01' )
    Unit
      ST
```

FIGURE 5.3 Template: An Example

9. WHAT IS AN "ENVIRONMENT" AND "SUB-ENVIRONMENT" IN THE CONTEXT OF "TEMPLATE?"

An **environment** is a group of functions. A template is always created for one particular environment and can then access all functions that belong to that environment and its *sub-environments*. For the most part, the environment provides only those functions and information necessary for the template in its corresponding context.

Transaction Code
CPT1

The **sub-environments** are groups of functions that are assigned to the environment. They are organised on the basis on content. A sub-environment can be assigned to many different environments. If you create a function in a sub-environment, it is automatically available in all environments which contain the sub-environment. A template, however, can only be created in an environment.

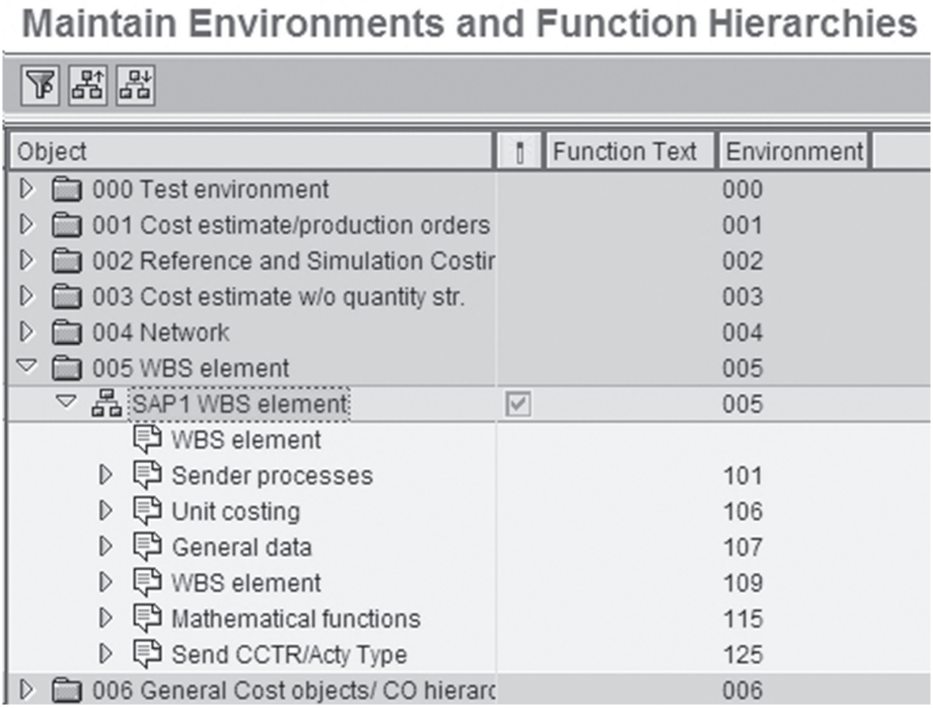


FIGURE 5.4 Template Environments

The environments included in the SAP System are tabulated in Table 5.1.

TABLE 5.1 Template Environments

Environment	Usage
001–012	Template Allocation to cost objects or use of cost objects and materials in the plan calculation
200–299	Easy Cost Planning/ Internal service orders
CPD, CPI, BPP, PCA	Formula planning
PAC	Template-Allocation for Profitability Segment
SDP, SCI. SCD	Template allocation to business process, Cost Center or Cost Center/activity type
SOP	Determining output quantities

10. ELABORATE THE "PUSH APPROACH" IN ABC

The **push approach**, also known as "Traditional ABC," involves assessment and distribution in planning and period-end closing. This pure cost distribution method makes it possible, through the appropriate selection of resource and process drivers, to assign overhead costs to their originating receiver objects (products and customers). Remember, this is solely an assignment of all occurring costs (that does not take the true activity quantities consumed into account) which cannot answer questions dealing with the productivity of overhead processes, or with the costs of idle resource capacity.

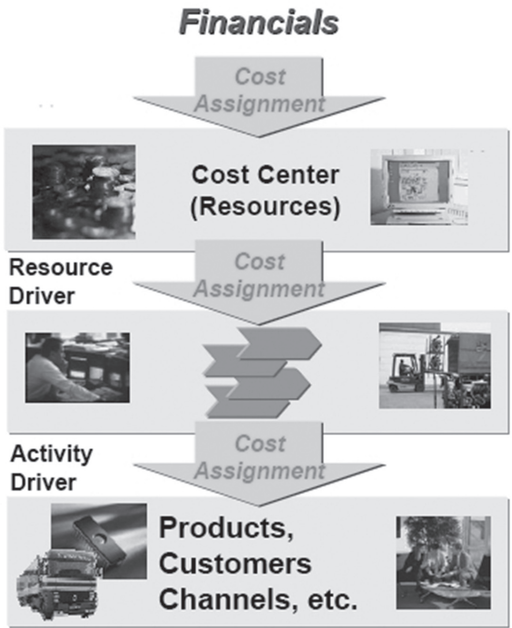


FIGURE 5.5 Push Approach of ABC (Image © SAP)

The assessment and distribution are available for the assignment of Cost Center resources to business processes. The tracing factor in an assessment cycle or distribution cycle is in both cases the *resource driver* (the resource driver can appear as a SKF which can be taken, for example, from the Logistics Information System (LIS) by creating a connection between the *LIS key figure* relevant to the resource driver and the SKF of the business process). You can also assign resources to business processes using fixed percentages. The costs appearing on business processes due to this method are always treated as fixed costs.

To assign business processes to receiver objects, the SAP system offers assessment because in Activity-Based Costing (ABC) the question of the source of consumption costs on the receiver remains paramount. The *process driver* appears as a tracing factor in the assessment cycle, just like the *resource driver*. The LIS can also serve as a source of relevant process driver information, as it does for resource drivers. If you define a process assessment directly to the profitability segments in CO-PA, the value fields in the operating concern serve as the sole tracing factors. However, in order to create a causal relationship between profitability segment and process consumption, you can transfer the process driver information from the LIS to the corresponding value fields. The process costs posted on the receiver object via assessment are always treated as fixed costs.

11. EXPLAIN THE "PULL APPROACH" IN ABC

The **pull approach** (quantity consumption method), also known as advanced ABC, makes it possible to examine an activity quantity or process quantity flow throughout the entire *value added chain* of an organization, as long as the user selects the appropriate *resource and process drivers* and makes appropriate assignments of overhead costs to their originating receiver objects (such as products and customers).

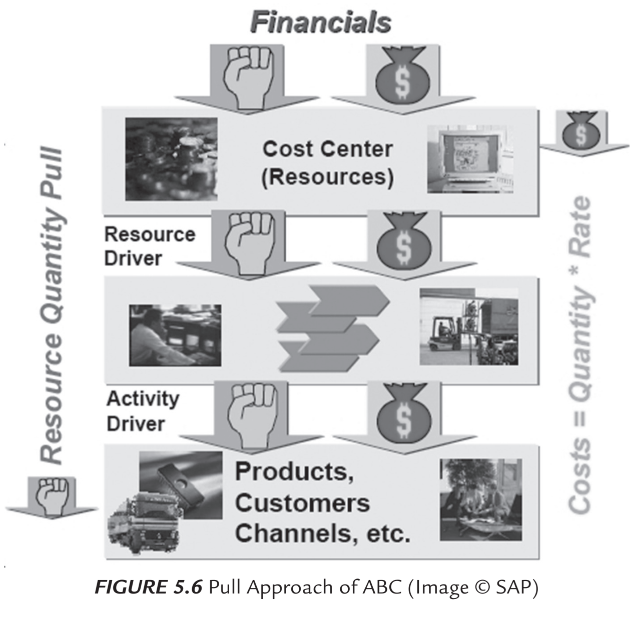


FIGURE 5.6 Pull Approach of ABC (Image © SAP)

The advantage of this approach is the use of only those quantities actually consumed by the receiver objects: thus answering questions dealing with the productivity of overhead processes, or with the costs of idle resource capacity, through variance analysis.

The following are the methods used in pull approach:

- Direct activity allocation
- Indirect activity allocation in plan and actual
- Target=actual allocation
- Template Allocation in Processes/Cost Centers in Plan and in Actual

The primary difference between quantity consumption ("Pull") and pure cost distribution ("Push") methods is that the former is based on allocation of activity and business process quantities (using a cost element specific to that activity type or business process), which are valuated using prices in a second step. By using the inverse methods, the quantity consumption (Pull) approach allows you to transfer plan sales quantities automatically, for the most part, to the required activity quantities to be provided by the Cost Center resources. You can carry out realistic primary cost planning on the Cost Centers on the basis of this plan quantity structure. Additionally, you can identify idle capacity or under-capacity of Cost Center resources early enough to take steps to redistribute these overhead resources, if necessary.

12. COMPARE THE "PULL" AND "PUSH" APPROACHES OF ABC

Table 5.2 compares the two approaches of ABC.

TABLE 5.2 "Pull" and "Push" ABC – A Comparison

Parameter	Push Approach	Pull Approach
Also known as Implementation	Traditional ABC • Easy and straightforward	Advanced ABC • Requires more details and knowledge of standards and cost behavior • Quantity Structure • Back-flushing capability • Identify idle capacities • Leverage resources in an early stage (planning)

Parameter	Push Approach	Pull Approach
Process Optimization / Flexible Budgeting	• No Quantity Structure • No back-flushing capability • No capacity view (Requires dummy processes for idle capacity) • No leveraging of resources	• Prices calculated based on practical capacity
Fair Costing	• Costs not assigned according to actual usage of resource • Costs of idle capacity burden products and customer	• Costs of idle capacity not assigned to products or customers but where it makes sense

13. WHAT ARE ALL THE POSSIBLE "ORIGINS OF DRIVER QUANTITIES?"

Table 5.3 lists some of the possible **origins of driver quantities**.

TABLE 5.3 Driver Quantity - Origin

Origin	Driver Quantity
BOM	Number of BOM items
External Systems	Measurement Data
LIS	Number of Purchase Orders
Material Master	Weight
Product Costing	Lot size
Routing	Number of Work Centers

14. EXPLAIN "DIRECT ACTIVITY ALLOCATION" IN THE PULL APPROACH.

In **direct activity allocation**, the resource driver is represented by an activity type illustrating the activity produced by a Cost Center resource (say: employee hours, kilowatt-hours, etc.). Though it is the most exact method, this is the most time-consuming method because of the necessity to enter the exact quantities of activities and processes consumed, calling for manual confirmation of quantities on both the sender and the receiver sides. The costs appearing on the business process via direct activity allocation can be fixed or of variable portions.

15. OUTLINE "INDIRECT ACTIVITY ALLOCATION" IN THE QUANTITY CONSUMPTION METHOD.

In **indirect activity allocation**, the resource driver is represented by the tracing factor of the corresponding cycle, similar to the pure cost distribution approach. The essential difference is that the resource driver is not used for cost distribution, but as the basis for allocations of activity or process quantities.

The indirect activity allocation appears in two variations:

- In manual indirect allocation, you assign the known activity quantities on the Cost Center to the business processes in relation to the resource drivers (tracing factors).
- In inverse indirect allocation, you multiply the resource drivers (such as the number of orders) by a standard quantity (such as two minutes per order). This thereby determines the activity quantity of a given resource consumed by a business process.

If you use a SKF as a resource driver, this results in purely fixed costs on the business process. If, on the other hand, the process output serves as the resource driver, this results in purely variable costs instead.

16. EXPLAIN "TARGET=ACTUAL ALLOCATION" IN THE QUANTITY CONSUMPTION METHOD.

The **target=actual allocation** method is also an inverse approach for determining resource consumption, but it is used for determining actual quantities only. The SAP system uses individually-posted actual quantities for business processes and the corresponding plan quantities in order to calculate an operating rate. For resource activity inputs which are difficult or impossible to measure, target=actual allocation multiplies the plan quantities by the operating rate in order to calculate target quantities. Assuming that the individual business process flows can be standardized for the most part, and that the plan activity quantities show a realistic picture of the true resource consumption, these target quantities can then be defined as equal to the actual quantities.

17. WHY DOES THE "TEMPLATE ALLOCATION" OF "PULL" APPROACH OFFER MORE FLEXIBILITY THAN OTHERS?

The **template allocation** (in processes or Cost Centers in plan and actual) offers the greatest flexibility for allocation of activity quantities in business processes via the corresponding resource drivers. By storing a template in the master data of a given business process, you create an explicit description of the business process structure. Similar to a routing for direct activities, the template describes the indirect activities that occur during each execution of a business process. It defines which Cost Center resources are consumed by the business process and in which quantities.

The great flexibility of this function is made possible by the ability to define methods for finding resource consumption data and for calculating quantities dynamically, enabling you to model complex resource drivers by means of functions and formulas. These templates also allow you to distinguish between variable and fixed activity quantities: the variable quantity factor represents a standard quantity for each business process execution, which when multiplied by the process output equals the variable activity quantity of the resource consumed by the process, while the fixed activity quantity consumption, on the other hand, is independent of the business process output and can be treated as a standby resource which is consumed by the business process even if the business process is never carried out. The cost input in this manner can be divided into fixed and variable portions.

The templates, in addition to the objects and functions mentioned above, can also include business processes themselves. You can thereby divide a primary business process into different sub-processes. These sub-processes, in turn, can be subdivided further by a template, making it possible for you to display a multi-step process hierarchy. You can use the SAP system to determine dynamically the sub-processes relevant to the primary business process. You can also structure the process drivers of the sub-processes easily with the aid of formulas and functions. As with resource consumption, the consumption of sub-processes can be broken down into fixed and variable quantities.

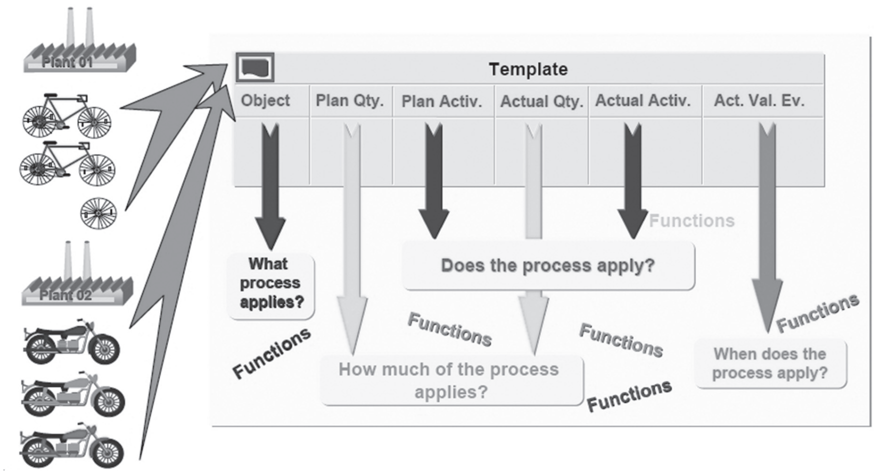


FIGURE 5.7 Functions and Processes in Template (Image © SAP)

18. HOW / WHEN DO YOU USE THE "TEMPLATE FOR JOB COSTING / PRODUCTION PLANNING?"

- Define unit-related activities, such as labor time and machine time, in the routing/recipe.
  - Planned times are used to schedule the order.
  - Actual times are tracked during order confirmation.
- Define batch-related activities, such as setting up a machine, handling the order or purchasing non-stock materials for the order, and so on, in the template.
  - Set a quantity of one in the template for machine setup and order handling.
  - Use a template function to count the number of non-stock items per order.
- Define product-related activities, such as purchasing, maintenance, quality control, disposal, and so on, in the template.
  - Use the function "*quantity of goods manufactured*" to calculate quality control usage based on the quantity to be checked.
  - Use the function "scrap quantity" to calculate waste disposal usage based on the quantity to be disposed.

- Define any remaining overhead as a percentage mark-up in the costing sheet; note that it is rarely practical to completely eliminate percentage overhead.

19. HOW / WHEN DO YOU USE THE "TEMPLATE FOR CO-PA?"

- Use template to describe activities relating to specific market segments.
  - Activity drivers (e.g. number of customer orders) can be tracked as value fields in CO-PA.
  - Template assignment is used to calculate the costs for those activities.
- Assign product-related activities by:
  - Product (e.g. product support, product development)
  - Product Line (e.g. advertising)
  - Brand (e.g. advertising)
- Assign customer-related activities by:
  - Customer Order (e.g. configuration, quotation)
  - Customer (e.g. customer support)
  - Channel (e.g. marketing)
- Use the CO-PA architecture to:
  - Assign costs to an intersection (e.g. the costs of handling an inquiry from Customer X about Product Y).
  - Ensure that costs appear in the appropriate level (e.g. product profitability report may handle product manufacturing costs and product development costs differently).

20. WHAT IS KNOWN AS "PARALLEL ABC?"

The **parallel ABC** can provide strategic information for managerial decisions. It allows you to define as many *delta versions* as desired so as to carry out alternative ("what-if") calculations. The parallel ABC acts as an addition to integrated cost accounting, with the integrated cost accounting system remaining unaffected. Note that you need to activate parallel ABC for each of the Controlling Areas if you have more than one.

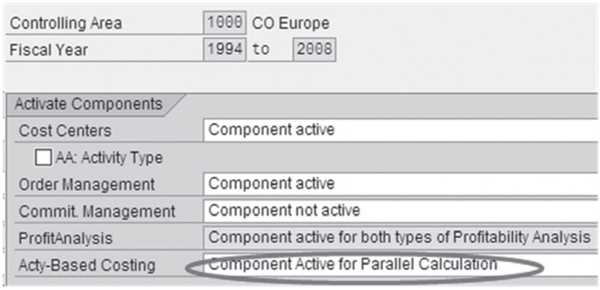


FIGURE 5.8 Activating Parallel ABC

Transaction Code
OKKP

When activated, it means that:

- ABC is active for parallel cost accounting only.
- None of the allocations are posted as true debits or credits (the allocations appear as statistical postings in the delta versions).

The *delta version* is a statistical version that you can use to create independent allocation scenarios. In order to use existing data, a delta version is based on a reference version. The reference version provides primary cost posting data and selected allocations that you can change in the delta version. You can use the delta version concept in both plan and actual. You may create as many delta versions as you feel necessary.

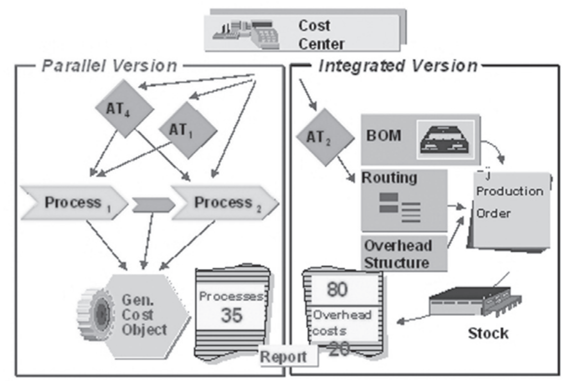


FIGURE 5.9 Parallel ABC (Image © SAP)

21. WHAT IS KNOWN AS "INTEGRATED ABC?"

Integrated ABC fully integrates the CO-OM-ABC in the value flow of the CO, in particular the CO-PC and CO-PA, by posting costs and quantities as real values (not statistical), to the participating objects. To be effective and successful with integrated ABC, you may need to radically restructure your organization as well as your strategies towards managerial accounting.

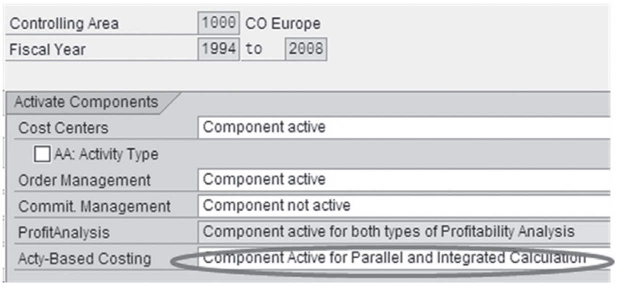


FIGURE 5.10 Activating Integrated ABC

As in the case of parallel ABC, you need to activate integrated ABC for all the Controlling Areas if you have more than one. When activated, it implies that:

- ABC is completely active (both the parallel and integrated options).
- Business processes act as real account assignment objects; you can post allocations as true debits and credits and update the allocation objects accordingly with the appropriate posting transactions.
- Allocations based on the delta version concept are still possible.

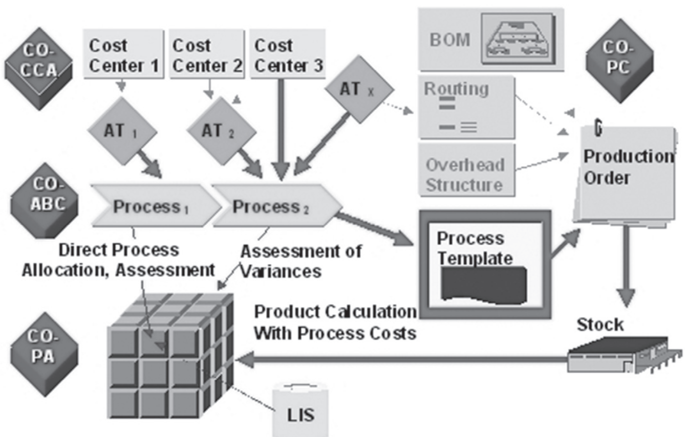


FIGURE 5.11 Integrated ABC (in Manufacturing Environment) (Image © SAP)

22. EXPLAIN THE "PLANNING AIDS" AVAILABLE FOR ABC

Integrated planning supports data transfers to ABC from other components like:

- Logistics Information System (LIS)
- Organization management
- Planning requirements from the Production Planning and Control component (PP)

If you enter and plan activities, key figures, or costs in one of the components feeding information to ABC, you do not need to repeat activity requirement and statistical key figure planning there.

23. OUTLINE THE "ABC INFORMATION SYSTEM."

In the **information system for ABC**, you can use reports to analyze cost and quantity flows. To evaluate the cost and quantity flows from business processes to cost objects, you can use the reports from the information system in the CO-PC. The assignments to profitability segments are documented in the profitability and market segment analyses (CO-PA).

In the *interactive information system* you can evaluate all business transactions directly on the screen: SAP offers a wide variety of standard reports that you can change or adjust to include other analysis functions. The advantages of the interactive information system include the real-time access to posted data and the corresponding analysis with the aid of totals, summarization, and creation of key figures.

The ABC reports are made up of eight sections:

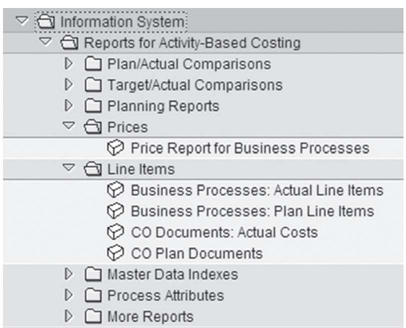


FIGURE 5.12 Information System for ABCs

CHAPTER 6

PRODUCT COST CONTROLLING (CO-PC)

1. WHAT IS "PRODUCT COST CONTROLLING?"

Product Cost Controlling (**CO-PC**) deals with estimating what it will cost to produce a product or service. CO-PC is divided into two major areas:

i. Cost of materials
ii. Cost of processing

With CO-PC, you will be able to calculate:

- Cost of goods manufactured (COGM)
- Cost of goods sold (COGS)

CO-PC is tightly integrated with *Production Planning* (PP) and *Materials Management* (MM), besides FI. The functionality helps to:

- Calculate Standard Costs of manufactured goods
- Calculate the Work-In-Progress (WIP)
- Calculate the Variances, at period-end
- Settlement of product costs

2. HOW HAS SAP ORGANIZED CO-PC?

Starting ERP 6.0, SAP has organized **Product Cost Controlling** (**CO-PC**) into the following four sections:

- **CO-PC-PCP**: Product Cost Planning
- **CO-PC-OBJ**: Cost Object Controlling
- **CO-PC-ACT**: Actual Costing / Material Ledger
- **CO-PC-IS**: Product Costing Controlling Information System

3. EXPLAIN THE PURPOSE OF PRODUCT COST PLANNING.

Product Cost Planning (CO-PC-PCP) is used to plan costs for materials without reference to orders, and set prices for materials and other cost accounting objects. You can use it to analyze the costs of a company's products (manufactured materials, services or other intangible goods).

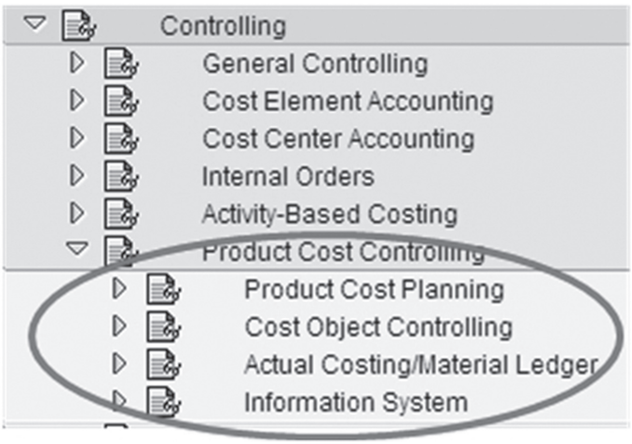


FIGURE 6.1 CO-PC: Components

You can use Product Cost Planning for:

- Calculating the non-order-related *cost of goods manufactured(COGM)* and *cost of goods sold (COGS)* for each product unit
- Cost Rollup (how the costs are broken down for each product, and to calculate the value added for each step of the production process)
- Optimizing the COGM through comparison costing
- Providing basic information for other SAP applications, such as (a) Cost Object Controlling, providing standards with which to assess production efficiency, (b) CO-PA prices that are updated in the material master record and profitability analysis, and (c) SD lower price limits.

4. WHAT ARE ALL THE ORGANIZATION STRUCTURES INVOLVED IN COSTING?

The following are the SAP organization structures involved in costing in CO-PC:

- Client
- Company Code
- Controlling Area
- Valuation Area
- Plant

5. HOW YOU CAN STRUCTURE THE ORGANIZATION ELEMENTS FOR COSTING?

In SAP, the costing is done at the Plant level (all the costing data are with reference to the Plant), and the materials are valuated at the *valuation area level*. Towards this you need to define the Plant as the valuation level; the system creates a valuation area with the same name as that of the Plant. You may follow the menu path *SAP Customizing Implementation Guide > Enterprise Structure > Definition > Logistics – General > Define valuation level* to set the valuation level.

Transaction Code
OX14

When set, it will look like the following:

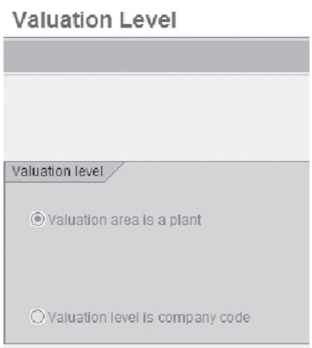


FIGURE 6.2 Setting Valuation Level

You may consider the following ways of structuring:

- A Company Code with multiple valuation areas
- A Company Code with a single valuation area

FIGURE 6.3 Organization Elements for Costing: Ways of Structuring

6. WHAT ARE THE COMPONENTS OF PRODUCT COST PLANNING?

Product Cost Planning (CO-PC-PCP) is made up of the various components outlined as in the following picture:

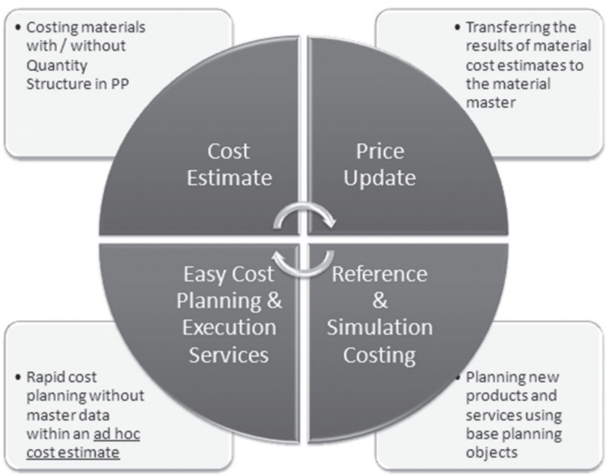


FIGURE 6.4 Components of CO-PC-PCP

7. WHAT IS "AUTOMATIC COSTING?"

Also known as "product costing," in **automatic costing** the system determines the *quantity structure* (BOMs and routings or master recipe) for the material and valuates it automatically using data from Production Planning (PP or PP-PI). These are all the cost estimates with the quantity structure.

8. WHAT IS "QUANTITY STRUCTURE?"

Quantity structure in SAP CO-PC, consisting of BOM and routing, is the basis for calculating costs in a material cost estimate. During *actual costing*, the SAP System creates the quantity structure based on the actual data. Note that a *master recipe* will be used in stead of BOM in process manufacturing. Similarly, you will be using a *rate routing* instead of the regular routing if you are in a repetitive manufacturing environment.

9. WHAT IS A "MASTER RECIPE?"

The **master recipe** (PP-PI), used for producing materials or supplying services, is a description of an enterprise-specific process in the process industry that does not relate to a specific order. You can create a master recipe either with reference to a material (the primary product) or to the process. It specifies the following:

- Which resources are required?
- Which operations are performed, and in what sequence?
- What are the phases the operations are divided into?
- Whether and how a phase is confirmed?
- Which material components are required to execute the phase?
- Whether a particular material component is included in costing?
- Which intra materials, valuable materials, and remaining materials are produced?
- Whether the costs for the valuable materials are calculated according to equivalence or by using the net realizable-value method?
- Whether a goods issue is posted when the last phase is confirmed?

The master recipe corresponds to the *routing* in order-related production.

10. WHAT IS A "BOM?"

The **bill of material (BOM)** lists all material components that are required to manufacture the product. It can contain materials that have their own BOMs. The BOM usage indicates whether the BOM is relevant to costing.

11. WHAT IS A "ROUTING?"

The **routing** contains standard values for the execution of the operation. The system calculates the planned costs for the internal activities in the operation by interpreting these standard values using the formula in the Work Center. In the routing, the base quantity (such as the piece quantity) is normally constant. The required times (such as the processing time for each operation) are maintained through the standard values. You can also use *rate routings* instead of routings.

The routing corresponds to *master recipe* (PP-PI) in process industry.

12. WHAT IS "RATE ROUTING?"

The **rate routing** is routing used in repetitive manufacturing for planning production quantities or volumes. They are used for quantity-based planning. It is possible to define the production quantity and a fixed reference point for each operation in a rate routing and determine the production rate. The reference time is constant, while the production quantity is established separately for each article. You define one sequence of operations. You can use the production time and the associated units to specify a production rate for the operation. The production rate is calculated by dividing the production quantity by the production time.

13. WHAT IS A "WORK CENTER?"

A **Work Center** is an organizational unit at which an operation is performed. It can be a machine, a person, a production line, or a group of workers. The work center is assigned to a Plant. The master record of each work center specifies a Cost Center or business process. The Cost Center or business process is assigned to a Controlling Area. The Work Centers assigned to a Cost Center or business process can be in different Plants. The Plant is assigned to a single Company Code, which is in turn assigned to a Controlling Area.

In Cost Center planning, the activities performed at the Work Center are planned using Activity Types. This means that the activities performed at the Work Centers have corresponding Activity Types in Cost Center Accounting. The system calculates the amount of activity required using the formula in the Work Center and the standard values in the operation. The planned costs for the operation are calculated by valuating the Activity Types with the prices established in Cost Center Accounting. The process quantities that will be used by the Work Center are planned in Activity-Based Costing (ABC). The system calculates the process quantities using the template. To establish the planned cost of the business process, the process quantities are valuated with the prices of the business processes.

The Work center corresponds to a *resource* (PP-PI) in process industry.

14. WHAT IS A "PRODUCTION LINE?"

In repetitive manufacturing you can use a **Production Line** instead of a Work Center. The Production Line must be defined as a work center in Production Planning. It provides information on the quantity that can be produced in a given time period.

15. WHAT ARE KNOWN AS "RESOURCES?"

Resources include the means of production and persons involved in a production process. The resource is assigned to a Plant. The master record of each resource specifies a Cost Center. The Cost Center is assigned to a Controlling Area. A Cost Center can have resources from different Plants assigned to it. Each Plant is unique in a Company Code (and therefore also in a Controlling Area). In Cost Center planning, the activities required for the resource are planned using Activity Types. SAP uses both "primary" and "secondary" resources (Table 6.1).

TABLE 6.1 Primary and Secondary Resources

	Primary Resources	**Secondary Resources**
Definition	The primary resource is that part of the installation or processing unit at which an operation is carried out. All phases automatically contain the same primary resource as the operation.	An operation or phase can also have additional resources assigned to it. These resources are called secondary resources.
Example	Heating for a reaction chamber	Personnel costs

16. WHAT DO YOU MEAN BY "UNIT COSTING" IN CO-PC?

In **unit costing**, you enter the costing items manually. For this purpose, you can access existing SAP system data such as materials, business processes, Cost Centers, and Activity Types. It is like a spreadsheet that uses these data in the system to create totals, subtotals, and formulas for mathematical operations. This is a universal tool for planning costs and setting prices. This cost estimate calculates the costs for the materials and base planning objects without accessing BOMs and routings in PP.

You can use it to plan costs for various reference objects:

- Additive costs for a material cost estimate with quantity structure
- Base planning objects
- General cost objects
- General costs activities
- Internal orders
- Materials (material cost estimate without quantity structure)
- Network components
- Primary cost elements
- Production orders without quantity structure
- Projects (WBS)
- Sales order items

17. EXPLAIN "MULTILEVEL UNIT COSTING."

Multilevel unit costing calculates the costs for (a) materials (material cost estimate without quantity structure) and (b) base planning objects without accessing BOMs and routings in PP. In this costing method, you enter the costing items manually. The system uses a highly flexible screen layout for the editing of material cost estimates (without quantity structure) and base planning objects.

18. WHAT IS A "BASE PLANNING OBJECT?"

A **base planning object** is a reference object in unit costing, used as a component in another cost estimate. It is possible to copy a base planning object when planning other objects in CO, such as for material cost estimates without quantity structure, CO-production orders, and WBS elements. You can use base planning objects (a) at the beginning of the planning phase, (b) at the draft stage of planning new Products & Services, (c) when there is no master data (material master, BOM, routing, master recipe) in the system, and (d) when it is required to change existing material cost estimates.

19. EXPLAIN THE BASIC SETTINGS FOR "MATERIAL COSTING."

The basic settings for material costing include:

1. *Define origin groups*: Specify how materials that are assigned to the same cost element are controlled separately for the purposes of overhead allocation. This is required to apply overhead to direct costs by cost element and origin (rather than only by cost element).

Transaction Code
OKZ1

2. *Overhead:* Create *overhead groups* for each *valuation area* and assign these groups to *overhead keys*. By entering an overhead group in the material master record of the product being manufactured and specifying the overhead key in the costing sheet, you can differentiate overhead rates according to the materials to which overhead is to be allocated.

   In conjunction with the overhead group, the overhead key controls the allocation of overhead in dependency on the material being produced. The overhead key is specified in the costing sheet. The overhead group is specified in the costing view of the material master record. The overhead group and the overhead key are assigned to each other in Customizing for Product Cost Planning.

Transaction Code
OKZ2

Valuation Area	Ovrhd Grp	Overhead Key	Name of Overhead Group
0001	SAP1	SAP1	Overhead Group 1
0001	SAP2	SAP2	Overhead Group 2

FIGURE 6.5 Overhead Group / Overhead Key

3. *Process costs:* Use ABC (Activity-Based Costing) to allocate overhead as an alternative to the conventional method.
4. *Define cost components:* Define the cost component structure and the cost components

Define Costing Sheets	SIMG_CFMENUORKKKZS2
Costing Sheet: Components	
Define Calculation Bases	SIMG_CFMENUORKKKZB2
Define Percentage Overhead Rates	SIMG_CFMENUORKKKZZ2
Define Quantity-Based Overhead Rates	SIMG_CFMENUORKKKZM2
Define Credits	SIMG_CFMENUORKKKZE2
Develop Enhancements for Overhead Calculation	SIMG_CFMENUORKKCMODZ

FIGURE 6.6 Define Costing Sheet / Components

5. *Check settings:* Check the Customizing settings by specifying a *costing variant.*

Transaction Code
CKC1

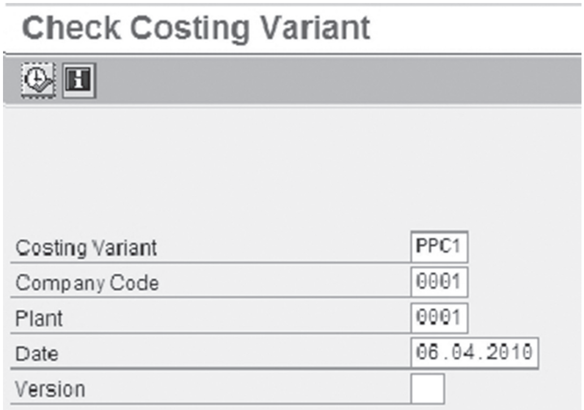


FIGURE 6.7 Check Settings

6. *Error management:* Customize the settings for message management.

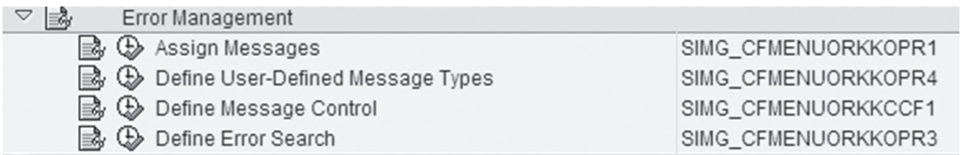


FIGURE 6.8 Error Management

20. WHAT "MASTER DATA" ARE REQUIRED FOR "COSTING?"

The costing with quantity structure requires the following master data (in other SAP applications):

- Material master records and purchasing info records (MM)
- Bill of material, routing and Work Centers (PP)
- Material recipes and resources (PP-PI)
- Cost Centers, Activity Types and business processes (CO)

21. EXPLAIN "MATERIAL COST ESTIMATE WITH QUANTITY STRUCTURE."

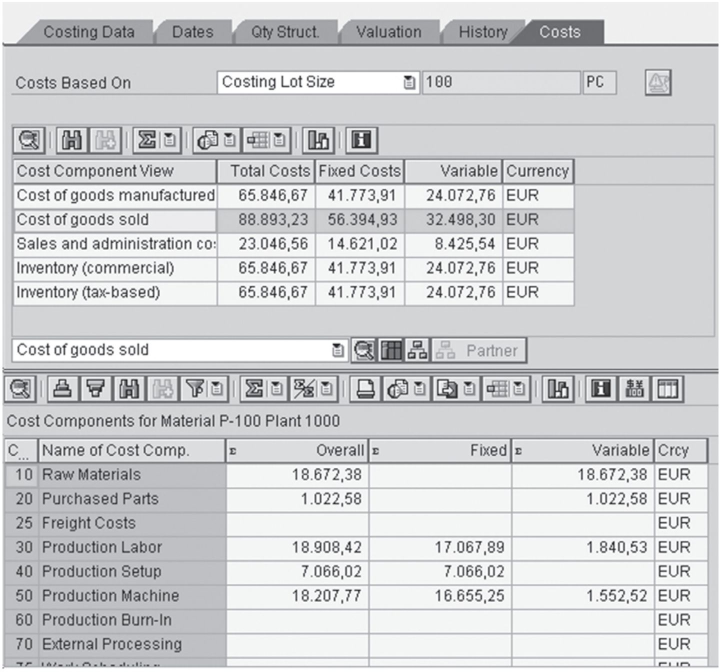
A **material cost estimate with quantity structure** uses the PP or PP-PI master data to determine the materials and internal activities required to manufacture the product. This cost estimate is created automatically and is a tool for planning costs and setting prices for materials without reference to orders. It is used to calculate the cost of goods manufactured (COGM) and cost of goods sold (COGS) for each product unit.

You can use the results of material cost estimates with a quantity structure to valuate materials at *standard prices*. Before a cost estimate with a quantity structure can be created, you need to have a bill of materials and routing (PP) or a master recipe (PP-PI) for the material being costed.

The *material costs* for a material are calculated using the BOM and the master records of the materials in the BOM. The *production costs* are calculated using the routing, the Work Centers where the respective operations are carried out, the Cost Centers, and the Activity Types. You can calculate overhead using the material costs and the production costs as a base.

22. EXPLAIN "MATERIAL COST ESTIMATE WITHOUT QUANTITY STRUCTURE."

Material costing without a quantity structure is a tool for planning costs and setting prices for materials without reference to quantity structure data in Production Planning (PP and PP-PI). It is intended for materials with insufficient or no quantity structure data. A material cost estimate without a quantity structure enables you to (a) plan costs for raw materials, internal activities, and external activities for a product in the form of a *unit cost estimate*, (b) assign production and material *overhead* to the product, (c) assign the calculated costs to the *cost components* and save them and (d) break down the costs of material consumption for semi-finished products into cost components. It can also be used to enter data from non-SAP systems.



Cost Component View	Total Costs	Fixed Costs	Variable	Currency
Cost of goods manufactured	65.846,67	41.773,91	24.072,76	EUR
Cost of goods sold	88.893,23	56.394,93	32.498,30	EUR
Sales and administration co:	23.046,56	14.621,02	8.425,54	EUR
Inventory (commercial)	65.846,67	41.773,91	24.072,76	EUR
Inventory (tax-based)	65.846,67	41.773,91	24.072,76	EUR

C...	Name of Cost Comp.	Overall	Fixed	Variable	Crcy
10	Raw Materials	18.672,38		18.672,38	EUR
20	Purchased Parts	1.022,58		1.022,58	EUR
25	Freight Costs				EUR
30	Production Labor	18.908,42	17.067,89	1.840,53	EUR
40	Production Setup	7.066,02	7.066,02		EUR
50	Production Machine	18.207,77	16.655,25	1.552,52	EUR
60	Production Burn-In				EUR
70	External Processing				EUR

FIGURE 6.9 Material Cost Estimate with Quantity Structure: Cost of Goods Sold View

If you want to cost a material when there is no quantity structure (BOMs and routings) in the system, you can create a *unit cost estimate* (cost estimate without quantity structure) and enter the costing items manually. You may create a spreadsheet, which can consist of materials, internal activities, external activities, services, processes, variable items, and overhead. The system determines the prices for the costing items entered.

23. OUTLINE THE VARIOUS COSTING TERMS USED IN CO-PC ON A TIMELINE.

The following illustration brings out the various costing terms like standard costs, planned costs, actual costs and targets and the associated cost estimates like standard cost estimate, modified standard cost estimate, preliminary costing, actual costing, simultaneous costing, and final costing.

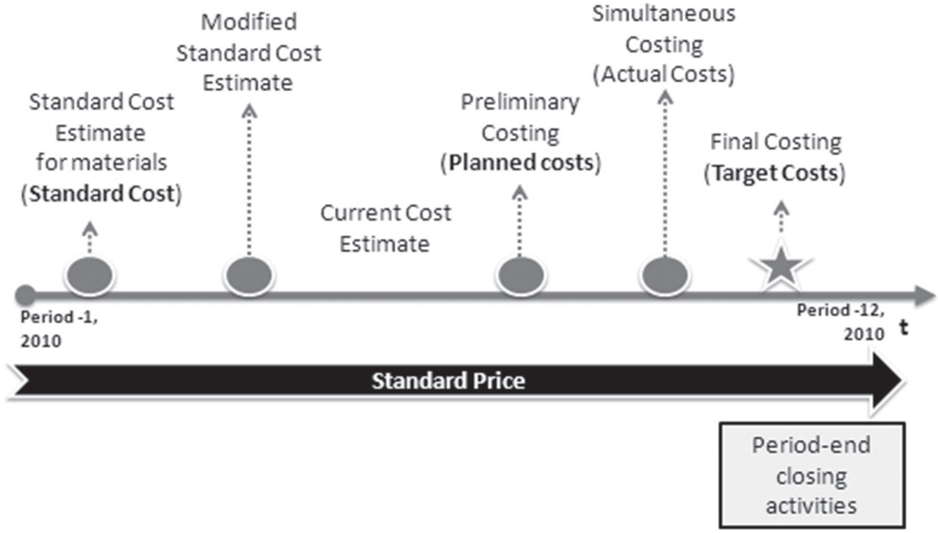


FIGURE 6.10 Costs / Cost Estimates on a Timeline in CO-PC

24. EXPLAIN "STANDARD COST."

The **standard cost** is one that is based on an activity unit and that *remains stable over a relatively long period of time*, say for a year. The standard cost estimate for a material is normally created at the beginning of each fiscal year. It is essentially a norm that should not be exceeded.

25. WHAT IS KNOWN AS THE "STANDARD PRICE?"

The total standard cost of a material can be written to the material master record as the **standard price** which is used to valuate the material during the year. This price is normally calculated using a standard cost estimate for the material. The standard price can also be calculated in a mixed cost estimate. The materials whose price control indicator is set to **S** are valuated in SAP Financial Accounting (FI) at standard price. This is recommended for semi-finished products and finished products.

26. EXPLAIN “MODIFIED STANDARD COSTS.”

The **modified standard costs** differs from the standard cost estimate in that it uses the quantity structure that has changed during the planning period as the basis for calculating costs. It is an alternative material cost estimate that calculates the cost of goods manufactured for a product during the course of a planning period.

27. DESCRIBE THE “CURRENT COST ESTIMATE”

The **current cost estimate** is used to calculate the cost of goods manufactured of a material in the course of the fiscal year, and to provide up-to-date information as to whether the current material costs are acceptable. It is possible to transfer the results of a current cost estimate as “other planned prices” to the material master. This cost estimate valuates the current quantity structure with the current valid prices. Like the modified standard cost estimate, the current cost estimate is an alternative material cost estimate that you can create in the application component Product Cost Planning.

28. WHAT ARE KNOWN AS “PLANNED COSTS?”

The **planned costs** are those costs that are anticipated for a particular undertaking (such as an order), and **preliminary costing** is the process that determines the planned costs for objects such as orders.

29. EXPLAIN “ACTUAL COSTS.”

The **actual costs** are the costs that were actually incurred, consisting of the total debits made to a cost object.

30. WHAT DO YOU UNDERSTAND BY “SIMULTANEOUS COSTING?”

The **simultaneous costing** is the process in which the actual costs incurred for a cost object are written to the cost object. This costing makes it possible to see and analyze the actual costs for a cost object at any time.

31. WHAT IS "FINAL COSTING?"

The **final costing** is performed during the period-end closing activities consisting of (a) allocation of period costs (template allocation, revaluation at actual prices, overhead calculation), (b) calculation of work in process and variances (target/actual comparisons), and (c) transfer of data to other application components (such as the work in process to Financial Accounting).

