

# Product Cost Controlling Information System (CO-PC-IS)



HELP.COPCIS

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# Product Cost Controlling Information System (CO-PC-IS)

## Product Cost Controlling Information System

### Purpose

The component CO-PC-IS (Product Cost Controlling Information System) provides an extensive and powerful range of reports for the following areas:

- *Product Cost Planning*
- *Cost Object Controlling* with the subcomponents
  - *Product Cost by Period*
  - *Product Cost by Order*
  - *Product Cost by Sales Order*
  - *Costs for Intangible Goods and Services*
- *Actual Costing / Material Ledger*

You can use the *Information System* to evaluate the data generated in the respective components. The information system provides reports for both standard and specialized analysis purposes.

### Integration

The information system is a part of *Product Cost Planning*, the application component *Cost Object Controlling*, and *Actual Costing / Material Ledger*.

### Features

The standard setup of the *Product Cost Controlling Information System* is a structured report list from which you can choose the reports you need.