32. WHAT ARE "TARGET COSTS?"

The **target costs** are those costs that are expected to be incurred when a specific quantity is produced. These costs are calculated (in Cost Object Controlling), on the basis of the planned values of a service unit (such as the planned cost of a production order) and the control quantities (such as the yield delivered to stock). It is a type of planned cost that is converted to a reference figure such as the quantity produced (yield). This conversion can be performed at various points, such as when the variances are calculated. Target costs can be calculated on the basis of standard costs or planned costs. You may use the target costs can be used for (a) determining variances, (b) valuating the work-in-process (WIP), and (c) valuating unplanned scrap.

33. WHAT IS "PRICE UPDATE?"

Price update is a function that updates the cost calculated in a material cost estimate to the material's master record. Once you have carried out a cost estimate for a material, you can transfer the costing results to the material master as prices. You can update the results of the various material cost estimates, depending on the purpose of costing, in selected price fields in the material master.

34. WHAT ARE THE TYPES OF COST ESTIMATES IN CO-PC?

The Cost Estimates can be created at different times, and for different purposes:

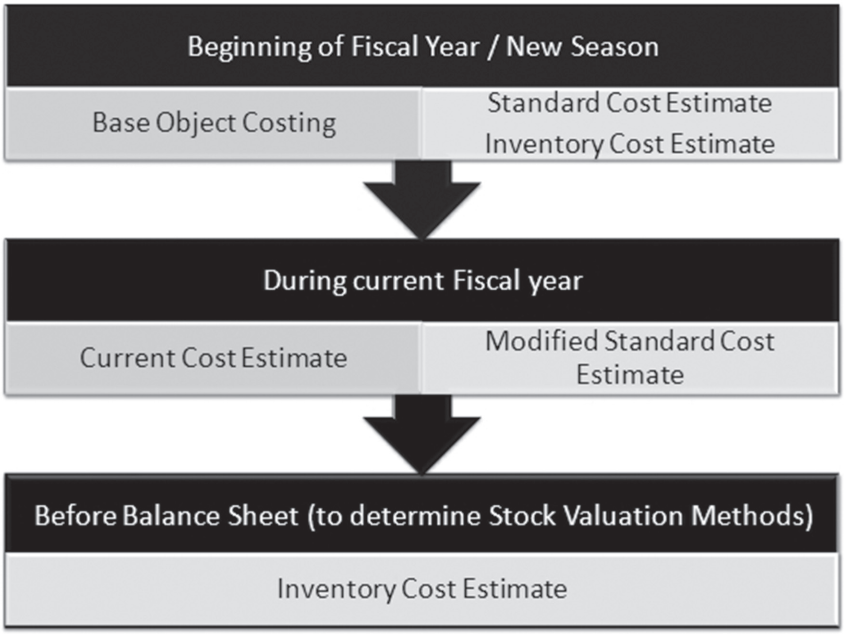


FIGURE 6.11 Cost Estimates According to Time and Purpose

35. WHAT IS A "STANDARD COST ESTIMATE?"

The **standard cost estimate**, forming the basis for profit planning or product costing where the focus is on determining the variances, is the most important type of cost estimate in material costing. This cost estimate must be executed with a *costing variant* that updates the material master, and the cost estimate must be released.

Typically, a standard cost estimate is used to calculate the standard price (with the price control "S") in the material master record, and is created for each product at the beginning of the fiscal year or new season and remains valid for the entire year or season. You should not change the standard cost estimate during this time: the standard costs then remain constant and are not influenced by price fluctuations or changes in the production structure during the planning period. Note that a standard cost estimate for a material is not associated with an order or production version, and you valuate the planned quantity structure of a standard cost estimate with standard prices.

36. WHAT IS A "MODIFIED STANDARD COST ESTIMATE?"

The **modified standard cost estimate** valuates the current quantity structure with the standard price, and is used to calculate the COGM of a material in the course of the fiscal year, and to ascertain changes to the standard cost estimate ("revised standard"). It is possible to transfer the results of a modified standard cost estimate to the material master as the planned price (Table 6.2).

TABLE 6.2 Features of Modified Standard Cost Estimate

Feature	Impact / Result
Create a modified standard cost estimate if the basic costing data have changed for technical reasons (for example, changes to the BOM) during the planning period.	In the modified standard cost estimate, the current quantity structure is valuated with the same prices as in the standard cost estimate.
Compare the results of the modified standard cost estimate with the results of the standard cost estimate in the information system.	Helps to see how changes in production affect the costs.
Use the modified standard cost estimate for short-term planning instead of the standard cost estimate.	The standard cost estimate remains the basis for cost-revenue control and for the calculation of total variances.
Transfer the results of the modified standard cost estimate into the material master record as the planned price (planned price 1, 2, and 3).	This planned price can also be used to valuate the material in the cost estimate.

37. EXPLAIN "INVENTORY COST ESTIMATE"

The **inventory cost estimate** is used to create valuation bases for the tax-based and commercial inventory valuation of products. The inventory cost estimate valuates the current quantity structure with the tax-based and commercial inventory prices. You can carry out inventory costing shortly before the balance sheet is prepared, in order to determine a valuation price for the materials for the tax balance sheet and the commercial balance sheet. You can transfer the results of the inventory cost estimate into the accounting view of the material master record as the commercial price or tax-based price.

38. WHAT IS A "COSTING VARIANT?"

The **costing variant** is a tool that contains all control parameters for costing, including parameters that control how cost estimates are executed and the material prices or activity prices that are used to valuate the costing items. You use costing variants to specify the purpose of costing and the quantities and prices used. The costing variant is the central control key with the settings that determine how costing is executed, such as which prices the system uses to cost materials, activities, and business processes. In essence, you are stating whether the cost estimate is a standard, modified standard, inventory, or current cost estimate. It is the link between the application and customizing, since all cost estimates are carried out and saved with reference to a costing variant.

Costing Variants

Costing Variant	Name
PPC1	Standard Cost Est. (Mat.)
PPC2	Mod. Std Cost Est. (Mat.)
PPC3	Current Cost Est. (Mat.)

FIGURE 6.12 Costing Variants

Transaction Code
OKKN

Each costing variant specifies a particular *valuation variant* and *costing type*. A costing variant for material cost estimates contains additional control parameters, such as for automatic determination of the quantity structure and for updating the prices in the material master.

39. ENUMERATE THE "CONTROL PARAMETERS" OF A COSTING VARIANT.

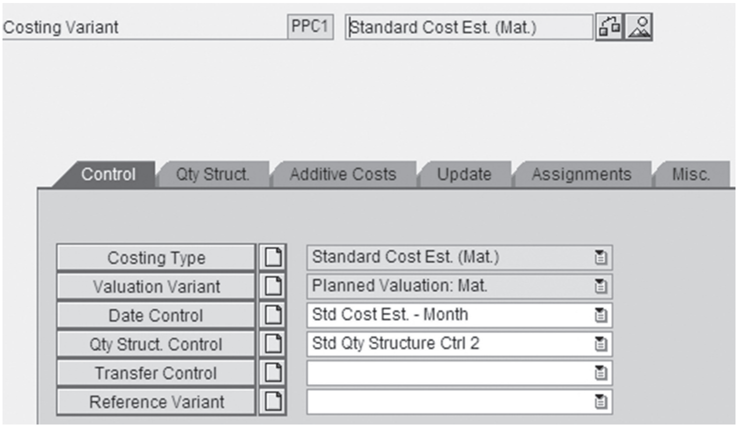


FIGURE 6.13 Control Parameters of Costing Variant

Also known as the components of a costing variant, the following are the **control parameters**:

• Costing type	• Reference variant (optional)
• Date control	• Transfer control (optional)
• Quantity structure control (only relevant for cost estimates with quantity structure)	• Valuation variant

40. WHAT IS A "COSTING TYPE?"

The costing type represents the technical attributes of the cost estimate. Here, you define the purpose of a material cost estimate by specifying, for example, which field in the material master record the costing results can be transferred to. The standard system comes with the several predefined costing types (Table 6.3).

Transaction Code
OKKI

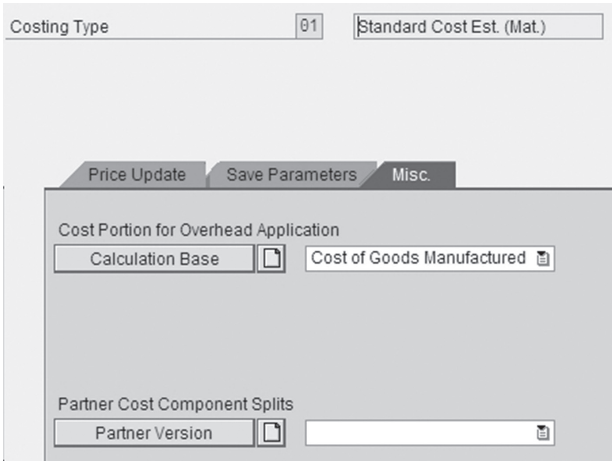


FIGURE 6.14 Costing Type: the Details

TABLE 6.3 Costing Types in the Standard System

Costing Type	Purpose
01	Standard cost estimate
10	Inventory cost estimate (tax-based)
11	Inventory cost estimate (commercial)
12	Modified standard cost estimate
13	Current cost estimate
19	Preliminary cost estimate for the product cost collector (repetitive manufacturing)

For each costing type you will maintain the (a) *price update* - specifying the "price update" (like no updated, standard price, tax-based price, commercial price, etc.) and "valuation view" (legal valuation, group valuation, or Profit Center valuation), (b) *"save" parameters* like with date, without date, or with start of period and (c) *"misc." settings* like calculation base (for determining the cost portion for overhead application) and partner version for partner cost component splits.

41. EXPLAIN "VALUATION VARIANT."

The valuation variant in CO-PC determines the prices that the SAP system selects to valuate the quantity structure of a material cost estimate or order, or to valuate the costing items of a unit cost estimate. It controls how the materials and activities in the cost estimate are valuated.

Transaction Code
OKK4

The valuation variant specifies the following parameters:

- The price in the material master (such as the standard price) or in the purchasing info record (such as the net order price) that is used to cost a material in the BOM.
- The planned or actual price that is used to valuate the internal activities.
- The version in Cost Center Accounting that is used to valuate internal activities.
- The costing sheet that is used to calculate overhead.
- Whether, and to what extent, a BOM item or an operation in the routing is relevant to costing.

Valuation Variant	Name
001	Planned Valuation: Mat.
002	Current Valuation: Mat.
003	Tax-Based Valuation
004	Commercial Valuation
005	MRP Valuation
006	Production Order: Planned
007	Production Order: Actual
008	Planned Valuation: Orders
009	Target Valuation: Mat.
010	Network: Planned
011	Network: Actual
012	Base Planning Object
013	Vltn - Primary Cost Elem

FIGURE 6.15 Standard Valuation Variants

A *global valuation variant* is valid for all Plants. A *local valuation variant* is valid only for a specific Plant. The valuation variants are defined in

CO-PC customizing activities. The different valuation strategies for materials, internal activities, external activities, and subcontracting are stored as *strategy sequences*.

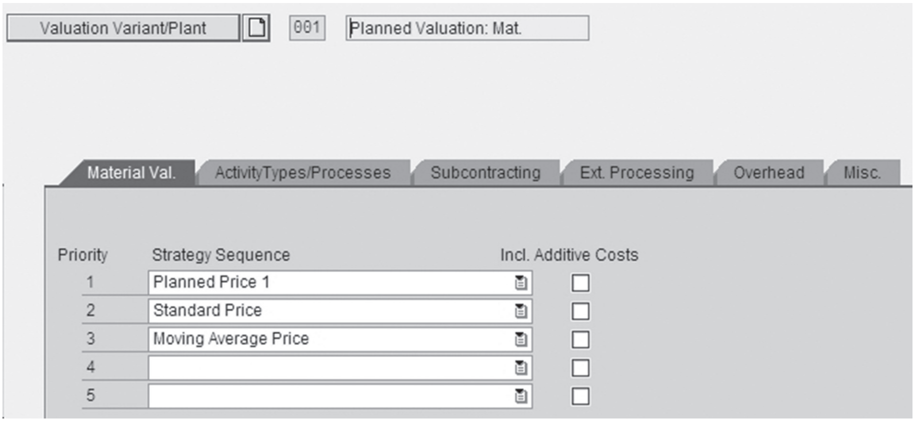


FIGURE 6.16 Valuation Variant: the Details

42. HOW IS THE "DATE CONTROL" USED IN A COSTING VARIANT?

The **date control** IDs control the dates on which the *quantity structure* and the *value structure* are created. It determines which dates are proposed or displayed when a cost estimate is created, and whether these dates can be changed by the user. The standard system contains predefined date control IDs. You can use these without making any changes:

Date control	Name
PC01	Std Cost Est. - Month
PC02	Std Cost Est. - Subseq.FY
PC03	Std Cost Est. - Period
PC04	Current Cost Est.- Dates
PC05	Mod. Std Cost Est. Dates
PC06	Std Cost Estimate - Old
PC07	Sales Order Cost Estimate
PS02	Easy Cost Planning (PS)

FIGURE 6.17 Date Control: IDs in the Standard System

If you want to calculate variances with reference to the cost estimate, make sure that the cost estimate is valid in the periods in which you will calculate the variances. If you intend to valuate scrap or work in process with the results of the standard cost estimate, you should make sure that the cost estimate is valid in the periods in which you will calculate variances or work in process.

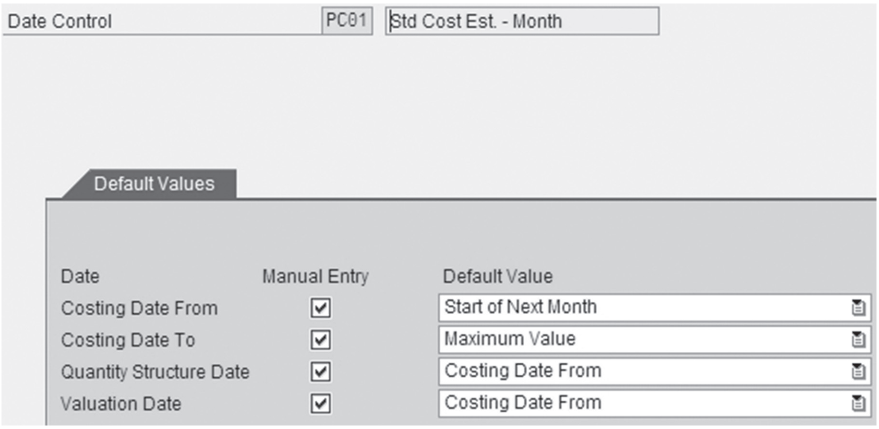


FIGURE 6.18 Date Control: the Details

Transaction Code
OKK6

43. EXPLAIN "QUANTITY STRUCTURE CONTROL" IN A COSTING VARIANT.

The **quantity structure determination** is used in *cost estimates with quantity structure* to specify for each Plant how the system searches for valid alternative BOMs and alternative routings to create a quantity structure for multilevel BOMs. Linked to the *order type* of each Plant, the determination also specifies whether the required quantity for BOM components with dimensional units of measure is rounded up to the next whole number if the calculation of scrap-adjusted quantities results in a fraction. To use the quantity structure determination in costing, it needs to be assigned to a costing variant.

Transaction Code
OKK5

In the standard SAP system, quantity structure determination ++++ is a fixed setting. It is used to check the entries for quantity structure in the costing view of the material master record for the material to be costed. When specifying a BOM application and selection ID for routing, you need to limit the selection of BOMs and routings to the parameters entered here. If you use quantity structure determination ++++, there are no limitations.

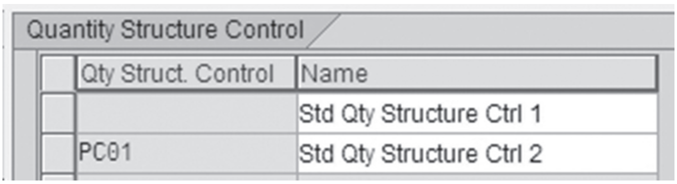


FIGURE 6.19 Quantity Structure Control

44. OUTLINE "TRANSFER CONTROL" IN A COSTING VARIANT.

The **transfer control** is used to control how the existing cost estimates are used in other cost estimates. You will specify a transfer control that establishes the *strategy sequence* for the search for costing data either for a single Plant transfer or cross-Plant transfer. You can define up to three strategies for single-Plant transfer and three strategies for cross-Plant transfer.

Transaction Code
OKKM

The standard system contains the following predefined transfer control IDs (Table 6.4):

TABLE 6.4 Transfer Control in the Standard System

Transfer Control ID	Name	Usage
PC01	Transfer with Plant change	For transfer from another Plant and production in another Plant. This prevents the quantity structure in the other Plant from being exploded and re-costed.
PC02	Complete transfer	For costing new products whose BOM contains materials have already been costed.
PC03	Sales order KDN	To improve performance in sales order costing. Only the costs for materials from the sales order stock are recalculated.

In the case of *single-Plant transfer*, if cost estimates for certain materials already exist in the individual levels of the BOM, they are not re-costed. Rather, the existing costing data is transferred into the cost estimate in accordance with the transfer control. If you always want to re-cost, choose the transfer control "No transfer." On the other hand, in *cross-Plant transfer,* the special procurement types (1. Transfer from other Plant and 2. Production in other Plant) are taken into account for transfer into material cost estimates.

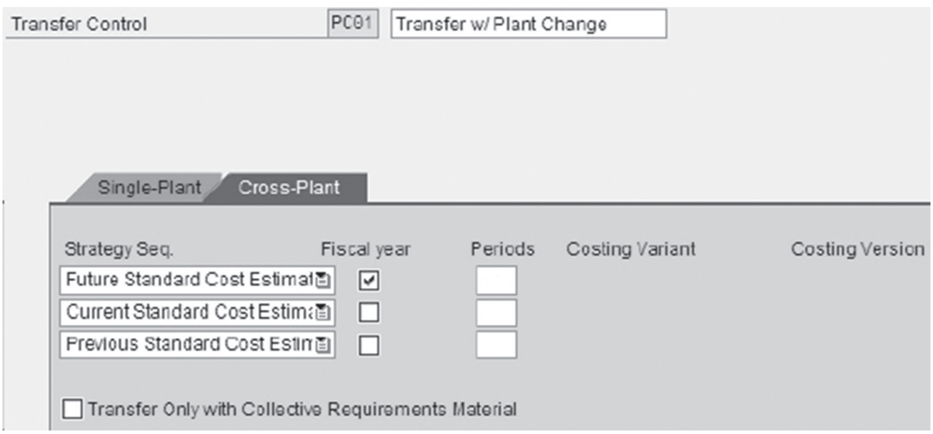


FIGURE 6.20 Transfer Control "PC01"

45. WHAT ARE "REFERENCE VARIANTS" IN A COSTING VARIANT?

Reference variants control how an existing quantity structure that has already been costed is used in the cost estimate. These variants allow creating material cost estimates or costing runs based on the same quantity structure for the purpose of improving performance or making reliable comparisons.

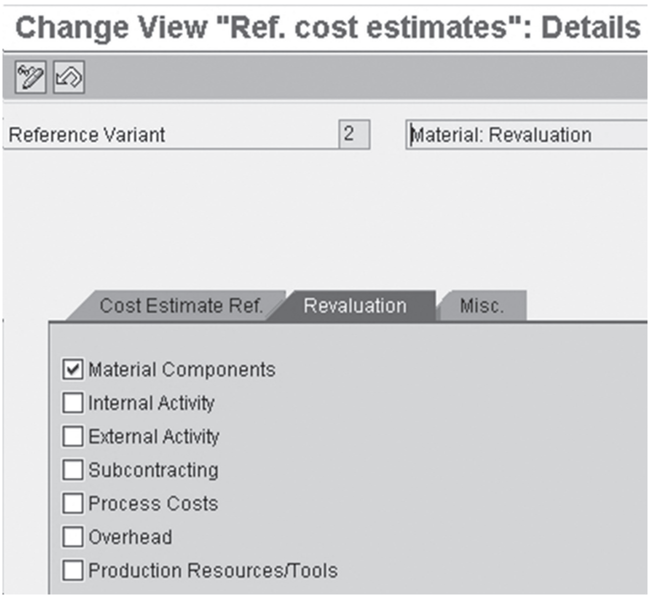


FIGURE 6.21 Reference Variant

Here you specify how the system searches for existing data and how the data is to be transferred. You enter a *transfer control ID* and specify that the following items should be revaluated:

- External activities
- Internal activities
- Materials without a BOM (material components)
- Process costs
- Production resources and tools (using a customer exit)
- Subcontracting

Transaction Code
OKYC

You can also specify the following:

- Whether the overhead should be recalculated
- Whether additive costs should be included

The reference variant is determined through the costing variant when a cost estimate is created.

46. GIVE SOME EXAMPLES WHERE "REFERENCE VARIANTS" ARE USEFUL.

The following are some sample situations where reference variants are useful:

- When you create a standard cost estimate and use it as a reference (template) for an inventory cost estimate. With a reference variant, the system can use the quantity structure of the standard cost estimate when it calculates the inventory cost estimate without having to re-determine the quantity structure. In the reference cost estimate, you specify that the overhead for the inventory cost estimate should still be calculated differently.
- When you use the functions of multiple valuations in *group costing* and execute a costing run in the legal valuation view (when customized as the "main view" for costing). You use the costing run as a reference to carry out costing runs based on the same quantity structure for the two other valuation views. This improves performance and provides you with cost estimates that only differ in the valuations.

47. CAN YOU HAVE TWO COSTING VARIANTS WITH SAME "COSTING TYPE" AND "VALUATION VARIANT?"

Yes, technically it is possible to have two costing variants with the same costing type and valuation variant. However, this should be avoided to prevent data from being overwritten because the key structure for the costing results in the database uses the costing type and the valuation variant, rather than the costing variant.

48. EXPLAIN THE COSTING VARIANT SETTINGS FOR "INVENTORY COST ESTIMATES."

The following are the settings that need to be maintained in the *costing variant* for the inventory cost estimates:

- Define the factors relevant to costing in the valuation variant.
- Specify, in the *costing type,* that the results of the cost estimate can be updated as the *tax-based* or *commercial price* or as other *planned price* in the material master.

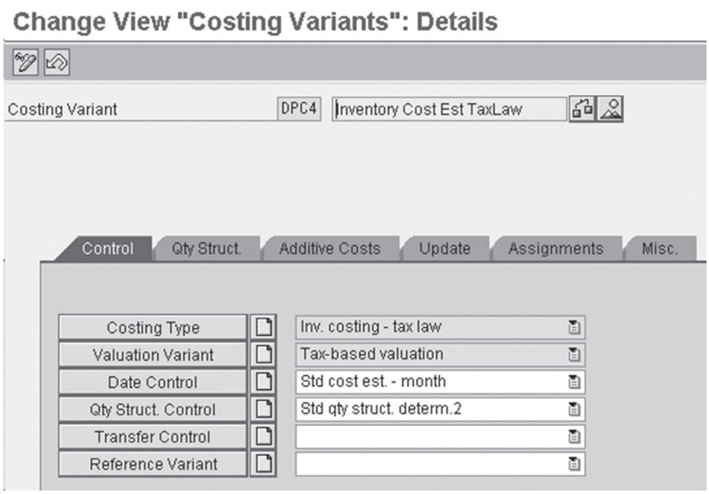


FIGURE 6.22 Costing Variant Settings for Inventory Cost Estimates

- Specify, in the *valuation variant,* that the valuation of the (a) materials is carried out with a tax-based or commercial price, and (b) internal activities are carried out with conservative prices.

49. EXPLAIN "CURRENT COST ESTIMATE."

Valuating the current quantity structure with the current valid prices, the **current cost estimate** can be used to calculate the COGM of a material in the course of the fiscal year, and to provide up-to-date information as to whether the current material costs are acceptable. As in the case of modified standard cost estimate, it is possible to transfer the results of a current cost estimate as "other planned prices" to the material master. You can create a current cost estimate in certain decision-making cases, such as in situations where you must decide between producing in-house or procuring externally. You can compare the results (in CO-PC information system) of the current cost estimate with those of other cost estimates (such as the modified standard cost estimate) to determine the effects of price changes on the cost.

50. CAN YOU USE ALE FUNCTIONS IN CO-PC-PCP TO DISTRIBUTE COST COMPONENT SPLIT?

The ALE functions can be used in CO-PC Planning to distribute the cost component split as follows:

- To CO-PA and SAP S&D if they are operated in separate systems.
- In group costing, to supply information about the product costs of separate production planning systems to a central cost accounting system.
- To transfer the costing results to other systems, for further costing to be carried out.

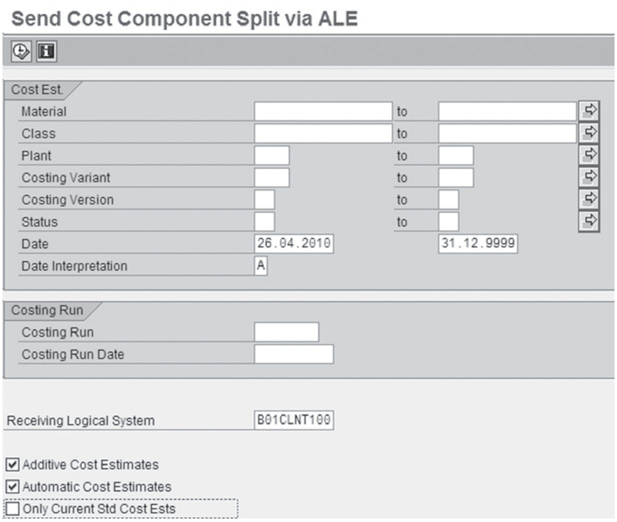


FIGURE 6.23 Distribute Cost Components Split

Note that to set up a distribution of business processes and functions with ALE, you must create a *logical distribution model* for the entire system. You also need to maintain the corresponding master data and control data in customizing for ALE. The material masters must exist in the target system, with accounting and costing views. It is possible that the costing data can be distributed to particular systems or to all the logical systems that are specified in the distribution model as recipients of costing data (If you do not make any entries for the target system, the data is distributed to all the systems specified in the distribution model as recipients of costing data). You can select the costing data to be distributed using the material number, class (of a group of materials), Plant, costing variant, costing version, costing status, and validity of the cost estimate. The selected data is picked out by the system and transferred in IDocs. To work with classes, you need to assign the materials in question to a class.

Transaction Code
CKA1

You may use either "filters" or "reference" functions of ALE. Note to activate both the functions in customizing. To use the "filters," you need to assign the corresponding class to a logical system.

51. LIST THE BAPIS AVAILABLE FOR CO-PC PLANNING.

BAPIs (Business Application Programming Interface) enable to access data and business processes in the SAP system through standardized interfaces (Table 6.5).

TABLE 6.5 BAPIs for CO-PC-PCP

BAPI	Usage
BAPI_COST E STI MAT E_GETLIST	Used to select cost estimates for materials in the system. A list is displayed with the cost estimates that meeting the selection criteria.

BAPI	Usage
BAPI_COST E STI MAT E_GETDETAIL	Used to access the cost component split for a cost estimate from the list that has been selected with the method. BAPI_COSTESTIMATE_GETLIST. The costs are displayed broken down into cost components.
BAPI_COSTESTIMAT E_ITEMIZATION	Used to access the itemization for a cost estimate from the list that has been selected with the method BAPI_ COSTESTIMATE_GETLIST. It is possible to display the information for each costing item
BAPI_COSTESTIMAT E_GETEXPLOSION	To access the costed multilevel BOM for a cost estimate from the list that you selected with the method. BAPI_COSTESTIMATE_GETLIST. The BOM structure is exploded at each level.

52. WHAT REPORTS YOU CAN USE TO ANALYZE THE COSTING RESULTS?

You may use the following reports to analyze the **Costing Results**, in CO-PC:

- **Cost Component Split**: A view of the costs of a material cost estimate broken down into cost groups, such as material costs, production costs, and overhead costs.
- **Itemization**: Detailed information about the costs contained in a material cost estimate or base object cost estimate
- **Itemization by Cost Element**: Detailed information about the costs contained in a material cost estimate or base object cost estimate, sorted by cost element.
- **Costed Multilevel BOM**: Quick overview of the BOM and costs of a material cost estimate or base object cost estimate in hierarchical form.
- **Partner Cost Component Split**: Overview of the value-added portions of organizational units (partners) in relation to the total costs of a material.

53. WHAT IS A "COST COMPONENT?"

The grouping of cost elements with or without origin groups is known as a **cost component**. The costs from a cost estimate are assigned to cost elements and cost components. You can use the origin groups in the material master records to subdivide the material costs within a cost element. The definition of the cost components in Customizing for Product Cost Planning determines how the costed material is valuated. The values for each cost component are updated in the currency of the Company Code to which the material is assigned.

For each cost component, you specify:

- Whether the assigned costs are included with the valuations (inventory valuation, Physical inventory valuation based on commercial law, Physical inventory valuation based on tax law, and Transfer price surcharge).
- Whether the costs assigned to the cost component are to be treated as (a) the cost of goods manufactured, (b) initial cost split (a cost component split for raw materials), and (c) whether delta profits (profits between Company Codes and Profit Centers) should be updated.
- For each valuation, you define the relevant proportion of the costs (cost component as "not relevant," "variable costs" or "fixed and variable costs."

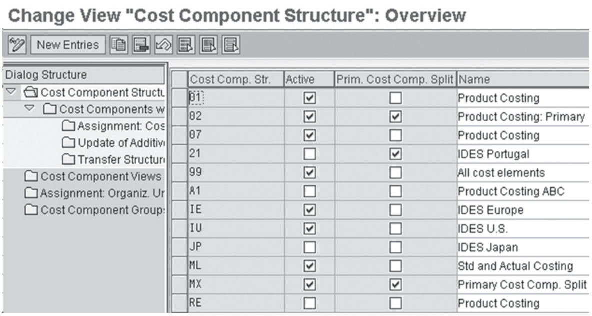
54. GIVE SOME EXAMPLES FOR "COST COMPONENTS."

The following are some of the examples for cost components:

- Raw materials
- Personnel costs
- Production costs
- Overhead: material
- Overhead: production
- Overhead: administration
- Overhead: sales and distribution
- External activities
- Other costs

55. WHAT IS A "COST COMPONENT STRUCTURE?"

The cost components are grouped into a **cost component structure**. A cost component structure can have up to 40 cost components. However, if the cost components contain both fixed and variable costs, the number of costs components is limited to 20. If you are using a particular costing variant, the system determines the cost component structure for this costing variant and creates the cost component split for the costing results accordingly. All costing variants for the standard cost estimate in a Company Code must be linked to the same cost component structure. Otherwise you cannot transfer costing results from other Plants for specially-procured materials. For costing variants that are not set for the standard cost estimate, you can assign the cost component structure separately for each Plant or for each costing variant.



Cost Comp. Str.	Active	Prim. Cost Comp. Split	Name
01	☑	☐	Product Costing
02	☑	☑	Product Costing: Primary
07	☑	☐	Product Costing
21	☐	☑	IDES Portugal
99	☑	☐	All cost elements
A1	☐	☐	Product Costing ABC
IE	☑	☐	IDES Europe
IU	☑	☐	IDES U.S.
JP	☐	☐	IDES Japan
ML	☑	☐	Std and Actual Costing
MX	☑	☑	Primary Cost Comp. Split
RE	☐	☐	Product Costing

FIGURE 6.24 Cost Component Structure

Transaction Code
OKTZ

You can define the cost component structure to have a validity period. You can create cost component views on the basis of the Customizing settings for the cost components. When you display a material cost estimate, cost component views show the costing results according to different viewpoints.

56. WHAT DO YOU MEAN BY "COST COMPONENT SPLIT?"

The results of a cost estimate are updated as *cost components* (called as **cost component split**). It shows the costs calculated in a material cost estimate or sales order cost estimate across all production levels, broken down into cost components: material costs, production costs, material overhead, production overhead, and other costs. The costs for internal activities normally flow into the cost component split under secondary cost elements.

Cost Comp.	Name of Cost Comp.	Σ Overall	Σ Fixed	Σ Variable	Crcy
10	Direct Materials	22.000,00		22.000,00	USD
30	Direct Labor (Setup)				USD
40	Direct Labor				USD
50	OH Prod. Machine				USD
60	Direct Material OH				USD
70	Direct Prof Serv				USD
80	Subcontracting Cost				USD
100	OH Misc				USD
		▪ **22.000,00**		▪ **22.000,00**	**USD**

FIGURE 6.25 Cost Component Split

The cost component split enables to:

- Analyze the cost origin across multiple production levels.
- Structure the costs according to the requirements of other areas (such as material valuation or profitability analysis).
- View the costs by original production factors (primary cost component split).

57. WHAT IS KNOWN AS "PRIMARY COST COMPONENT SPLIT?"

Primary cost component split is a report that displays the costs of the internal activities and the process costs broken down into their original production factors. This split can be created in a *cost estimate with or without a quantity structure*, as well as when costing a sales order. You can define the structure of the primary cost components in Customizing for Product Cost Controlling. The typical cost components of the primary cost component split are raw materials, wages, energy, depreciation, and so on.

The primary cost component split is an alternative way of showing the cost of goods manufactured of a product. This cost component split assigns the primary cost elements for the Cost Center or process to the cost components, which enables you to see the composition of the price for the activity type or the costs for the process.

58. EXPLAIN "COSTED MULTILEVEL BOM."

The **costed multilevel BOM** is a hierarchical overview of the values for all costing items of a material, sales order or base planning object. In addition to the costs, the respective input quantities are displayed. Note that the values in the costed multilevel BOM are determined from the values in the itemization: Any subsequent changes of the quantity structure or the values are not displayed. SAP provides you with several layouts (1SAP01-Value / Amount / Status, 1SAP02 – Values Fixed/Variable etc.), to display the results.

The following screenshot shows a costed multilevel BOM using the layout 1SAP02:

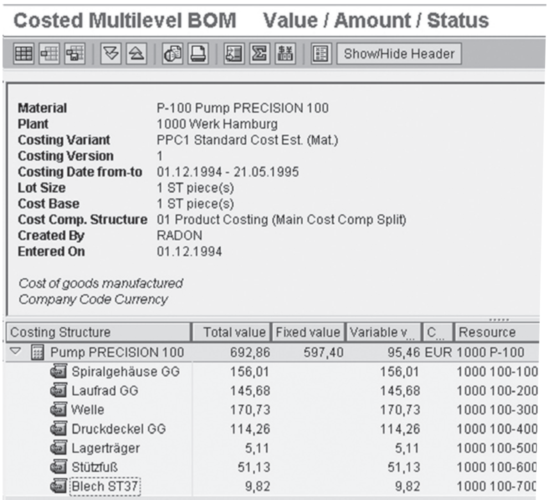


FIGURE 6.26 Costed Multilevel BOM – in 1SAP01 Layout

The following screenshot shows a costed multilevel BOM using the layout 1SAP03 (Cost Element / Origin Group):

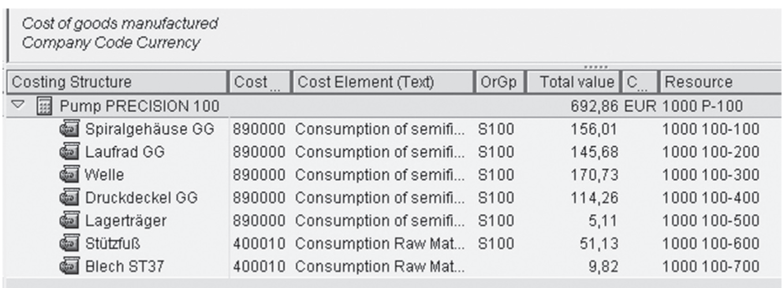


FIGURE 6.27 Costed Multilevel BOM – in 1SAP03 Layout

59. WHAT IS "COST ROLLUP?"

Cost rollup is a process in material costing wherein the costs at lower production levels are allocated to the highest level. The costs are rolled up by cost component, assuring that the origin of the costs remains visible after rollup. For example, labor costs in pre-assembly are rolled up into the COGM of the end product as internal labor costs rather than material costs. Any costs assigned to cost components that are not rolled up are not included in cost estimates of higher costing levels.

The system first calculates the costs for the materials with the lowest costing level and assigns them to cost components. The materials in the next-highest costing level (such as semi-finished materials) are then costed. The costs for the materials costed first are rolled up and become part of the COGM in the next-highest level. This process is continued until the costing results of the highest material in the structure (such as the finished product) contain the COGM for every material in the structure.

60. WHAT IS "ITEMIZATION?"

An **itemization**, generated automatically with a cost estimate, is a report that lists the calculated costs and contains detailed information on cost origins and elements that make up costs. You can break down these costs for analysis by cost elements, by operations, or by costing items.

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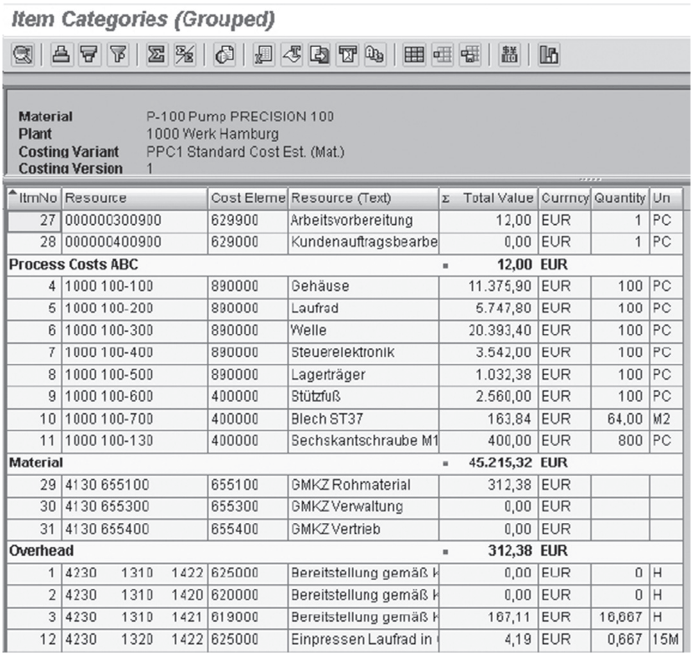
If you want to display the itemization information in the cost estimate display and the information system, do not forget to set the *Itemization indicator* when saving the cost estimate. You can use itemization to analyze a costed material, base planning object or sales document item in more detail. Note that the itemization is a prerequisite for variance calculation in Product Cost by Period and Product Cost by Order.

During preliminary costing for a production order or a production campaign, an itemization is generated dynamically, and is not stored in the system; it is available for analysis immediately after you carry out costing but cannot be analyzed in the information system.

There are different layouts of the itemization available in the SAP standard system:

- Itemization by Cost Components/ Cost Elements
- Itemization by Cost Elements
- Itemization by Costing Items
- Itemization by Operations

In the standard system, the itemization is displayed with the layout Item Categories (grouped): the costing items are listed according to item categories. The item categories indicate, for example, whether it is a material (**M**), internal activity (**E**), or overhead rate (**G**).



Item Categories (Grouped)

Material P-100 Pump PRECISION 100
Plant 1000 Werk Hamburg
Costing Variant PPC1 Standard Cost Est. (Mat.)
Costing Version 1

ItmNo	Resource	Cost Eleme	Resource (Text)	Σ	Total Value	Currncy	Quantity	Un
27	000000300900	629900	Arbeitsvorbereitung		12,00	EUR	1	PC
28	000000400900	629000	Kundenauftragsbearbe		0,00	EUR	1	PC
Process Costs ABC				▪	**12,00**	**EUR**		
4	1000 100-100	890000	Gehäuse		11.375,90	EUR	100	PC
5	1000 100-200	890000	Laufrad		5.747,80	EUR	100	PC
6	1000 100-300	890000	Welle		20.393,40	EUR	100	PC
7	1000 100-400	890000	Steuerelektronik		3.542,00	EUR	100	PC
8	1000 100-500	890000	Lagerträger		1.032,38	EUR	100	PC
9	1000 100-600	400000	Stützfuß		2.560,00	EUR	100	PC
10	1000 100-700	400000	Blech ST37		163,84	EUR	64,00	M2
11	1000 100-130	400000	Sechskantschraube M1		400,00	EUR	800	PC
Material				▪	**45.215,32**	**EUR**		
29	4130 655100	655100	GMKZ Rohmaterial		312,38	EUR		
30	4130 655300	655300	GMKZ Verwaltung		0,00	EUR		
31	4130 655400	655400	GMKZ Vertrieb		0,00	EUR		
Overhead				▪	**312,38**	**EUR**		
1	4230 1310 1422	625000	Bereitstellung gemäß k		0,00	EUR	0	H
2	4230 1310 1420	620000	Bereitstellung gemäß k		0,00	EUR	0	H
3	4230 1310 1421	619000	Bereitstellung gemäß k		167,11	EUR	16,667	H
12	4230 1320 1422	625000	Einpressen Laufrad in		4,19	EUR	0,667	15M

FIGURE 6.28 Sample Itemization

61. DESCRIBE A "PARTNER COST COMPONENT SPLIT."

If production involves more than one partner (say, multiple Profit Centers in multiple Plants and Company Codes), you can analyze the value added for each partner using the **partner cost component split**. It provides you with a hierarchical graphic in which the partners that you have defined are displayed with their costs. The costs are grouped in cost components and shown as totals.

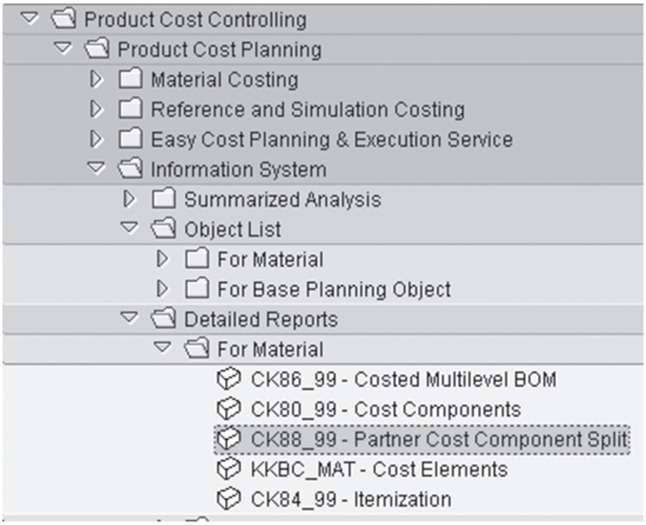


FIGURE 6.29 Partner Cost Component Split in CO-PC Information System

To generate and display a partner cost component split, you must do the following in Customizing:

- Define cost component groups.
- Define a partner version.

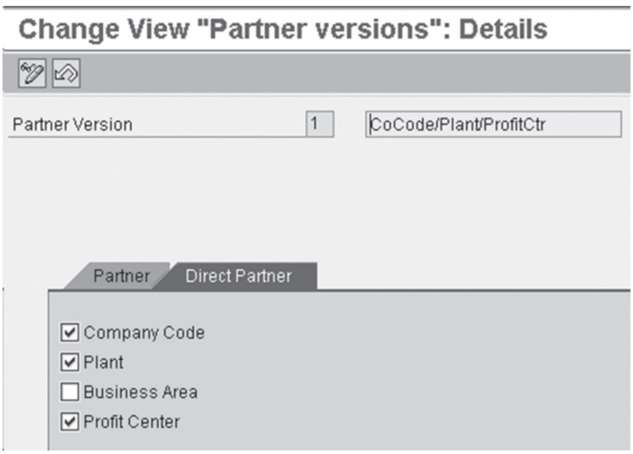


FIGURE 6.30 Partner Versions

- Enter this partner version in the costing type.
- Enter this costing type in the costing variant that you use for costing.

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62. WHO IS A "PARTNER" / "DIRECT PARTNER" REFERRED TO IN PARTNER COST COMPONENT SPLIT?

SAP defines a **partner** as the business unit that is involved in the value added process. The **direct partner** is the business unit that passes on its delivery or service directly to another partner. Partners and direct partners provide an in-depth view of how the value added portions are broken down. Within the context of partner versions in Customizing for Product Cost Planning, partners or direct partners can consist of any combination of the organizational units Profit Center, Plant, business area, and Company Code. If you do not want the portion of the value added that the direct partner procured to be visible when the product or service is transferred to the receiving partner, it can be subsumed under the value added of the direct partner (*single-level partner*). In such a case, only the portions of the directly-procured deliveries and activities are displayed. Value-added portions that the direct partner has received from others are passed on directly to the direct partner.

The group cost component split can be displayed according to the partner definition. You can display the cost structures of the partners hierarchically according to your requirements, such as the Company Code segments on the highest level and the Plant or Profit Center segments underneath.

63. EXPLAIN "GROUP COSTING."

Group costing is a costing function that calculates the value added for multiple Profit Centers across Company Codes. It provides a detailed display of complex procurement, production, and sales relationships. The cost structures and value-added segments of each partner (such as Plants and Profit Centers) are passed on to the next partner, retaining the costs of the previous level.

To make use of group costing you need to have all the Company Codes assigned to the same Controlling Area. In case you want to mark and release the results of group costing, or carry parallel values in actual data, you must define a currency and valuation profile in Customizing for General Controlling, and activate multiple valuations. If you only want to carry out planning simulation, you do not need these settings.

You can use group costing for the following:

- Planning and simulation invoicing
- Price update and the stock valuation of group values
- To interpret Profitability Analysis

64. WHAT ARE THE DIFFERENT "VALUATION APPROACHES" FOR MATERIAL COSTING?

SAP provides you with three different valuation approaches for costing the material movements:

Group Valuation

The goods movements between affiliated companies (not involving intercompany profits) are processed using group valuation. This view determines the actual cost of goods manufactured for the group, and does not include any intercompany profits. You can, however, display internal profits as delta profits in the legal and/or Profit Center views.

Legal Valuation

The deliveries between companies that carry out their own accounting are valuated using the legal view in accordance with the statutory accounting requirements for individual account closing.

Profit Center Valuation

Internal income calculations with independent valuation bases (that is, transfer prices) can be valuated in the Profit Center view. A fixed transfer price can be agreed for stock transfers between Profit Centers, and this can be included in the cost estimate

65. EXPLAIN THE CUSTOMIZING TO COST IN MULTIPLE VALUATION VIEWS.

To cost multiple values, you need to:

- Define a costing type for each valuation approach in Product Cost Planning.
- Use the costing type to specify which valuation approach you require.
- Define each costing type in a new costing variant.

During costing, you can then carry out a cost estimate with this costing variant.

66. WHAT IS A "TRANSFER PRICE" IN CO-PC?

Transfer price is the price charged for transfer of a product from one business unit (Company Code or Profit Center) to another. "Profit Center Cost Estimate" (one of the three valuation views) enables you to include transfer prices for the delivery of materials between Profit Centers. Note that a fixed transfer price can be agreed for stock transfers between Profit Centers, and the same can be included in the cost estimate. To include transfer prices in the Profit Center cost estimate, you need to define transfer prices based on a "*transfer price variant*" in Customizing for CO-PCA. This transfer price variant is determined through the CO version. You can also define a different transfer price variant through the costing version in Customizing for Product Cost Planning in CO-PC, though the entry in the costing version has priority over the CO version.

67. WHAT IS A "COSTING RUN?"

The **costing run** is a tool that provides you with the opportunity to cost multiple materials at the same time. In Product Cost Planning, costing runs are used to cost materials based on planning data. This type of costing run is based on a user-defined name and a date. In Actual Costing/Material Ledger, costing runs are used to cost materials with actual data. This type of costing run is based on a costing run profile and a period.

68. EXPLAIN THE "COSTING RUN" PROCESS FLOW.

The following is the process flow in a costing run:

Access the costing run functions by choosing *Accounting* > *Controlling* > *Product Cost Controlling* > *Product Cost Planning* > *Material Costing* > *Edit Costing Run*.

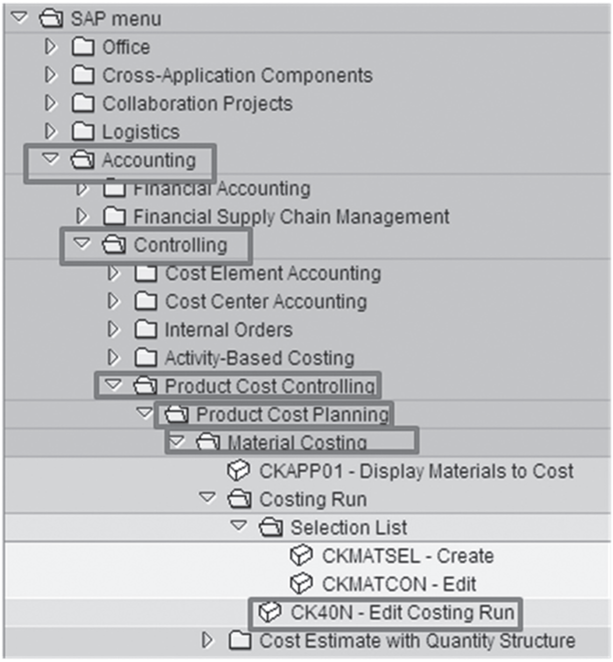


FIGURE 6.31 Costing Run: Menu Path

The Edit Costing Run screen appears. This is divided into three areas namely (a) General Data, (b) Processing, and (c) Costing Results:

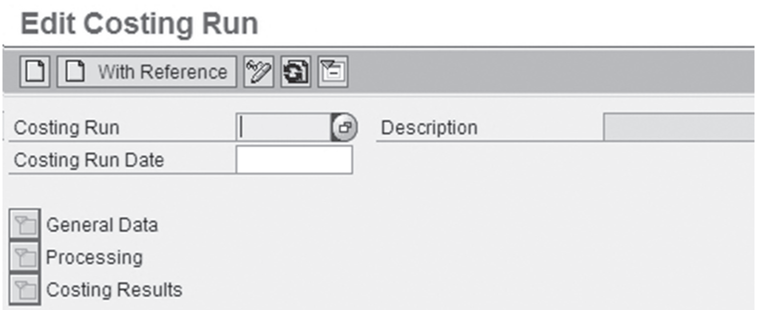


FIGURE 6.32 Edit Costing Run: Initial Screen

Enter the details in "Costing Run," "Description" and "Costing Run Date" and click on "create costing run" or "create costing run with reference" and enter the General Data for the costing run, such as the costing variant, Company Code, and transfer control ID.

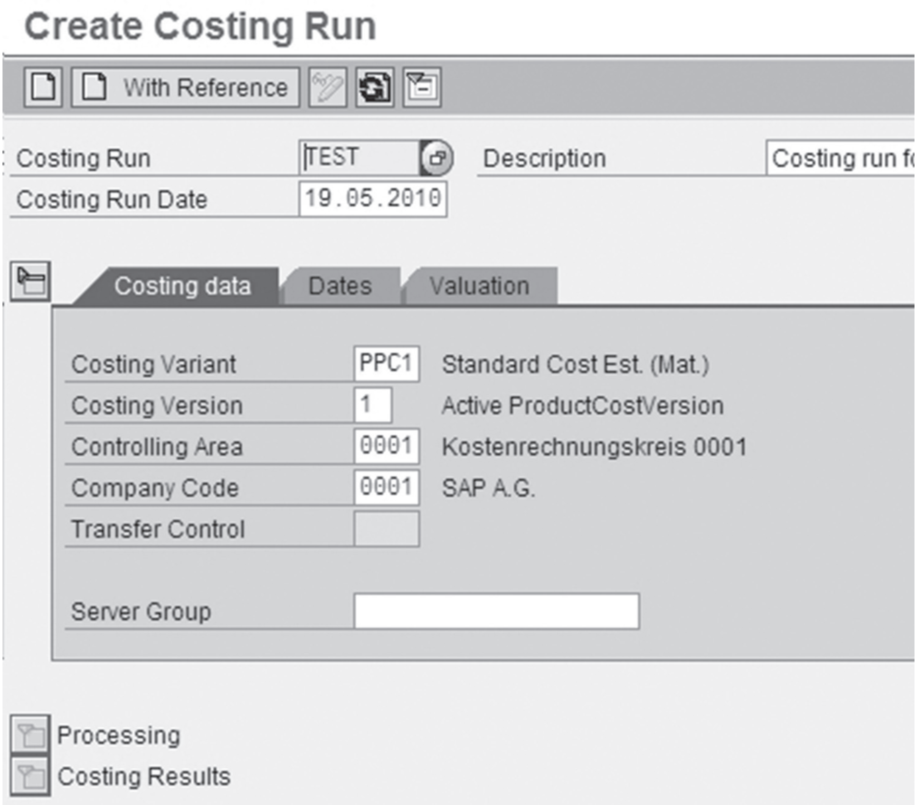


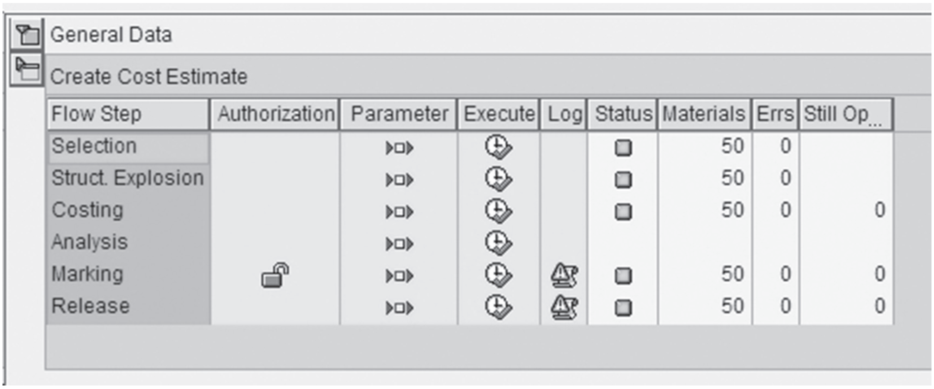
FIGURE 6.33 Costing Run: General Data

Save before proceeding further. Unless you save the "costing run" you will not see the "processing" screen area.

In the "Processing" screen area, carry out the following steps:

- Material selection
- BOM explosion
- Costing
- Analysis
- Price update

To carry out a processing step, choose (*Change parameters*). Once you have selected the parameters, you can proceed with the processing step by choosing (*Execute*). The system generates a **log** for each step of the costing run, which you can save and print. To display the log, choose (*Log*) in the relevant step. To print the log, choose *Accounting > Controlling > Product Cost Planning > Tools > Costing Run > Print Logs.*



General Data

Create Cost Estimate

Flow Step	Authorization	Parameter	Execute	Log	Status	Materials	Errs	Still Op...
Selection						50	0	
Struct. Explosion						50	0	
Costing						50	0	0
Analysis								
Marking						50	0	0
Release						50	0	0

FIGURE 6.34 Costing Run: Processing Screen Area

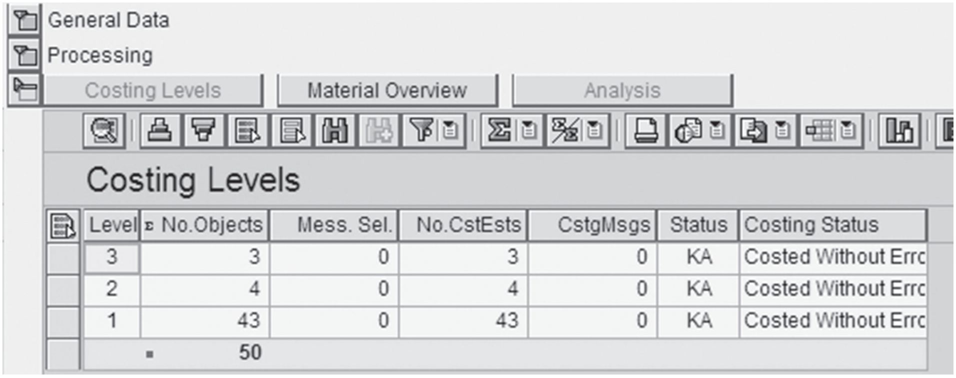
The system sets a costing status for each step in the costing run. The status is displayed in graphic form, as follows:

- (Free of errors)
- (No errors, warning messages have been issued)
- (With errors, error messages have been issued)

Note that you can execute each step of the costing run both online and in the background. For background processing, set the Background processing indicator when you define the parameters (). You can cost, mark, and release, and update other prices, using parallel processing. To do this, set the *Parallel processing* indicator when you define the parameters (), and enter the *server group* in the General Data.

In this "Costing Results" screen area, you can analyze the costing results using the following:

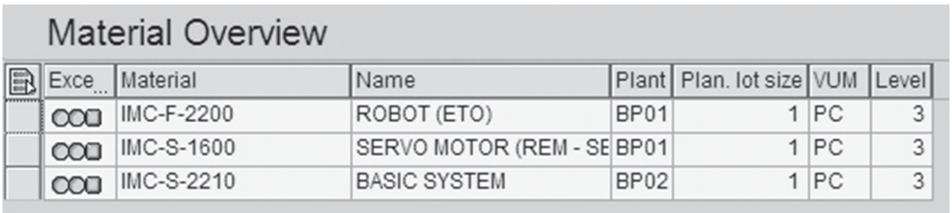
- The *costing level overview*



Level	Σ No.Objects	Mess. Sel.	No.CstEsts	CstgMsgs	Status	Costing Status
3	3	0	3	0	KA	Costed Without Errc
2	4	0	4	0	KA	Costed Without Errc
1	43	0	43	0	KA	Costed Without Errc
	▪ 50					

FIGURE 6.35 Costing Run: Costing Results Screen Area

- The *material overview*



Exce...	Material	Name	Plant	Plan. lot size	VUM	Level
	IMC-F-2200	ROBOT (ETO)	BP01	1	PC	3
	IMC-S-1600	SERVO MOTOR (REM - SE	BP01	1	PC	3
	IMC-S-2210	BASIC SYSTEM	BP02	1	PC	3

FIGURE 6.36 Costing Run: Costing Results – Material Overview

69. WHAT ARE THE DIFFERENT "COSTING STATUSES?"

There are several costing statuses which you will come across during the costing run. They include ER, SE, SF, KA, KF, etc., based mostly on the error conditions during material selection, costing, marking, and release of the cost estimate.

If costing was completed without errors, the system sets the status **KA** (costed without errors). If the system sets a success status, this status can prevent the step from being repeated. If, for example, you release a cost estimate, the system sets the status **FR**. If the cost estimate has this status, the system issues an error message if you try to release it again.

The system sets the status for each costing level. This means that you can release the costing results for specific costing levels , even though the costing run itself has the status **KF** (Table 6.6).

Costing Status	Short Descript.
ER	Opened
SE	Selected Without Errors
SF	Selected with Errors
KA	Costed Without Errors
KF	Costed with Errors
VO	Marked Without Errors
VF	Marked with Errors
FR	Released Without Errors
FF	Released with Errors
FM	Release Through Material Ledger Settlement

FIGURE 6.37 Costing Status

TABLE 6.6 Costing Status

Costing	Description Status	Explanation
KA	Costed without errors	The cost estimate has therefore yet to be marked or released. No information messages (type I) or warning messages (type W) have occurred.
VO	Marked without errors	Costing has been carried out, and the cost estimate has been marked but not released.
KF	Costed with errors	Error messages (type E) have occurred. The results of cost estimates cannot be transferred to the material master.
FR	Released without errors	If a standard cost estimate has already been released, it cannot be costed, marked, or released again. The system issues an error message.

70. WHAT DO YOU MEAN BY "PRICE UPDATE?"

Price update is a function that updates the cost calculated in a material cost estimate to the material's master record. You can update the results of the various material cost estimates, depending on the purpose of costing, in selected price fields in the material master.

- The costing results can be updated as the standard price in the material master.

- The costing results can be updated as the tax-based or commercial price in the material master. In such cases, the determination of lowest value applies. This means that the prices are only updated if they represent the lowest value.
- The costing results can be updated as planned prices, or as tax-based or commercial prices in the material master. Here, however, the "determination of lowest value" principle does not apply when updating the tax-based or commercial prices.

71. WHAT IS THE PURPOSE OF "COST OBJECT CONTROLLING (CO-PC-OBJ)?"

The **Cost Object Controlling** is an area in cost accounting that assigns the costs incurred in the production of company activities (such as materials manufactured in-house) to those activities. It provides real-time cost management functions that measure the cost of goods manufactured in all Plants.

It supports you in:

- Determining inventory values
- Determining price floors
- Performing complex cost analysis (such as target/actual analysis)
- Reaching make-or-buy decisions

Before you can use Cost Object Controlling, you need to calculate the planned costs for each product in a cost estimate. You can use different costing methods in Product Cost Planning (CO-PC-PCP) for this purpose. It accesses master data and transaction data in Production Planning (PP), Production Planning - Process Industries (PP-PI), Materials Management (MM), Sales and Distribution (SD), and Overhead Cost Controlling (CO-OM).

72. WHAT ARE THE COMPONENTS OF "CO-PC-OBJ?"

The CO-PC-OBJ is divided into the following components:

- Product Cost by Period
- Product Cost by Order: used to control the costs of individual production lots.

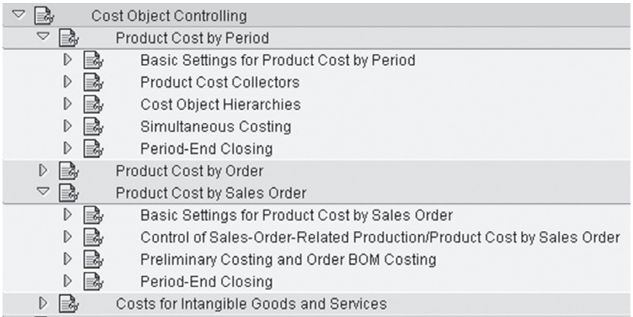


FIGURE 6.38 Components of Cost Object Controlling

- Product Cost by Sales Order: used to control costs in complex make-to-order production or customer-specific services, for example
- Costs for Intangible Goods and Services

73. EXPLAIN "PRODUCT COST BY PERIOD."

Used for recurring periodic cost control of products that are manufactured in the same way over an extended period of time, **Product Cost by Period** enables periodic analysis of costs at the product level. In contrast to *Product Cost by Order* in which you analyze costs by lot, in here you analyze costs by period. This means that you collect the costs on a cost object over an extended period of time, and analyze the debits and credits in each period.

You can use this component for the following purposes:

- Calculate and analyze target costs and actual costs for product cost collectors and cost object hierarchies
- Calculate and analyze variances for each period
- Calculate or update the work-in-process inventory and the finished goods inventory
- Create a preliminary cost estimate for product cost collectors
- Transfer data to Actual Costing/Material Ledger (CO-PC-ACT)
- Transfer data to Financial Accounting (FI)
- Transfer data to Profit Center Accounting (EC-PCA)
- Transfer data to Profitability Analysis (CO-PA)

The Product Cost by Period method is recommended for products that have relatively high design stability and are manufactured over an extended period of time. If you are manufacturing your products in a repetitive manufacturing environment, you always use Product Cost by Period. In *Product Cost by Period*, the settlement rule must specify settlement type PER (periodic).

74. WHAT COST OBJECTS YOU CAN USE IN "PRODUCT COST BY PERIOD?"

You can use (a) product cost collector and (b) cost object hierarchies with their cost object nodes and assigned objects (such as materials) as the cost objects in product cost by period.

75. WHAT IS KNOWN AS "PRODUCT COST COLLECTOR?"

Product cost collector is a cost object in Product Cost by Period that collects the periodic actual costs incurred in the production of a material. When you use a product cost collector, the product is the main cost object. Because the product cost collectors are independent of the production type, you can collect actual costs on product cost collectors in production environments like order-related production, repetitive manufacturing, etc.

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KKF6N

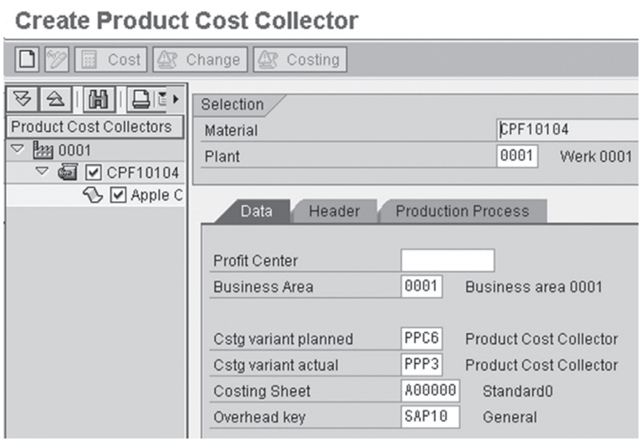


FIGURE 6.39 Product Cost Collector

76. WHEN YOU WILL NORMALLY USE "PRODUCT COST BY PERIOD?"

You normally use the **Product Cost by Period** component in:

- Repetitive manufacturing environments (you always collect and analyze your costs on product cost collectors).
- Make-to-order or process manufacturing when you are not interested in managing your costs at the order level (instead of using the manufacturing orders as the basis for Cost Object Controlling, you create a product cost collector).
- When you have costs that you cannot (or do not want to) assign to particular orders. You then assign these costs to the cost object nodes in a cost object hierarchy.

77. DESCRIBE "PRODUCT COST BY ORDER."

The **Product Cost by Order** application component enables you to analyze costs at the level of manufacturing orders, in *make-to-stock* and *sales-order-related production* environments.

Here, the manufacturing orders themselves are the cost objects: the costs charged to these orders are usually analyzed and settled by lot. Because of this, the variances can only be analyzed after the entire planned production quantity has been put into inventory.

When based on manufacturing orders, the Product Cost by Order component is particularly suitable for measuring the cumulative cost of lots (that is, when the settlement rule specifies full settlement). You can implement Product Cost by Order with production orders and process orders in order-related production or process manufacturing environments.

Product Cost by Order is recommended in lot-based production environments. Typical applications of Product Cost by Order are in order-related production or batch-based process manufacturing. The production process is based on manufacturing orders where the focus of production and cost analysis is on a particular quantity (production lot size). In Product Cost by Order, the settlement rule must specify settlement type **FUL** (full settlement).

78. WHAT YOU CAN ACHIEVE THROUGH "PRODUCT COST BY ORDER?"

The **Product Cost by Order** component allows you to:

- Calculate and analyze planned costs, target costs, and actual costs of production orders and process orders
- Calculate and analyze variances
- Transfer data to Actual Costing / Material Ledger (CO-PC-ACT)
- Transfer data to Financial Accounting (FI)
- Transfer data to Profit Center Accounting (EC-PCA)
- Transfer data to Profitability Analysis (CO-PA)

79. UNDER WHAT SITUATIONS YOU WILL USE "PRODUCT COST BY ORDER?"

You can use the **Product Cost by Order** component in the following situations:

- In *sales-order-related production* environments when you are using complex make-to-order production with valuated sales order stocks and want to calculate the work in process and variances at the level of the logistical orders (production orders and process orders). In this case you use the Product Cost by Order component together with the Product Cost by Sales Order component.
- In *sales-order-related production* environments with mass production on the basis of sales orders when you are using valuated sales order stocks and you want to concentrate your cost-management efforts more on the costs of the logistical orders than on the cost of the products.
- In *make-to-stock* environments when you want to focus on the cost of the order.

80. EXPLAIN "SALES-ORDER-RELATED PRODUCTION."

In **sales-order-related production**, the materials are manufactured with reference to a sales order item. Such materials are also called *individual requirements* materials and they can also be manufactured for a project stock.

There are two types of sales-order-related production:

- Sales-order-related mass production
- Complex make-to-order production

81. WHAT IS "SALES-ORDER-RELATED MASS PRODUCTION?"

Mass production environments using sales orders are often encountered in advanced-technology industries and in the automotive industry. Sales orders are processed as in *make-to-stock* environments.

From an SAP point of view, you are in a mass production environment using sales orders when you have *configurable products* with *super bills of material* and *super task lists* whose individual variants you define through the characteristic values in the sales order but for which *no further customer-specific changes are made*. You sell different variants of a configurable material. The sales order item contains the characteristic value of the configurable material.

Consider the following example:

- You are a computer manufacturer. Customer A orders a computer with a 21" monitor and 1.2 GB hard disk. You create sales order number 4711 with item 10. Customer B orders a computer with a 17" monitor and 1.2 GB hard disk. You create sales order number 4712 with item 10.

The cost accounting on the two sales order items would not deliver meaningful results, since the costs in each case depend on the particular combination of monitor and hard disk. A more useful approach would be to analyze the costs of the products:

- What is the cost situation with 1.2 GB hard disks?
- What is the cost situation with 17" monitors compared with 21" monitors?

The focus of cost management is on the cost of the product, rather than the cost of the sales order item. The use of a valuated sales order inventory in this scenario means that you do not have to manage the costs of sales order items. This *eliminates the need for results analysis* and settlement of the sales order item in Controlling. WIP is calculated at the level of orders (such as production orders) and production cost collectors, for which variance calculation is now possible. Note that if you make customer-specific changes to a variant, this scenario is no longer a mass production environment using sales orders – it is now a *complex make-to-order* environment.

The cost object can be a manufacturing order (production order or process order) or a product cost collector. A requirement is that you are using a valuated sales order stock. You can use either the Product Cost by Order component or the Product Cost by Period component.

82. EXPLAIN "COMPLEX MAKE-TO-ORDER" PRODUCTION.

Unlike sales-order-related mass production where you do not make customer-specific changes to variant, the central feature of **Complex Make-To-Order** environments is that products are modified or even completely redesigned in response to particular orders. You manufacture a product especially for a particular customer, or make customer-specific changes to variants. The manufacturer needs to be able to plan and monitor the costs and revenues of such production environments effectively.

The cost object is the sales order item that carries costs and revenues. You use *Product Cost by Sales Order* (usually in addition to *Product Cost by Order* and/or *Product Cost by Period*).

83. WHAT PROCESSING METHODS ARE AVAILABLE IN "COMPLEX MAKE-TO-ORDER" PRODUCTION?

The different processing methods available in "Complex Make-To-Order" production environment are outlined in Table 6.7.

TABLE 6.7 Processing Methods in "Complex Make-To-Order" Production

Processing method	Description	Option 1	Option 2
Make-to- order	Cost management directly through the sales order item	You can use a *valuated sales order* stock in conjunction with sales order items that carry costs and revenues. This is the type of processing **recommended by SAP**.	You can use a *non-valuated sales order stock* in conjunction with sales order items that carry costs and revenues.

Engineer-to-order	Cost Object Controlling for projects for complex manufacturing such as Plant engineering	You can use a *valuated* project stock in conjunction with WBS elements that have costs and revenues. This is the type of processing recommended by SAP.	You can use a non-valuated project stock in conjunction with WBS elements that have costs and revenues.

84. WHAT IS THE SEQUENCE OF COSTING PERFORMED CO-PC-OBJ?

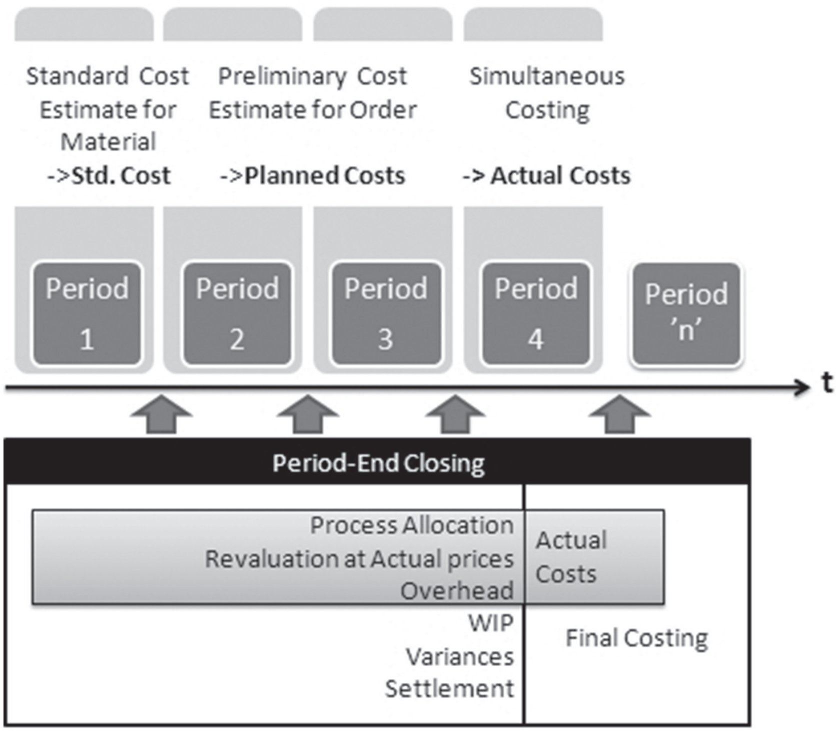


FIGURE 6.40 Sequence of Costing in CO-PC-OBJ

The following sequence of steps is performed in CO-PC-OBJ:

- **Step 1: Preliminary costing**
- The preliminary costing calculates the planned cost for each object. For example, if the cost object is a production order, planned costs can be used in variance calculation as the basis for calculating target costs.
- **Step 2: Simultaneous costing**
- Simultaneous costing enables you to view and analyze the actual costs on a cost object at any time. All the actual costs incurred for a cost object are collected directly on the cost object. These costs are incurred in different ways, such as through internal activity allocations and material withdrawals. This process of collecting actual costs on a cost object is called simultaneous costing.
- **Step 3: Final costing**
- The final costing is normally performed as a period-end closing process (you will find final costing as one of the menu options under Period-End Closing). Once the cost object has been produced, final costing determines the actual costs incurred during the production process. The final costing also serves the purposes of cost analysis and control.

85. DESCRIBE "PERIOD-END-CLOSING" PROCESS IN COST OBJECT CONTROLLING.

During period-end closing you will:

- Capture the *period costs*
- Determine the value of unfinished goods (WIP)
- Calculate variances in Product Cost by Period and Product Cost by Order

When you settle the costs during period-end closing, you can transfer data to other application components such as Financial Accounting. Note that the period-end closing in Cost Object Controlling is performed after period-end closing in Cost Center Accounting.

86. WHAT IS A "PERIOD COST?"

A **period cost** is an actual cost that is not attributable to the cost object from a particular activity. This can be the revaluation of activities at actual prices or the calculation of process costs or overhead, for example.

87. WHAT ARE THE TWO COSTING APPROACHES?

The two costing approaches are (a) absorption costing and (b) variable costing.

88. WHAT IS "ABSORPTION COSTING?"

Absorption costing is a costing approach that does not differentiate between fixed and variable costs. Hence, the costs are allocated to cost objects without being categorized as fixed or variable.

89. WHAT IS "VARIABLE COSTING?"

Also known as direct costing, **variable costing** is a costing method in which the costs to be *inventoried* include only the *variable* manufacturing costs (both variable and fixed). The fixed factory overhead is treated as a period cost, and is deducted along with the selling and administrative expenses in the period incurred.

The variable costing is used for internal management only: for (1) inventory valuation and income determination, (2) relevant cost analysis, (3) Break-Even and Cost-Volume-Profit (CVP) Analyses, and (4) short-term decision-making. This kind of costing is not acceptable for external reporting or income tax reporting. The companies that use variable costing for internal reporting must convert to *Absorption Costing* for external reporting.

90. WHAT IS A "PRICE CONTROL INDICATOR" IN MATERIAL MASTERS IN SAP?

The **price control indicator** is an indicator determining the procedure used for material valuation. SAP uses the following procedures in the standard system:

- Valuation at standard price (**S**)
- Valuation at moving average price (**V**) or, if the material ledger has been activated, periodic unit price

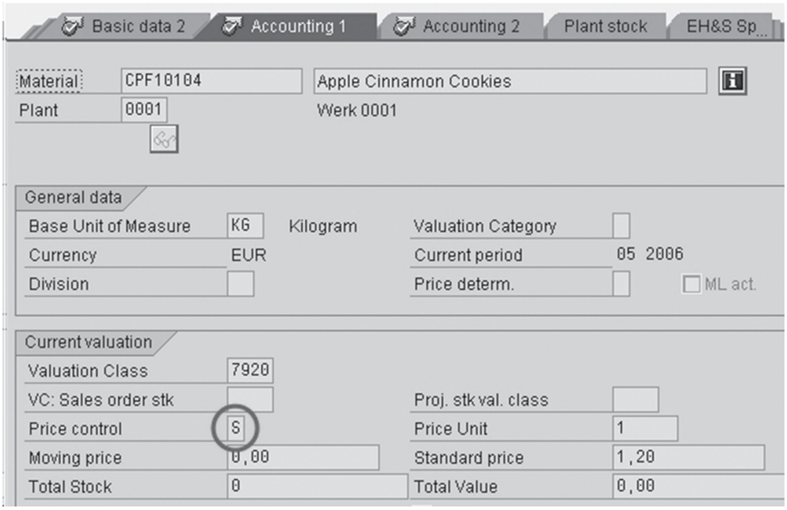


FIGURE 6.41 Price Control Indicator in Material Master

91. WHAT IS A "MOVING AVERAGE PRICE?"

The **moving average price** is a price that changes in consequence of goods movements and the entry of invoices and is used to valuate a material. The moving average price is calculated by dividing the value of the material by the quantity of material in stock. It is automatically recalculated by the system after each goods movement or invoice entry.

When materials whose price control indicator is set to V are received from in-house manufacturing processes, they are initially valuated with a value you defined (such as the standard price). When you settle, the material stock account is debited with the variances. This results in a new moving average price. Valuating semi-finished products and finished products with the moving average price is not recommended.

92. WHAT ARE ALL THE VARIOUS "INVENTORY VALUATIONS" POSSIBLE IN SAP?

The inventory valuation may be based on:

- *Standard Price*
- *Moving Average price*

- *Actual costing* (Use the Actual Costing/Material Ledger component to calculate a periodic unit price for the previous period. You can use this price for statistical purposes or to revaluate your inventories.)
- *Inventory costing* (If you do not want to use any of the above methods to valuate your inventories in the year-end closing, you can create inventory cost estimates in Product Cost Planning to determine the cost of goods manufactured for commercial and tax valuation, and use these cost estimates to valuate your inventories in the commercial balance sheet or tax balance sheet.)

93. OUTLINE THE ACTIVITY SEQUENCE IN COST ACCOUNTING IN "MAKE-TO-STOCK" PRODUCTION

In **make-to-stock production**, the sequence of activities in cost accounting in each period includes:

- Overhead costs are posted to the Cost Centers from FI.
- Materials are withdrawn with reference to the production order, and the costs are allocated to the production order (*direct materials costs*).
- Activities performed in production are allocated from the production Cost Centers to the production order. This allocation can be accomplished through automatic activity allocations that are triggered by confirmations in Logistics.
- At the end of the month, the period-closing activities are performed in *Cost Center Accounting* and *Cost Object Controlling*. These activities include:
    - Allocation of period costs from Cost Centers to cost objects
    - Calculation of variances for each Cost Center and cost object
    - Calculation of work in process
    - Transfer of variances and work in process to other application components (such as *FI*)

94. WHAT IS "BACKFLUSH?"

The **backflush** is the non-manual posting of an issue of components some time after their physical withdrawal for an order. The goods issue posting for backflushed components is performed automatically at the time of order completion confirmation. A backflush can be effected in various ways, such as:

- Confirmation of an operation to which particular BOM components are assigned and for which a backflush is planned (*Backflush indicator*).
- Through a combined goods receipt/goods issue in repetitive manufacturing (you make the corresponding setting in the repetitive manufacturing profile).

95. EXPLAIN THE "VARIANCES ON PRODUCTION ORDERS."

The **variances on production orders** are caused by differences between the actual costs incurred and the *standard cost*. The variances may be calculated for a production order with the settlement type FUL if the production order has the status DLV or TECO. The variances are settled to CO-PA.

The *variance calculation function* in Cost Object Controlling enables you to analyze these differences, by breaking down the variance into detailed *variance categories*. The variance categories reveal the cause of the difference.

96. LIST THE "VARIANCE CATEGORIES" THAT CAN BE ASSIGNED TO COST OBJECT CONTROLLING.

The following variance categories can be assigned to cost object Controlling in CO-PC:

- Input price variances: are caused, for example, when the planned price of an activity differs from the actual price, or when the moving average price of a raw material has changed by the time it is used.
- Input quantity variances: are caused, for example, when the quantity of an activity or material used does not equal the planned quantity.
- Resource-usage variances: are caused, for example, when a material is replaced by a different material.
- Other variances.

97. WHAT ARE THE FOUR DIFFERENT "OVERHEAD TYPES" APPLIED TO A PRODUCTION ORDER?

The four **overhead types** that are applied to a production order include:

- Administrative overhead costs
- Labor overhead costs
- Machine overhead costs
- Material overhead costs

The labor and administrative overhead costs are collectively called the production overhead costs, and are based on direct costs of production.

98. GIVE EXAMPLES OF "MATERIAL OVERHEAD" COLLECTED IN A PRODUCTION COST CENTER.

A production Cost Center collects all indirect costs related to the material. The *material overhead rate* is based on the cost of the material components that were issued to the order during the period (the direct materials costs). Some examples of such **material overhead costs** are:

- Administrative costs
- Quality inspection costs
- Storage costs

99. GIVE EXAMPLES OF "MACHINE OVERHEAD COSTS."

The **machine overhead costs** are all the indirect costs based on the machine time can be collected in a production Cost Center. The machine overhead rate is based on the machine time that was confirmed for the production order in the period. Some examples of machine overhead costs are:

- Lubricants
- Maintenance costs
- Setup costs

100. WHAT IS "LABOR OVERHEAD?"

The **labor overhead costs** include all indirect costs based on the labor time. The labor overhead rate for personnel is based on the labor time allocated to the production order in the period in which they are incurred. The following are some of the examples of labor overhead:

- Costs for human resources (proportional to the number of production workers)
- Payroll costs (proportional to the number of production workers)

101. WHAT ARE THE "ADMINISTRATIVE OVERHEAD COSTS?"

The administrative overhead costs include all indirect costs based on the labor time.

- Company pension plan (costs for benefits such as pension plans must be based on the time period of manufacture, and are allocated on the basis of the anticipated quantity that will be produced in the period)
- Depreciation on assets such as machines and buildings
- General administration
- Research and development
- Social facilities at the company (such as a kindergarten)
- Voluntary social contributions

102. EXPLAIN "WORK-IN-PROCESS."

The **work-in-process (WIP)** refers to the unfinished products whose costs are calculated either (a) by calculating the difference between the actual costs charged to an order and the actual costs credited to the order, or (b) by valuating the yield confirmed to date for each milestone or reporting point, less the relevant scrap.

The WIP is computed by the WIP calculation function. When this function is run, WIP is calculated for the production orders whose status is **REL**

(Released). The values calculated in the WIP calculation process (such as the work in process and reserve for unrealized costs) are called results analysis data which is posted to the production order under what are called *results analysis cost elements*. It is possible to view and analyze the results analysis data in the Product Cost Controlling Information System.

103. HOW IS "WORK-IN-PROCESS" SETTLED?

The WIP is capitalized (or the reserve is carried as a liability) in the settlement process. If results analysis data is settled to Financial Accounting, the production order is not credited. The posting in Financial Accounting is triggered by the settlement.

104. WHEN THERE WILL BE NO "WIP" CALCULATED?

If a production order is created, released, and closed all in the same period, no WIP will be calculated. Consequently, the settlement will not post any WIP to FI.

105. WHAT HAPPENS TO "WIP" IF THE PRODUCTION ORDER REMAINS OPEN FOR SEVERAL PERIODS?

If a production order remains open for several periods, the results analysis data is recalculated in each period. The system settles the difference to the value of the previous period to FI.

106. WHEN IS "WIP" IS CANCELLED?

When the WIP calculation function is run, WIP is cancelled for production orders whose status is **DLV** (Delivered) or **TECO** (Technically completed). In the month in which the production order is fully delivered (status: Delivered), the period-end closing process calculates zero work in process. The posting record in FI for the cancellation of the WIP is: Unfinished Goods Inventory Change is debited and Unfinished Goods Inventory is credited.

107. WHAT LOGISTICAL PROCESSES CAN BE USED WITH CO-PC-OBJ?

The following are some of the logical process types that can be used with cost object Controlling:

- Assembly processing
- Collective orders
- Customer-specific external activities
- Customer-specific external procurement
- Customer-specific services (say, onsite assembly)
- Production with MRP (Material Requirements Planning)
- Rework
- Sales-order-related production with planned orders (repetitive manufacturing)
- Subcontracting (with valuated sales order stock)
- Variant processing

108. WHAT IS "MATERIAL REQUIREMENTS PLANNING (MRP)?"

Material requirements planning (MRP) is a term for procedures in materials planning that take into account and plan for every future requirement during the creation of procurement proposals such as independent requirements, or dependent requirements. MRP is multilevel: that is, planned orders, purchase requisitions, and stock transport orders are also generated for secondary requirements.

The planning run, known as **MRP run,** is divided into the following main work-steps:

- Net requirement calculation
- Lot-size calculation
- Procurement element and type determination
- Scheduling

109. WHERE YOU WILL USE “MRP?”

You can use **MRP** both with individual requirements materials (*sales-order-related production*) and with collective requirements materials (*make-to-stock production*).

In material requirements planning:

- Planned orders for materials produced in-house are generated, which are converted into manufacturing orders.
- Purchase requisitions (PR) for externally procured materials are generated, which are converted into a purchase order.
- Stock transport orders (STO) are created for stock transfers of finished materials.

The cost objects can be manufacturing orders and product cost collectors as well as cost object hierarchies and sales order items.

110. WHAT IS “ASSEMBLY PROCESSING?”

You will use **assembly processing** if you want to trigger the assembly of individual parts or assemblies into a finished product right when you create a sales order. In assembly processing, the dependent requirements are usually taken from inventory. That is, the materials that go into the finished product are collective requirements materials. However, you can also use assembly processing in conjunction with dependent requirements that are controlled by individual requirements. You can also use collective orders in assembly processing.

The assembly processing enables you to skip over MRP and materials planning for the sales order, and generate the following orders directly from the sales order:

- Manufacturing order (also called an assembly order)
- Planned order in repetitive manufacturing
- Service order in maintenance tasks

111. WHAT IS AN “ASSEMBLY ORDER?”

Also known as **manufacturing order**, an **assembly order** is a request to assemble pre-fabricated parts and assemblies into a finished product for an existing sales order. An assembly order can be a production order or process order.

112. EXPLAIN "VARIANT PROCESSING."

From the large number of possible variants of a product (configurable material), the desired components are selected in the sales order item by valuating the characteristics of the product. This creates a specific, manufacturable product variant (configured material) in the sales order item. Selecting a particular characteristic value may bring up other required characteristics that must be selected (such as *dependent components* or *operations*). The relationships between the components and the operations are stored as *object dependencies* in variant configuration.

The product variant is manufactured with a manufacturing order or planned order.

113. WHAT IS A "CONFIGURABLE MATERIAL?"

You do not need to create a separate material for each variant of a product in your company. You can use one **configurable material** (use Transaction Code MK01) to cover all variants. You create a *super BOM* and a *super routing* for this material, containing all the components and operations for producing all variants of the product desired.

114. HOW WILL YOU MAKE A MATERIAL AS A "CONFIGURABLE" ONE?

You can create a material as "configurable" using a material type that has the configurable indicator defined in Customizing: this means that all materials created with this material type are configurable. In the standard system, material type **KMAT** is defined for this purpose. You can define individual materials of other material types as configurable; to do this, set the "Material is configurable" indicator in the Basic data of the material master record.

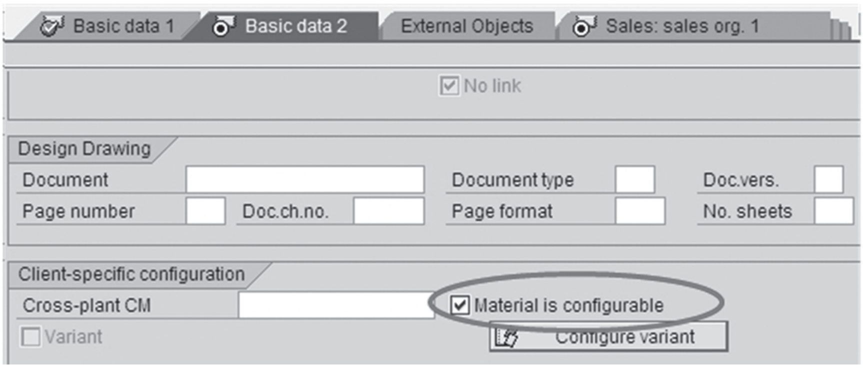


FIGURE 6.42 Configurable Material Specification in Material Master

115. WHAT WILL BE THE "COST OBJECTS" IN VARIANT PROCESSING?

The cost objects that can be used in variant processing are outlined in Table 6.8, along with the suitable production environment and the recommended costing function.

TABLE 6.8 Processing Methods in "Complex Make-To-Order" Production

Interested in to understand	Cost Object	Production environment used?	What Costing function to be used	Remarks
Cost of the Product	Manufacturing Order Product Cost Collector	Mass production on the basis of Sales Orders	Product Cost by Order or Product Cost by Period	The manufacturing order for the configured material contains only those material components and operations that were selected in the configuration process.
Cost of Sales Order item	Sales Order item in addition to the Manufacturing Order	Complex Make-to-Order production	Product Cost by Sales Order	If you have made order-specific changes to the variant in variant manufacturing

116. WHAT IS A "COLLECTIVE ORDER?"

A **collective order** is a logistical linkage of planned orders, production orders, or process orders across multiple manufacturing levels. The system generates a collective order when you create a production order for a material whose components have a special procurement key ("52") for direct production in the MRP view of their master record. A collective order consists of:

- *Leading order* (This is the order at the highest level of the collective order. It is created to manufacture the finished product.)
- *Dependent orders* (All orders below the leading order are dependent orders. The system automatically creates the dependent orders for the leading order. Dependent orders can be subordinate to each other on multiple levels of the collective order.)

The collective orders represent multilevel production structures for materials produced in-house in which the manufacturing order for the highest material in the structure automatically generates manufacturing orders for the semi-finished products in the structure. The changes to higher-level orders (such as a changed order quantity or release of the order) are immediately reflected in all dependent orders when the order is saved. The output quantity of the manufacturing orders for the semi-finished products is the quantity required for the manufacture of the highest material. You can analyze the costs for collective orders in the Product Cost Controlling Information System in special reports.

117. WHAT ARE THE TWO WAYS OF PROCESSING "COLLECTIVE ORDERS?"

There are two ways of processing collective orders in Cost Object Controlling:

- *Collective orders with automatic goods movements*
  - All orders in the collective order are processed in Cost Object Controlling in the same way as the orders that are not in the collective order. Goods movements take place between the levels of the collective order. This means that a goods receipt is automatically posted to the higher-level production order when the lower-level manufacturing orders are delivered to stock.

SAP recommends the use of collective orders with automatic goods movements.

- *Collective orders without automatic goods movements*
    - No goods movements take place between the levels of the collective order. No MM documents are generated. In *make-to-order production* and with a valuated sales order or project stock, the orders are credited the planned costs at the time of final confirmation of the operation. The higher-level order in each case is debited with the planned costs at the same time. The difference between the debit and credit is settled to the higher-level order at the end of the period. Only the leading order delivers to stock and settles to inventory (receiver = material). In sales-order-related production and in engineer-to-order with a non-valuated stock, the leading order is not credited at the time of the goods receipt. The full cost is passed to the sales order item or WBS element when you settle.

118. EXPLAIN "SUBCONTRACTING" WITH VALUATED SALES ORDER STOCK.

The "sales-order-related production" can also support **subcontracting**. The *Individual/collective indicator* in the MRP view of the material master record controls whether the provided parts come from the *valuated sales order stock* or from the *subcontracting stock*.

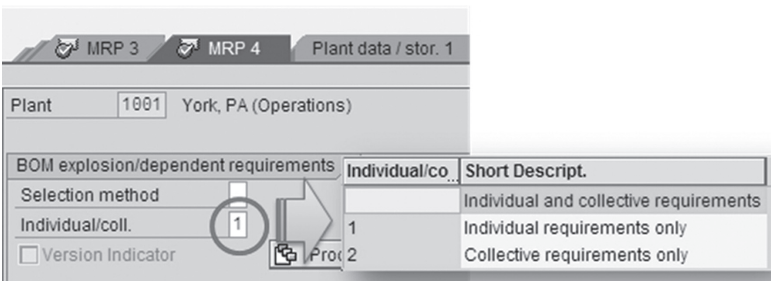


FIGURE 6.43 Individual / Collective Requirements Indicator in Material Master

If it is specified there that the material is an *individual requirements* material, the material provided is taken from the valuated sales order stock. If it is specified there that the material is a *collective requirements material*, the material is taken from the subcontracting stock. When the goods receipt is posted for the subcontracted material, the system debits the inventory account and credits the inventory change account. The subcontracted material is posted to the valuated sales order stock. The other postings correspond to the normal procedure in classical subcontracting. This means that the goods issue of the provided materials and the subcontracting itself are posted at the same time as the goods receipt for the subcontracted material.

119. WHAT IS "REWORK" IN CO-PC?

It may be required sometimes, during or at end of a production process, to execute additional operations in order to improve components or products with insufficient quality. These operations or the work performed to correct defects in a product after it has been manufactured are called **rework**. Note that the cost of rework is interpreted as a variance.

The rework can be incorporated into the production process by:

- Inserting additional operations into the production order where rework is required.
- Inserting a reference operation set.
- Creating a separate production order without a material and assigning it to the original production order.

If rework frequently occurs at particular points in the production process, you can assign trigger points to operations, which then automatically trigger (a) insertion of reference operation set via trigger point or (b) creation of rework order via trigger point.

120. WHAT IS A "TRIGGER POINT" IN REWORK?

A **trigger point** is an object that can be assigned to an operation in order to trigger a function. The trigger points can trigger different functions depending upon a set situation (Table 6.9). To minimize the effort involved in creating trigger points, you can create standard trigger points and trigger point groups.

TABLE 6.9 What can be Triggered through Trigger Points

When triggered?	Example
If the status of an operation changes	You assign a trigger point to operation 30. In the trigger point you specify that when operation 30 is released, the operation(s) that come directly after it are also to be released. As soon as the system status 'REL' is activated in operation 30, the system automatically releases the directly succeeding operation(s)
When an operation is confirmed: here, the user decides whether the function is triggered	You assign a trigger point to operation 40. In the trigger point you specify that the following functions can be triggered manually during confirmation: Include a reference operation set Create a new order When you confirm operation 40, a list of the all the functions that can be triggered manually for this operation is displayed. (In this example this is *Include reference operation set and Create order.*) You decide whether you want to trigger one of these functions.
By linking a user status to a 'reason for variance'	In Customizing, you have specified that the user status 'MLF' (malfunction) is to be activated automatically in an operation, every time '00011' (tool breakage) is entered as a reason for variance during a confirmation. Now, you assign a trigger point to operation 50. In the trigger point you specify via a workflow task that mail is to be sent to a particular MRP controller, as soon as the user status 'MLF' is activated in the operation. If '00011' is entered as a reason for variance when operation 40 is confirmed, the trigger point causes mail to be sent to the MRP controller.

121. LIST THE FUNCTIONS THAT CAN BE TRIGGERED VIA TRIGGER POINTS IN CO-PC.

As of now, SAP provides you with the following functions that can be triggered via the trigger points:

- Creating a new order by copying (without reference to material, using a reference operation set)

- Including a reference operation set (include a reference operation set in the existing order; you need to specify the operation after which the operation set is to be inserted)
- Releasing directly succeeding operations (release all operations which come directly after the operation)
- Releasing operations up to "stop" indicator (release all operations up to and including the next operation with a release stop indicator)
- Releasing preceding operations (release all operations which come before the operation in the order)
- Triggering a workflow set (trigger a task defined as a workflow)

122. WHAT ARE THE "PRIMARY COST ELEMENT CATEGORIES" USED IN CO-PC-OBJ?

The following **primary cost element categories** are used in Cost Object Controlling:

- *01: Primary cost elements, general* (These can be debited with all primary postings (such as FI or MM). Accounting documents are generated for these postings.
- *22: Cost elements for external settlement* (These are required, for example, for settling order or project costs to CO-external objects. CO-external objects are objects such as fixed assets (AM), materials (MM), or G/L accounts (FI). Settlement generates an accounting document trigger.)

123. WHAT ARE THE "SECONDARY COST ELEMENT CATEGORIES" USED IN CO-PC-OBJ?

The following **secondary cost element categories** are used in Cost Object Controlling:

- *21: Cost elements for internal settlement* (for settling order or project costs to CO-internal objects. CO-internal objects are such things as orders, profitability segments, Cost Centers, and projects.)
- *31: Cost elements for results analysis* (for saving the data generated

during WIP calculation or results analysis on the order or project)

- *41: Cost elements for overhead rates* (to allocate overhead from Cost Centers to orders, projects, and other objects)
- *43: Cost elements for direct internal activity allocation* (used by the system in internal activity allocation to allocate costs)

124. WHAT ARE THE "REVENUE ELEMENT CATEGORIES" USED IN CO-PC-OBJ?

Some cost objects such as sales order items and internal orders with revenue can carry revenues as well as costs. Revenues use the following cost element categories:

- *11: Revenues*
- *12: Sales deductions*

125. LIST THE "PP MASTER DATA" USED IN CO-PC.

The following are the **PP master data** used in CO-PC:

- BOM
- Routing / Rate Routing
- Work Center (Production Line in Repetitive Manufacturing)
- Material Master Record

126. WHAT ARE THE TWO VIEWS OF MATERIAL MASTER THAT ARE RELEVANT FOR CO-PC-OBJ?

A material master record contains all information necessary to manage a material. The following views are important in Cost Object Controlling (Table 6.10):

- Accounting view
- Costing view

TABLE 6.10 Control Information in Accounting / Costing View of Material Master

Accounting View	Costing View	
Controls the valuation of the material and the assignment of the material to a G/L account and therefore to a primary cost element	Whether the material number (the *Origin)* is updated in the cost element itemization in the *Controlling* component (this is to ensure that the material number for material costs is displayed in the information system)	Whether the consumption of the material is subdivided according to origin groups (this allows you to create groups of raw materials or trading goods for purposes such as calculating overhead uniformly for each group)
Shows the sum and the value of all valuated inventories of the material	The basis on which overhead costs for the material can be calculated (overhead group)	Whether variances for orders are calculated through this material
Contains prices that can be transferred from inventory cost estimates for the material (tax price 1 and commercial price 1)	Whether the material is normally costed in product costing or unit costing The status of the material	How BOMs and routings are selected for cost estimates with quantity structure The default lot size for costing

127. WHAT DO YOU CHECK IN BOM BEFORE CREATING A COST ESTIMATE?

You need to check the following in BOM before creating a cost estimate:

- BOM status (Can the BOM be selected for costing?)
- BOM usage (Is the BOM relevant to costing?)
- Indicator for relevancy to costing of the BOM item (This determines whether the individual material components are included in the standard cost estimate and preliminary cost estimate for the order. If this indicator is not selected, the material component will not be costed. For inventory cost estimates, this indicator determines the factor applied to the costs calculated for the material component.)
- Lot size range in which the BOM is valid
- Validity period of the BOM
- Validity period of the BOM item

128. WHAT DO YOU CHECK IN ROUTING BEFORE CREATING A COST ESTIMATE?

You need to check the following in Routing before creating a cost estimate:

- Key date
- Control key of the operation (If the control key says that the operations are costed, you can use the indicator for relevancy to costing to specify which factor is used to cost the activities in the operation for the inventory cost estimate. Otherwise the indicator for relevancy to costing is set to X (relevant to costing) or blank (not relevant to costing.)
- Indicator for relevancy to costing of the operation
- Lot size range in which the routing is valid

129. WHAT DO YOU CHECK IN WORK CENTER BEFORE CREATING A COST ESTIMATE?

You need to check the following in Work Center before creating a cost estimate:

- Activity Types (You can specify up to six Activity Types for each work center.)
- Business process (if applicable)
- Formulas (To enable a formula to be used to calculate the production costs, the indicator *Costing allowed* in Customizing for *Product Cost Controlling* must be set for this formula. You should also make sure that the formula parameters are linked to values that have been entered in the routing.)
- Link to Cost Center

130. WHAT ARE ALL THE CONTROL PARAMETERS IN CO-PC-OBJ?

The following table illustrates the various control parameters in Cost Object Controlling (Table 6.11).

TABLE 6.11 Control Information in Accounting / Costing View of Material Master

Activity	Control Parameters
Costing	• Valuation Variant
	• Costing Variant
	• Costing Sheet
	• Overhead key
WIP Calculation	• Results Analysis (RA) Key
Variance Calculation	• Variance Key
	• Variance Variant
	• Target Cost Version
Settlement	• Default Rule
	• Settlement Rule
	• Distribution Rule
	• Settlement Type
	• Settlement Profile
	• PA Transfer Structure
	• Allocation Structure

131. WHAT IS A "RESULTS ANALYSIS (RA) KEY?"

Used in the calculation of WIP, a **results analysis (RA) key** must be specified in the order so that the order is included when WIP is calculated at the end of the period. It is specified as a separate default value for each order type and plant. There are different RA keys for WIP at actual costs, WIP at target costs, and for results analysis.

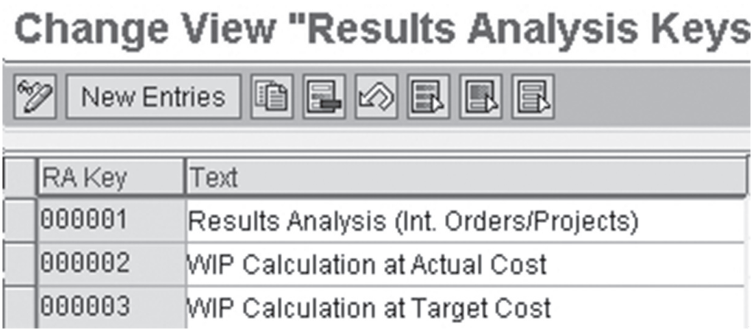


FIGURE 6.44 Results Analysis Keys

Transaction Code
OKG1

132. WHAT IS A "VARIANCE VARIANT?"

Specified in the target cost version, the **variance variant** controls which *"variance categories"* are included in variance calculation.

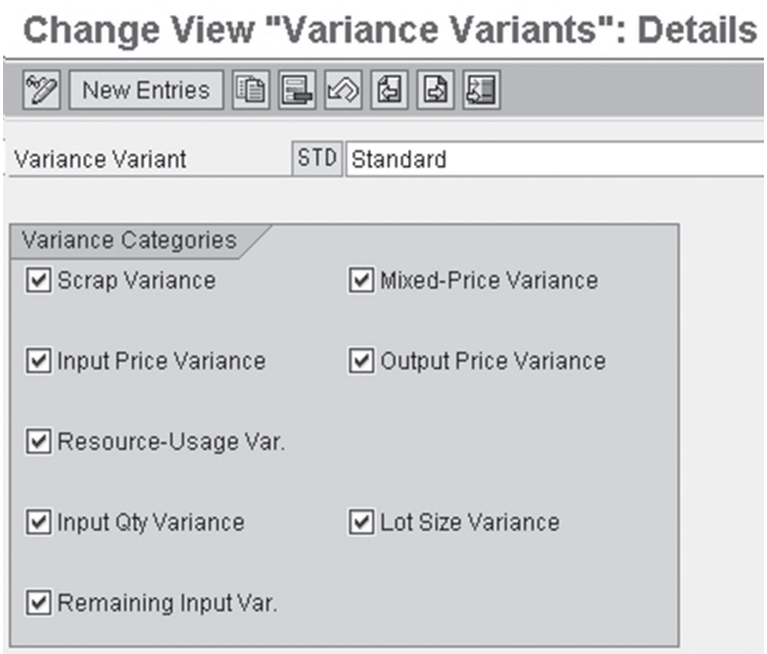
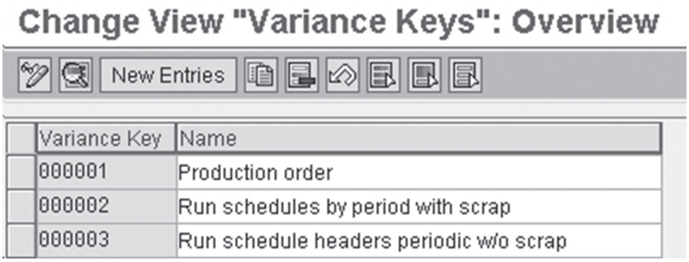


FIGURE 6.45 Variance Variant

Transaction Code
OKVG

133. WHAT IS A "VARIANCE KEY?"

A **variance key** must be specified in an order so that the order is included when the variances are calculated during period-end closing. The variance key also controls whether scrap should be calculated in variance calculation and whether line items are written for the transaction variance calculation. This key is stored as a default value for each plant and transferred from there into the material master record of the plant materials. When you create an order for the material, the variance key is transferred into the order header as a default value.


Change View "Variance Keys": Overview

New Entries

Variance Key	Name
000001	Production order
000002	Run schedules by period with scrap
000003	Run schedule headers periodic w/o scrap

FIGURE 6.46 Variance Keys

Transaction Code
OKV1

134. WHAT IS A "TARGET COST VERSION?"

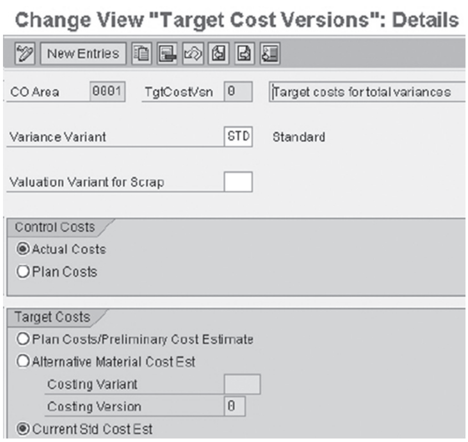


FIGURE 6.47 Target Cost Version

Entered when calculating the variances, the **target cost version** determines which variances the system calculates (total variance, production variance, or planning variance). This means that you specify in the target cost version which costs are used in variance calculation as target costs and which costs are used as control costs.

Transaction Code
OKV6

135. WHAT IS A "DEFAULT RULE" IN ORDER SETTLEMENT?

The **default rule** is the critical control parameter for costing products by lot or by period. Proposed through the order type and plant, the default rule specifies a *settlement rule*.

136. WHEN WILL YOU HAVE A "DISTRIBUTION RULE" WITH 100% TO MATERIAL?

The distribution rule is usually 100% to material in the following cases:

- In make-to-stock production and sales-order-related production with a valuated sales order inventory
- When the system normally generates the first distribution rule automatically, when you create the order

137. EXPLAIN THE "SETTLEMENT TYPES" USED IN CO-PC-OBJ.

The **settlement type** is selected through the default rule and determines how settlement is performed. There are two settlement types:

- **FUL:** Here, the settlement is carried out in full, and is used in lot-based cost object Controlling. It can be used in conjunction with production orders and process orders. With settlement type FUL, the WIP is always valuated at actual costs. This means that with this settlement type, the difference between the debit of an order through postings of actual values and the credit of the order through goods receipt postings is interpreted as work in process as long as the order has the status REL (released). If the order has the status DLV (delivered) or TECO (technically completed), the system interprets the difference between the debit and credit as a variance. With settlement type FUL, an order can never have both work in process and variances at the same time. Settlement type FUL is determined through default rule PP1.

- **PER**: Here, the settlement is performed by period, and is used in periodic cost object Controlling. With settlement type PER the WIP is always valuated at target costs. With settlement type PER the difference between the target costs and the actual costs less WIP and scrap is reported as a variance. WIP, scrap, and variances can exist simultaneously on a cost object during a period. If the work in process for an order is valuated at target costs, the variances are calculated for the order by period. Settlement type PER is used for (a) manufacturing orders, determined through default rule PP2, and (b) product cost collectors, determined through default rule STR.

138. WHAT IS A "COST OBJECT HIERARCHY?"

A **cost object hierarchy** is a hierarchy consisting of cost object nodes, and is used to analyze target costs, actual costs, and variances in situations where costs are not collected at the level of orders or materials. A cost object hierarchy consists of cost object nodes to which (a) material/plant, and (b) material/plant/production process can be assigned. This assignment enables product cost collectors, manufacturing orders, and CO orders to be selected that belong to a particular cost object node. At the level of the cost object hierarchy, price differences can be passed on to stock and from there to Financial Accounting (FI) and Profitability Analysis (CO-PA). It is also possible to distribute the costs to the assigned orders and settle them from there.

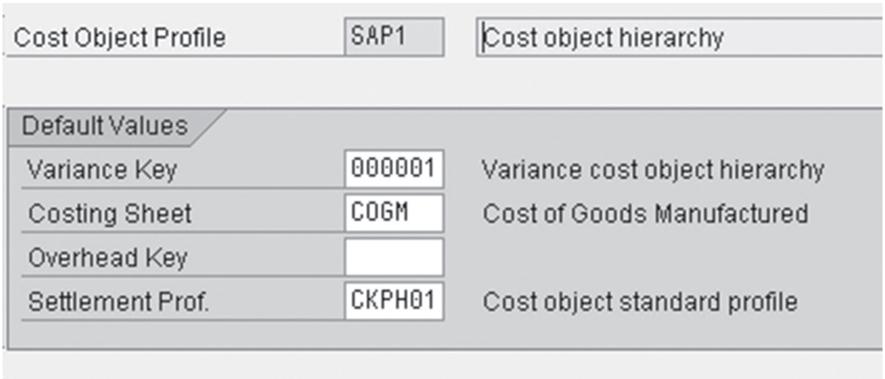


FIGURE 6.48 Cost Object Hierarchy

Transaction Code
OKZ6

139. WHAT ARE "PRODUCTION PROCESSES?"

The **production processes** are procurement processes of the process category *Production*. If you are using a given material in different manufacturing processes, production processes allow you to collect the quantities for each quantity structure (such as for each production version) and use those quantities for evaluation or analysis purposes. The production processes are used (a) in the Product Cost by Period component, and (b) when the Actual Costing / Material Ledger application component is active. The quantities updated by the production process are valuated and the resulting costs allocated to the cost object. The production order is assigned to a production process.

140. WHAT IS KNOWN AS "CONTROLLING LEVEL" IN CO-PC?

The **Controlling level** determines the level in Product Cost Controlling at which you can perform the following activities for a material:

- Calculate planned values

- Calculate actual values
- Calculate target values
- Analyze costs

There is only one Controlling level for each plant and process category for a given material. By means of various characteristics, this Controlling level determines the level of detail of the procurement alternatives created. The standard setting for the Controlling level is determined by the characteristics Material/Plant.

141. WHAT IS A "JOINT PRODUCTION?"

Joint production is a production process that yields two or more products (called co-products or joint products) in a single production run. In shop floor control, a manufacturing order (usually a process order) is created to manufacture co-products. In joint production, the system normally accesses master data of Production Planning for the Process Industries (PP-PI) such as the master recipe and materials list, or master data of Production Planning (PP).

To distribute the planned and actual costs to the co-products, the system uses the apportionment structure that can be specified the material master record or in the manufacturing order itself. However, you can indicate in the material master that the co-product is a fixed-price co-product. Once you have done this, the material is entered in the cost estimate with the price that you specified, and price calculation does not involve a cost apportionment structure.

142. WHAT IS A "CO-PRODUCT?"

Co-product is a product that is produced in process industries in addition to other products in the manufacture of co-products. You specify that a material is a co-product by selecting the *Co-product indicator* in the MRP view or costing view of its master record.

143. WHAT IS A "PROCESS MATERIAL?"

A **process material** is a non-stock material that is used in the system to represent the process by which co-products are produced. Instead of the primary products, you can enter a process material in the recipe header and in the order header. Process materials have material type **PROC**.

144. WHAT IS A "BY-PRODUCT?"

A **by-product** is a product that is produced incidental to the production process of other products. You enter by-products in the material list of a primary product or process material with a *negative* quantity. You do *not* set the *Co-product indicator* in the MRP view or costing view of the master records of by-products.

145. WHAT IS AN "INFRA MATERIAL?"

Intra materials only exist temporarily between two processing units. They appear in the material list as items of category **M**, but are not costed. If the process is interrupted because of a malfunction, however, intra materials may have to be transferred into inventory. In this case they are valuated with a price in the material master that is selected through the valuation variant for the valuation of goods received. Intra materials have material type I**NTR.**

146. WHAT IS A "CIRCULATING MATERIAL?"

The **circulating material** is a material used in a process that is also partially recovered or recycled, such as a catalyst. It appears twice in the material list, as an ingredient and as a yield. If the circulating material is flagged as relevant to costing, the material costs appear in the itemization twice: once with a plus sign and once with a minus sign. The balance is the material input costs.

147. WHAT IS A "COSTING SHEET?"

The **costing sheet** is a definition of how values posted in the SAP System are calculated.

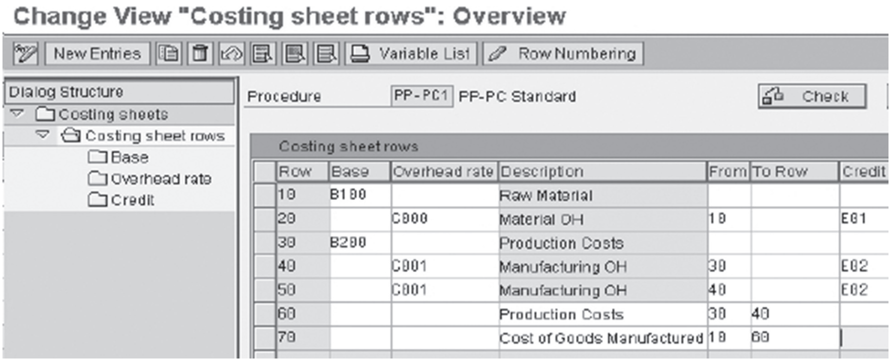


FIGURE 6.49 PP-PC Standard Costing Sheet

A costing sheet consists of one or more of the following lines:

- Base lines (Calculation base): contain the amount or quantity on which the overhead is calculated.
- Calculation lines: contain the percentage rate to be applied to one or more base lines.
- Totals lines (Total rows): contain the sum of the base amount and calculated amounts.

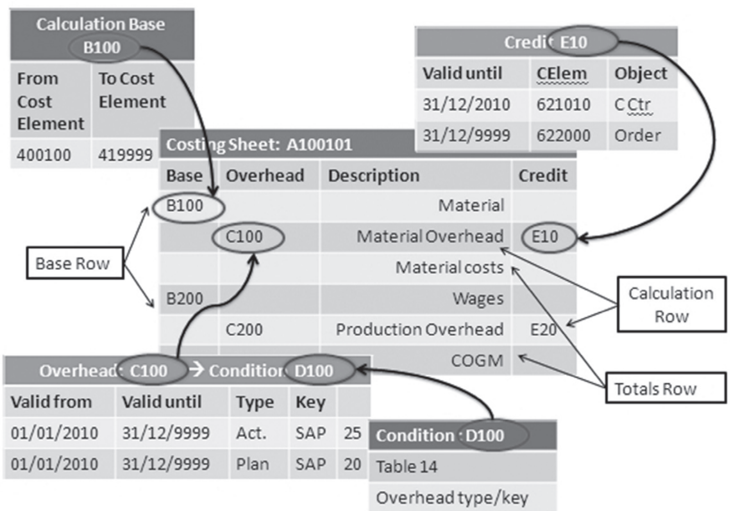


FIGURE 6.50 Costing Sheet: The Elements

The costing sheets are used in various Controlling components (Table 6.12).

TABLE 6.12 Control Information in Accounting / Costing View of Material Master

Controlling Component	Costing Sheet is used for:
Overhead Orders (CO-OM-OPA)	Overhead calculation
Product Cost Controlling (CO-PC)	Overhead calculation
Profitability Analysis (CO-PA)	Anticipated values calculation
Overhead Cost Controlling (CO-OM)	Resource price calculation
Activity Based Costing (CO-OM-ABC)	Process cost allocation (also)

148. WHERE DO YOU SPECIFY "COSTING SHEET" FOR MATERIAL / REFERENCE AND SIMULATION COSTING?

Table 6.13 outlines where you need to specify the costing sheet in respect of material costing / reference and simulation costing.

TABLE 6.13 Costing Sheet Maintenance for Material / Reference & Simulation Costing

Controlling Component	Costing Sheet is specified in
Material Costing	Valuation Variant (in Customizing)
Reference and Simulation Costing	Master record of Base Planning Object

149. EXPLAIN THE "CALCULATION BASE" IN A COSTING SHEET.

The **calculation base** (say B100, B200, etc.) consists of a group of cost elements to which overhead is applied according to the same conditions. This process involves assigning individual cost elements or cost element intervals to a calculation base. This assignment is done separately for each Controlling Area.

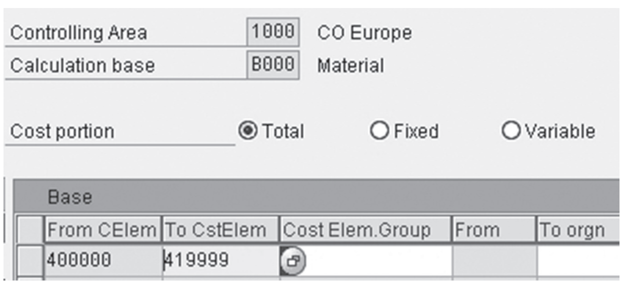
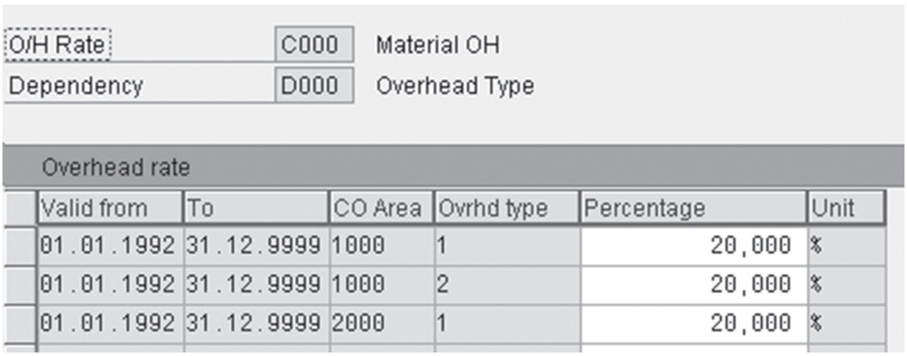


FIGURE 6.51 Costing Sheet: the Calculation Base

You can apply different overhead amounts to the fixed and variable portions of a given base cost element. You can also have different overhead rates for different materials. You do this by entering the origin groups in the material master records and then specifying these origin groups in the calculation bases.

150. HOW ARE "OVERHEAD RATES" ARE APPLIED IN A COSTING SHEET?

As already explained in Chapter 2 (Q16), the **overhead rates** are applied to the calculation base either as a lump sum per quantity unit or as a percentage of the direct costs. You also specify the validity period and the conditions under which the overhead should be calculated. The system calculates the overhead amount either as a percentage or based on the quantity.


O/H Rate C000 Material OH
Dependency D000 Overhead Type

Overhead rate

Valid from	To	CO Area	Ovrhd type	Percentage	Unit
01.01.1992	31.12.9999	1000	1	20,000	%
01.01.1992	31.12.9999	1000	2	20,000	%
01.01.1992	31.12.9999	2000	1	20,000	%

FIGURE 6.52 Costing Sheet: the Overhead Rate

The conditions under which overhead is to be applied are defined in *condition tables*. The standard condition table is linked to a Controlling Area, an Overhead Type (planned or actual), and to one other field of the object"s master record (such as the plant or overhead key). Hence the conditions for overhead calculation can relate to all the reference objects of an organizational unit, or to an Overhead Key.

These rows also contain a Credit Key, which determines the cost element with which the overhead is applied, and which cost center, business process, or order is credited. You can also specify which part of the overhead should be reported as fixed costs.

Controlling Area	1000	CO Europe
Credit	E01	Credit Material

Credit

Valid to	Cost Elem.	OrGp	Fxd %	Cost Center	Order	Business Pro...
31.12.9999	655110		*	4130		

FIGURE 6.53 Costing Sheet: the Credit Key

151. IS IT POSSIBLE TO INCLUDE "PROCESS COSTS" IN A MATERIAL COST ESTIMATE?

Using ABC (Activity Based Costing), you may assign the **process costs** (the costs incurred for business processes, calculated by multiplying the price of a business process by the quantity performed) on a source-related basis to the material cost estimate in CO-PC-OBJ. You may include the process costs (a) through *templates* or (b) by incorporating business processes in the routing though the PP component.

ItmNo	Resource	Cost Eleme	Resource (Text)	Σ	Total Value	Currncy	Quantity	Un
27	000000300900	629900	Arbeitsvorbereitung		12,00	EUR	1	PC
28	000000400900	629000	Kundenauftragsbearbe		0,00	EUR	1	PC
Process Costs ABC				▪	**12,00**	**EUR**		
4	1000 100-100	890000	Gehäuse		11.375,90	EUR	100	PC
5	1000 100-200	890000	Laufrad		5.747,80	EUR	100	PC
6	1000 100-300	890000	Welle		20.393,40	EUR	100	PC
7	1000 100-400	890000	Steuerelektronik		3.542,00	EUR	100	PC
8	1000 100-500	890000	Lagerträger		1.032,38	EUR	100	PC
9	1000 100-600	400000	Stützfuß		2.560,00	EUR	100	PC
10	1000 100-700	400000	Blech ST37		163,84	EUR	64,00	M2
11	1000 100-130	400000	Sechskantschraube M1		400,00	EUR	800	PC
Material				▪	**45.215,32**	**EUR**		
29	4130 655100	655100	GMKZ Rohmaterial		312,38	EUR		

FIGURE 6.54 Process Costs (from ABC) in a Material Cost Estimate

152. HOW CAN YOU INCLUDE "PROCESS COSTS" IN A MATERIAL COST ESTIMATE?

The **template** is a tool for including process costs from Activity-Based Costing (ABC) in cost estimates, enabling you to dynamically determine and valuate the process quantities used at the time of costing. Because templates are not dependent on the reference object, the appropriate template must be selected at the time of evaluation. Depending on the Controlling area, costing sheet, overhead key, and environment, you can specify which template should be used for the cost estimate.

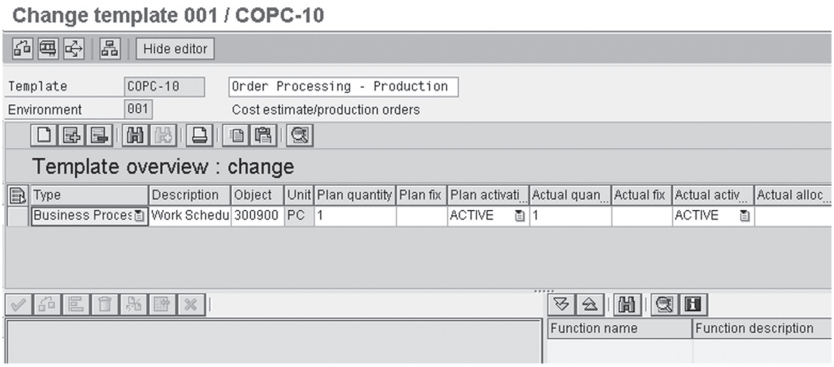


FIGURE 6.55 Template

Transaction Code
CPT2

(Refer to Chapter 5, *Activity Based Costing*, for more details on "templates.")

153. WHAT IS "REVALUATION AT ACTUAL PRICES?"

The **revaluation at actual prices** supplements revaluation of activity allocations between cost centers and business processes. It is used to correct activity allocations that occurred previously from cost centers or business processes to other cost accounting objects. You can use revaluation at actual prices for the following objects:

- Cost object nodes in a cost object hierarchy
- General cost objects
- Internal orders
- Networks / Network activities
- Process orders

- Product cost collectors
- Production orders
- Projects
- Sales document items (for example, sales orders)
- WBS elements

The method you use for the revaluation depends on the price indicator that you specified in the fiscal year dependent parameters in version 0 in customizing. You can set the following price indicators:

- *Average price* (This is price based on the costs and activity quantities of all periods. You post the revaluation in the period in which the activity was incurred.)
- *Cumulative price* (This is price based on the costs and activity quantities of all periods. You post revaluation of the current period and all previous periods to the current period.)
- *Period price* (These are periodically differentiated prices, based on the costs and activity quantities for the period.)

154. EXPLAIN THE "COSTS FOR INTANGIBLE GOODS AND SERVICES" COMPONENT IN CO-PC-OBJ

The application component **Costs for Intangible Goods and Services** provides capabilities for analyzing the costs of intangible goods and services. This component allows you to:

- Determine the costs for a general cost object over its entire life or by period.
- Collect actual costs on a general cost object when the actual costs were incurred from goods movements, postings in Financial Accounting, and postings in Controlling.
- Collect revenues on internal orders if the internal orders can carry revenues.
- Perform results analysis for the internal order when you are using internal orders that carry revenues.

However, if you are using a general cost object in the Costs for Intangible Goods and Services component, you cannot assign revenues to this cost object.

155. EXPLAIN THE OBJECTIVES OF THE "ACTUAL COSTING/MATERIAL LEDGER" COMPONENT OF CO-PC

The two basic objectives of the application component **Actual Costing/ Material Ledger** are:

- The ability to carry material prices in multiple currencies/valuations
- Actual costing

156. IS THERE A CONSTRAINT TO USING "ACTUAL COSTING/MATERIAL LEDGER?"

Yes, there are some constraints you need to take note of if you use the Actual Costing/Material Ledger component:

- Along with Actual Costing/Material Ledger component, you must also use *Logistics Invoice Verification* because ordinary invoice verification does not support Actual Costing/Material Ledger.
- Actual Costing/Material Ledger component cannot be used with the SAP Industry Business Solution SAP Retail.

157. WHAT IS "MATERIAL LEDGER?"

The **material ledger** is a tool that collects transaction data for materials whose master data is stored in material master, and uses this data to calculate prices to valuate these materials. It is the basis of actual costing, enabling material inventories to be valuated in multiple currencies and allowing the use of different valuation approaches. If you have activated the material ledger in a plant, you can update valuated goods movements in multiple currencies and valuations.

Note that the material ledger only supports active ingredient management for transaction-based material price determination.

158. EXPLAIN "ACTUAL COSTING."

The **actual costing** expands upon the functionality of the application components with the purpose of determining actual costs for externally procured materials and materials produced in-house. In addition, actual costing uses actual costs to valuate inventories of raw materials, semi-finished products, and finished products. It calculates an actual price (periodic unit price) for each material, into which all actual costs for the particular period flow.

159. WHAT IS THE CONCEPT BEHIND "ACTUAL COSTING?"

The **actual costing** valuates all goods movements within a period at the standard price (preliminary valuation). 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 period. This actual price is called the *periodic unit price* and can be used to revaluate the inventory for the period to be closed. In addition, you can use this actual price as the standard price for the next period.

Actual costing determines what portion of the variance is to be debited to the next-highest level using material consumption. The actual BOM enables variances to be rolled up over multiple production levels all the way to the finished product. Additionally, you can choose to have variances from cost centers and business processes also taken into account.

160. IS WIP INCLUDED IN "ACTUAL COSTING?"

The **Work in Process** (WIP) is not included in Actual Costing. That is, all materials consumed for a production process within the current month are processed in the withdrawal period, even if in part, or all of the delivery of the material to the warehouse takes place in a later period. The actual quantity structure is not adjusted when the WIP determination reposts the withdrawal costs to a WIP account. Any price differences for the consumed materials or activities are, therefore, completely accounted for in the production for that month.

161. EXPLAIN THE "ACTIVATION OPTIONS" FOR "ACTUAL COSTING / MATERIAL LEDGER."

The following table provides you a detailed view of the activation options when you consider using the application component Actual Costing / Material Ledger in Product Cost Controlling (Table 6.14).

TABLE 6.14 Activation Options for Actual Costing / Material Ledger

If you need	Activate	Additional
To carry material inventory values in multiple currencies/valuations	Material ledger	Choose transaction-based price determination (price determination indicator in the material master record = 2)
To calculate a periodic unit price for your materials based on the actual costs incurred in a period	Actual costing in addition to activating the material ledger	Choose single-level/multi-level price determination for your materials (price determination indicator in material master record = 3
To include variances from cost centers and business processes in addition to the material cost variances in Actual Costing	To activate activity consumption update in the quantity structure in addition to activating Actual Costing	

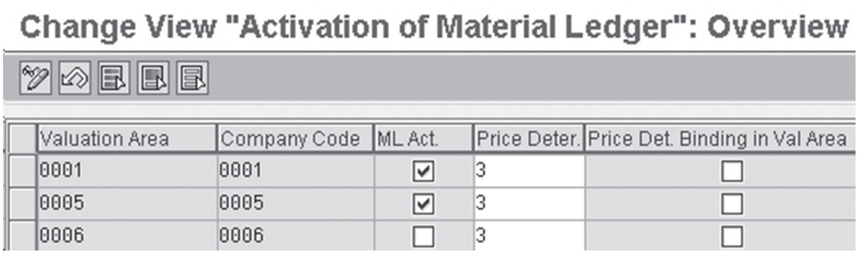


FIGURE 6.56 Material Ledger Activation

Transaction Code
OMX1

162. EXPLAIN THE "MULTI-CURRENCY VALUATION" IN "ACTUAL COSTING / MATERIAL LEDGER"

You can manage values for materials in up to three currencies using the component Actual Costing/Material Ledger. If you use the parallel valuation functions, the values in each currency can also represent a separate valuation view (such as legal valuation, group valuation, and Profit Center valuation). The system enables historical currency translation for valuation-relevant transactions. This means that items are translated using the exchange rate that was valid at the time of posting that item. The currency amounts that come from stock valuation, invoice verification, material cost estimates, and order settlement are translated into the other currencies in their respective areas and updated in the material ledger.

163. EXPLAIN THE "PRICE CONTROL WITH MATERIAL LEDGER"

When using the application component Actual Costing/Material Ledger, you only use the standard price as a preliminary valuation price in the current period. At the end of the period, you can use this component to calculate an average price for the material using the actual costs incurred in that period. You can then use this average price to valuate the material stock in the period in question. Actual Costing/Material Ledger, therefore, combines the advantages of price control using the standard price and the moving average price. SAP recommends that if you use Actual Costing/Material Ledger, you should also use standard price control of raw materials and trading goods to ensure consistent cost management of your production process. Only in this way are variances completely transparent within production.

164. WHAT ARE THE DISADVANTAGES OF USING "MOVING AVERAGE PRICE?"

- The main disadvantage of using the moving average price is that the price used to valuate a material consumption is almost completely dependent on the time at which the goods issue is posted in the system.

Example: An invoice receipt is posted in the system after a goods issue was entered, so that invoice value is not reflected in the value of the material issued. The material is therefore not valuated with its actual procurement cost.

- The moving average price also does little to guarantee consistent cost management of your production process.

  Example: The effect of changes in the production process are not recognizable in the finished product, and comparing results from different areas in Profitability Analysis is not really meaningful due to lack of a benchmark.
- It can also lead to incorrect material valuation, as goods movements that are posted to a previous period are not valuated with the price from that period, but rather with the current moving average price.
- Another problem with the moving average price is that any mistake in entering data can cause immediate and unwanted changes in the material price.
- It can lead to unrealistic material prices in cases of multilevel production or when there are variances that do not appear immediately.

  Example: Such unrealistic prices occur when in the context of stock coverage, a subsequent adjustment to the material stock occurs using an incorrect base quantity.

165. WHAT ARE THE ADVANTAGES OF USING "MOVING AVERAGE PRICE?"

The **advantage of using the moving average price** is that variances occurring both for materials produced in-house as well as materials procured externally cause an update in the material price and the material stock value. Because the material price reflects the average procurement cost of a material, material issues could, in principle, be valuated with the current price. The moving average price, therefore, is more useful if you want your material stock values and material prices to reflect the most up-to-date data.

166. HOW DO YOU CHANGE THE "TYPE OF PRICE CONTROL?"

You **change the type of price control** by overwriting the price control indicator in the material master record with the new indicator. Changing the type of price control for a material does not change the value of the material stock, since in both cases the current price becomes the new price.

167. WHEN CAN YOU CHANGE THE PRICE CONTROL FROM STANDARD TO MOVING AVERAGE?

You can make the change from standard price (**S**) to moving average price (**V**) at any time. The moving average price (which until now has been updated for informational purposes only) replaces the standard price and is used for valuation from now on (Table 6.15).

TABLE 6.15 Changing from Standard to Moving Average Price

Scenario	Price Control	Std Price	Moving Average Price	Total Stock	Total Value
Before	S	10	9	1000	10000
After	V	10	10	1000	10000

168. WHAT HAPPENS WHEN YOU CHANGE PRICE CONTROL FROM MOVING AVERAGE TO STANDARD?

If the change is possible, the moving average price (**V**) becomes the standard price (**S**), which is then used for valuation (Table 6.16).

TABLE 6.16 Changing from Standard to Moving Average Price

Scenario	Price Control	Std Price	Moving Average Price	Total Stock	Total Value
Before	V	0	9	1000	9000
After	S	9	9	1000	9000

169. WHEN CAN YOU NOT CHANGE THE PRICE CONTROL FROM MOVING AVERAGE TO STANDARD?

You cannot make this change from moving average (**V**) to standard price (**S**) in the following two cases:

- If the material master record is set up as a valuation header record for a material subject to split valuation
- Split Valuation. If the standard price comes from costing and is not equal to the moving average price

170. EXPLAIN "SPLIT VALUATION."

The **split valuation** is an option that lets you manage stocks of a single material in a plant in different stock accounts in terms of value. You can valuate different stocks of the same material separately. For example, some stocks of a material can be procured externally. Others are produced internally. Using split valuation, you can assign your "bought-out" stocks and your "made-in" stocks to different accounts and valuate the "bought-out" stocks at different prices to the "made-in" stocks. Such stocks can be subject to different price controls.

If a material is subject to split valuation, the material is managed as several partial stocks; each partial stock is valuated separately. Each transaction that is relevant for valuation, be it a goods receipt, goods issue, invoice receipt, or physical inventory, is carried out at the level of the partial stock. When you process one of these transactions, you must always specify which partial stock is involved. This means that only the partial stock in question is affected by a change in value, the other partial stocks remain unaffected. Alongside the partial stocks, the total stock is also updated. The calculation of the value of the total stock results from the total of the stock values and stock quantities of the partial stocks.

You define whether the material is subject to split valuation on the accounting view of the material master record using the fields "*valuation category*" and "*valuation type*."

171. WHAT DO YOU MEAN BY "MATERIAL LEDGER DATA?"

The **material ledger data** forms the basis of actual costing and is used to manage valuation prices in multiple currencies and valuations. Besides supplementing the material master record, the material ledger data can refer to materials that are part of sales order stock and project stock. The most important information in material ledger data is:

- Valuation price, inventory quantity, and inventory value in up to three currencies and/or valuations
- Indicator for price determination (as in the material master record)
- Control of the valuation prices (as in the material master record)
- Period status of the material

Using material ledger data, the system collects information on material movements (such as goods receipts and invoice receipts) in each period at historical exchange rates. This data is used during material price determination to calculate new valuation prices for the material. Then the material stock account is reconciled in multiple currencies with the accounts in Financial Accounting.

If the material ledger is active for a particular plant (and consequently for all materials in that plant), material ledger data is automatically created upon the creation of the material master record or upon production start-up.

172. WHAT ARE THE TWO METHODS OF CARRYING OUT "ACTUAL COSTING?"

The following are the two methods of carrying out a periodic actual costing:

- Costing run for processing mass data
- Individual processing

173. WHAT ARE PREREQUISITES FOR CARRYING OUT "PERIODIC ACTUAL COSTING?"

The following are the prerequisites for carrying out periodic actual costing in the system:

- Material ledger is active.

- Price determination indicator in material master is "3."
- Price control indicator in material master is "S."

It is recommended when carrying out a periodic actual costing that you use the costing run. You should only use the individual processing functions for post-processing individual materials that are incorrect.

174. WHAT ARE USES OF "ACTUAL COST COMPONENT SPLIT?"

The **actual cost component split** groups the actual costs according to cost components across multiple manufacturing levels. You can display a primary cost component split and/or a cost component split for cost of goods manufactured, according to the Customizing settings. If you want to display both cost component split types, specify which the primary cost component split is and which is the auxiliary cost component split in Customizing.

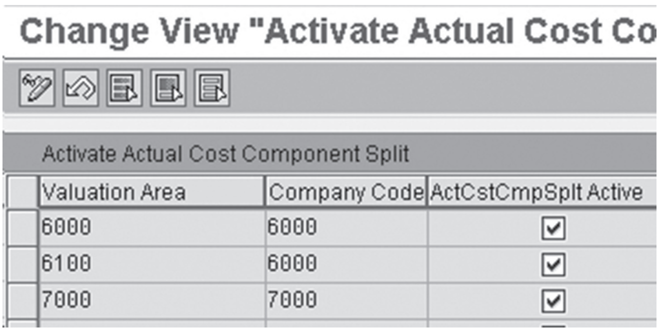


FIGURE 6.57 Actual Cost Component Split: "Active"

The actual cost component split can be used to analyze actual costs over multiple production levels. You can analyze:

- Differences from preliminary valuation
- Exchange rate differences
- Price differences

175. WHAT IS KNOWN AS "MATERIAL PRICE ANALYSIS?"

The **material price analysis** shows the valuated transactions and the results of material price determination with price and exchange-rate differences for a given material in a plant in a period within a price determination structure. The data is displayed according to process categories and procurement alternatives. The line items can be found under the procurement alternatives. From material price analysis, you can branch to a multilevel procurement or multilevel consumption in the actual BOM.

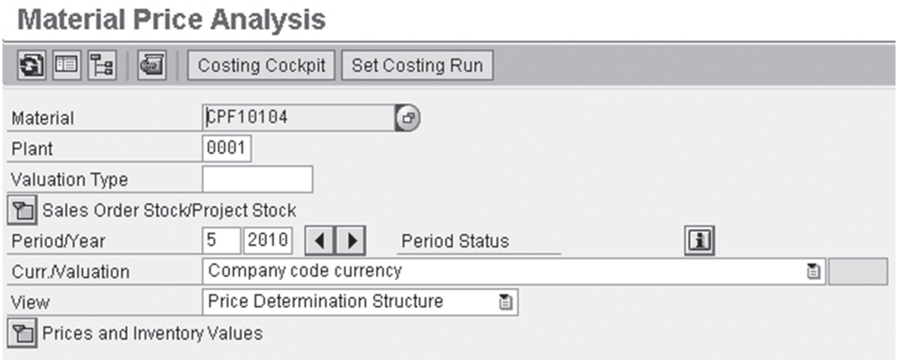


FIGURE 6.58 Material Price Analysis

Transaction Code
CKM3N

176. WHAT IS THE USE OF THE "PRICE CHANGE" FUNCTION?

Using the **price change** function, you can change prices, mark prices for change, and release prices for material valuation.

If the material ledger is active, a price change for a material with price determination 3 (single and multilevel material price determination) is only possible if there have been no goods movements relevant to valuation and no incoming invoices for the material in the period.

- If a material is valuated at the *standard price*, it is always valuated at the same price.
- If a material is valuated at the *moving average price*, the price changes with every goods movement and incoming invoice if the purchase order price or invoice price varies from the moving average price.

- If you activated the material ledger, you can maintain valuation prices independent of one another in up to three currencies and/or valuations.

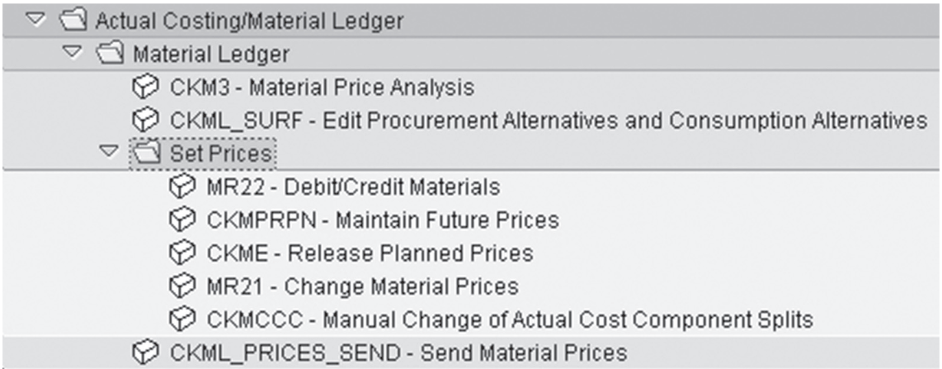


FIGURE 6.59 Setting Prices in Material Ledger

If the material ledger is not active, you only maintain the valuation prices in company code currency with legal valuation. Here, you can always change material prices regardless which price control has been set for the material. You can change current material valuation prices retroactively or at the current date.

177. WHAT IS A "MIXED COST ESTIMATE?"

A **mixed cost estimate** allows you to calculate a *mixed price*. You can update the mixed price as a standard price, and also use this mixed price to valuate materials controlled with "S" price. The mixed price is arrived at by applying a weighting factor for each of the cost estimates to the procurement alternatives using equivalence numbers. The mixed cost estimate is based on the costing version, to which the quantity structure type is assigned. All mixed cost estimates contain a cost component split, a costed multilevel BOM, and a special itemization.

178. WHEN WILL YOU USE "MIXED COSTING?"

You can use **mixed costing** when you (a) use different production processes to manufacture a product, and (b) use different sources for procuring a material.

179. EXPLAIN "PRODUCT COST CONTROLLING INFORMATION SYSTEM (CO-PC-IS)"

The standard **Product Cost Controlling Information System** is a structured report list from which you can choose the reports you need from the following application areas:

- Product Cost Planning
- Cost Object Controlling
- Product Cost by Period
- Product Cost by Order
- Product Cost by Sales Order
- Costs for Intangible Goods and Services
- Actual Costing / Material Ledger

The standard reports are presented in a structure that is predefined by SAP. You can change this structure to suit your own needs, and add your own custom reports.

180. WHAT ARE THE REPORT CATEGORIES THAT ARE AVAILABLE IN CO-PC-IS?

The **report categories** subdivide the information systems of the individual application components on the first level according to the most common reporting needs.

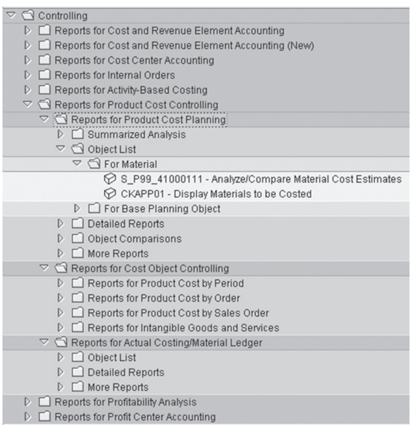


FIGURE 6.60 Report Categories in CO-PC-IS

You will see the following report categories within CO-PC-IS:

- *Summarized analysis* (This shows the aggregated data. With these, for example, you can carry out target/actual comparisons at the product group level.)
- *Object lists* (You can generate lists of costing objects (such as orders of a particular order type or cost estimates for a material) with the help of selection data.)
- *Detailed reports* (Reports that provide data for individual costing objects such as orders, cost estimates, and sales document items.)
- *Object comparison* (This contains reports that compare costing objects with each other.)
- *More reports* (This contains the report contents that were not assigned to any other category.)

181. WHAT ARE THE VARIANTS OF COSTING RUN (SUMMARIZED ANALYSIS) REPORTS?

The standard system supplies the following three variants of the costing run (summarized analysis) report:

- *Results of the Costing Run* (You can display the results of one or more costing runs.)
- *Price vs. Cost Estimate* (You can compare the selected cost estimates against a material master price that you select. You can, for example, check the revaluation of the warehouse inventories that would result if the selected cost estimates were released.)
- *Variances between Costing Runs* (You can compare costing runs with each other.)

182. WHAT REPORTS ARE AVAILABLE IN "OBJECT LIST" REPORT CATEGORY IN CO-PC-OBJ?

In the report category *object list* in Cost Object Controlling, you can generate lists for the following objects on the basis of selection data in the different cost Controlling scenarios:

Product Cost by Period

- Orders (manufacturing orders and product cost collectors)
- Summarization hierarchies and order hierarchies
- Cost object hierarchies

Product Cost by Order

- Orders (manufacturing orders and product cost collectors)
- Summarization hierarchies and order hierarchies
- Cost object hierarchies

Product Cost by Sales Order

- Summarization hierarchies
- Sales order items

Costs for Intangible Goods and Services

- Internal orders with revenue
- Summarization hierarchies

183. EXPLAIN THE REPORT "PRICES AND INVENTORY VALUES."

The prices and inventory values report, under actual costing / material ledger information system, under the report category of object list, provides an overview of the prices and inventory values of materials and of the selected materials or valuated sales order or project stocks in a period. In the basic setting, the inventories are grouped according to material type and valuation class and subtotals of inventory values are displayed. You can select the currency/valuation used. In the selection screen of the report, you can save the list of prices and inventory values as an extract so that you can access it later. This report is also useful in the analysis of materials with regard to prices (for example, comparison of the standard price and the periodic unit price) or inventory values (for example, analysis of the price and exchange rate differences of the ending inventory).

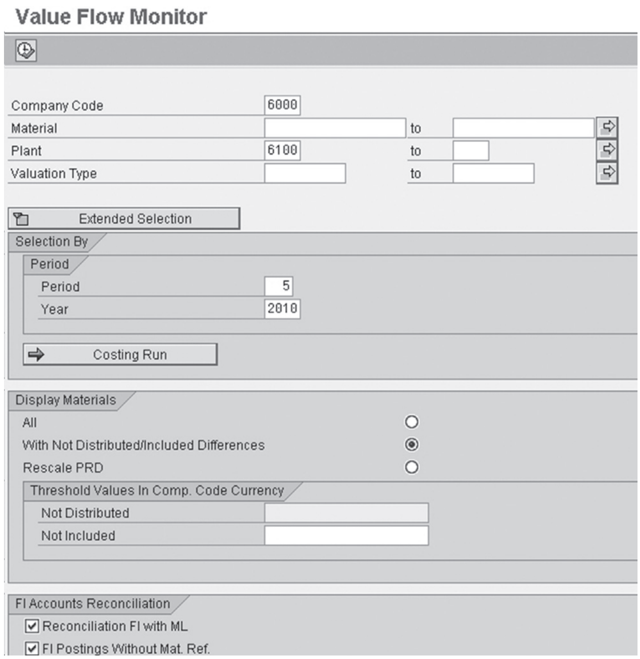


FIGURE 6.61 Value Flow Monitor

184. WHAT IS A "VALUE FLOW MONITOR?"

The **value flow monitor** displays not-distributed and not-included differences as well as the status of the single- and multilevel material price determination. The monitor view gives you a complete overview of the differences listed according to *Valuation Area* > *Plant* > *Material*.

CHAPTER 7

PROFITABILITY ANALYSIS (CO-PA)

1. WHAT IS "PROFITABILITY ANALYSIS?"

Profitability Analysis (**CO-PA**) helps you to determine how profitable (denoted by the "*contribution margin*") your market segments are. The analysis is on the external side of the market. You will be able to define which segments, like customer, product, geography, sales organization, etc., of the market are required for analyzing the "operating results /profits." With multi-dimensional "drill-down" capability, you have all the flexibility you require for the reporting. SAP supports two forms of profitability analysis: costing-based and account-based.

2. HOW IS "PROFIT CENTER ACCOUNTING" (EC-PCA) DIFFERENT FROM CO-PA?

Unlike CO-PA where the focus is on external market segments" profitability, **Profit Center Accounting** (**EC-PCA**) is all about profitability of internal areas (*Profit Centers*) of the enterprise. Profit Center accounting is used to draw internal balance sheets and Profit & Loss statements. You may use EC-PCA in place of *business area* accounting. In EC-PCA, you may use either the "period accounting" or "cost-of-sales approach" to calculate the profitability.

The difference between EC-PCA and CO-PA are outlined in Table 7.1.

TABLE 7.1 EC-PCA and Co-PCA: A Comparison

Attribute	Profitability Analysis (CO-PA)	Profit Center Accounting (EC-PCA)
Focus	External market segments	Internal responsibility centers
Reporting	Any point of time Margin reporting	During period-end Profit & Loss statements
Accounting	Cost of Sales	Supports both “Period” accounting and “Cost of Sales” accounting

Both CO-PA and EC-PCA serve different purposes, and are not mutually exclusive. It is possible that you might need them both in your organization.

3. EXPLAIN “COST OF SALES ACCOUNTING (COS)”

The **cost of sales accounting** (CoS) is about setting off of cost of sales against the revenue. It can be either by “direct costing” or “contribution margin accounting” (also known as “full absorption”). While using this method of accounting, it is possible to allocate the fixed costs either on a proportional basis or in total and the same can be achieved at any level of a hierarchy. You can obtain a “preliminary profit analysis” by valuating CoS using *standard costs*. In case you want to reconcile CO-PA with FI on the basis of *actual costs*, you then need to transfer the variances (of production orders / Cost Centers) to CO-PA.

4. EXPLAIN THE TWO FORMS OF CO-PA.

The **two forms of profitability** analysis in SAP CO-PA are:

- *Costing-based PA*
- The so-called traditional method of PA, costing-based profitability analysis groups costs and revenues according to the quantities and values stored in “value fields” (see the example in Table 7.2). It is possible that you can define both the values fields and the costing-based valuation approaches. This form of PA is very useful for short-term analysis of profitability analysis. This helps in managing sales based on when (i) sales documents are updated and (ii) data is transferred from FI and other modules.

TABLE 7.2 Costing-based PA: An Example

Value Fields	Amount (million USD)
Revenues Sales deductions	1000 100
Net Revenues	**900**
Production Costs Variable Material Costs Variable Production Costs Production Variances	 400 190 10
Contribution Margin-1	**300**
Production Overheads Material Overhead Production Overhead	 60 40
Contribution Margin-2	**200**
Other Overheads Sales Marketing Others	 60 50 30
Contribution Margin-3	**60**

- *Account-based PA*
- Using cost and revenue elements, account-based PA helps to reconcile with the FI data and to draw long-term profitability reports. Unlike the "value fields" in costing-based PA, here the data is captured in the accounts (see the example in Table 7.3), with the updation happening whenever these accounts are posted to.

TABLE 7.3 Account-based PA: An Example

Details	Cost /Revenue Element	Amount (million USD)
Revenues Less: Sales deductions	800000 806000	1000 100
Net Revenues		**900**
Cost of Sales Price Difference Sales 654000 Marketing Others	892000 231100 690000 699000	690 10 60 50 30
Result		**60**

Because of differences in time when the revenue is updated in CO-PA, both forms of PA may not be in synchronization all the time.

5. EXPLAIN THE ESSENTIAL DIFFERENCES BETWEEN THE TWO FORMS OF CO-PA

The essential differences between the costing-based and account-based PA can be grouped as in Table 7.4.

TABLE 7.4 Essential Differences between Costing-based and Account-based PA

Details	Costing-based PA	Account-based PA
Quantities and values are stored in	Value fields	Accounts (cost/revenue)
Useful for	Short-term profitability reporting	Reports that are permanently reconciled with FI data
When updating happens in PA	COGS is *not* updated at the time of delivery (GI), but when the billing document is created; the revenue, discounts, and freight, etc., are updated at the same time	COGS is updated at the time of delivery (GI). The revenue, discounts, and freight, etc., are updated when the billing document is created.
COGS may be	Understated at times	Overstated at times

6. COMPARE THE TIMING OF “PA UPDATES” BETWEEN THE TWO FORMS OF CO-PA

Table 7.5 provides a summary of when PA is updated in costing/account-based profitability analysis during the document flow.

TABLE 7.5 Timing of PA Updating, in Costing/Account-based PA

Details	Costing-based PA	Account-based PA
COGS	When Billing document is created	At Delivery (GI)
FI Expenses	At FI Posting	
Freight	When Billing document is created	
Internal Order	During Settlement	

Details	Costing-based PA	Account-based PA
Revenue	When Billing document is created	
Sales Document		
Sales Orders	During Settlement	
Variances in MM	At FI Posting	
Variances in PP	During Settlement	

7. WHAT FORM OF PA IS BEST FOR YOUR ORGANIZATION?

This is very difficult to answer, as the form you should use depends on your exact requirements. However, when it comes to popularity, most companies use the costing-based form of CO-PA, simply because this enables managing sales profitability, which is the main purpose behind the profitability analysis. The recent approach adopted by many companies is that they use account-based PA along with the costing-based one for the reason that the former helps for easy reconciliation with FI.

8. HOW IS CO-PA INTEGRATED WITH OTHER COMPONENTS IN SAP?

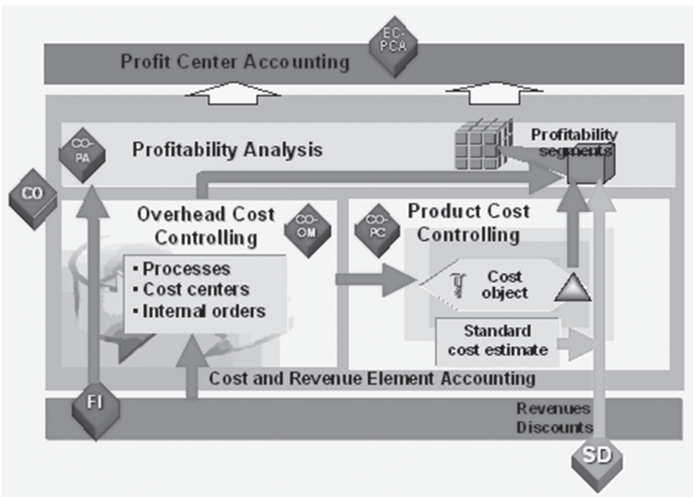


FIGURE 7.1 CO-PA's Integration with Other SAP Components (Image © SAP)

As in many other application areas, CO-PA is also tightly integrated with several components viz., Controlling (CO-OM & CO-PC), MM, SD, FI and EC-PC. The following illustration shows the integration and the *flows of actual values* to CO-PA from other components.

9. CAN YOU HAVE CO-PA IN A DISTRIBUTED ENVIRONMENT?

Yes. It is possible to have CO-PA in different SAP Systems yet integrated. The distributed systems are connected through ALE (Application Link Enabling). As a result PA then runs concurrently on each system.

SAP supports both the costing-based and account-based PA even in distributed PA. In the case of costing-based PA, you can use either the periodic rollup or transaction based distribution. Remember that you cannot use both, and it is NOT recommended to change the method in between.

The following are the pre-conditions for distributed PA:

- All PAs that are connected must belong to the same operating concern.
- All operating concerns should have the same name and the same characteristics in all of the systems (the easy way to achieve this is to maintain operating concerns in a central system: customizing can then be transported into the other systems from this central system).

In the distributed environment, (new) line items posted in a sender system are also sent to a receiver system which centrally collates the data from the sender systems. The functions such as derivation and valuation occur exclusively in the sender systems.

10. HOW DO YOU "ACTIVATE" CO-PA? EXPLAIN THE OPTIONS.

You can use the Transaction Code OKKP to activate the CO-PA component for the Controlling Area you need. SAP provides you with the following options of activating the "profit analysis" (yes, the field label is "ProfitAnalysis" and not "Profitability Analysis"):

- *Component not active*: This is the default option (that is, when you do not implement CO-PA).

- *Component active for costing-based PA*: This is more flexible than the accounting-based approach, and hence more popular than the other. It helps to group costs and revenues according to value fields and costing-based valuation approaches, both of which you can define yourself. Suitable for drawing short-term profitability reports.
- *Component active for accounting-based PA*: This approach is organized in accounts and uses an account-based valuation approach. The distinguishing characteristic of this form is its use of cost and revenue elements. More suitable for drawing profitability reports that are permanently reconciled with Financial Accounting.
- *Component active for both the types of PA*: Provides you with the ultimate flexibility so that you can use both the approaches simultaneously.

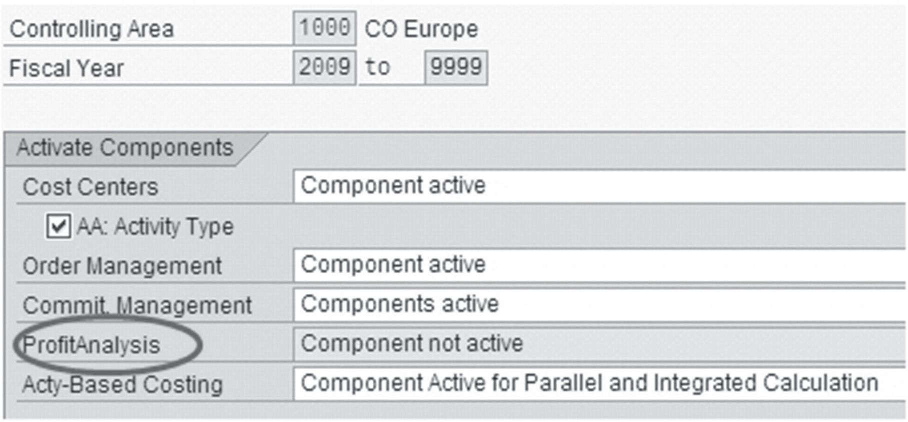


FIGURE 7.2 Activating CO-PA

11. EXPLAIN THE FEATURES OF SAP CO-PA

The four important features of CO-PA include:

- *Master data*: The master data are the basic structures of CO-PA, consisting of *characteristics* (the evaluation units) and *categories* (for analyzing the values). The values are stored in "value fields" (in the case of costing-based analysis) or accounts (in the case of account-based profitability analysis). A number of characteristics can be combined to form a multidimensional *profitability segment*.

- *Planning*: The planning (manual and/or automatic) feature helps to create the sales and profit plans. The important point to be noted is that if you use both costing- and account-based PA, you need to plan twice: there is no centralized planning. However, the converse is true for actual data: entered once, it can flow parallel to both the types of PA.
- *Actual postings*: Being the most important source of data for CO-PA, actual postings help you to transfer, in real-time, the sales order and sales documents from the SD component. In case you have your sales information in an external system, you just need to use the interface programs to transfer the data to CO-PA. Besides the sales data, you can also transfer the cost data from Cost Centers, orders and projects. All the costs / revenues posted in FI, by direct posting, can also be transferred.
- *Information system*: SAP provides you with drilldown reporting tool, enabling you to interactively analyze the data using the "data cubes."

12. WHAT IS AN "OPERATING CONCERN?"

Representing the valuation level in CO-PA, an **operating concern** is an organizational unit in your company for which the sales market has a uniform structure. The structure of an operating concern may differ from one company to another. You need to "model" your operating concern to suit your exact requirements. Without defining an "operating concern" you will not be able to use CO-PA. The definition of an operating concern is client independent.

13. HOW IS AN "OPERATING CONCERN" IS STRUCTURED?

An "**operating concern**" can be structured by selecting the appropriate (a) characteristics, along with the (b) value fields (costing based Profitability Analysis) or (c) G/L accounts (account-based Profitability Analysis). Based on your required characteristics, and value fields (or GL accounts), you need to "model" your operating concern, and the system will generate the necessary database tables (for CO-PA transaction data) and access programs.

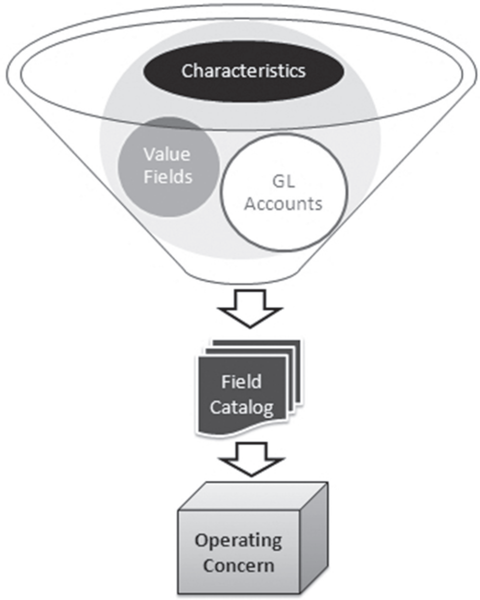


FIGURE 7.3 Structuring an Operating Concern in CO-PA

When you create an "operating concern" using the menu path: *"SAP Customizing Implementation Guide > Enterprise Structure > Definition > Controlling > Create Operating Concern,"* you just define the name and description: the master data and the functional characteristics for the operating concern are defined later when you configure the system for the CO-PA component.

Transaction Code KEP8

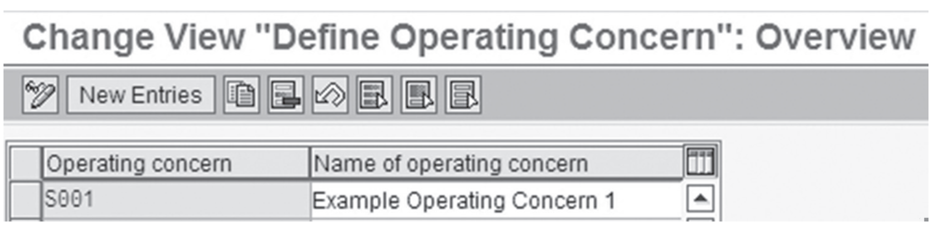


FIGURE 7.4 Operating Concern (Transaction Code KEP8)

However, if you create an "operating concern" under the menu path: *"SAP Customizing Implementation Guide > Controlling > Profitability Analysis > Structures > Maintain Operating Concern,"* you also specify the attributes of your operating concern (fiscal year variant, currencies).

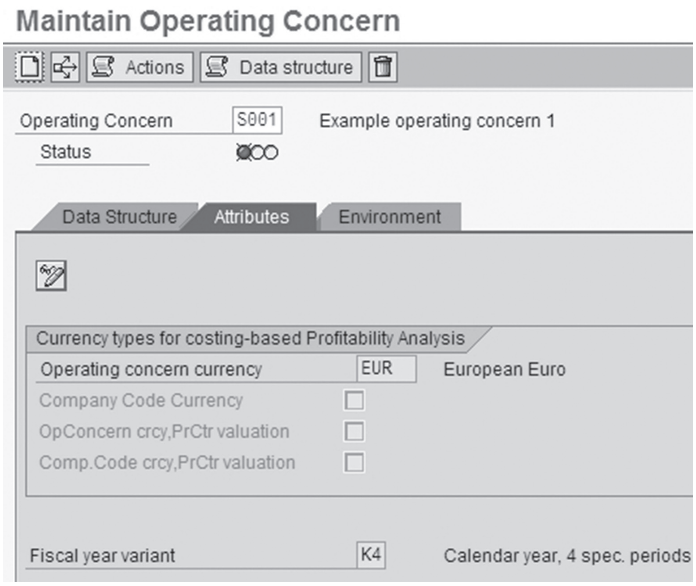


FIGURE 7.5 Operating Concern (Transaction Code KEA0)

Transaction Code
KEAO

14. EXPLAIN "CONTROLLING AREA – OPERATING CONCERN ASSIGNMENT"

Though it would be sufficient to have one operating concern as it reflects your marketing structure, you can have more than one as well. Whatever the case, you need to assign your operating concern at least to one Controlling Area, so that when data is transferred to CO-PA, the system correctly derives the operating concern, and in turn the Company Codes, through the Controlling Area(s). It is a normal practice to assign more than one Controlling Area to an operating concern. If you recollect the organizational structure depicted at the beginning of this book, you will notice that the operating concern "9000" has been assigned to the Controlling Areas "9000" and "00."

15. WHAT IS A "CHARACTERISTIC?"

The **characteristics** (say, Company Code, business area, sales order, etc.) are the criteria in CO-PA. You can use them to (a) analyze your operating results, (b) perform differentiated sales, and (c) do profit planning. Stored in a *field catalog*, you can select them while defining your operating concerns. The values for a characteristic can be arranged hierarchically in a "*characteristics hierarchy.*"

The characteristics can be categorized (based on how and when defined) into:

- Standard characteristics (delivered along with the SAP system)
- User-defined characteristics

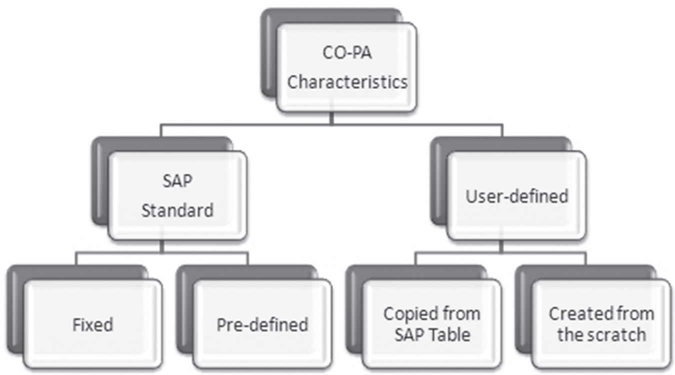


FIGURE 7.6 Characteristics in CO-PA

Note that the characteristics, once defined, are valid in all the clients, and available for all the operating concerns defined.

16. EXPLAIN "STANDARD CHARACTERISTIC."

The **standard characteristics** (also known as "characteristics delivered by SAP") are the SAP-supplied ones that come along with the standard system.

Char.	Description	Short text	DTyp	Lgth.	Origin Tab...	Origin field d
KMLAND	Country	Country	CHAR	3	KNA1	LAND1
KMLEGS	Route segment	RouteSegmt	CHAR	7		
KMMAKL	Material Group	Matl Group	CHAR	9	MARA	MATKL
KMNIEL	Nielsen ID	Nielsen ID	CHAR	2	KNA1	NIELS

FIGURE 7.7 Standard Characteristics

There are two types of standard characteristics, namely:

- *Fixed characteristics* The fixed characteristics represent the some of the fundamental (mandatory) characteristics, defined automatically by the system whenever you create an operating concern. Some of the fundamental characteristics include Company Code, business are, Controlling Area, billing type, customer, etc. Beside these fundamental ones, there other fixed characteristics defined automatically by the system depending upon the type of PA you use: cost elements in the case of account-based PA, and "record type" for costing-based PA.
- *Pre-defined characteristics* These "pre-defined" characteristics are available in the system (not automatically added to the operating concern), and you can add them from the field catalog to your operating concern. Examples include country, customer group, etc.

17. ELABORATE "USER-DEFINED CHARACTERISTICS."

The **user-defined characteristics** (also known as "customer-defined characteristics") are the ones defined by you, should you need to include more characteristics than the ones provided by SAP. There are two ways with which you can create these:

- *Copying from a SAP Table*: You can use select the fields from SAP tables (like customer master records, material masters, etc.) and some structures (like PAPARTNER in SD), to define your own characteristic for the operating concern. In doing so, the system automatically derives the characteristic from the key fields of these referred-to tables (known as characteristic"s origin table). For example, you plan to add a new characteristic "customer group" from the table KNA1. Because the customer group is based on the customer number, the system derives the customer group from the "customer number."

- *Custom characteristics:* You can also create a new characteristic from scratch without referring to any of the SAP tables. In this case, you also need to maintain the necessary derivation rules. The important point to be noted is that you cannot create two characteristics with the same data element in the same operating concern. (Remember that the semantic meaning of a characteristic is determined by the data element to which it is assigned; the data element contains the texts that appear on the screen and in lists for the characteristic).

18. WHAT ARE "COMPOUNDING CHARACTERISTICS?"

When you define your own characteristic (customer-defined characteristic), it is possible to define one which is dependent upon another existing characteristic of your operating concern, and this is known as **compounding a characteristic**. When you do the compounding, the newly-defined characteristic – known as "subordinate characteristic" - refers to an upper-level characteristic. Note that you cannot use such a compounded characteristic separately: it has to be used along with the upper-level characteristic.

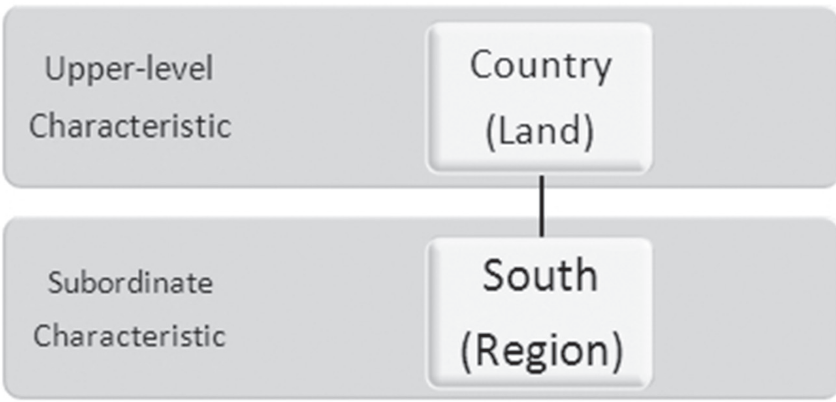


FIGURE 7.8 Compounding Characteristics in CO-PA

19. WHAT IS A "CHARACTERISTICS HIERARCHY?"

A **characteristics hierarchy** is nothing but a tree like structure of made up of nodes (single characteristic) that can be posted to, and nodes that cannot be posted to. The postable nodes (for example "Germany," "France," etc.) contain the characteristic values, and other nodes (say, "Europe," "America," etc.) usually will give you a value aggregation.

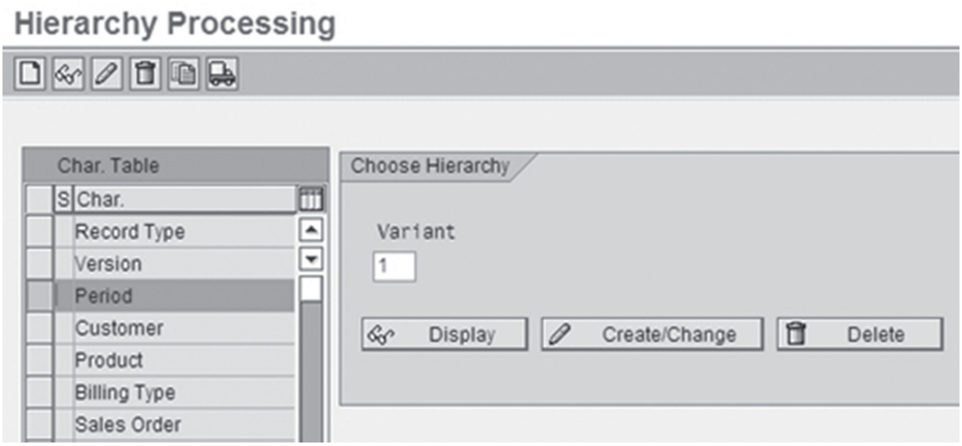


FIGURE 7.9 Characteristics Hierarchy

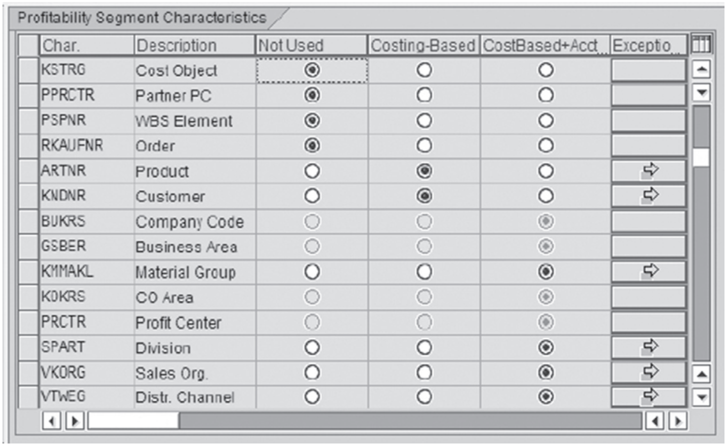
Transaction Code
KES3

20. WHAT IS A "SEGMENT" IN CO-PA?

The "segment" in CO-PA represents an object to which cost and revenues can be assigned and evaluated. Because this represents an external market segment, you can use this to analyze its profitability, by comparing the sales and revenues over a period of time. An operating concern can have any number of segments, and each of the segments is nothing but a combination of characteristic values.

For example, one of your segments could be: Product "LCD TV" / Country "India" / Region "South." The other segment could be: Product Group "Consumer Appliances" / Product "Washing Machines."

21. WHAT PRECAUTION NEEDS TO BE TAKEN IN THE "CHARACTERISTICS FOR CO-PA SEGMENTS?"


Profitability Segment Characteristics

Char.	Description	Not Used	Costing-Based	CostBased+Acct	Exceptio
KSTRG	Cost Object	◉	○	○	
PPRCTR	Partner PC	◉	○	○	
PSPNR	WBS Element	◉	○	○	
RKAUFNR	Order	◉	○	○	
ARTNR	Product	○	◉	○	⇨
KNDNR	Customer	○	◉	○	⇨
BUKRS	Company Code	○	○	◉	
GSBER	Business Area	○	○	◉	
KMMAKL	Material Group	○	○	◉	⇨
KOKRS	CO Area	○	○	◉	
PRCTR	Profit Center	○	○	◉	
SPART	Division	○	○	◉	⇨
VKORG	Sales Org.	○	○	◉	⇨
VTWEG	Distr. Channel	○	○	◉	⇨

FIGURE 7.10 Profitability Segment Characteristics

Though it is technically possible that you could use all the characteristics of an operating concern for a profitability segment, as in the case of their usage in the line items, it is noteworthy that you need to restrict the usage of some of the characteristics for segments as it would be too much of a cluttering and not practical to have those information from such characteristics; an example would be the "sales order" characteristic. In fact, SAP *does not* recommend having the "sales order" (from repetitive manufacturing) characteristic in the profitability segment. You can control which characteristics you need in for your CO-PA segments in customizing.

Transaction Code
KEQ3

22. WHAT ARE "VALUE FIELDS?" IN CO-PA, WHERE WOULD YOU USE THEM?

Used only in costing-based PA, value fields – containing the currency amounts and quantity information - are the highest level of detail at which you can analyze the values (quantities, revenues, costs including sales deductions, etc.) for the profitability segments. You can also use them to analyze the contribution margin. In costing-based PA, you use these fields to structure your costs and revenues. When defining your operating concern, you add these fields from the "field catalog."

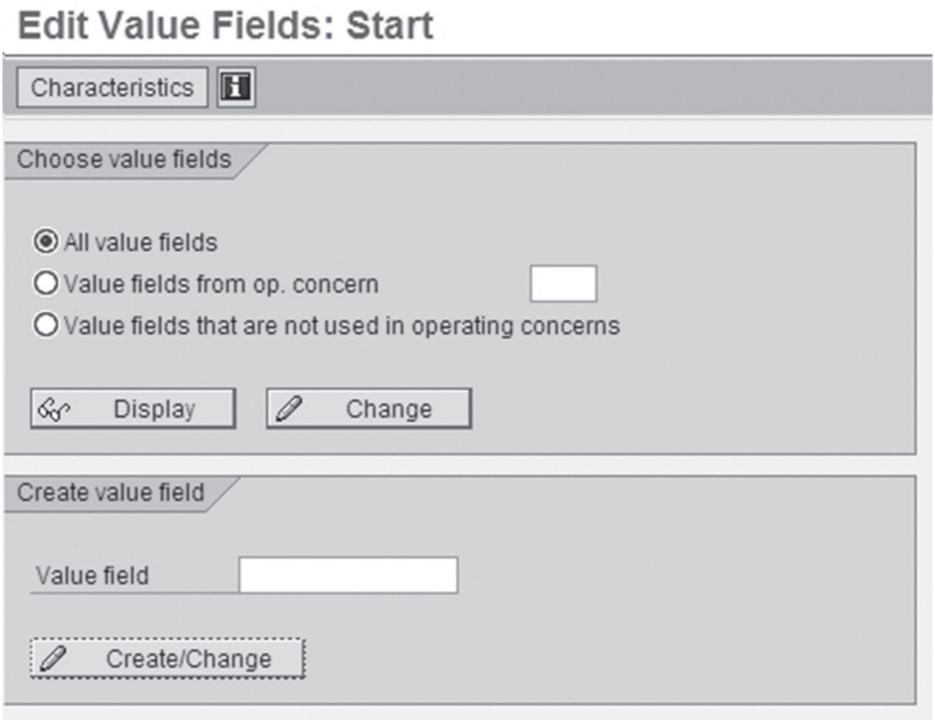


FIGURE 7.11 Value Fields

SAP makes use of the "aggregation rule" (this has no impact on the posting logic) to determine how the values in a value field are to be handled when data is aggregated over multiple periods in planning and in reports. There are three aggregation rules:

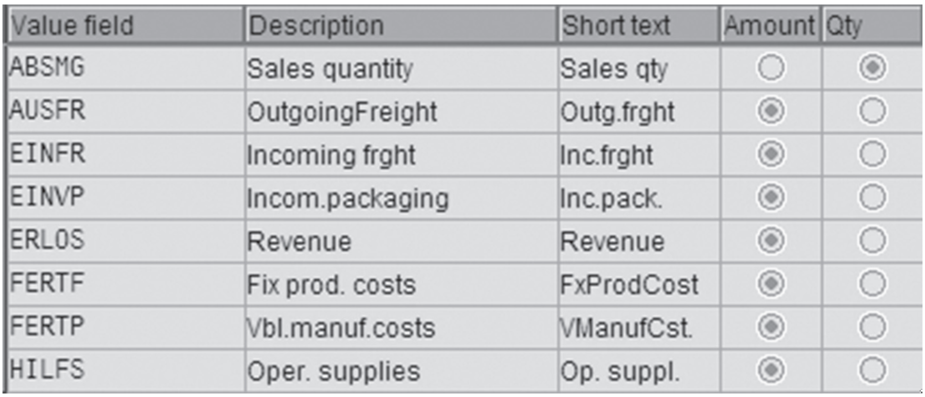
- Addition (most commonly used)
- Average (used, for example, in the case of non-cumulative values like number of employees)
- Last value (used, for example, in the case of non-cumulative values like number of employees)

There are two types of value fields.

23. WHAT ARE THE TWO TYPES OF "VALUE FIELDS?"

There are two types of value fields that you will be using in costing-based PA:

- *Amount fields*: These value fields contain the amounts in currencies. If the line item contains more than one amount field, then all of them will use only one currency.
- *Quantity fields*: Representing the quantity, these fields are always assigned to a field containing the unit of measurement (UOM). Unlike the amount fields, each quantity field in a line item can have different UOMs.



Value field	Description	Short text	Amount	Qty
ABSMG	Sales quantity	Sales qty	○	◉
AUSFR	OutgoingFreight	Outg.frght	◉	○
EINFR	Incoming frght	Inc.frght	◉	○
EINVP	Incom.packaging	Inc.pack.	◉	○
ERLOS	Revenue	Revenue	◉	○
FERTF	Fix prod. costs	FxProdCost	◉	○
FERTP	Vbl.manuf.costs	VManufCst.	◉	○
HILFS	Oper. supplies	Op. suppl.	◉	○

FIGURE 7.12 Amount and Quantity Value Fields

24. EXPLAIN THE CATEGORIES OF "VALUE FIELDS."

There are two categories of values fields available in SAP:

- *Pre-defined value fields*: This includes the most frequently-used value fields such as revenues, sales quantity, freight charges, sales discounts, etc. You just need to select the value fields required from the available entries in the field catalog, and transfer them to your operating concern.
- *User-defined value fields*: These are all customer-defined value fields, which you define and add to the field catalog. Irrespective of the client or operating concern you can define these fields, and later on you can make use of them in any of the client / operating concern.

25. CAN YOU USE MULTIPLE CURRENCIES IN CO-PA?

SAP CO-PA allows you to store data in two currencies:

- Operating concern currency (B0): This is the group level currency.
- Company Code currency (10): This is the local currency.

When you define the operating concern, you can specify whether you want to store the data (a) only in operating concern currency or (b) in both operating concern and Company Code currencies.

When you have activated the operating concern for multiple currencies, every time an actual line item is posted, the system creates two line items: one in operating concern currency and the other in the Company Code currency. However, this is not true for the planning data; becase you always work with an estimated (future) exchange rate, it is not necessary to have planning data in two currencies. For each of the plan versions, you specify whether you want to plan in operating concern currency or Company Code currency. You can then copy one version to another and use the other currency with the relevant exchange rate.

26. WHEN DO YOU NEED MULTIPLE CURRENCIES IN CO-PA?

SAP recommends using multiple currencies when your organization carries out transactions in currencies with the exchange rates fluctuating daily. For example, in a situation where you use a group currency (say, USD) at the corporate level and different local currency at the Company Code level (say, INR). As a result, when parallel currencies are used in CO-PA for this operating concern, all the data of the subsidiary (using INR) need to be stored in two currencies (USD and INR) in CO-PA, though the transactions are updated only in the local currency (INR) in FI. By this, you will avoid exchange rate differences and it becomes easy to reconcile the CO-PA data with that in FI.

27. WHEN SHOULD YOU NOT USE MULTIPLE CURRENCIES IN CO-PA?

SAP recommends not using multiple currencies when you use an average exchange rate by period, instead of the daily fluctuating rates. If you use multiple currencies when you work with average exchange rate, you will unnecessarily be doubling the data volume.

28. EXPLAIN THE SAP TABLES IN CO-PA.

Table 7.6 outlines the different tables used in CO-PA.

TABLE 7.6 SAP Tables in CO-PA

Table	Used for	Details
CE1xxxx	Actual line items	Contains all the actual line item data with all the details. The system inserts data into this table on an ongoing basis (sorted according to time stamp of the insertion point).
CE2xxxx	Planning line items	Contains all the planned line item data with all the details.
CE3xxxx	Segment level totals	This table (in the first summarized form) is set up between the segment tables CE4xxxx and the line items, enabling time-based classification. Along with value fields, the segment level also contains the characteristics record type, planned/actual indicator, version, and period, as well as some additional technical details. Several lines from the segment level are attached to a particular profitability segment (that is, to a line in the segment table). These lines all have the same segment number but relate to different posting periods. Each line at the segment level adds together the value fields for a row of line items bearing the same segment number and assigned to the appropriate posting period. Among other technical fields like version, record types, etc., the key fields of the table include the profitability segment number and period. The data part contains the characteristic values.

Table	Used for	Details
CE4xxxx	Segments	Located at a higher level than CE3xxxx, and iused to assign segment numbers to each combination of characteristic values. It contains a unique profitability segment number (the primary key) for each combination of characteristic values (data part) to which data has been posted.
CE4xxxx_ ACCT	External assignment	Serving as the "interface" to other applications, this table contains all the external account assignment information as well as the characteristics for CE4xxxx.

Note: "xxxx" refers to the operating concern.

29. ARE THERE DIFFERENT TABLES FOR THE TWO TYPES OF CO-PA?

Table 7.7 brings out the different tables used in costing-based / accounting-based CO-PA.

TABLE 7.7 SAP Tables for Costing-based / Account-based CO-PA

The table is used for:	Account-based CO-PA	Costing-based CO-PA
Actual line items	COEJ	CE1xxxx
Planned line items	COEP	CE2xxxx
Totals records per profitability segment	COSS , COSP	CE3xxxx
Profitability segment definition	CE4xxxx	CE4xxxx
External assignment	CE4xxxx_ACCT	CE4xxxx_ACCT

Note: "xxxx" refers to the operating concern.

30. WHAT IS A "STRUCTURE" CO-PA?

The CO-PA master data are closely linked to the **structures** you create, after you have defined the operating concern and characteristics and value fields. By defining a structure, you actually define the possible valuation levels. Technically, you are creating a table when you define a structure. In the operating concern, you can define your structures so that the value fields (for example, revenues and sales deductions) correspond to the respective characteristics (say, levels like customer, customer group, sales office, product, etc.).

31. WHAT DO YOU MEAN BY "MASTER DATA" IN PROFITABILITY ANALYSIS?

The **master data** in CO-PA provides the fundamental data and content within the *structures* you have already determined by characteristics and value fields for an operating concern.

32. WHAT IS "REALIGNMENT?"

The **master data** in CO-PA provides the fundamental data and content within the *structures.*

The "realignment" changes the characteristic values of profitability segments and thereby changes the active master data in CO-PA. The realignment may become necessary because of organizational changes in your product, customer, or sales structure, and the same may be required to be done periodically. As result, it is possible for you to apply changes in customer or material master records, in the SD customer hierarchy, or in CO-PA derivation rules to the data that has already been posted to PA. Once realigned, only the new changes are available in the system in the information system and in planning (the earlier characteristic values valid at the time the original posting was made can only be analyzed in line item reports).

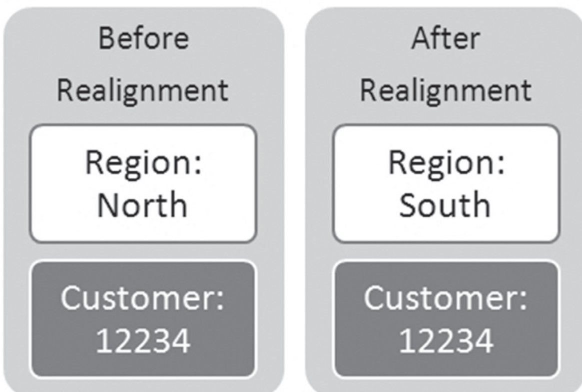


FIGURE 7.13 Realignment

The realignment cannot be executed directly; you need to create a *realignment request* (containing selection criteria, a *conversion rule,* and a description) and do a *realignment run* (can have one or more realignment requests). The requests in a realignment run are applied to each profitability segment in the order in which they appear in the hierarchy.

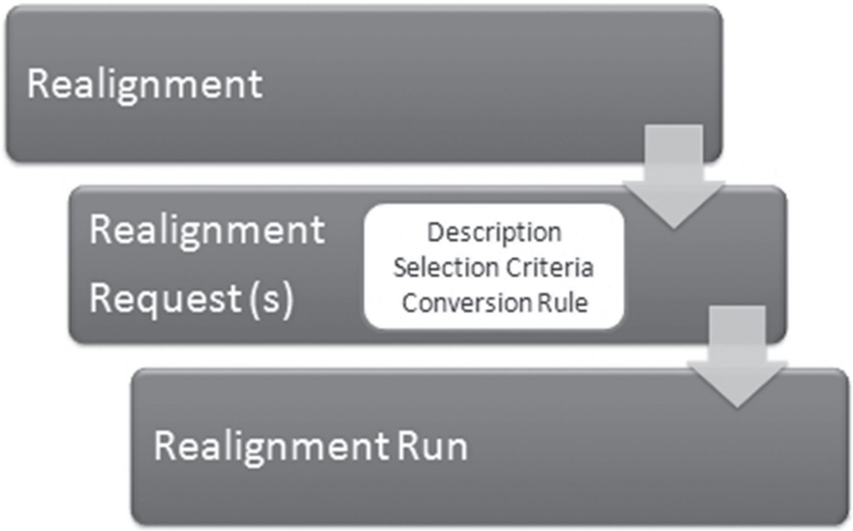


FIGURE 7.14 Realignment Process

33. EXPLAIN THE "CONVERSION RULE" IN "REALIGNMENT."

For realignment, you need to create a realignment request which, among other things, contains a conversion rule. The conversion rule instructs the system to do one of the following for each characteristic that can be changed by the realignment program:

- Derive characteristic again (default).
- Do not change (predefined and unchangeable for the Controlling Area, Company Code, business area, sales order, sales order item, and quantity units).
- Replace with fixed value (value must also be specified).

34. WHAT IS THE PURPOSE OF "VALUATION" IN CO-PA?

The **valuation** (for cost-of-sales accounting purposes) in CO-PA helps you to a have quick access to recent and complete profitability information for sales-related business transactions. You cannot use the valuation functions for account-based CO-PA, since the account-based PA only posts values that are reconcilable with Financial Accounting (FI). The valuation options can be used for both the actual data and planning data.

You can, for example, use valuation to calculate:

- Sales deductions that do not appear in the invoice (such as cash deductions, rebates, and commission)
- Costs of sales (sold products * standard costs of goods manufactured)
- Calculated direct costs (also known as the special direct costs for sales such as transportation costs, packaging, or insurance)

35. WHAT ARE THE "VALUATION METHODS" AVAILABLE?

SAP offers you the following three **methods of valuation**:

- *Valuation using material cost estimates* This type of valuation helps you to determine the cost of sales (CoS) when you post a sales transaction to PA. In this case, the quantities of products sold are multiplied by the standard costs of goods manufactured, thereby including in the contribution margin analysis detailed fixed and variable cost components for the cost of goods manufactured (COGM) in the individual contribution margins. You can use the actual cost estimate from *Material Ledger* to valuate your sales quantities during periodic revaluation.
- *Valuation using condition methods and costing sheets* You may use the *condition technique* to calculate values (like anticipated sales commissions, discounts, or shipping costs) in CO-PA that are not yet established when the document posting occurs.
- *Valuation customer-defined valuation routines* If you feel that either of the above approaches will not meet your valuation requirements, you can have your own valuation logic established through "customer exits" (COPA0002).

36. HOW DOES "PLANNING" HELP IN CO-PA?

The **planning** in CO-PA allows you to plan sales, revenue, and profitability data for any selected profitability segments. It is possible to display the entire planning process of your company in different ways, depending on your business demands. The *planning tool* in PA offers all those involved (both a power-user and an occasional user) in the planning process a uniform, graphical planning interface that is straightforward and modern.

37. WHAT IS KNOWN AS THE "PLANNING FRAMEWORK" IN PA?

The **planning framework** allows you to structure planning selectively according to specific planning levels and planning contents and to assign that planning structure (in a tree-like hierarchy) to individual users. It is possible from the planning framework to execute almost all the planning functions: modelling the planning process, monitoring the planning tasks, manual entry of planning data, etc. The *planning methods* available in the planning framework allow you to plan the profitability segments specified in the planning packages. You may also use the *schedule manager* (Transaction Code: SCMA) to control/monitor recurring planning tasks.

For manual planning, you can adopt:

- Price planning using ratios
- Transaction based top-down distribution

Besides using integrated Excel, you may use the WWW for entering the planning data. It is also possible that you can use the workflow "COPA_PLAN_M1" to produce (during sales and profit planning) a planning set into which several planners can enter their planning data.

Transaction Code
KEPM

38. EXPLAIN "AUTOMATIC PLANNING METHODS" IN CO-PA

You can use the **automatic planning methods** to edit automatically a large number of planned profitability segments that you first specify in a planning package. When you execute the automatic planning methods, the system automatically derives from the existing characteristics those characteristics that are not contained in the planning level. SAP provides you with the following automatic planning methods:

- Copy: for copying data from another year or another plan version
- Customer enhancement: to apply the user-programmed logic from a customer enhancement on data
- Delete: for deleting a large amount of data
- Event: to take into account a short-term event (such as a sales campaign) during planning
- Forecast: say, for forecasting data using specific rules and on the basis of data from a previous year
- Period distribution: to distribute data planned for the year to the individual periods
- Ratios: to valuate a quantity plan using reference prices from another plan version
- Revaluation: to calculate additions or deductions for data
- Top-down distribution: for distributing data from a higher planning level (such as the customer group level) to a more detailed level (such as the customer level)
- Valuation: to valuate data using the logic stored in CO-PA Customizing for valuation

39. EXPLAIN "INTEGRATED EXCEL PLANNING" IN CO-PA

SAP allows you to continue in MS-Excel while planning in CO-PA. The **integrated Excel planning** thus combines the familiarity of Excel (you can use macros, insert graphs, use functions, etc.) with the powerful planning functions of SAP to give you unmatched versatility. SAP uses the *OLE (Object Linking and Embedding)* as the interface for integrating with MS-Excel.

The only limitation of this integrated planning is that you will not be able to enter any planning data in the "period" screen.

You may use this integrated planning in two ways:

- Offline planning in MS-Excel, and then uploading the data into SAP
- Planning directly in the excel spreadsheet integrated into the SAP user interface

40. WHAT IS "FLOWS OF ACTUAL VALUES?"

SAP use the flows of actual values while transferring the data from the integrated components like CO-OM, CO-PC, FI, SD, MM, etc., into CO-PA's value fields. You can assign all primary, profit-related postings and activities from the FI (G/L account postings), MM (invoice receipts, purchase orders), and SD (sales orders) application components to profitability segments.

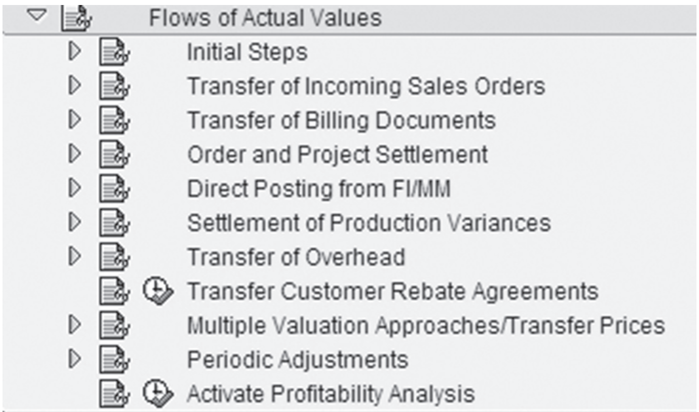


FIGURE 7.15 Flows of Actual Values in CO-PA

In the case of period-end closing, you can:

- Assign internal activities to profitability segments.
- Assess Cost Center costs and business process costs to profitability segments.
- Settle orders, projects and cost objects to profitability segments.

Table 7.8 outlines the values flowing from other applications integrated with CO-PA.

TABLE 7.8 SAP Tables for Costing-based / Account-based CO-PA

Application Component	What is flowing into CO-PA?	From where?
FI	Freight Rebate	G/L Postings
SD	Quantity Revenue Sales Deduction Cost of Sales	Billing Document
PS	R & D Costs	WBS Element Network Activity
CO-PC	COGM (Variable / Fixed) Production Variances	Cost Estimate Production Order
CO-OM	Sales and Administrative Costs Marketing Costs Variances	Cost Center Order Process
CO-PA	Accrued discounts / rebates	Additional Costs

41. WHAT ARE THE SAP RECOMMENDED "COST ELEMENT CATEGORIES" TO BE USED IN CO-PA?

SAP recommends to use the following **cost element categories** so that you do not meddle with the sign (+/- signs) representation in CO-PA:

- 01 (costs)
- 11 (revenues)
- 21 (sales deductions)

42. HOW DOES SAP HANDLE "+" / "-" SIGNS IN CO-PA?

All the values (planning and actual) in CO-PA are stored as positive values in the respective fields. This applies to all revenues, sales deductions, and cost of goods manufactured, as well as to the different period costs, that flow into CO-PA. Only the business transactions like returns, cr. memo, or reversals are represented with negative sign.

In rare cases where you are not able to maintain the rule (that all values are stored as positive), you may set the indicator *Transfer values with +/- signs* when assigning value fields (for the transfer of billing documents and incoming sales orders). By setting this indicator, you can transfer values with their +/- signs from condition types to display a correct total value, even in the case of positive and negative condition values. Remember that you can use this indicator only if:

- A condition with different signs flows into a value field
- Anticipated and actual rebates need to balance in rebate processing
- Several condition types in a value field need to "balance out" with different signs

CHAPTER 8

AT THE CROSS-ROADS…

What you will be seeing in the following pages in this chapter are real-life business-challenging situations relating to SAP CO that users and consultants have come across in various SAP implementations or user environments. It is a mosaic of compilation, cutting across almost all the components of SAP Controlling. Ample screenshots have been provided at the appropriate places to enhance your comprehension and to make you feel at home with the issue or problem at hand, as well as with the suggested solution. Note that the solutions or ideas or alternatives provided have been compiled from various sources, and are to be taken as the "possible" solutions or alternatives, and not as the only solution or alternative.

1. MAKING THE "FROM YEAR FIELD" EDITABLE AFTER CREATION OF THE DUMMY PROFIT CENTER.

In CO-PA under the "Maintain Controlling Area" settings under the "control indicator," the *"from year field"* is only in display mode. At the time of creation of dummy Profit Center an entry was not made in this field, but was "saved" as such. How to make an entry in that field now?

Make the following changes in the Configuration (SPRO):

- *Controlling >General Controlling >Organization-> Maintain Versions* (T-Code: OKEQ)
- Select Version "0."


General Version Overview

Version	Name	Plan	Actual	WIP/RA	Variance
0	Plan/actual version	☑	☑	☑	☑

FIGURE 8.1 Maintain Versions: Overview

- Click "Settings for Each Fiscal Year" button on left side.

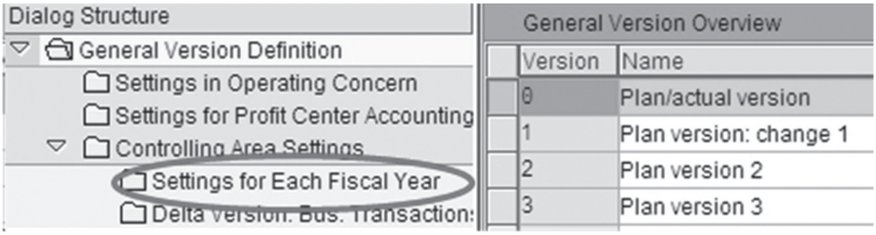


FIGURE 8.2 Maintain Versions: Settings for Each Fiscal Year

- Enter the required Controlling Area on the pop-up screen.

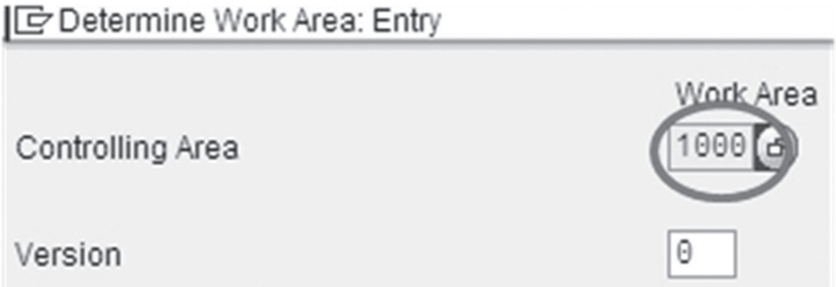


FIGURE 8.3 Maintain Versions: Work Area

- Select "copying allowed" check-box, and "Save."

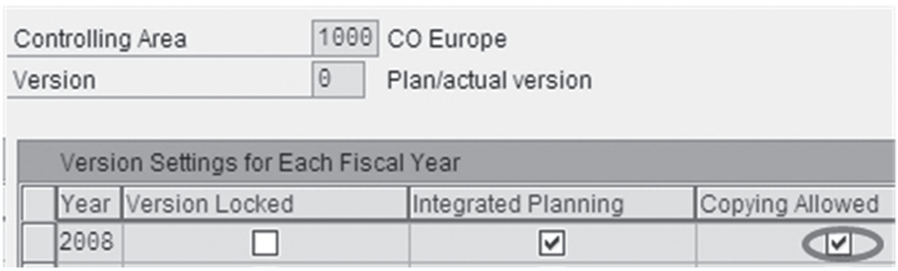


FIGURE 8.4 Maintain Versions: Select "Copying Allowed" for a Fiscal Year

2. CHANGING THE VALIDITY OF A COST CENTER AFTER TRANSACTIONS HAVE BEEN POSTED.

I have posted certain transaction in one of the Cost Centers. Now, I want to change the original validity (01-01-2009" to 31-12-9999) of the Cost Center to "01-01-1990 to 31-12-9999." Is this allowed?

You will be able to change the validity from "2009" to "1990." However, note that you will not be able to change the beginning period to a future date to 01-01-2009 (that is changing 2009 to 2011, for example) if you have already posted some transactions relating to the year 2009.

3. THE PRICE GOT UPDATED IN THE MATERIAL MASTER, AND IN MR21 A PRICE CHANGE DOCUMENT GOT GENERATED, BUT NO FI DOCUMENT WAS GENERATED.

In costing, we have completed CK11N and CK24. The price got updated in the material master and a "price change document" got generated in MR21. But no FI document got generated for the same. Why? The old price and the new price have a difference of $4.

Note that the Transaction MR21/CK24 (release) always creates a "price change document." But an accounting document is created only if the value of "price change" * "quantity on stock" is not ZERO. So, if you have a "price change document" for a material with zero quantity on stock, no accounting document will be created.

4. THE "SALES OFFICE" HAS BEEN DEFINED AS A CHARACTERISTIC IN COPA. BUT IN THE REPORT EXECUTION, NOT ALL OF THESE ARE DISPLAYED.

The Sales Office has been defined as a Characteristic in COPA. But while executing the report, it was noticed that all the sales offices are not appearing in the report. There are invoices available for all these sales offices. What is the issue?

- Check whether any COPA document is posted. If a COPA document is posted, then you may check whether the original document (sales order) has the sales office maintained in the sales order header.
- Check the characteristic derivation table lookup; check whether field VBAK-VKBUR is maintained in "Assignment of Table fields to Target Fields."

- Try Transaction KE4F (Prepare subsequent posting of sales orders) or Transaction KE4T (Post sales orders subsequently).
- Assign a default customer range in the report definition. Absence of this may lead the system not picking up all the customers and hence some sales offices.

5. IN TRANSACTION KE30, SUMMATION OF VALUE IS INCORRECT

While running report through KE30, it is found that summation of value by SAP system is wrong. The system is not adding up data correctly. What would be the reason for that?

The possibilities include:

- When you have formulas in lines and columns, you have to define which formula has priority at each intersection of those formulas. Depending on the formulas, that result may not be the same.
- The system may apply the formula to the aggregated values when you expect it to apply the formula to single items and then aggregate (for example to product group).
- In case there are lines/columns with reversed signs, note that if you reverse the sign for a line/column that does not apply to formulas using that line/column, i.e. in the calculation of that formula results the sign is as posted.

6. THE SUB-ASSEMBLY (ALREADY COSTED, AND USED IN A FINAL PRODUCT) IS GETTING COSTED AGAIN WHEN USED WITH ANOTHER FINAL PRODUCT.

We are about to go live in four weeks and we would like to start with the "standard cost estimate" process soon in order to have enough time to correct all costing errors before going live. We are looking for a way to prevent an accidental release of the standard cost estimate before time to avoid any transactional data at this stage. We tried changing the *costing type* in our *costing variant* to "no-update" but the field is greyed out. Is there a specific authorization object for the release step in CK40N? Is there any other way to prevent such an accidental cost release?

There are two ways with which this can be achieved:

- You can create a temporary *costing type* with reference to one used by your regular costing variant. Instead of the regular *price update*, you need to have this configured as "*no price update allowed*." Then you need to create a temporary costing variant for pre-costing with reference; create one referencing to the regular variant but with the temporary costing type ("*no price update allowed*") you just created. Now you can use the temporary costing variant to do costing planning safely. However, the disadvantage is that you need to do cost planning later again, with the regular costing variant.
- You can grant *Mark/Release* authorization to specific users. Use the authorization object K_FVMK under class CO. It has activities "43-Release," "44-Flag," and "45-Allow." Do not be misled by the messages: the system will not issue a meaningful *"lack of authorization"* message, but an obscure message about "*no items found for release*."

7. THE SUB-ASSEMBLY (ALREADY COSTED, AND USED IN A FINAL PRODUCT) IS GETTING COSTED AGAIN WHEN USED WITH ANOTHER FINAL PRODUCT.

We have two Controlling Areas, 1000 and 2000. The Company Code 1000 is attached to Controlling Area 1000. "Funds Management" has been activated for Company Code 1000. While planning for the Cost Center (Transaction KP06), the system throws a message "Funds Management is active and Layout 101 is unsuitable." Why?

The system triggers message KAFF002 if and only if one of the three components of Funds Management (funds, functional area, or grant, usually in Industry Business Solution IS-PS) is active in the current system, but is not provided in the selected layout (1-101). This is not allowed. A valid layout must contain all the active components.

Layout	Text	Changed b
1-101	Cost Elements Acty-Indep./Acty-Dependent	SAP
1-101F	Cost Elements	SAP
1-101FFG	Cost Elements	SAP

FIGURE 8.5 Planning Layouts

It is necessary to use a planning layout that contains exactly those components that are active in your system. If there is no suitable standard layout you may need to create your own layout (for example, for planning with Transaction KP06 use Transaction KP65 and create the planning layout 1-101, 1-101F, or 1-101FFG. If they are not available in the system already, you may have to copy them first from client 000 using Transaction OKBF.)

8. UNABLE TO CREATE A "COST ELEMENT" USING TRANSACTION FS00

We have a Company Code 8000, assigned to the Controlling Area 8000. When we try to create the cost elements through the Transaction FS00, the system throws the message KI205 "Cost accounting is not active in Company Code 1000." Why?

Unless the correct Controlling Area assignment is defined for a Company Code, the postings from FI are not updated in CO. To update the FI postings in CO, you must assign a Controlling Area to Company Code 1000 (Transaction OX19). Also, ensure that the Controlling Area component in Transaction OKKP is "active."

9. USING LSMW, UNABLE TO RECORD FIELD COST CENTER/ELEMENT GROUP "DESCRIPTION" (FIELD NAME: DESCRIPT) THROUGH KSH2 AND KAH2.

We have been trying to change the "Description" (Field name: DESCRIPT) "Cost Center"/Cost Element Group using LSMW. However, we are unable to the record values for that record field through Transaction KSH2 and KAH2 while running step 1 of LSMW. We have tried to manually add the screen field for screen 0120, program SAPMSSY0, but it also is not working. Is it possible to use LSMW at all for this scenario? If yes, what needs to be done? How?

When you are using the "batch input" in LSMW, use *Menu* > *Extras* > *Report Settings* (or Ctrl + F2) in your recording and set text in the field "Description" in the "Report Settings" pop up.

10. IN DOCUMENT "ENTRY VIEW" A PROFIT CENTER HAS BEEN ASSIGNED TO A LINE ITEM THOUGH THE USER HAS NOT ENTERED ANY PROFIT CENTER WHILE POSTING.

When posting an entry to a bank account, the user does not enter any Profit Center. But in the document "entry view" we can see that a Profit Center is being assigned to that line item displayed. From where the system is getting this Profit Center assigned? How to check?

A default Profit Center can be maintained in transaction 3KEH (table T8A30).

Check if there is a default Profit Center has been maintained for that specific Bank G/L account.

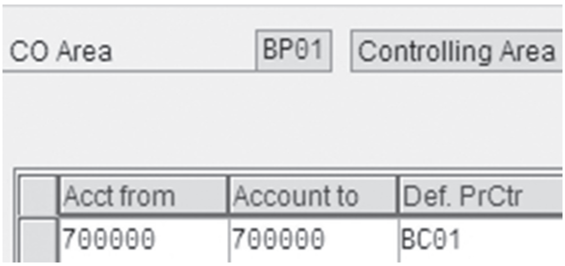
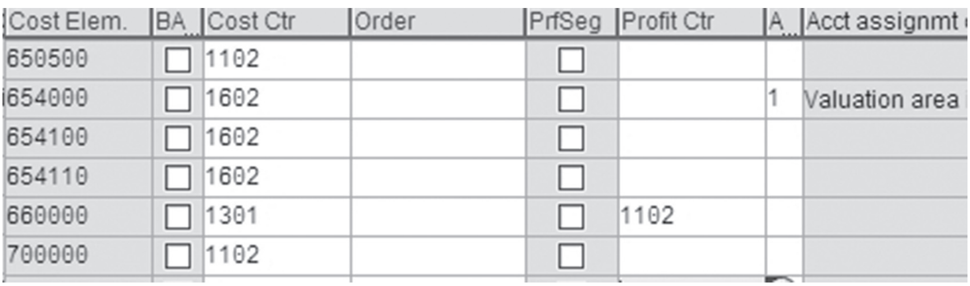


FIGURE 8.6 Default Profit Center in Transaction 3KEH

You may also eheck if there is a substitution maintained in Transaction GGB1 or there is a Profit Center maintained in the automatic account assignment in Transaction OKB9.



Cost Elem.	BA	Cost Ctr	Order	PrfSeg	Profit Ctr	A..	Acct assignmt
650500		1102					
654000		1602				1	Valuation area
654100		1602					
654110		1602					
660000		1301			1102		
700000		1102					

FIGURE 8.7 Profit Center Assignment Transaction OKB9

11. IN CO-PA DERIVATION, "STATE" (REGION) IS MAPPED TO KNNR BASED IN CUSTOMER NUMBER KNA1 AND THE "REGION." WHAT IS THE CORRECT WAY TO MAP?

We have CO-PA derivation for State (Region) mapped to KNNR, based on the Customer number (KNA1) and the "Region." We are given to understand that this may be incorrect because while the sales team changes the "ship-to" address for the customer, it will not get reflected in CO-PA. What is the correct mapping?

In SAP, the standard customer characteristic in CO-PA is KUNNR (sold-to-party). So if you want to derive another SD partner role (ship-to-party, payer, etc.) follow SAPNET note 36557. Once the ship-to-party customer is derived you can derive "state" (or others) in the same way as it is done for the "sold-to-party" customer.

12. MOVING AVERAGE PRICE SHOULD NOT BE MANUALLY UPDATED THROUGH TRANSACTION MR21

We need to control the Moving Average Price (MAP) "change" option in the material master. We have made this field as non-editable (grayed-out) using the field status maintenance. But it is still possible to update this price if we post a statistical price through Transaction MR21. The Price control used is "S." How can we control that manually so no one is able to update this price? Is it possible to control this using a "user exit?"

Instead using a "user exit," you achieve the same results by restricting the user access to the transaction by customizing role authorization in SAP Security for the Transaction MR21.

13. DOCUMENT SPLITTING ERROR (GLT2201) IN SETTLING AUC TO FINAL ASSET IN TRANSACTION KO88

We are trying to settle an Asset under Construction (AuC) through Transaction KO88 to a final Asset but are getting Document splitting error (GLT2201). The Profit Center / Cost Center is assigned to the Asset Master and also in the Internal Order. We could settle from the P/L account to the

AuC asset when we run Transaction KO88 earlier, but the system is not allowing settling from AuC to the final asset. We are using Parallel Ledger and there are two additional depreciation areas: 30 for posting only depreciation (real area) and 60 for posting only APC (derived area). We have maintained ACSET for all the depreciation areas. What is the problem?

Ensure that the field "Profit Center" is not suppressed in the field status of Asset G/Ls. Note that the field status of a Profit Center should not be "Suppressed."

14. FACTORY UNIFORMS FOR LABOR ARE PURCHASED IN ONE LOT, AND THE SAME NEEDS TO BE DISTRIBUTED TO THE COST CENTERS FOR EACH PERIOD OF THE YEAR.

In our factory the uniform expenses of factory laborers are done in one shot for the whole year. However, booking these expenses in one period would definitely distort the financial results so it should be accrued for all the period of a financial year.

On the FI side, manual entries are passed on every month by debiting "*Uniform Expenses*" account and crediting "*Accrued Factory Charges*" account. Because the Purchase Request is raised in bulk and goods are received in bulk, we are unable to understand how to book and distribute these costs to the cost centers for each of the periods. If we put an account assignment category K, we can give a cost center but the posting would be lump sum for all the periods and it would distort our COGM for every month. How to handle this?

Because costs are distributed manually in FI, you might as well create "Uniform Expenses" account as a Cost Element ("01") and allow the value flow to a Cost Center every period. Alternatively, using the "Percentage Method of Accrual Calculation," you may accrue the cost on a Cost Center by crediting an Internal Order and when you post actual expense in FI, you debit the same Internal Order. Your actual costs are posted to the internal order. Each period, the internal order is settled to a Balance Sheet account so it does not impact the P&L. The overhead accrual process allocates some portion of the costs from the internal order to a Cost Center each month. This reduces the amount on the Internal Order and therefore reduces the amount of the accrual once the order is settled again.

15. HOW TO KNOW IF THE VARIANCE IS FROM USAGE OR SCRAP?

For a given component, assume the component scrap is 10%. Example: the required quantity is 100 pieces, component scrap is assumed to be at 10%, scrap quantity at 10 pieces. Therefore, 110 pieces are required on the process order/Production order. If the goods issue is 130, how will we know what the usage variance is and what is the scrap variance?

Note that the scrap variances are caused by differences between the *operation scrap planned* (10 in the example) in the routing and the *operation scrap actually confirmed*. The scrap can be confirmed at operation level. If the operation scrap actually confirmed is 30, then the entire variance can be considered as "scrap variance." On the other hand, if you have confirmed the actual scrap at, say 20, then in this particular case 20% is the "scrap variance" and the rest is the "usage variance."

16. "TRANSFER CONTROL" IS NOT WORKING THE WAY IT SHOULD.

A lower level material is re-costed even though you have entered settings for transfer control. What needs to be done?

The issue is probably caused by the settings in Customising in transfer control.

You need to check what period the cost estimate exists in. You can check this in the cost estimate (Transaction CK13N -> "Dates" tab).

- For example, say that the cost estimate that you expect the system to take over exists in period 3. In your single Plant strategy (Transaction OKKN > Transfer Control > "Single Plant" tab) you have assigned that strategy that should take over the current cost estimate. However you are calculating costs for period 6.
- Or consider that the cost estimate for the material that you want it to take over is for period 3. You are calculating costs for period 4.

In the settings OKKN > Transfer Control >"Single Plant" tab you need to maintain a value in the "periods field." If you do a F1 help in the "period field" you will see "Period age of zero" means the current period. If you put in the value 4 the system will check all the periods from 4 then 3, 2, and 1. You can also fill the field with a maximum value of 999.

See SAP note 1258470 Costing: Customizing for transfer control explains more about the values for fiscal year and periods.

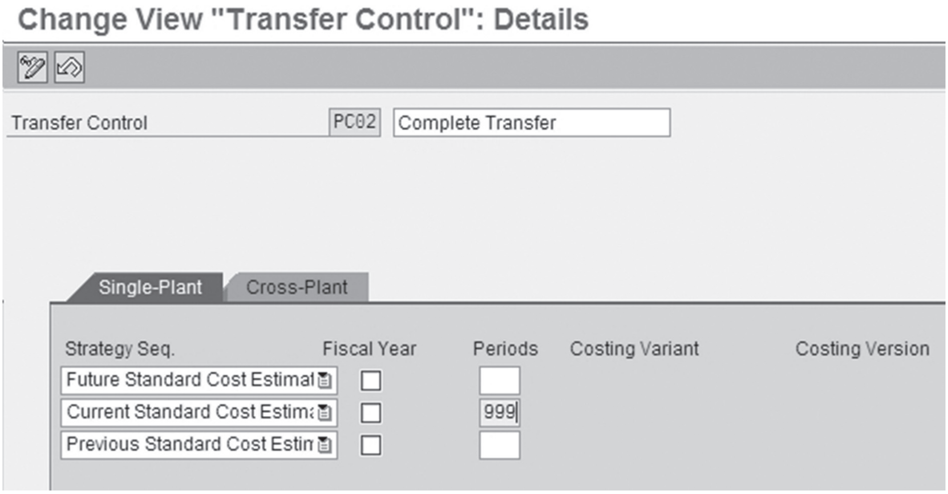


FIGURE 8.8 Transfer Control: "Periods" Maintenance for Single-Plant

17. HOW TO BRING THE DEPRECIATION AND INTEREST ON WORKING CAPITAL INTO COSTING?

We have created the Cost Components for depreciation cost and interest on working capital. How do we take these values to Costing?

The depreciation, interest, and capital must form different primary cost elements. Maintain cost component structure Transaction OKKN and make sure that the cost component split is by "primary cost element splitting." Then assign the cost elements of depreciation, interest, or capital to relevant cost component. There are two ways to bring these costs into cost components:

- Define a cost "splitting structure" (Transaction OKES) and assign these to manufacturing Cost Centers (Transaction OKEW). You need to configure the Cost Center as account assignment object in ACSET for depreciation posting. While executing depreciation run, depreciation will get posted to relevant Cost Center in FI.
- Conduct activity type dependent planning (Transaction KP06)

18. BOM PICKS ONE COMPONENT (VENDOR COMPONENT) AND IGNORES THE OTHER (MANUFACTURED IN-HOUSE) WHILE COSTING THE PRODUCT.

We have a very simple BOM made up of two components: Component A is procured from vendors and has a standard price of $.01, and Component B is manufactured in-house and has a standard price of $110.00. When we run CK40N, the BOM is only picking up the cost of Component A ($.01) and ignoring Component B. We have tried finding out what is wrong by looking at all the Material Master settings between the two components and they all seem to be fine. The BOM detail lines seem to be fine, no different than other BOMs. So, where is the catch?

- Check the *material valuation strategy* of the costing variant to ascertain whether it uses other prices like *Plan Price* or User Exit instead of standard price to valuate material cost.
- Check the Procurement Type and Special Procurement in MRP2 view for the two components. Cost planning will check the procurement type and special procurement to determine whether the component is purchased or produced. If your purchasing department who are responsible for updating the Purchasing and MPR Views on the material master had set the Procurement type field for the BOM to Externally Procured instead of in-house produced, then the BOM will not pick this component during costing.
- Check the Price Control in Accounting1 view. Make sure the relevant price is defined for the Price Control (say, if the price control is V, make sure the moving average price is entered).

19. THE SUB-ASSEMBLY (ALREADY COSTED, AND USED IN A FINAL PRODUCT) IS GETTING COSTED AGAIN WHEN USED WITH ANOTHER FINAL PRODUCT

We have a sub-assembly (B), already costed for this year and used in a final product X. We are using the same sub-assembly in another final product Y, and are doing the standard cost estimate for Y. The system is re-calculating the standard price of B. Is there a way to overcome this?

You need to apply proper "Transfer Control" for your costing variant. In costing variant maintenance (Transaction OKKN), double-click on the relevant costing variant, and on the "Control" tab click "Create" against the "Transfer Control."

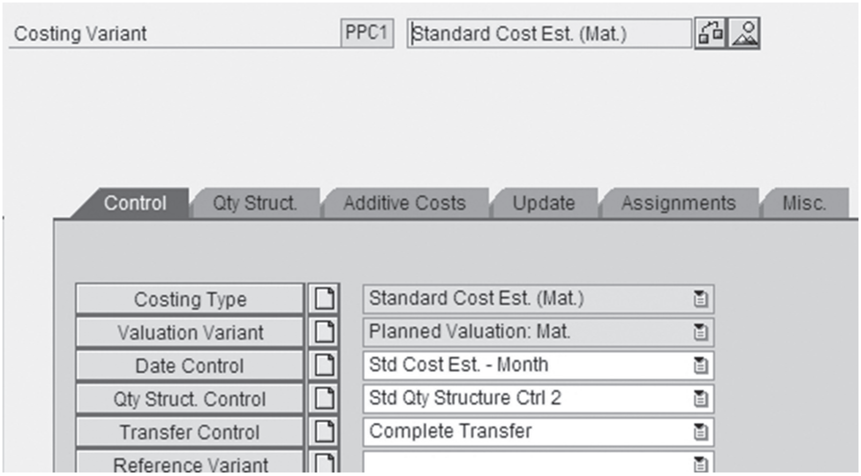


FIGURE 8.9 Maintain Appropriate Transfer Control

On the next screen, select and double-click on the appropriate "Transfer Control" (say"PC02"). Move to the next screen, and maintain the necessary "Strategy Sequence" (select "Previous Standard Cost Estimate") under the "Single Plant" tab. This single-Plant strategy will prevent the assemblies in the production structure from being re-costed. To avoid problems in costing periods, you may also input "999" in the "Periods" field.

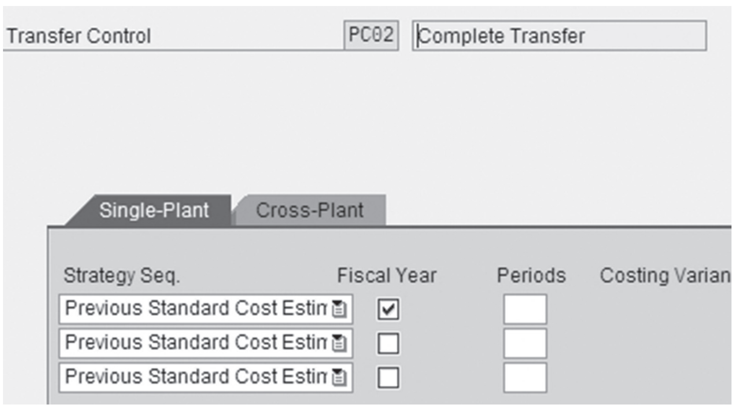


FIGURE 8.10 Maintain Appropriate Strategy Sequence for "Single-Plant"

20. HOW TO USE "CONTRIBUTION MARGIN" OR "TOTAL DIRECT COST" AS THE TRACING FACTOR IN COSTING-BASED CO-PA?

We are working with costing-based CO-PA. In doing Cost Center assessment to CO-PA, is it possible to use the "contribution margin" or the "total direct cost" as the "tracing factor?" In the case of "top-down distribution," the system provides us with two options as regards the "reference base": (a) "single value" fields and (b) "by-value" fields. Is it possible to use a "group value" field like "total direct costs" or "total cost," etc.?

Transaction KEU5 allows having a receiver tracing factor either as a value or a key figure. However, if you look at KEU5, the system will bring out only the value fields unless you have already maintained a key figure. So, the first step is to maintain the required key figure (say, the contribution margin) through Transaction KE2K. After this, it is up to you to use the value field or the key figures available in KEU5 as the receiver tracing factor.

As regards the "top-down" distribution, note that you can only use the "single" or "by-value" fields as the distribution base (Transaction KE28), and not any group of value fields.

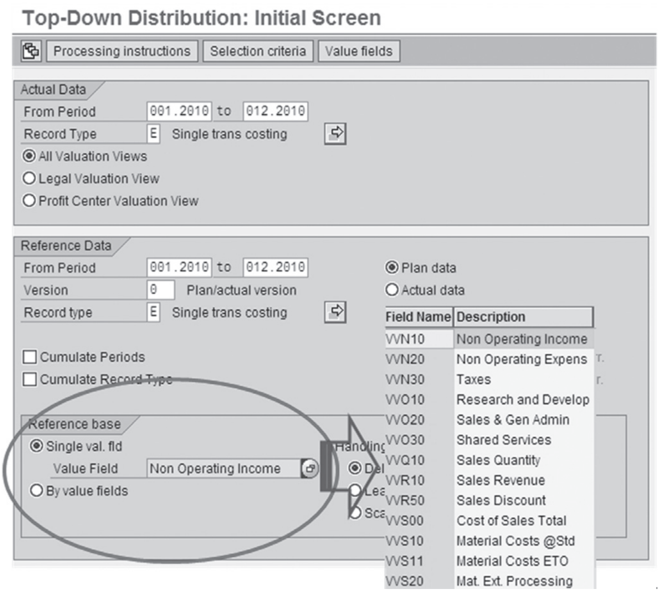


FIGURE 8.11 Top-Down Distribution: Reference Base

21. HOW TO ADD "SHIP-TO-PARTY" IN A COSTING-BASED COPA DATA SOURCE?

We have a costing-based COPA data source based with some characteristics and values. We need to add "ship-to-party" field into this. We have checked Transaction KEA0, but this "ship-to-party" field is not available in the list of standard fields. What do we need to do?

"Ship-to-Party" is a pre-defined characteristic and the same can be added by simply selecting it from "Transfer from" in Transaction KEA0. But to make this available in KEA0, you first need to create and activate the same in Transaction KEA5, by following the steps below:

- Click on create/change button.
- Enter Table name (PAPARTNER since it is a partner function field).
- Select KUNWE (Ship-to-Party).
- Activate and save (ignore message, if any).

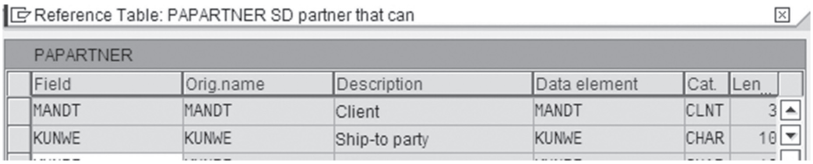


FIGURE 8.12 Activating "KUNWE" in PAPARTNER Table

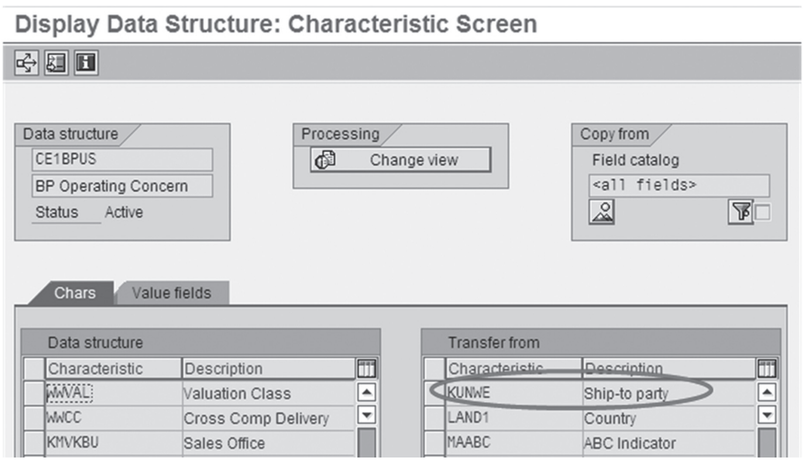


FIGURE 8.13 "KUNWE" Available in Transaction KEA0 in "Transfer from" Column

Once this characteristic is activated in KEA5, it will now be available in KEA0 in the "transfer from" column, where this can be added into the data source.

22. "MARKING ALLOWANCE" HAS BEEN ACTIVATED WITH AN INCORRECT COSTING VARIANT / VERSION. HOW TO DEACTIVATE, AND ACTIVATE FOR THE RIGHT ONE?

In Transaction CK24, we activate "marking allowance" before releasing the future price with the costing variant and costing version for the specific period. While activating the marking allowance, it has been activated for the wrong costing variant and version, and the cost is not marked and released. Because the wrongly-activated marking allowance would be active for that specific period, is there a way we can deactivate it so that we can reactivate it with the right costing variant / version?

Note that here is no standard functionality to remove a wrongly activated "marking allowance." If you have not released any plan cost estimate due to your wrong marking allowance for the given period, check table FVMK which contains the marking allowance (note that the costing variant itself is not stored in this table, only costing version and valuation variant). You may also edit table entries so it shouldn't be a problem to set the marking allowance for the right costing variant.

23. COST ESTIMATES WERE DELETED ACCIDENTALLY. IS IT NECESSARY TO RE-CALCULATE? HOW?

All our standard material does not have a cost estimate any more, because an unknown user has deleted all current cost estimates. Is it possible to find out which user has used the CKR1 transaction? That is not the full story: how can I solve the problem? Do I need to re-calculate all the material?

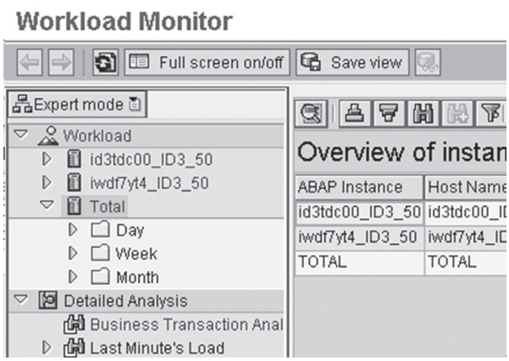


FIGURE 8.14 Workload Monitor (Transaction ST03N)

There is no short-cut here. Let us handle each part separately.

To find out who has executed Transaction CKR1, you may check the authorizations to ascertain who have been provided with the access to the transaction. Use Transaction ST03N (Workload Monitor), and on the left upper window double-click “Total” (you may even try for a single day if you can imagine which (possible) date the deletion would have been done).

On the lower- left section open “Detailed Analysis” and then fill-in CKR1 in the “Transaction” on the “SAP Workload: Business Transaction Analysis” pop-up screen.

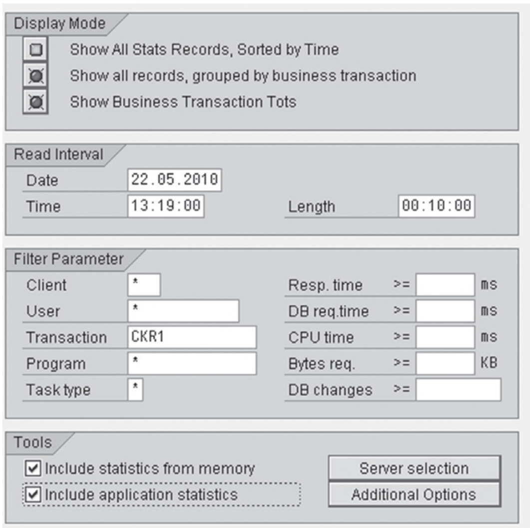


FIGURE 8.15 Workload Monitor: Fill-in the Parameters

Now, look for the users who might have used this transaction. Yes, this can be time-consuming but it is worth a try. In future, note to restrict the access to CKR1 to *a very small number of well-trained users*.

Now, let us focus on the major issue: because deletion of a cost estimate clears it from the tables there is no way you can recover them. If there are PP-Orders that have been created based on the old/deleted plan cost estimates, the variance calculation will not work any more, even when you recalculate the cost and release in the same period, as the plan cost estimate is missing. With the variance calculation not possible for these orders, you have to settle the whole balance to a receiver object by removing the variance key in PP-order. Before doing it for all, try first for a single order to see if there are any other problems that need to be solved during month-end-closing.

24. HOW DOES THE SYSTEM ARRIVE AT THE VARIANCE IN THE CASE OF PRODUCTION ORDERS?

The output material of a production order is valuated at the standard price. The variance calculation method depends on how the material is valuated. If material is valuated at the moving average price, then the variance calculated as the difference between the "actual costs" and "planned costs" (which is nothing but the difference between the "actual costs" and "total GR of the production order at standard price." Is this understanding correct?

When we talk about variance, what we have to understand is that the total variance is the one that is settled by the system. The total variance is the difference between the actual costs debited to the order and the costs credited to the order due to deliveries to stock. The difference between the debit and credit of the order is passed to Financial Accounting (FI) and Profit Center Accounting (EC-PCA) when the order is settled.

So, when a material is valuated at a standard price, the variance is nothing but the difference between "total actual costs" and "total deliveries to stock at standard price (from the last released cost estimate)."

25. THE CHARACTERISTIC KDGRP IS NOT GETTING POSTED TO CO-PA.

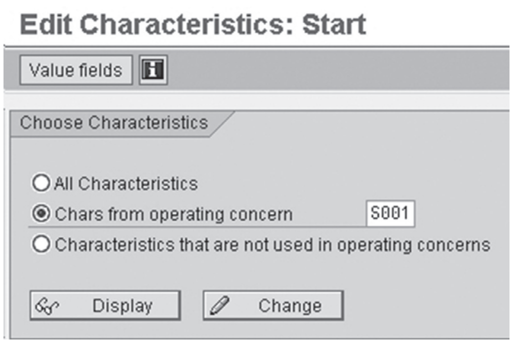


FIGURE 8.16 Characteristics from Operating Concern

We are getting the error "Characteristic value "25" does not exist for characteristic KDGRP (Country Ship-to)" while releasing the billing document in VF02. Message no. KE0C133. The system's diagnosis is that the characteristic "KDGRP" ("Customer Group") should be posted to Profitability Analysis (CO-PA). When the system checked the entries, it was established that the transferred characteristic value ("25") is not valid in CO-PA. The system has proposed the response; the data is not consistent and therefore cannot be transferred to CO-PA. Where is the problem?

Execute Transaction KEA5, choose the Operating Concern, and retrieve all the Characteristics used in that Operating Concern.

Now, find the Characteristic KDGRP, double-click and look at the details under "Validation" for the "Check Table."

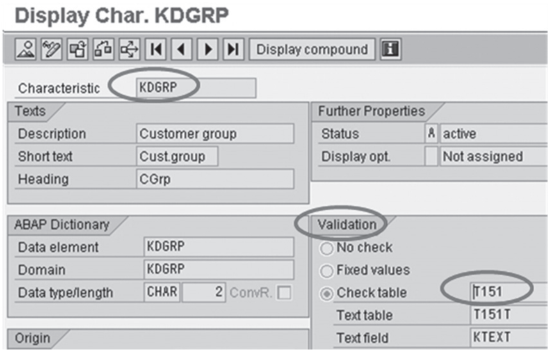
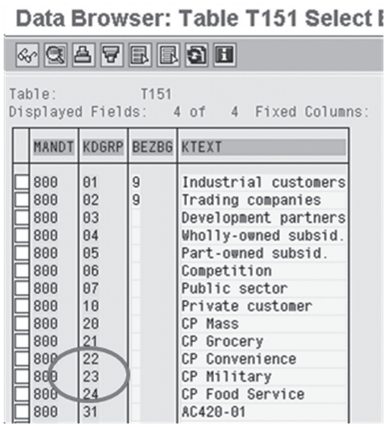


FIGURE 8.17 Check Table (T151) for the Characteristic KDGRP

Now, look for the value (25) in the Check Table (say, T151) by double-clicking the on the Check Table T151 or by using Transaction SE16, and looking at the "Table Contents."

You will find all the valid values for that Characteristic KDGRP. For example, it could be that you do not find "25" in that table, then you need to create one first (say, if it is a customer table where each new Customer Group has to be created via Transaction SM31).

In case, you do not want to maintain the relevant Table and want to undo the check against the Check Table for the Characteristic KDGRP.



MANDT	KDGRP	BEZBG	KTEXT
800	01	9	Industrial customers
800	02	9	Trading companies
800	03		Development partners
800	04		Wholly-owned subsid.
800	05		Part-owned subsid.
800	06		Competition
800	07		Public sector
800	10		Private customer
800	20		CP Mass
800	21		CP Grocery
800	22		CP Convenience
800	23		CP Military
800	24		CP Food Service
800	31		AC420-01

FIGURE 8.18 Available Values for KDGRP

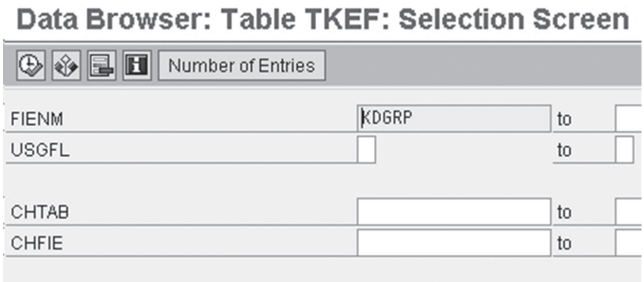


FIGURE 8.19 Finding the Entry KDGRP in Table TKEF

You need to remove the Check Table from Table TKEF (remove the entries for fields CHTAB and CHFIE from the TKEF record for KDGRP (that means FIENM = KDGRP) so that these fields become initial in table TKEF for the KDGRP record).

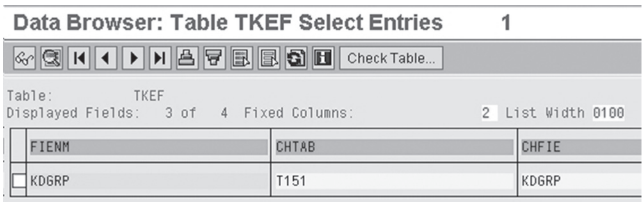


FIGURE 8.20 CHTAB and CHFIE Entries for KDGRP

Now, regenerate the check routine RK2FGPKE (using the Function Module RKD_SHORT_TEXT_GENERATE for APPLCLASS = KE). Note to test this thoroughly in your Development / Quality before attempting the same in Production.

26. IS IT POSSIBLE TO USE A LOCAL VARIABLE (IN WHICH THE USER CAN ENTER A VALUE WHILE EXECUTING THE REPORT) FOR A CO-PA REPORT COMPARING ACTUAL DATA FOR TWO TIME SPANS?

We need a CO-PA report that can compare actual data of a month/ quarter/ year with actual data of another month/ quarter/ year. The users will input the two spans of time that they want to compare while executing the report. Is it possible to use a variable here?

Supposing that you want to see the different time spans in columns, double click the column head. A window "element definition" will pop up. Choose the Characteristics from the right as needed (year, period) and move them to the left.

For every Characteristic that you want a variable for, tick the check-box under that yellow symbol (for both "from" and "to"). Another window will pop up asking for a local variable. Here you can choose a name for the variable freely. On executing the report, the user will have to enter a value for those local variables.

27. WIP REPORT, FOR COLLECTIVE PROCESSING, THAT NEEDS TO BE RUN ONLY ONCE.

As with the Transaction KKAY which brings up the WIP report for individual processing, is there a report which can be used for collective processing? This report will be run only once as of 31-March and should have the following:

Order #	WIP of order	WBS ID for order	WBS ID description	Sum of consumption of order as on 31/Mar

The Transaction KKAQ can be used for collective display (for single month).

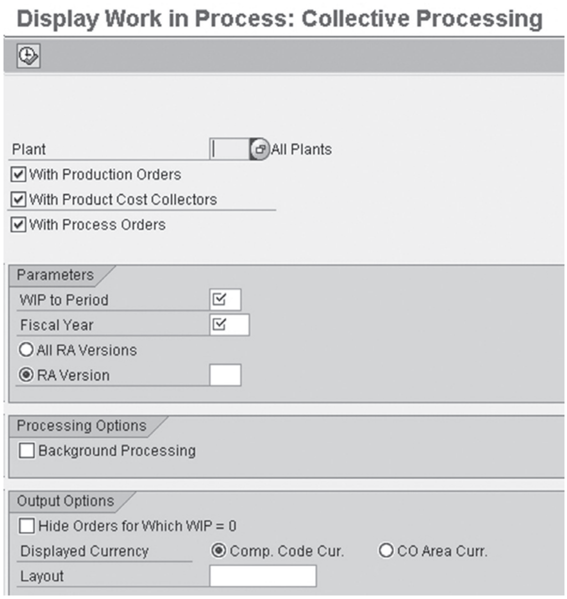


FIGURE 8.21 Transaction KKAQ: Collective Processing

With the report S_ALR_87013151, you have the select-option for the period/year.

28. CONTROL INDICATORS FOR CONTROLLING AREA XXXX DO NOT EXIST.

We have copied a Controlling Area XXXX from 1000, with the date from 2010 to 9999. When we try creating AR invoice, we are getting the following error, "Control indicators for Controlling Area XXXX do not exist."

- Check the date of your Cost Center or Profit Center, which you are using for posting the AR invoice, which should be equal to your Controlling Area year.
- Check the Control of the Cost Center if you are using that Cost Center for the document posting.

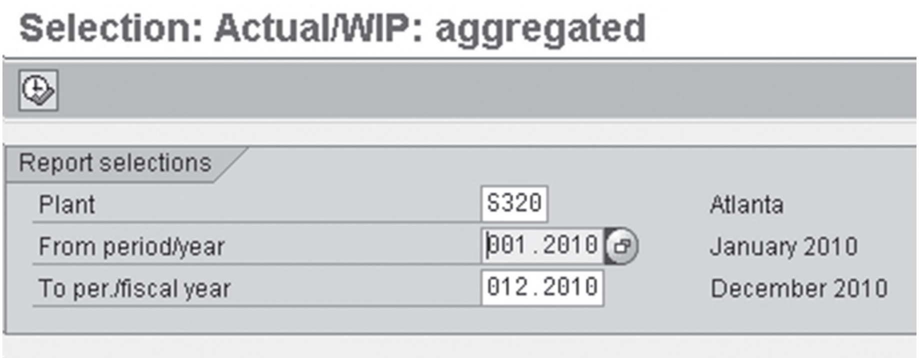


FIGURE 8.22 Report: S_ALR_87013151

- Check 1KEF transaction (if you have PCA active) and Transaction OKKP and ensure that you have activated the required CO components.
- Check Transaction OKE5 and see if the control indicator is checked.
- Check records in Table TKA00 for Controlling Area XXXX and 1000 to see any configuration missed for the Controlling Area XXXX.
- Check the CO version for the Controlling Area XXXX through Transaction OKEQ.

CHAPTER 9

SAP TABLES IN CONTROLLING

#	Description	Table
1	Activity Type Master	CSLA
2	Actual Line Items for Reconciliation	COFIS
3	Assign Company Code to Controlling Area	TKA02
4	Assignment of Work Center to Cost Center	CRCO
5	Basic Settings for Versions	TKA09
6	Characteristic Values	AUSP
7	CO Key Sub-Numbers	COKEY
8	CO Object: Control Data for Activity Type	COKL
9	CO Object: Control Data for Cost Center	COKA
10	CO Object: Control Data for Primary Cost Element	COKP
11	CO Object: Control Data for Secondary Cost Element	COKS
12	CO Object: Control Data for Statistical Key Figure	COKR
13	CO Object: Document Header	COBK
14	CO Object: Line Items (by Fiscal)	COEJ
15	CO Object: Line Items (by Period)	COEP
16	CO Object: Line Items for Activity Type	COEJL
17	CO Object: Line Items for Activity Types	COEPL
18	CO Object: Line Items for Prices	COEJT
19	CO Object: Line Items for Prices	COEPT
20	CO Object: Line Items for SKF	COEJR

#	Description	Table
21	CO Objects: Assignment	COSC
22	CO Period Locks	KAPS
23	CO Versions	TKVS
24	Controlling Areas	TKA01
25	CO-PA: Actual Line Items	CE1xxxx
26	CO-PA: Planned Line Items	CE2xxxx
27	CO-PA: Segment (Higher Level)	CE4xxxx
28	CO-PA: Segment Level Line Items	CE3xxxx
29	CO-PC Cost Object Hierarchy: Individual Objects	CKPE
30	Cost Center / Activity Type	CSSL
31	Cost Center / Cost Element	CSSK
32	Cost Center Master Data	CSKS
33	Cost Center Texts	CSKT
34	Cost Components for Cost of Goods Manuf.	KEPH
35	Cost Elements - Data Dependent on Chart of Accounts	CSKA
36	Cost Elements - Data Dependent on Controlling Area	CSKB
37	Cost Elements Texts	CSKU
38	Costing Objects	KALO
39	Dependent on Material and Receiver	A141
40	Dependent on Material Group	A143
41	Dependent on Material	A142
42	Distribution Rules Settlement Rule Order Settlement	COBRB
43	Document Header Controlling Object	BPBK
44	Document Header for Settlement	AUAK
45	Document Segment: Transactions	AUAV
46	EC-PCA: Actual Line Items	GLPCA
47	EC-PCA: Object Table for Account Assignment Elements	GLPCO
48	EC-PCA: Plan Line Items	GLPCP
49	EC-PCA: Transaction Attributes	GLPCC
50	Line Item Annual Values Controlling Object	BPEJ
51	Line Item Period Values Controlling Object	BPEP
52	Line Item Total Values Controlling Object	BPEG

#	Description	Table
53	Object- Control Data for Cost Elements	COKA
54	Object- Cost Totals for External Postings	COSP
55	Object- Cost Totals for Internal Postings	COSS
56	Object Table for Reconciliation	COFI01
57	Order Master Data	AUFK
58	PCA- Totals Table	GLPCT
59	Price per Company Code	A138
60	Price per Controlling Area	A136
61	Price per Cost Center	A132
62	Price per Country / Region	A137
63	Price per Profit Center	A139
64	Processes for Product Cost Collector	PKOSA_ PROC_A
65	Product-Costing Header	KEKO
66	Profit Center Master Data Table	CEPC
67	Profit Center Master Data	CEPCT
68	Sales Order Items - Costing Objects	KANZ
69	Settlement Document: Distribution	AUAB
70	Settlement Document: Receiver Segment	AUAA
71	Settlement Rule for Order Settlement	COBRA
72	Settlement Rules per Depreciation	AUAI
73	Single Plan Items for Reconciliation	COFIP
74	Totals Record - Reconciliation Ledger	COFIT
75	Totals Record for Annual Total Controlling Object	BPJA

CHAPTER 10

SAP TRANSACTION CODES IN CONTROLLING

Using Transaction Codes (T-Codes) is the fastest way of getting into a transaction, rather than going through the menu path. There are hundreds and hundreds of Transaction Codes, and it is impossible (and also not required!) that you remember all these codes.

It is possible that you can get into a list of Transaction Codes if you are familiar of using the Transaction Code SE93 (All the Transaction Codes are stored in Tables TSTC and TSTCT.).

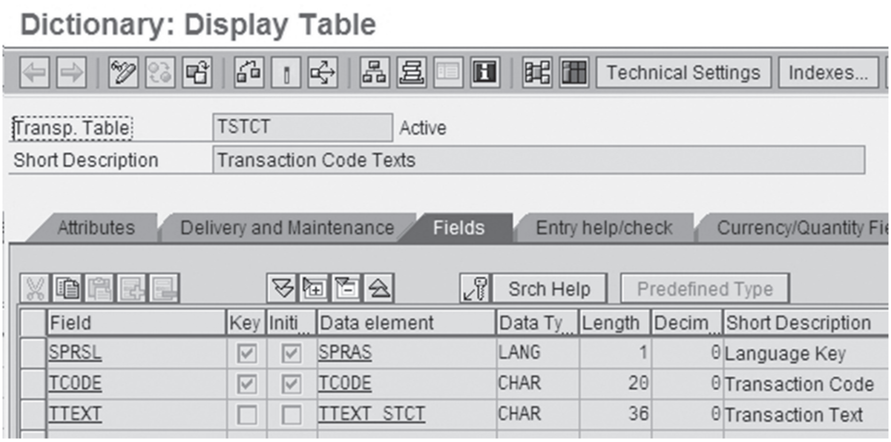


FIGURE 10.1 Table TSTCT

There are two ways of finding the Transaction Codes using SE93:

1. When you know the application area: say, you want to list all the Transaction Codes starting with 'KE'. Enter 'KE*' in the initial screen.

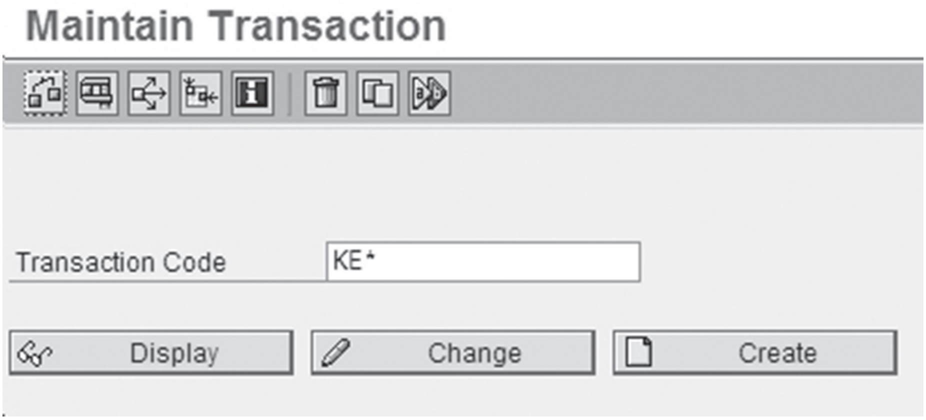
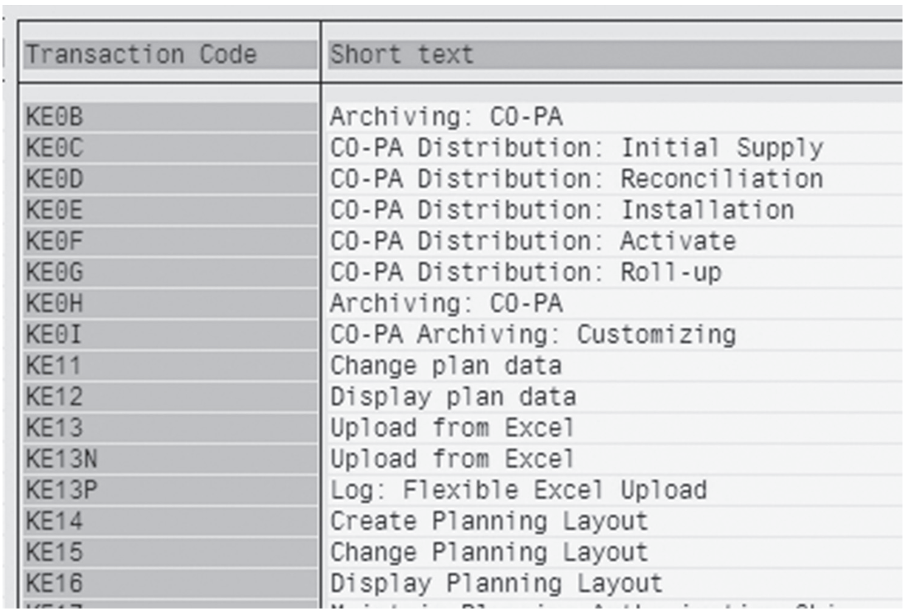


FIGURE 10.2 Initial Screen in SE93

a. Search using ‘F4’. The system brings out all the T-Codes starting with ‘KE’.



Transaction Code	Short text
KE0B	Archiving: CO-PA
KE0C	CO-PA Distribution: Initial Supply
KE0D	CO-PA Distribution: Reconciliation
KE0E	CO-PA Distribution: Installation
KE0F	CO-PA Distribution: Activate
KE0G	CO-PA Distribution: Roll-up
KE0H	Archiving: CO-PA
KE0I	CO-PA Archiving: Customizing
KE11	Change plan data
KE12	Display plan data
KE13	Upload from Excel
KE13N	Upload from Excel
KE13P	Log: Flexible Excel Upload
KE14	Create Planning Layout
KE15	Change Planning Layout
KE16	Display Planning Layout

FIGURE 10.3 Search Results for Transactions Starting with ‘KE’

2. In case you do not know or do not have any clue about the Transaction Code, but still want to find out, then you need to go via the ‘Selection Screen’ after you enter the Transaction Code SE93. Place the cursor in the ‘Application Component’ field on the pop-up:

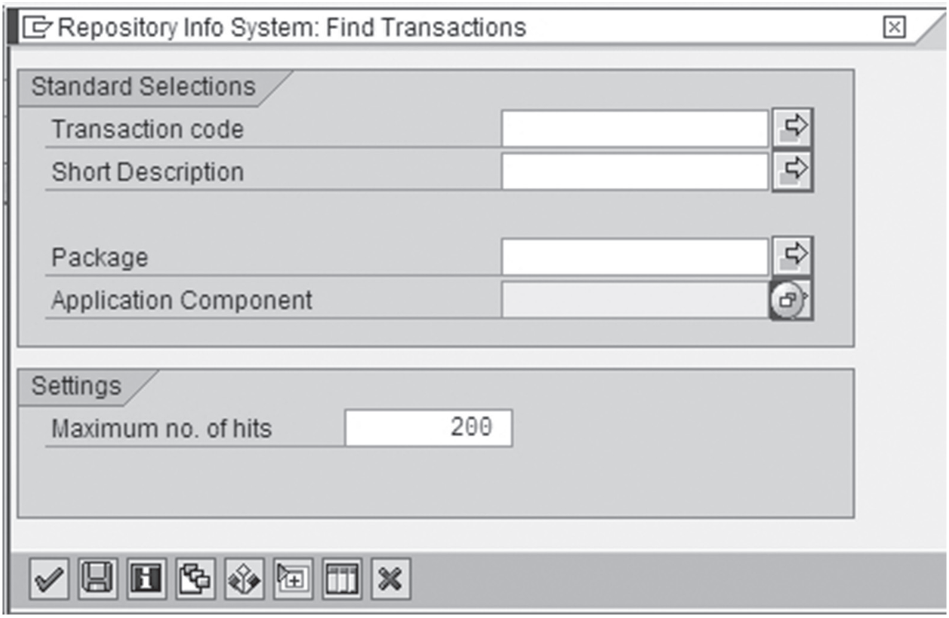


FIGURE 10.4 'Find Transactions' Selection Screen

a. Press 'F4'. The system pops-up the 'Select Application Component' screen as shown below.

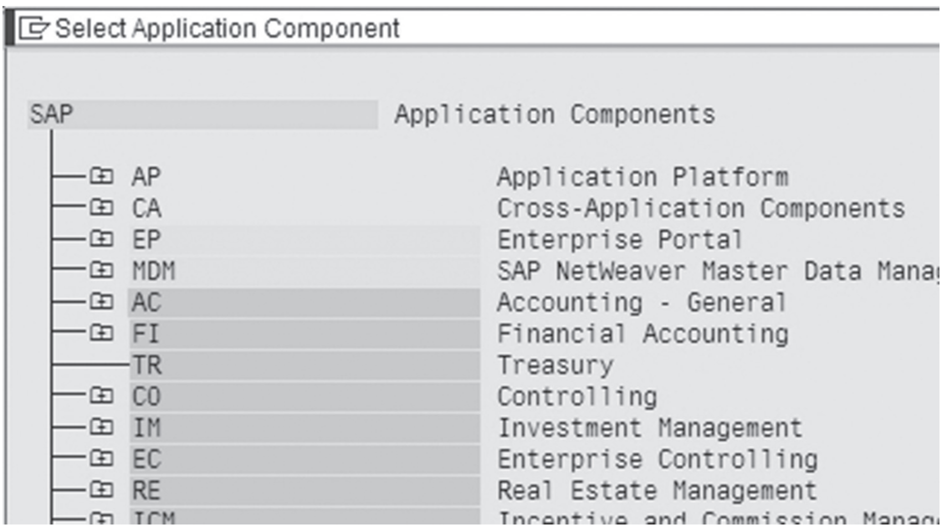


FIGURE 10.5 Select Application Component - Initial

b. Drill-down to the desired node. For example, consider you need to list down all the Transaction Codes under 'Controlling-Profitability Analysis,' then you will be drilling-down as shown below.

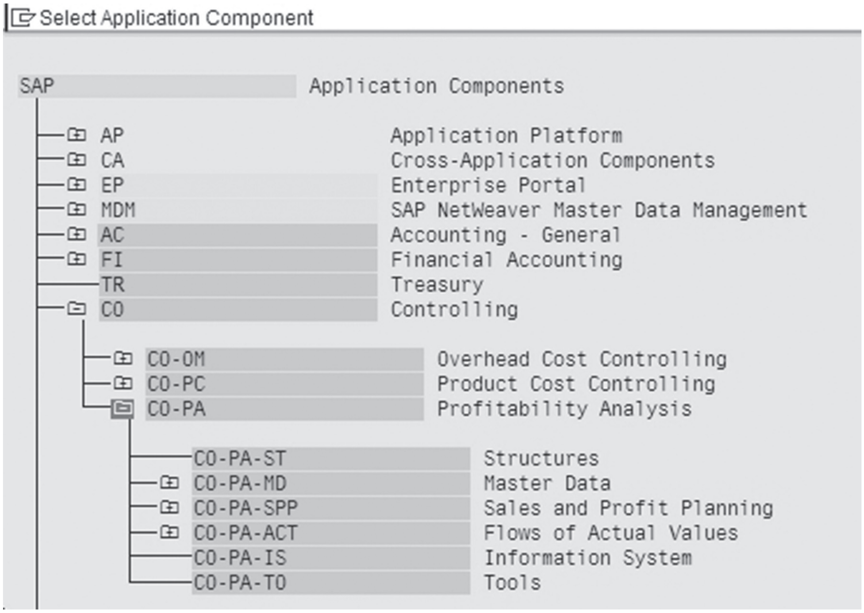


FIGURE 10.6 Select Application Component – Drill-down

c. Select the node 'CO,' then drill-down to 'CO-PA.' Now, double-click on the line. You are now taken back to the pop-up shown under (2) above, with the 'application component' filled in. You may append a "*" to bring all the T-codes under all the sub-application areas of CO-PA:

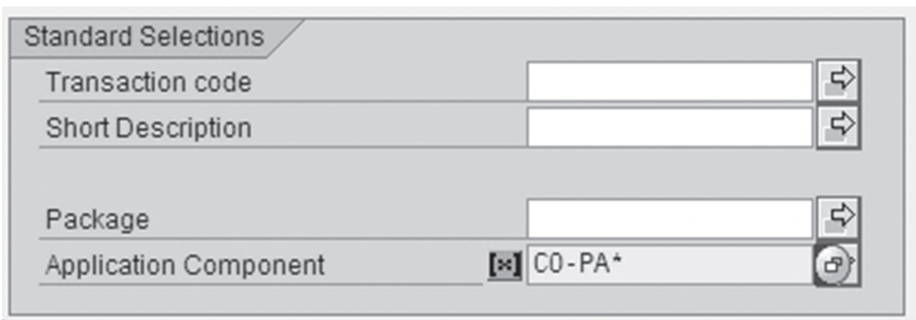


FIGURE 10.7 Value Filled in Standard Selection with the Application Component

d. Press 'Enter', then 'F8' and the system brings up all the Transaction Codes relating to this application sub-component.

Transaction Code	Short text
3KE1N	EC-PCA: Create Actual Assessment
3KE2N	EC-PCA: Change Actual Assessment
3KE3N	EC-PCA: Display Actual Assessment
3KE4N	EC-PCA: Delete Actual Assessment
3KE7N	EC-PCA: Create Plan Assessment
3KE8N	EC-PCA: Change Plan Assessment
3KE9N	EC-PCA: Display Plan Assessment
3KEAN	EC-PCA: Delete Plan Assessment
4KE1N	EC-PCA: Create Actual Distribution
4KE2N	EC-PCA: Change Actual Distribution
4KE3N	EC-PCA: Display Actual Distribution
4KE4N	EC-PCA: Delete Actual Distribution
4KE7N	EC-PCA: Create Plan Distribution
4KE8N	EC-PCA: Change Plan Distribution
4KE9N	EC-PCA: Display Plan Distribution
4KEAN	EC-PCA: Delete Plan Distribution

FIGURE 10.8 List of T-Codes for the Selected Application Component

e. Continue to other application areas or sub-components to find all the Transaction Codes you need.

To provide a ready-reference, we have tabulated the important Transaction Codes in SAP Controlling which you will see in the following pages.

OVERHEAD COST CONTROLLING (CO-OM)

#	Description	Transaction Code
1	Act. Int Calc.: Projects Coll. Proc.	CJZ1
2	Act. Overhead: Int.Order Ind.Pro	KGI2
3	Act. Overhead: Prod.Ordr Col.Pro.	CO43
4	Act. Overhead: Prod.Ordr Ind.Pro.	CO42
5	Activity Type Selection Variants	KM7V
6	Activity type: Display changes	KL05
7	Activity Types: Master Data Report	KL13
8	Actual Accrual for Cost Centers	KSA3
9	Actual Overhead: Cost Centers	KSI4

#	Description	Transaction Code
10	Actual Overhead: Sales Order	VA44
11	Actual Overhead: Int. Ord. Coll. Proc.	KGI4
12	Actual Reval.: Cost Obj. Col.Pro.	KKN2
13	Actual Reval.: Cost.Obj. Ind.Pro.	KKN1
14	Actual Reval.: Int.Orders Col.Pro.	KON2
15	Actual Reval.: Int.Orders Ind.Pro.	KON1
16	Actual Reval.: PrCstCol. Col.Pro.	MFN2
17	Actual Reval.: PrCstCol. Ind.Pro.	MFN1
18	Actual Reval.: Prod.Ordr Col.Pro.	CON2
19	Actual Reval.: Prod.Ordr Ind.Pro.	CON1
20	Actual Reval.: Sales Order	VAN1
21	Archive Admin: assess., distr., ...	KA18
22	Archive CO Line Items	CO_ITEM_WR
23	Archive CO Orders	KOAR
24	Archive Settlement Documents	KOAA
25	BCT-CO: Change Report Row Hierarchy	BWOM01
26	BCT-CO: Displ/Check Report Row Hier.	BWOM02
27	Call Doc. Display for CCtr Monitor	CCMON_DOC_CALL
28	Callup View Maintenance With COArea	KPR1
29	Change "All Currencies" Indicator	OKCX
30	Change Activity Type	KL02
31	Change Activity Type Group	KLH2
32	Change Automatic Account Assignment	OKB9
33	Change Cost Center	KS02
34	Change Cost Center Group	KSH2
35	Change Cost Centers	KS12
36	Change Cost Element	KA02
37	Change cost element group	KAH2
38	Change Currency Translations	OKC8
39	Change Group (Hierarchical)	KXH2
40	Change Primary Posting Price Var.	OKA8
41	Change Standard Hierarchy	OKEO

#	Description	Transaction Code
42	Change Standard Hierarchy	OKEON
43	Change Statistical Figure	KK02
44	Change Statistical Key Figure Group	KBH2
45	Change Statistical Key Figures	KAK2
46	Change Time-Based Fields/Cost Ctrs	OKEG
47	Change Time-Dependent Field/Process	OKEZ
48	Change Valuation in Version 0	OKEV1
49	Check Archiving Documentation	ANNETTE
50	CO Integr.: Reposting - Indiv. Procg	COINT_TP_S
51	CO Integration: Link to Customizing	COINT_TP_CUST
52	CO Integration: Reposting Maint.	COINT_TP_MAINT
53	CO Integration: Reposting Maint.	COINT_TP_MAINT_S
54	CO Line Items	KA16
55	CO Res.: Display Valuation Variants	KPR9
56	CO Res.: Maintain Valuation Variants	KPR8
57	CO Resources: Display Price Strategy	KPRB
58	CO Resources: Maint. Price Strategy	KPRA
59	CO Table Display	RKACGRID
60	CO Totals Records	KA12
61	CO Variant Maintenance: CO-OM-ABC	0KW3
62	CO Variant Maintenance: Cost Centers	0KM1
63	Commitment Overhead: Cost Centers	KSO9
64	Configuration Menu Gen. Controlling	ORK0
65	Controlling Area: ALE Settings	OKKP1
66	Controlling Area: ALE Settings	OKKP2
67	Controlling Area: Assgn. to CCode	OX19
68	Controlling Area: Components/StKFs	OK01
69	Controlling Documents: Actual	KSB5
70	Controlling Documents: Plan	KABP
71	Controlling Integration: Reposting	COINT_TP
72	CO-OM Information System: Settings	RPX0

#	Description	Transaction Code
73	CO-OM Information System: Settings	RPXN
74	CO-OM-IS User Settings: Customizing	REPP1
75	Copy Resource Planning	KPRN
76	Cost Center Master Data	KA10
77	Cost Center Selection Variants	KM1V
78	Cost Center: Display Changes	KS05
79	Cost Centers: Activity prices	KSBT
80	Cost Centers: Actual Line Items	KSB1
81	Cost Centers: Change Management	KS30
82	Cost Centers: Master Data Report	KS13
83	Cost Centers: Plan Line Items	KSBP
84	Cost Centers: Planning overview	KSBL
85	Cost Element: Display Changes	KA05
86	Cost Elements: Master Data Report	KA23
87	Cost Object: Planning Overview	KKBU
88	Cost Resource: Test Environment	KCR04_TEST
89	Cost Transfer Layout Variants	KBC1
90	Create Activity Type	KL01
91	Create Activity Type Group	KLH1
92	Create Cost Center	KS01
93	Create Cost Center Group	KSH1
94	Create Cost Element	KA01
95	Create Cost Element Group	KAH1
96	Create Group (Hierarchical)	KXH1
97	Create Secondary Cost Element	KA06
98	Create Statistical Figure	KK01
99	Create Statistical Key Figure Group	KBH1
100	Define Component/Switching Structure	OKER
101	Define Substitution	OKC9
102	Define Validation	OKC7
103	Delete Activity Type	KL04
104	Delete Activity Types	KL14

#	Description	Transaction Code
105	Delete Activity Types	OKC6
106	Delete ALE-COEP(L) Line Items	KAID
107	Delete Business Processes	0KWD
108	Delete Cost Center	KS04
109	Delete Cost Centers	KS14
110	Delete Cost Centers	OKC4
111	Delete Cost Element	KA04
112	Delete Cost Elements	KA24
113	Delete Cost Elements	OKC5
114	Delete Statistical Key Figures	KK03DEL
115	Delete Transaction Data	OKC3
116	Display Activity Type	KL03
117	Display Activity Type Group	KLH3
118	Display Activity Type Matchcode IDs	OKEF
119	Display CO Cost Segments	RKACSHOW
120	Display CO Document	RKABSHOW
121	Display CO Transactions	OKC1
122	Display Conversion Milestones	KAUM
123	Display Cost Center	KS03
124	Display Cost Center Group	KSH3
125	Display Cost Center Matchcode IDs	OKEB
126	Display Cost Center Types	OKA1
127	Display Cost Element	KA03
128	Display cost element group	KAH3
129	Display Cost Element Matchcode IDs	OKED
130	Display Customizing Settings	COCUSDIS
131	Display Follow-On Documents	RKARSHOW
132	Display Hierarchy (Hierarchical)	KXH3
133	Display IMG Structure	OKM0
134	Display Logical Databank CEK	OKE2
135	Display Logical Databank CIK	OKE3

#	Description	Transaction Code
136	Display Logical Databank CPK	OKE4
137	Display Logical Databank CRK	OKE1
138	Display Logical Databank SAK	OKEM
139	Display Manual Allocations	KB16
140	Display Period Lock	OKP2
141	Display Primary Posting Price Var.	OKA9
142	Display PS Cash Documents	CJIG
143	Display Resource Master Record	KPR3
144	Display Standard Hierarchy	OKEN
145	Display Standard Hierarchy	OKENN
146	Display Statistical Key Figure Group	KBH3
147	Display Statistical Key Figures	KAK3
148	Display Statistical Key Figures	KK03
149	Display Time-Based Fields/Act.Types	OKEJ
150	Display Time-Based Fields/CElems	OKEL
151	Display Time-Based Fields/Cost Ctrs	OKEH
152	Display Time-Dependent Field/Process	OKEY
153	Display WBS Element Groups	KJH3
154	Down Payment: Maintain Default CElem	OKEP
155	Enter Manual Allocations	KB15
156	Evaluate Resources Used	KPRW
157	Execute List Editing of Cost Center	KS08
158	Execute Rough Entry of Cost Center	KS07
159	Export CO-CCA Reports	OKD1
160	Extracts: User Settings	GRE8
161	Extracts: User Settings, Coll.Maint.	GRE9
162	General Version Maintenance	OKEQN
163	Generate Cost Center Acctg. Reports	OKB6
164	IAA via Internet	KB22
165	IMG Controlling: General	OKM1
166	IMG Controlling: General	OKM2
167	Import CO-CCA Reports	OKD3

#	Description	Transaction Code
168	Import Individual Reports	OKD6
169	Import Models Activities	OPMI
170	Import models Cost Center Accounting	OKMI
171	Import Models Cost Elements	OCMI
172	Import Models Orders	ORMI
173	Import Planning Layouts	OKBF
174	Info. Sys. Rec.Ldgr: Report Currency	RPA1
175	Info. Sys. Rec.Ldgr: Report Currency	RPAM
176	Info. System CCtrs: Presettings	RPC0
177	Info. System CCtrs: Presettings	RPC1
178	Info. System CCtrs: Presettings	RPC2
179	Info. System CCtrs: Presettings	RPCN
180	Info. System Orders: Presettings	RPO0
181	Info. System Orders: Presettings	RPON
182	Info.Sys. Proc.: Presettings	RPB0
183	Info.Sys. Proc.: Presettings	RPBN
184	Info.Sys. Rec.Ledger: Presettings	RPA0
185	Info.Sys. Rec.Ledger: Presettings	RPAN
186	Int. Cost Alloc. Screen Variants	KBC2
187	INTERNAL: Work List	ACTL
188	List Variants, CCA/ABC Master Data	0KMV
189	Maintain ABC Report Tree	OKLB
190	Maintain Activity Type Matchcode IDs	OKEE
191	Maintain Allocation Structure	VCTP
192	Maintain Authorization Group Version	OK15
193	Maintain CCA Report Tree	OKLS
194	Maintain CO Resource Prices	KPR6
195	Maintain CO Resource Prices	KPR7
196	Maintain Controlling Area	OKKA
197	Maintain Controlling Area	OKKP
198	Maintain Cost Center Categories	OKA2
199	Maintain Cost Center Matchcode IDs	OKEA

#	Description	Transaction Code
200	Maintain Cost Element Matchcode IDs	OKEC
201	Maintain List Of Screen Variants	KBC0
202	Maintain Period Lock	OKP1
203	Maintain Project Settlement LIs	CJ70
204	Maintain Resources Master Record	KPR2
205	Maintain Time-Based Fields/Act.Types	OKEI
206	Maintain Time-Based Fields/CElems	OKEK
207	Maintain Versions (CO Area)	OKEV
208	Maintain Versions (General)	OKEQ
209	Non-Alloc. Activity Screen Variants	KBC5
210	Number Range Maint.: RK_BELEG	KANK
211	Order: Planning Overview	KABL
212	Orders: Budget Line Items	KOB4
213	Orders: WIP/Results Anal. Line Items	KOB8
214	Overhead COMM: Projects Col.Pro.	CJO9
215	Overhead COMM: Projects Ind.Pro.	CJO8
216	Overhead Commt: Int.Orders Col.Pro.	KGO4
217	Overhead Commt: Int.Orders Ind.Pro.	KGO2
218	Overhead Plan.: Int.Orders Col.Pro.	KGP4
219	Overhead Plan.: Int.Orders Ind.Pro.	KGP2
220	PEP CO-PC-ACT: Dummy	PFM3
221	Period Monitor - Log Display	PFM5
222	Period Monitor: Log Display	PFM2
223	Period Monitor: Log Display	PFM4
224	Plan Accrual for Cost Centers	KSA8
225	Plan Overhead: Cost Centers	KSP4
226	Planning Report: Cost Centers	KSB9
227	Planning Report: Cost Objects	KKBH
228	Planning Report: Orders	KAB9
229	Post Down Payments	OKBG
230	Proj. Info System: Default Settings	RPP0
231	Proj. Info System: Default Settings	RPPN

#	Description	Transaction Code
232	Report Writer: Delete Extracts	GRE5
233	Report Writer: Display Extracts	GRE1
234	Report Writer: Extract Management	GRE0
235	Report Writer: Print Extracts	GRE6
236	Report Writer: Validity of Extracts	GRE7
237	Residence Times for CO Line Items	ARCU_COIT1
238	Reval. ACT: Projects Col.Pro.	CJN2
239	Reval. ACT: Projects Ind.Pro.	CJN1
240	Revaluate CO Resource Prices	KP9S
241	Reverse Manual Allocations	KB17
242	RS Header: Line Items Variance	KKFB
243	Run Sched. Header: Line Items Actual	KRMI
244	Sales Document Line Items Res.Anal.	KKAA
245	Sales Documents: Commit. Line Items	KVBO
246	Screen Variants: Stat. Key Figures	KBC3
247	Selection Variants: Cost Elements	KM5V
248	Send Activity Type Group	KAVD
249	Send Cost Center Activity Prices	BD27
250	Send Cost Center Group	KAVB
251	Send Cost Center Totals Records	KAVA
252	Send Cost Element Group	KAVC
253	Send Cost Elements	BD24
254	Send Obj/Cost Element Control Data	BD28
255	Set Controlling Area	OKKS
256	Simulation of CO Line Item Summariz.	RARCCOA5
257	Start F4	CCMONITOR_F4
258	Start Report/Report Interface	CCMONITOR_RRIF
259	Stat.Key Figures: Master Data Report	KK04
260	Test Calculation of CO Resource	KCR01_TEST
261	Test Message	MSG_TEST
262	Transfer FI Documents to CO	OKBA
263	Transfer G/L Acct: Display Defaults	OKB1

#	Description	Transaction Code
264	Transfer G/L Acct: Maintain Defaults	OKB2
265	Transfer MM Documents to CO	OKBB
266	Transfer Revenue Screen Variants	KBC4
267	Transfer SD Documents to CO	OKBC
268	Transport Actual Posting Settings	OKE8
269	Transport Mater Data Settings	OKE6
270	Transport Organization Customizing	OKE10
271	Transport Organization Customizing	OKE5
272	Transport Planning Layouts	OKEX
273	Transport Planning Settings	OKE7
274	Transport Tool Settings	OKE9
275	Version Maintenance in CO Area	OKEVN
276	WWW: Internal Price List	KW3P

PRODUCT COSTING (CO-PC)

#	Description	Transaction Code
1	Account Maintenance Document Display-Reversal	MR11SHOW
2	Activate Actual Cost Component Split	OMXF
3	Activate Failure Cost Processing	FCOACTIV
4	Activate Failure Cost Processing	FCOACTIV_REM
5	Activate Failure Cost Processing	FCOACTIV_SFC
6	Activate Production Lot Cost Estimate	CKW4
7	Activate WIP at Actual Costs	OMXW
8	Activation of Planned Prices	CKME
9	Actual Cost Distribution: Cost Object	KKPX
10	Actual Cost Distribution: Cost Object	KKPY
11	Actual OHead: Cost Object Collec Processing	KKPJ
12	Actual Overhead: Cost Object Individual Processing	KKPZ

#	Description	Transaction Code
13	Actual Overhead: Run Schedule Header	MFI2
14	Actual Results Analysis: Orders	KKAI
15	Actual Results Analysis: Sales Ordrs	KKAK
16	Actual Results Analysis: WBS Element	KKAJ
17	Actual Settlement: Cost Objects	KK89
18	Ad Hoc Cost Estimate	CKECP
19	Add Base Planning Object	KKE1
20	Additional Expense in FCO	FCOREP_EXCESS
21	Administration Shared Buffer	CKSBX
22	Allow Closing Entries	CKMG
23	Allow Closing Entries for Run	CKMG_RUN
24	Allow Price Determination	CKMF
25	Allow Price Determination for Run	CKMF_RUN
26	Alternative Valuation Run Cockpit	CKMLCPAVR
27	Analyze Business Process	KKBC_BPR
28	Analyze Cost Center	KKBC_KST
29	Analyze Cost Object	KKBC_KTR
30	Analyze Costing Run	S_ALR_87099930
31	Analyze Costing Run	S_ALR_87099931
32	Analyze Internal Order	KKBC_ORD_INT
33	Analyze Material Cost Estimate	KKBC_MAT
34	Analyze Order	KKBC_ORD
35	Analyze Product Cost Collector	KKBC_PKO
36	Analyze Sales Order	KKBC_KUN
37	Analyze Summarization Object	KKBC_HOE
38	Analyze Unit Cost Est Base Plan Obj	KKE6
39	Archive Base Planning Objects	KKE8
40	Archive WIP Quantities Document	COMLWIPARCH
41	Archive: Create and Remove Index	CKRA
42	Area of Responsibility <-> Message	OPR1
43	Assign Contr. Level to Process Cat.	OMX_NLINK_DISP
44	Assign Material Update Structure	OMX8

#	Description	Transaction Code
45	Assign ML Movement Type Groups	OMX0
46	Assign Naming Structure to Plant	OMXE
47	Assignment of Delivery Costs	OKYO
48	AVR Erklärungstool	CKMLAVREXP
49	Background Processing of Reports	KKML8
50	Background Processing of Reports	KKO8
51	Base Planning Object Group	OKZA
52	BOM for Base Planning Objects	KKED
53	Call Summar. Hierarchy for Projects	OKTP
54	Call Summariz. Hierarchy for Orders	OKTO
55	Call Summariz. Hierarchy for Orders	OKVO
56	Change Additive Costs	CK75
57	Change Additive Costs	CK75N
58	Change Base Planning Object	KKE2
59	Change Characteristics	ECP_CT04
60	Change CO Production Order	KKF2
61	Change CO-FA Plan Values	KKF4
62	Change Cost Est w/o Qty Structure	KKPB
63	Change Cost Estimate w/o Quantity Struct	KKPBN
64	Change Cost Object	KKC2
65	Change Cost Object Planning	KKC5
66	Change Costing Run	CK42
67	Change Drilldown Report	KKML2
68	Change Drilldown Report	KKO2
69	Change Form	KKML5
70	Change Form	KKO5
71	Change Hierarchy Master Record	KKP2
72	Change Message: Error Management	CCF2
73	Change Mixing Ratio	CK94
74	Change Price Determination	CKMM
75	Change Procurement Alternatives	CK92
76	Change Product Group	KKC8

#	Description	Transaction Code
77	Change Production Cost Collector	KKF7
78	Change Report Layouts for Cost Ctrs	OKRS
79	Change Report List for Cost Centers	OKR6
80	Change Variance Key in Mat. Master	OKVZ
81	Change Variance Vrnts for Cost Ctr	OKVF
82	Characteristic Groups for Costing	KKOG
83	Check Costing Variant	CKC1
84	Check Order Type-Manufacturing Ord.	KOT2_PAUF
85	Check Order Type-Prod.Cost Collector	KOT2_PKOSA
86	Check Report: WIP Deactivation	CKMLWIPDEACT
87	Checks + Corrects Quantity Structure	MGV_CORRECT
88	CK Batch Processing	CK61
89	CK Batch Processing	CK63
90	CK Batch Processing	CK65
91	CK BATCH: Print logs	CK32
92	Classification Data (Summarization)	OKQ0
93	Classification Data for Object Records	OKQ1
94	Client Copy of Forms	KKMLK
95	Client Copy of Forms	KKOK
96	Client Copy of Reports	KKMLJ
97	Client Copy of Reports	KKOJ
98	Closing and Calc. of Periodic Price	OPR4_CKML
99	CO Summarization: Hierarchy Maintena	KKR0
100	CO Summarization: Summ. Characterist	KKR2
101	CO Summarization: Summ. Object Types	KKR1
102	CO_ML_DISPLAY	LACCS
103	COC Change Planning Layout Stat. KF	KK96
104	COC Change Plnng Layt Cost/ActvInput	KK66
105	COC Create Planng Layt Cost/ActInput	KK65
106	COC Create Planning Layout Stat. KF	KK95
107	COC Display Planning Layout Stat. KF	KK97
108	COC Display Plnng Layt Cost/ActvInpt	KK67

#	Description	Transaction Code
109	Cockpit Actual Costing	CKMLCP
110	CO-COC Plng: Change Costs/ActyInput	KK16
111	CO-COC Plng: Change Stat. Key Fig.	KK46
112	CO-COC Plng: Display Costs/ActyInput	KK17
113	CO-COC Plng: Display Stat. Key Fig.	KK47
114	Collective Entry	KKPH
115	Collective Entry	KKPK
116	Collective Processing: Variances	OPR4_FCO
117	Collective Processing: Variances	OPR4_KKS
118	Compare Base Object - Unit Cost Es	KKEC
119	Comparison of Itemizations	CK33
120	Concurrent Costing -XiPPE Dialog	CKTC
121	Configure Report Trees	KKB6
122	Consist. Check for Costing Run Nos.	KALNRCHECK
123	Control Info Sys Intangible Goods	OKNF
124	Control Info Sys Prod Cost by Order	OKN2
125	Control Info Sys Prod Cost by Period	OKN4
126	Control Info Sys Prod Cost Planning	OKN8
127	Control Info Sys Prod Cost Sales Ord	OKN3
128	Control of CO-PC Information System	OKN0
129	Control of Information System ML	CKMK
130	Control Parameters for Info System	KKB0
131	Control Parameters for Info System	KKB0N
132	CO-PC: Summarization level maint.	KKDV
133	Cost Analysis	KOC4
134	Cost Comp. Groups for Repetitive Mfg	OKT5
135	Cost Comp. Grps for Product Costing	OKT6
136	Cost Comp. Split Multiple Currencies	OKYW
137	Cost Comp. Str (View Cluster Maint.)	OKTZ
138	Cost Components for Price	MLCCSPD
139	Cost Element Groups: General Cost Obj	OKT8
140	Cost Element Groups for Process Mfg	OKTC

#	Description	Transaction Code
141	Cost Elements	CK84_99_COST_ELE-MENT
142	Cost Elements	CK85_99_COST_ELE-MENT
143	Cost ObjectHier: Coll. Proc. Variances	KKPT
144	Cost Object Category: Process Mfg	OKZ5
145	Cost Object Hierarchy	KKPHIE
146	Cost Object Line Items - Plan	KKCP
147	Cost Object Profile: Process Mfg	OKZ6
148	Cost Object: Analysis	KKP6
149	Cost Objects: Line Items - Actual	KKCS
150	Cost Objects: Variance Line Items	KKCA
151	Cost ObjHier: Indiv. Proc. Variances	KKP5
152	Cost_object_analyzer	COA_TEST
153	Costed BOM Sales Orders	CK87
154	Costed Multilevel BOM	CK86
155	Costing Items for Cost Object	KKB2
156	Costing Items for Material	KKB5
157	Costing Items for Sales Document	KKB1
158	Costing Items for WBS Elements	KKB3
159	Costing Model	CKCM
160	Costing Origins	OKZ1
161	Costing Types (Sales Order)	OKYA
162	Costing Types (Sales Order)	OKYE
163	Costing Types Base Planning Object	OKYP
164	Costing Types for PM Order	OKP7
165	Costing Types for Product Costing	OKKI
166	Costing Types Simulation Costing	OKIQ
167	Costing Types: Seiban	OKYK
168	Costing Variant for PM Order	OKP6
169	Costing Variant Generic Object	IKKZ
170	Costing Variants - Production Order	OPM1

#	Description	Transaction Code
171	Costing Variants (Brackets)	OKYY
172	Costing Variants (Sales Order)	OKY9
173	Costing Variants Base Planning Obj	OKKO
174	Costing Variants CO Production Order	OKY2
175	Costing Variants for Internal Orders	OKKR
176	Costing Variants for Primary Costs	OKY4
177	Costing Variants for Product Costing	OKKN
178	Costing Variants for Projects	OKKT
179	Costing Variants Message	OKYI
180	Costing Variants Network Component	OKYF
181	Costing Variants: Cost Objects	OKY3
182	Costing Variants: Cost Objects	OKY6
183	Costing Variants: PP Prod. Order	OPL1
184	Costing Variants: Seiban	OKYH
185	Costing Variants: Service Line	OKYS
186	Costing Variants: Simulation Costing	OKIP
187	Costing Versions	OKYD
188	Create Additive Costs	CK74
189	Create Additive Costs	CK74N
190	Create Additive Costs	CK77N
191	Create Characteristics	ECP_CT05
192	Create CO Production Order	KKF1
193	Create Cost Est w/o Qty Structure	KKPA
194	Create Cost Estimate w/o Qty Structure	KKPAN
195	Create Cost Estimate w/o Qty Structure	KKPDN
196	Create Cost Object	KKC1
197	Create Cost Object Archive	KKPQ
198	Create Cost Object Planning	KKC4
199	Create Cost of Sales: Order	KKG1
200	Create Cost of Sales: Project	KKG2
201	Create Cost of Sales: Sales Order	KKG3
202	Create Costing Run	CK41

#	Description	Transaction Code
203	Create Drilldown Report	KKML1
204	Create Drilldown Report	KKO1
205	Create Form	KKML4
206	Create Form	KKO4
207	Create Hierarchy Master Record	KKP1
208	Create Material Cost Estimate	CK11N
209	Create Message: Error Management	CCF1
210	Create ML Costing Run	CKRU00
211	Create ML-AT Master Data Manually	CKMLLACREATE
212	Create Multiple Product Cost Coll.	KKF6M
213	Create Order BOM Cost Estimate	CK51
214	Create Order BOM Cost Estimate	CK51N
215	Create Procurement Alternatives	CK91
216	Create Product Cost Estimate	CK11
217	Create Product Group	KKC7
218	Create Production Cost Collector	KKF6
219	Create Production Lot Cost Estimate	CKW1
220	Create Production Process	CKML_FPR1
221	Create RA Data for Sales Order	KKA6
222	Create RA Data for WBS Element	KKA5
223	Create Res. Analysis Data for Order	KKA4
224	Cross-Company Costing	OKYV
225	Cost Elem Grps for Orders, Eng-to-Ord	OKTI
226	Costing Variants Appropriation Request	OKYZ
227	Costing Variants Network Costs Activity	OKYG
228	Customizing Assignment	OKG5
229	Customizing Assignment	OKGB
230	Customizing Execution Profile	0KEX2
231	Customizing Execution Profile	0KEX3
232	Customizing Valuation Methods	OKG3
233	Customizing: WIP Valuation	OKGC
234	Customizing: WIP Valuation	OKGD

#	Description	Transaction Code
235	Data Collection Product Drilldown	KKRV
236	Data Collection: Product Drilldown	KKRO
237	Data Transfer: Val. Production Plan	CKMVAPP
238	Debit or Credit Material	CKMLDM
239	Debit/Credit Material	CKMLDC
240	Def. of Areas of Responsibility	OPR7
241	Def. of Minimum Message Types (SAP)	OPR8
242	Def. of Reference Objects (SAP)	OPR9
243	Default Values Cost ObjectControlling	OKZ3
244	Default Values for Varian. Key/Plant	OKVW
245	Define Formula Element	JPECPFE
246	Define Material Ledger Type	OMX2
247	Define Material Update Structure	OMX9
248	Define Naming Rule	OMXB
249	Define Pricing Key	JPECPPK
250	Define Reference Character. (Orders)	OKQ3
251	Define Reference Characteristics	OKQ2
252	Define Reference Chars (Projects)	OKQ4
253	Define Report Writer Languages	OKT4
254	Definition ML Movement Type Groups	OMX7
255	Definition of Breakpoints	OPR3
256	Definition of Error Mgmt IDs (SAP)	OPR5
257	Definition of Object IDs (SAP)	OPR6
258	Delete Costing Run	CK44
259	Delete Costing Run (Actual Costing)	CKMLRUNDEL
260	Delete Costing Run Cumulation	CKMLRUNCUMDEL
261	Delete Costing Run in Background	CK45
262	Delete Extract	CKMVFM_DEL
263	Delete Logs	CKMLPROT
264	Delete ML Costing Run	CKRU06
265	Delete RA Data for Sales Order	KKA9
266	Delete RA Data for Sales Order	KKA9P

#	Description	Transaction Code
267	Delete RA Data for WBS Element	KKA8
268	Delete RA Data for WBS Element	KKA8P
269	Delete Results Anal. Data for Order	KKA7
270	Delete Results Anal. Data for Order	KKA7P
271	Delete Test Data for Base Object	KKE5
272	Delete Transaction Data	KKPV
273	Detail Control Execution Services	0KEX4
274	Determine Value Added	CKWE
275	Display Accounts for Account Key UMB	OMX_UMB_AC-COUNTS
276	Display Activity Prices	CKMLLASHOW
277	Display Actual Cost Component Split	CKMCCS
278	Display ActvPrices, Change NO_SETTLE	CKMLLACHANGE
279	Display Additive Costs	CK76
280	Display Additive Costs	CK76N
281	Display Base Planning Object	KKE3
282	Display CO Production Order	KKF3
283	Display CO-FA Plan Values	KKF5
284	Display Controlling Levels	OMX_NRULE_DISP
285	Display Cost Est w/o Qty Structure	KKPC
286	Display Cost Estimate w/o Qty Structure	KKPCN
287	Display Cost Object	KKC3
288	Display Cost Object Hierarchy	KKP4
289	Display Cost Object Planning	KKC6
290	Display Costing Run	CK43
291	Display Cutoff Period	KKG0
292	Display Cutoff Period	KKG0P
293	Display Drilldown Report	KKML3
294	Display Drilldown Report	KKO3
295	Display Failure Cost Documents	FCODOC
296	Display Form	KKML6
297	Display Form	KKO6

#	Description	Transaction Code
298	Display Hierarchy List	KKBZ
299	Display Hierarchy Master Record	KKP3
300	Display Inventory and Activity Diff.	CKMDUVSHOW
301	Display Levels	CKRU08
302	Display Log	CKMPROTDIS
303	Display Material Cost Estimate	CK13N
304	Display Material List	CKMLMAT
305	Display Material Master/Price Analys	INV_DISPLAY_MAT
306	Display Message: Error Management	CCF3
307	Display Mixing Ratios	CK95
308	Display ML Costing Run	CKRU05
309	Display Order BOM Cost Estimate	CK53
310	Display Order BOM Cost Estimate	CK53N
311	Display Organizational Measures	CKMJ
312	Display Period Values	CKMLAVRPERD
313	Display Price Change Document	CKMPCD
314	Display Procurement Alternatives	CK93
315	Display Product Cost Estimate	CK13
316	Display Product Group	KKC9
317	Display Production Lot Cost Estimate	CKW3
318	Display Production Process	CKML_FPR3
319	Display Quantity Structure Type	OMXA
320	Display Selection	CKRU04
321	Display WIP - Collective Processing	KKAQ
322	Display WIP Quantities Document	COMLWIPDOC
323	Distribution of Activity Differences	CKMDUVACT
324	Distribution of Inventory Diffs	CKMDUVMAT
325	Dyn. Price Release Plan. Pr. Change	OMX5
326	Easy Execution Services	0KEX1
327	EC-PCA: Import Reports	OKT0
328	Edit Controlling Level	CKMLMV_CA
329	Edit Costing Run	CK40N

#	Description	Transaction Code
330	Edit Prcrmnt / Cnsmptn Alternatives	CKML_SURF
331	Edit Procurement Alternatives	CK91N
332	Edit Production Process	CKML_FPR1N
333	Enter Activity Differences	CKMDUVREC
334	Export Reports for Make-to-Order	OKSC
335	Export Reports for Process Mfg	OKSE
336	Export Reports for Product Costing	OKSJ
337	Export Reports for Projects	OKSQ
338	Export Reports for Run Schedules	OKSM
339	Export Reports for Sales Orders	OKSO
340	Export Reports for Unit Costing	OKSH
341	Find CO Orders	KKF9
342	Find Structure: BOM Explosion	CK62
343	Flexible Cost Comp. Report SaleOrder	CK89
344	Flexible Cost Component Report	CK80
345	General Cost Object Categories	OKZ7
346	General Cost Object Profiles	OKZ8
347	General Cost Object Reports	OKTA
348	Generate General Cost Object Reports	OKT9
349	Generate Report Group	KKBG
350	Generate Reports for Cost Ctr: Batch	OKS6
351	Generate Reports for Int.Ord.: Batch	OKS1
352	Generate Reports for Internal Orders	OKSA
353	Generate Reports for Make-to-Order	OKS3
354	Generate Reports for Process Mfg	OKS4
355	Generate Reports for Process Mfg	OKTD
356	Generate Reports for Product Costing	OKS8
357	Generate Reports for Projects	OKS7
358	Generate Reports for Repetitive Mfg	OKS2
359	Generate Reports for Run Schedules	OKS9
360	Generate Reports for Run Schedules	OKSS
361	Generate Reports for Sales Orders	OKS0

#	Description	Transaction Code
362	Generate Reports for Unit Costing	OKS5
363	Generate Rpts for Orders, Eng-to-Ord	OKTJ
364	GR/IR Account Maintenance	MR11
365	Graph. Cost Object Hierarchy Maint.	KKPG
366	Hierarchy ID for Process Mfg	OKRZ
367	Import Reports for Make-to-Order	OKSD
368	Import Reports for Orders,Eng-to-Ord	OKTK
369	Import Reports for Process Mfg	OKSF
370	Import Reports for Process Mfg	OKTE
371	Import Reports for Product Costing	OKSL
372	Import Reports for Production Ctrl	OKSP
373	Import Reports for Projects	OKSR
374	Import Reports for Repetitive Mfg	OKSB
375	Import Reports for Run Schedules	OKSN
376	Import Reports for Unit Costing	OKSI
377	Import/Generate FI/CO Report Groups	KKBI
378	Inconsistency Check:MK -MatMstr-CoEs	CHECK_ANCHOR
379	Ind.'Do Not Consider Price'	CKMLLANOSETTLE
380	Indicator for Relevancy to Costing	OKK9
381	Individual Processing: Variances	OPR4_KKS1
382	Itemization for Base Planning Object	KKB4
383	Line Items in Cost Est for Order	CK85
384	Line Items in Cost Est for Product	CK84
385	List Base Planning Objects	KKE4
386	List of Costing Variants	0K01
387	List of Existing Mat. Cost Estimates	S_P99_41000111
388	List Production Cost Collector	KKF8
389	Main Tree for CO-PC Info System	KKBC
390	Maintain Capitalization Percentages	OKGK
391	Maintain Characteristic Structure	OKQ6
392	Maintain Cost Component Structure	OKSV
393	Maintain Cost Element Group	OKSU

#	Description	Transaction Code
394	Maintain Cost Element Group: Orders	OKSK
395	Maintain Costing Tables	OKKK
396	Maintain Currency Translation Type	KKOW
397	Maintain Cutoff Period	KKA0
398	Maintain Cutoff Period	KKA0P
399	Maintain Future Prices by Profile	CKMPRP2
400	Maintain Global Variable	KKMLV
401	Maintain Global Variable	KKOV
402	Maintain Hierarchy Struct. (General)	OKQ5
403	Maintain Key Figures	KKML7
404	Maintain Key Figures	KKO7
405	Maintain Naming Structure	OMXD
406	Maintain Number Ranges: KALK	CKNR
407	Maintain Overhead Groups	OKZ2
408	Maintain Planned Prices	CKMPRP
409	Maintain Product Cost Collector	KKF6N
410	Maintain Sel. Screens for Order-Rel.	OKKC
411	Maintain Sel. Screens Intern. Orders	OKKD
412	Maintain Selec. Screens Process Mfg	OKKZ
413	Maintain Selection Screens for MTO	OKKY
414	Maintain Tgt Cost Vers for Cost Ctrs	OKV5
415	Maintain Variance Tables	OKVK
416	ManChang: Display Actual CC Split	CKMCCD
417	Mark Run for Release	CK66
418	Mass Costing - Sales Documents	CK55
419	Mass Costing - Sales Documents	OPR4_CKMC
420	Mass Maintenance: Controlling Levels	CKMLMV_MCA_N
421	Mat. with Highest MAP Difference	CKMTOPPRICEDIF
422	Material Assignment	KKPN
423	Material Cost Estimate	OPR4_CK
424	Material Ledger Budget Cockpit	CKMLCPMLBF
425	Material Ledger Docs for Material	CKMS

#	Description	Transaction Code
426	Material: Cost Components	CK80_99
427	Material: Itemization	CK84_99
428	Material: Itemization Comparison	CK79_99
429	Material: Multilevel BOM	CK86_99
430	Material: Partner Cost Comp. Split	CK88_99
431	Materials by Period Status	CKMLSTATUS
432	Materials List: Prices and Inventory	S_P99_41000062
433	Materials To Be Costed	CKAPP01
434	Materials w/ Highest Inventory Value	CKMTOPSTOCKVAL
435	Menu Tree for Failure Costs	FCOMENU
436	Message Management (Release)	OKZZ
437	ML Activation in Valuation Areas	OMX1
438	ML Assignment of Valuation Area	OMX3
439	ML Costing Run, Change Profile	CKRU02
440	ML Costing Run, Create Profile	CKRU01
441	ML Costing Run, Display Profile	CKRU03
442	Movement Variants Simulation Costing	OKIR
443	Multilevel Actual Settlement	OPR4_ACT
444	Multilevel Pr. Deter. for Costing Run	CKMM_RUN
445	Multilevel Unit Costing	CKUC
446	No. Ranges Results Analysis CO Doc.	OKG6
447	Number Range Maint: CMF_PROTOK (SAP)	CMFN
448	Number Range Maintenance: ML-DOCU.	OMX4
449	Old GR/IR Account Maintenance	MR11_OLD
450	Order History Display	CKMLPOH
451	Order List for Make-to-Order	KKAD
452	Order List for Order-Related Prod.	KKSD
453	Order List for Process Manufacturing	KKPD
454	Order Results Analysis and WIP Calc.	KKA1
455	Order Results Analysis and WIP Calc.	KKA1P
456	Order Selection	S_ALR_87100137
457	Order Selection	S_P99_41000018

#	Description	Transaction Code
458	Order Selection (Classification)	KKBF
459	Order Selection with Variances	KKBE
460	Order Selection Without Variances	KKBD
461	Order Summarization	KKRA
462	Orders: Variance Line Items	KOB3
463	Organizational Measure	CK22
464	Organizational Measures for Run	CKMJ_RUN
465	Overview of Reports	CK81
466	Partner Cost Component Split	CK88
467	Partner Versions	OKYB
468	Plan Results Analysis: Sales Orders	KKAKP
469	Plan Results Analysis: WBS Elements	KKAJP
470	Planned Results Analysis: Orders	KKAIP
471	Plants in Costing Runs	CKRU07
472	PO History/Multiple Currencies	CKMLOH
473	Post Closing	CKMI
474	Post Closing for Costing Run	CKMI_RUN
475	Post WIP Closing for Activities	COMLI
476	Posting Rules for Res. Analysis Data	OKG8
477	Postprocessing Report for 46A-XPRA	CKMLXPRA46A
478	Preselection for Material/Plant	CK60
479	Price Change	CKMLPC
480	Price Change Documents for Material	CKMPCSEARCH
481	Price Factors for Costing Relevancy	OKK7
482	Price Maintenance	CKMPRPN
483	Price Update	OPR4_CKPF
484	Price Update with Cost Estimate	CK24
485	Prices in the Material Ledger	CKMLLA
486	Print Cost Estimates in Background	CK83
487	Print Log of Costing Run	CK31
488	Production Order: Cost Calculation	OPR4_PPCO
489	Production Startup of Mat. Ledger	CKMSTART

#	Description	Transaction Code
490	Project Results Anal. and WIP Calc.	KKA2
491	Project Results Anal. and WIP Calc.	KKA2P
492	Project Summarization	KKRP
493	Qty Structure Control for Costing	OKK5
494	Quality Notification in FCO	FCOREP_NOTIF
495	Quantity Structure Consistency	CKMLMVCHECK
496	Reference Cost Estimates	OKYC
497	Release Costing Run	CK68
498	Reorg. of Old Costing Number Entries	KALNRREORG
499	Reorganization in Product Costing	CKR1
500	Reorganization of Costing Runs	CKMLRUNREORG
501	Reorganization of Forms	KKMLP
502	Reorganization of Report Data	KKMLN
503	Reorganization of Report Data	KKON
504	Reorganization of Reports	KKMLO
505	Reorganization of Reports	KKOO
506	Reorganize Forms	KKOP
507	Reorganize in Background	CKR5
508	Repair Program for ML Tables	CKMREP
509	Repetitive Mfg and Process Mfg	OPR4_KKP
510	Report Call CM	KKBB
511	Report Layouts for Internal Orders	OKRL
512	Report Layouts for Make-to-Order	OKRN
513	Report Layouts for PPC	OKRW
514	Report Layouts for Process Mfg	OKRO
515	Report Layouts for Product Costing	OKRU
516	Report Layouts for Projects	OKRT
517	Report Layouts for Repetitive Mfg	OKRM
518	Report Layouts for Run Sched Headers	OKRV
519	Report Layouts for Sales Orders	OKRK
520	Report Layouts for Summ. Objects	OKST
521	Report Layouts for Unit Costing	OKRP

#	Description	Transaction Code
522	Report List (Data Check Only)	KKB_RLISP
523	Report List (Hierarchical-Sequent.)	KKB_RLISH
524	Report List (Single-Level)	KKB_RLISE
525	Report List for Internal Orders	OKR1
526	Report List for Make-to-Order	OKR3
527	Report List for Orders, Eng.-to-Ord	OKTH
528	Report List for PPC	OKRD
529	Report List for Process Mfg	OKR4
530	Report List for Process Mfg	OKTB
531	Report List for Product Costing	OKR8
532	Report List for Projects	OKR7
533	Report List for Repetitive Mfg	OKR2
534	Report List for Run Schedule Headers	OKRC
535	Report List for Sales Orders	OKR0
536	Report List for Unit Costing	OKR5
537	Report List: General Cost Objects	OKT7
538	Report Selection	KKOR
539	Report Selection	ORET
540	Report Selection	SRET
541	Report Selection for Process Mfg	KKPE
542	Report Selection Material Ledger	CKMR
543	Report Tree	KKBO
544	Report Tree Base Planning Object	KKE7
545	Report Tree for CO-OPA	OKL1
546	Report Tree: Cost Objects	OKLF
547	Report Tree: Engineer-to-Order	OKLH
548	Report Tree: Maint. Reconcil. Ledger	KALN
549	Report Tree: Order-Related Prod.	OKL2
550	Report Tree: Process Manufacturing	OKLI
551	Report Tree: Product Costing	OKL8
552	Report Tree: Repetitive Mfg	OKL4
553	Report Tree: Sales-Order-Rel. Prod.	OKL3

#	Description	Transaction Code
554	Report Tree: Unit Costing	OKL5
555	Responsible Cost Center	FCOREP_RESPCC
556	Results Analysis Keys	OKG1
557	Results Analysis Versions	OKG2
558	Results Analysis Versions for WIP	OKG9
559	Results Analysis: Delete Log	KKAN
560	Results Analysis: Delete Worklist	KKAF
561	Results Analysis: Display Log	KKAL
562	Results Analysis: Display Worklist	KKAE
563	Revaluate Base Planning Objects	KKEB
564	Rework Costs in Failure Cost Proc.	FCOREP_REWCO
565	Rework in Failure Cost Processing	FCOREP_REW
566	Routing Control Key	OKZ4
567	Rules for Name Formation	OMXC
568	Run Drilldown Report	KKML0
569	Run Drilldown Report	KKO0
570	Run Selected Reports	KKAB
571	Run Selected Reports	KSBB
572	Run: Cost Estimate of Objects	CK64
573	Sales Document Item Results Analysis	KKA3
574	Sales Document Item Results Analysis	KKA3P
575	Sales Document: Cost Components	CK89_99
576	Sales Document: Itemization	CK85_99
577	Sales Document: Multilevel BOM	CK87_99
578	Sales Documents: Line Items Actual	KVBI
579	Sales Order Hierarchy Display	KKAC
580	Sales Order Item to be Costed	CKAPP03
581	Sales Order Selection	KKAH
582	Sales Order: Unit Costing	OKY1
583	Scheduling for Costing	OKK6
584	Scrap - Cost by Sales Order (C)	KKSV
585	Scrap - Cost by Sales Order (I)	KKSW

#	Description	Transaction Code
586	Scrap - Engineer-to-Order (C)	KKSR
587	Scrap - Engineer-to-Order (I)	KKSS
588	Scrap - Product Cost by Lot (C)	KKS3
589	Scrap - Product Cost by Lot (I)	KKS4
590	Scrap - Product Cost by Period (C)	KKS7
591	Scrap - Product Cost by Period (I)	KKS8
592	Scrap Costs in Failure Cost Proc.	FCOREP_SCRAP
593	Select Cost Estimates	CK82
594	Selection Screen Maintenance	OKKB
595	Send Material Prices	CKML_PRICES_SEND
596	Settings Cost ObjectContr Process Mfg	KPRF
597	Settings in Failure Cost Processing	FCOSETTINGS
598	Show Whether Marking/Release Allowed	CKVF
599	Single-Level Price Det.for Costg Run	CKMH_RUN
600	Single-Level Price Determination	CKMH
601	Split Report	KKOT
602	Start Additional Expense Posting	FCOEX
603	Start Failure Cost Processing	FCOST
604	Start Selected Reports	KKSB
605	Std Cost Est to Profitability Anal.	CKA1
606	Summarization Hierarchy for Orders	OKRA
607	Summarization: CO Object	KKRC
608	Summarization: Process Mfg (COC)	KKRZ
609	Summarization: Repetitive Mfg (COC)	KKRS
610	Table Maintenance for Report Layouts	OKRI
611	Table Maintenance for Report List	OKRH
612	Target Cost Versions for Cost Objs	OKV7
613	Target Cost Versions for Orders	OKV6
614	Target/Actual Comparison for Orders	KKBB_ORD_46C
615	Technical Activity Type View	CKMDISPACT
616	Technical View ML Document	CKMDISPDOC
617	Technical View of ML Master Data	CKMDISPTAB

#	Description	Transaction Code
618	Technical View of Order Development	CKMDISPPOH
619	Test Monitor Object Record Reports	KKMLM
620	Test Monitor Object Record Reports	KKOM
621	Texts for Currency Types/Valuations	OMX6
622	Trans. For Prog. Display_WIP_OBJ_M	COMLWIPDISP
623	Transactions for a Material	CKMD
624	Transfer Control	OKKM
625	Transfer of Costing Table Entries: 2.1D	OKKL
626	Transport of Forms	KKMLI
627	Transport of Forms	KKOI
628	Transport of Reports	KKMLH
629	Transport of Reports	KKOH
630	Treatment of Exch. Rate Differences	OMRW
631	Update for Results Analysis	OKG4
632	Update for WIP Calculation	OKGA
633	Update Material Price	CKU1
634	User-Defined Messages	OPRCMFE
635	User's List of Reports	KKPU
636	Val. Variants Detail Plan Cost Ctr	OKY8
637	Val. Variants Sales Order/Prod. Cost	OKY0
638	Val. Variants Sales Order/Unit Costing	OKY7
639	Valn. Variants Appropriation Request	OKYU
640	Valn. Variants Network Component	OKYL
641	Valn. Variants Network Costs Actvy	OKYM
642	Valuated Quantity Structure(M-level)	CKMLQS
643	Valuation of Failure Cost Documents	FCOVALU
644	Valuation Variant f. Internal Orders	OKKX
645	Valuation Variant Generic Object	IKKW
646	Valuation Variant: Service Line	OKYT
647	Valuation Variants - Prod. Order	OPN2
648	Valuation Variants for CO Prod.Order	OKY5
649	Valuation Variants for PM Order	OKP8

#	Description	Transaction Code
650	Valuation Variants for Prod. Costing	OKK4
651	Valuation Variants for Projects	OKKW
652	Valuation Variants Message	OKYJ
653	Valuation Variants: Base Plan Object	OKKE
654	Valuation Variants: Seiban	OKYN
655	Value Flow Display for Reduced WIP	CKMREDWIP
656	Value Flow Monitor	CKMVFM
657	Var. Cost Object Line Items Config.	KKCV
658	Variance Keys for Cost Centers	OKV0
659	Variance Keys for Cost Objects	OKV2
660	Variance Keys for Orders	OKV1
661	Variance Variants for Cost Objects	OKVH
662	Variance Variants for Orders	OKVG
663	Variances - Cost by Sales Order (C)	KKST
664	Variances - Cost by Sales Order (I)	KKSU
665	Variances - Engineer-to-Order (C)	KKSP
666	Variances - Engineer-to-Order (I)	KKSQ
667	Variances - Product Cost by Lot (C)	KKS1
668	Variances - Product Cost by Lot (C)	KKS1N
669	Variances - Product Cost by Lot (I)	KKS2
670	Variances - Product Cost by Per. (C)	KKS5
671	Variances - Product Cost by Per. (I)	KKS6
672	Variances Between Costing Runs	S_ALR_87099932
673	View Maint. Sel. Production Orders	KKV1
674	WIP Calc. for Product Cost Coll.	KKAS
675	WIP Calc.: Collective Processing	KKAO
676	WIP Calculation	OPR4_KKA
677	WIP Calculation for Cost Object Hier	KKAV
678	WIP Calculation for Order	KKAX
679	WIP Display Cost Object Hierarchy	KKAW
680	WIP Display for Order	KKAY
681	WIP Display for Product Cost Coll.	KKAT

#	Description	Transaction Code
682	WIP: Display Worklist	KKAG
683	Workflow: Role Customizing	0KEX_ROLE
684	Workflow: Task Customizing	0KEX_TASK
685	Write Archive	CKR3

PROFITABILITY ANALYSIS (CO-PA)

#	Description	Transaction Code
1	Access of Segment-Specific Distr.Key	KEPZ_V
2	Access of Segment-Specific Events	KEPZ_E
3	Access of Segment-Specific Forecast	KEPZ_P
4	Access of Segment-Specific Revaltn	KEPZ_U
5	Activate Debugging Support	KEB3
6	Active Indicator for Prof.Ctr Update	KEKG
7	Actl Transfer of CCtr Costs,Overview	KEU6
8	Actl Transfer of CCtr Costs,Overview	KEU6N
9	Admin.: Logs for Overall Planning	KE1FN
10	Administration: All Logs	KE29A
11	Administration: Logs	KE29N
12	Archiving: CO-PA	KE0B
13	Archiving: CO-PA	KE0H
14	Assign Account to Value Field	KEAD01
15	Assign Char. Grp to Actual Cycles	KEVG5
16	Assign Char. Grp to Plan Cycles	KEVG4
17	Assign Characteristic Group	KEVG2
18	Assign CO-PA Standard Quantity	KE4MS
19	Assign CRM Cost Element Group	KEL0
20	Assign Value Field Groups	KEVG3
21	Assign Value Fields (Dir. Post. FI)	KEP0
22	Assignment of CRM Conditions	KE4IEX
23	BW/CO-PA Ret: Variant Query Variable	KELV

#	Description	Transaction Code
24	BW/CO-PA Retraction: Cancel	KELS
25	BW/CO-PA Retraction: Customizing	KELC
26	BW/CO-PA Retraction: Execute	KELR
27	BW/CO-PA Retraction: Overview	KELU
28	Change Actual Transfer of CCtr Costs	KEU2
29	Change Actual Transfer of CCtr Costs	KEU2N
30	Change Allocation IAA Result	KEAL
31	Change Condition	KE42
32	Change Condition Table	KE4A
33	Change Distribution Key	KEV2
34	Change Forecast Profile	KE1T
35	Change Form	KE35
36	Change Form	KE95
37	Change Form	KEH5
38	Change Indirect Actual Acty Alloc.	KEG2
39	Change Indirect Actual Acty Alloc.	KEG2N
40	Change Indirect Plan Acty Alloc.	KEG8
41	Change Indirect Plan Acty Allocation	KEG8N
42	Change Line Item Layout	KE3G
43	Change Operating Concern	KEBC
44	Change Plan Data	KE11
45	Change Plan Structure	KE1M
46	Change Plan Transfer of CCtr Costs	KEU8
47	Change Plan Transfer of CCtr Costs	KEU8N
48	Change Planning Layout	KE15
49	Change Pricing Report	KE4N
50	Change Report	KE32
51	Change Revaluation Keys	KEF1
52	Change Weighting Group	KE1R
53	Char. Groups for Actual and Planning	KEPA
54	Characteristic Groups For Reports	KEPD
55	Check Plan Structure	KEPP

#	Description	Transaction Code
56	CO Transport Collector: Grouping	OKXO1
57	Complete Plan Management	KE1F
58	Control Table For Ext. Data Transfer	KE4V
59	Convert CO Obj,Acct-Based PrAnalysis	KE_CHACO_2
60	Convert Profitability Report	KE3Z
61	Convert ProfSegments in Sender Table	KE_CHACO_1
62	Convert ProfSegments in Sender Table	KE_CHACO_3
63	Convert ProfSegments in Sender Table	KE_CHACO_4
64	CO-PA Allocation: Data Field Descr.	KEIH
65	CO-PA Allocation: Field Group Texts	KEIM
66	CO-PA Allocation: Table Information	KEIT
67	CO-PA Archiving: Customizing	KE0I
68	CO-PA Assessment: Data Control	KEIJ
69	CO-PA Assessment: Field Usage	KEII
70	COPA Char. Derivation Overview ALV	KEDD
71	CO-PA Company Code Line Items	KECB
72	COPA Customizing via ALE	KEDRA
73	CO-PA Distribution: Activate	KE0F
74	CO-PA Distribution: Initial Supply	KE0C
75	CO-PA Distribution: Installation	KE0E
76	CO-PA Distribution: Reconciliation	KE0D
77	CO-PA Distribution: Roll-up	KE0G
78	CO-PA External Data Transfer	KEFC
79	CO-PA Hierarchy DataSource	KEB1
80	CO-PA Line Item Display	KE23N
81	CO-PA Line Item Entry	KE21N
82	CO-PA Maintain Characteristic Values	KES1
83	CO-PA Planning	KEPM
84	CO-PA Planning Framework	KEPM_WAO
85	CO-PA Planning: Distribution Profile	KEVP
86	CO-PA Planning: Set Planner Profile	KE1H
87	CO-PA Planning: Value Field Assignm.	KEVF

#	Description	Transaction Code
88	CO-PA Translation Tool	KETR
89	CO-PA Valuation Simulation	KE21S
90	CO-PA Value Field Groups	KEVFG
91	CO-PA: Activation Indicator	KEKE
92	CO-PA: Build Summarization Levels	KEDU
93	CO-PA: Customizing Monitor	KECM
94	CO-PA: Cycle Overview	KEOV
95	CO-PA: Data Control,Int. Cost Alloc.	KEIL
96	CO-PA: Field Usage, Int. Cost Alloc.	KEIK
97	CO-PA: Fill Summ. Levels (Expert)	KEDF
98	CO-PA: Fill Summ. Levels (Expert)	KEDJ
99	CO-PA: Fill Summ. Levels (Expert)	KEDW
100	CO-PA: Maintain Key Figures	KE2K
101	CO-PA: Maintain Operating Concern	KEA0
102	CO-PA: Maintain Operating Concern	KEA0O
103	CO-PA: Maintain Summarization Levels	KEDV
104	CO-PA: Monitor Build for Summ. Lvls	KEDUSM
105	CO-PA: Operating Concern Templates	KETE
106	CO-PA: Period Build of Summ. Levels	KEDUS
107	CO-PA: Post Material Documents Subs.	KE4SMM
108	CO-PA: Post Subsequently from FI	KE4SFI
109	CO-PA: Reorganize Report Data	KE39
110	CO-PA: Reorganize Reports + Data	KE3A
111	CO-PA: Reversal of Line Items	KE4S00
112	CO-PA: Transport Tool	KE3I
113	CO-PA:Fill Summ.Lev. from Summ. Lev.	KEDX
114	Copy Complete Plan	KE1A
115	Copy Condition	KE4C
116	Copy Operating Concern	KECP
117	Copy Transaction Data (Plan)	KECC
118	Copying Transaction Data (Actual)	KECA
119	Correction to Incoming Orders	KE2B

#	Description	Transaction Code
120	Create Actual Transfer of CCtr Costs	KEU1
121	Create Actual Transfer of CCtr Costs	KEU1N
122	Create Condition	KE41
123	Create Condition Table	KE49
124	Create CO-PA DataSource	KEB0
125	Create CO-PA Line Item	KE21
126	Create Distribution Key	KEV1
127	Create Form	KE34
128	Create Form	KE94
129	Create Indirect Actual Acty Alloc.	KEG1
130	Create Indirect Actual Acty Alloc.	KEG1N
131	Create Indirect Plan Acty Alloc.	KEG7
132	Create Indirect Plan Acty Allocation	KEG7N
133	Create Line Item Layout	KE3F
134	Create Line-Item-Based Report	KE91
135	Create Plan Structure	KE1L
136	Create Plan Transfer of CCtr Costs	KEU7
137	Create Plan Transfer of CCtr Costs	KEU7N
138	Create Planning Layout	KE14
139	Create Planning Level from Layout	KEPMU
140	Create Profitability Report	KE31
141	Create Top-Down Distribution	KE28
142	Customize Application Tree	KE3X
143	Customizing: Display Characteristics	KES2
144	Data Mining: Change Form	KED6
145	Data Mining: Create Form	KED5
146	Data Mining: Display Form	KED7
147	Debugging Support Hierarchies	KEB4
148	Default for Summarization Levels	KEDVP
149	Define Variant Group	KE3S
150	Delete Actual Transfer of CCtr Costs	KEU4
151	Delete Actual Transfer of CCtr Costs	KEU4N

#	Description	Transaction Code
152	Delete Distribution Key	KEV4
153	Delete Indirect Actual Acty Alloc.	KEG4
154	Delete Indirect Actual Acty Alloc.	KEG4N
155	Delete Indirect Plan Acty Alloc.	KEGA
156	Delete Indirect Plan Acty Allocation	KEGAN
157	Delete Plan Data	KE1C
158	Delete Plan Transfer of CCtr Costs	KEUA
159	Delete Plan Transfer of CCtr Costs	KEUAN
160	Delete Records From Error File	KE2C
161	Deletion of Test Data in CO-PA	KEDB
162	Derivation When OpConc. Implemented	KEDR_CHACO
163	Derivation: Initial Screen	KED0
164	Display Actl Transfer of CCtr Costs	KEU3
165	Display Actl Transfer of CCtr Costs	KEU3N
166	Display Characteristics	KEP7
167	Display Condition	KE43
168	Display Condition Table	KE4B
169	Display CO-PA IMG	ORKE
170	Display CO-PA Line Item	KE23
171	Display Distribution Key	KEV3
172	Display Dtld Info on CO-PA DataSrce	KEB2
173	Display Error File	KE2D
174	Display Events	KEF4
175	Display Forecast Profile	KE1U
176	Display form	KCR6
177	Display Form	KE36
178	Display Form	KE96
179	Display Indirect Actual Acty Alloc.	KEG3
180	Display Indirect Actual Acty Alloc.	KEG3N
181	Display Indirect Plan Acty Alloc.	KEG9
182	Display Indirect Plan Acty Alloc.	KEG9N
183	Display Line Item Layout	KE3H

#	Description	Transaction Code
184	Display Operating Concern	KEBA
185	Display Plan Data	KE12
186	Display Plan Structure	KE1N
187	Display Plan Transfer of CCtr Costs	KEU9
188	Display Plan Transfer of CCtr Costs	KEU9N
189	Display Planning Authorization Obj.	KE18
190	Display Planning Layout	KE16
191	Display Pricing Report	KE4O
192	Display Report	KE33
193	Display Report Authorization Objects	KE38
194	Display Report Authorization Objects	KE98
195	Display Revaluation Indices	KEF2
196	Display Weighting Group	KE1S
197	EC-PCA: Change Actual Assessment	3KE2N
198	EC-PCA: Change Actual Distribution	4KE2N
199	EC-PCA: Change Plan Assessment	3KE8N
200	EC-PCA: Change Plan Distribution	4KE8N
201	EC-PCA: Create Actual Assessment	3KE1N
202	EC-PCA: Create Actual Distribution	4KE1N
203	EC-PCA: Create Plan Assessment	3KE7N
204	EC-PCA: Create Plan Distribution	4KE7N
205	EC-PCA: Delete Actual Assessment	3KE4N
206	EC-PCA: Delete Actual Distribution	4KE4N
207	EC-PCA: Delete Plan Assessment	3KEAN
208	EC-PCA: Delete Plan Distribution	4KEAN
209	EC-PCA: Display Actual Assessment	3KE3N
210	EC-PCA: Display Actual Distribution	4KE3N
211	EC-PCA: Display Plan Assessment	3KE9N
212	EC-PCA: Display Plan Distribution	4KE9N
213	Edit Value Fields	KEA6
214	Execute Distribution	KEZ5
215	Execute Indirect Actual Acty Alloc.	KEG5

#	Description	Transaction Code
216	Execute Indirect Plan Acty Alloc.	KEGB
217	Execute Pricing Report	KE4Q
218	Execute Profitability Report	KE30
219	Export Summarization Level	KEDA
220	Ext. Data Transfer to CO-PA Planning	KE1XO
221	FI-SL Change Planning Layout	GLPLC
222	FI-SL Create Planning Layout	GLPLI
223	FI-SL Display Planning Layout	GLPLD
224	Flexible Callup of Cost Estimates	KEPC
225	Forecast Plan Data	KE1D
226	Generate Proc. Template Environment	KEAE
227	Generate Variant from KEPM Environmt	KEGV
228	Import	KE3J
229	Indirect Actual Acty Alloc.: Overview	KEG6
230	Indirect Actual Acty Alloc.: Overview	KEG6N
231	Indirect Plan Acty Alloc.: Overview	KEGC
232	Indirect Plan Acty Alloc.: Overview	KEGCN
233	Line Item Display - Actual Data	KE24
234	Line Item Display - Plan Data	KE25
235	Log Summarization Logs	KEDT
236	Log: Flexible Excel Upload	KE13P
237	Maint. Number Ranges: CO-PA Planning	KEN2
238	Maint. Rule Values for Forcast Prof.	KEPK
239	Maintain Access Sequences	KE48
240	Maintain Charact. for Segment Level	KEQ3
241	Maintain Characteristics	KEA5
242	Maintain Characteristics	KEP6
243	Maintain Characteristics Hierarchy	KES3
244	Maintain Condition Types	KE47
245	Maintain CO-PA Account Determination	KEDP
246	Maintain CO-PA Customiz. Hierarchies	KEHIER1
247	Maintain Costing Sheet	KE46

#	Description	Transaction Code
248	Maintain Derivation Rule Entries	KEDE
249	Maintain Derivation Strategy	KEDR
250	Maintain Distribution Keys	KEV0
251	Maintain Environ. Dyn. Process Alloc	KECT
252	Maintain External Str. in ABAP Dict.	KE4D
253	Maintain Global Variables	KE3E
254	Maintain Hierarchy	KE3K
255	Maintain Key Figure Scheme	KER1
256	Maintain Key Figures for Allocations	KEUH
257	Maintain Number Range: COPA_IST	KEN1
258	Maintain Old Storage Summ. Levels	KEDVS
259	Maintain Operating Concern	KEP5
260	Maintain PA Transfer Structure	KEI1
261	Maintain PA Transfer Structure	KEI2
262	Maintain PA Transfer Structure	KEI3
263	Maintain Planning Authorization Obj.	KE17
264	Maintain Process Template Determin.	KEKW
265	Maintain Ratio Scheme	KE1I
266	Maintain Record Types	KEP1
267	Maintain Report Authorization Object	KE37
268	Maintain Report Authorization Object	KE97
269	Maintain Rule Values for Distrib.	KEPJ
270	Maintain Rule Values for Events	KEPL
271	Maintain Rule Values for Revaluation	KEPI
272	Maintain Rules	KEFB
273	Maintain Rules	KEFD
274	Maintain Segment-Lvl Chars ALE	KEQ4
275	Maintain Sender Structures	KEFA
276	Maintain User Exits for Planning	KE1O
277	Maintain Variant Groups	KE3P
278	Maintain Variants	KE3Q
279	Maintain Variants (RKEBATCH)	KE3U

#	Description	Transaction Code
280	Maintain View Cluster V_TKEVAx	KE4U
281	Maintain View for Defined Op.Concern	KEQ5
282	Maintain View V_T258I_KO	KE45
283	Maintain View V_T258M	KE4M
284	Maintain View V_T258W_KE	KE4E
285	Maintain View V_T258Z_KE	KE4Z
286	Maintain View V_TKA01_ER	KEKK
287	Maintain View V_TKEPPI	KESF
288	Maintain View V_TKEVA03	KE40
289	Maintain View V_TKEVA03A	KE4H
290	Maintain View V_TKEVA03M	KE4J
291	Maintain View V_TKEVA04	KE4R
292	Maintain View V_TKEVG	KE4G
293	Maintain View VV_T258I_M	KE4IM
294	Management	KE29
295	Operating Concerns	KEP8
296	Overview Actual Assessment Cycles	KEUD
297	Overview Actual IAA Cycles	KEGD
298	Overview of Reports	KE3M
299	Overview Plan Assessment Cycles	KEUE
300	Overview Plan IAA Cycles	KEGE
301	PA Transfer Schema: Overhead ACTUAL	KEVG6
302	PA Transfer Schema: Overhead PLAN	KEVG7
303	PCA: Substitutions CRM Integration	KECRM_0KEL
304	Perform Act. Cost-Ctr Cost Transfer	KEU5
305	Perform Plan Cost-Ctr Cost Transfer	KEUB
306	Periodic Valuation	KE27
307	Plan Settlement: Assign Version	KEPV
308	Plan Transfer of CCtr Costs,Overview	KEUC
309	Plan Transfer of CCtr Costs,Overview	KEUCN
310	Post Billing Documents to CO-PA	KE4S
311	Post Incoming Orders Subsequently	KE4F

#	Description	Transaction Code
312	Pricing Report	KE4L
313	Print and Actualize Reports	KE3B
314	Process Complete Plan	KE1B
315	Profitability Report: Test Monitor	KEMO
316	Proposal for Summ. Levels (Analysis)	KEDVPD
317	Read Interface for CO-PA Log	KEDZ
318	Realignments	KEND
319	Reconcile CO-PA <-> SD <-> FI	KEAT
320	Reconciliation Make-to-Order Prod.	KEAW
321	Record Types for Process Costs	KEVG
322	Reduce Data Volumes for Test	KEB5
323	Reorganization of Variant Groups	KE3T
324	Reorganize Data	KEUU
325	Reorganize Forms	KE3C
326	Reorganize Forms	KEWW
327	Reorganize Line Item Layouts	KE3D
328	Reorganize Line Item Layouts	KE9D
329	Reorganize Long Texts	KE1Q
330	Reorganize Planning Layouts	KE19
331	Reorganize Planning Layouts	KEX9
332	Report Selection	KE3Y
333	Repost Accounting Document	KE26
334	Reset Value Fields	KE4W
335	Reversal of KE27 Delta Line Items	KE27S
336	Sales & Profit Planning in the WWW	KEPM_W
337	Schedule Variant Group	KE3R
338	Segment-Specific Distribution Keys	KEPF
339	Segment-Specific Events	KEPH
340	Segment-Specific Forecast Profiles	KEPG
341	Segment-Specific Planning Functions	KCPZ
342	Segment-Specific Planning Functions	KEPZ
343	Segment-Specific Revaluation Keys	KEPE

#	Description	Transaction Code
344	Selection Characteristics CO-PA/ABC	KEAS
345	Set Operating Concern	KEBD
346	Set Operating Concern (Batch-Input)	KEBI
347	Set Up Cost-Center Cost Transfer	KEUG
348	Set Up Transfer of Incoming Orders	KE4T
349	Simulate Doc. Transfer from Orders	KE4TS
350	Simulation Billing Docs Transfer CO-PA	KE4ST
351	Split Report	KE3L
352	Test Key Figure Transaction	KEK0
353	Time-Dependent Revaluation Factors	KEF3
354	Top-Down Complete Plan	KE1G
355	Transfer CO-PA Plan Data to GL (New)	KE1Z
356	Transfer Customer Rebate Agreements	KES4
357	Transfer External Data to CO-PA	KE4XO
358	Transfer Incoming Sales Orders	KEKF
359	Transfer of CO-PA Plan Data to FI-GL	KE1W
360	Transfer of CO-PA Plan Data to FI-SL	KE1Y
361	Transfer of Cost Component Split	KECO
362	Transfer Plan Data to SOP	KE1E
363	Transfer to EC-PCA	KE1V
364	Transfer to LIS	KE1K
365	Upload from Excel	KE13
366	Upload from Excel	KE13N
367	Valuation	KEAV
368	Valuation Analysis	VALU
369	Valuation of Overhead Cost Transfer	KECD
370	Value Field Analysis	KEAF
371	Value Field Assignment	KEP9
372	Value Field Assignment CO-Interface	KEICO
373	View Maint. with Preset Op. Concern	KEQ6
374	View Maintenance VV2_T258I_V	KE4I

APPENDIX A

LIST OF TABLES

APPENDIX B

LIST OF FIGURES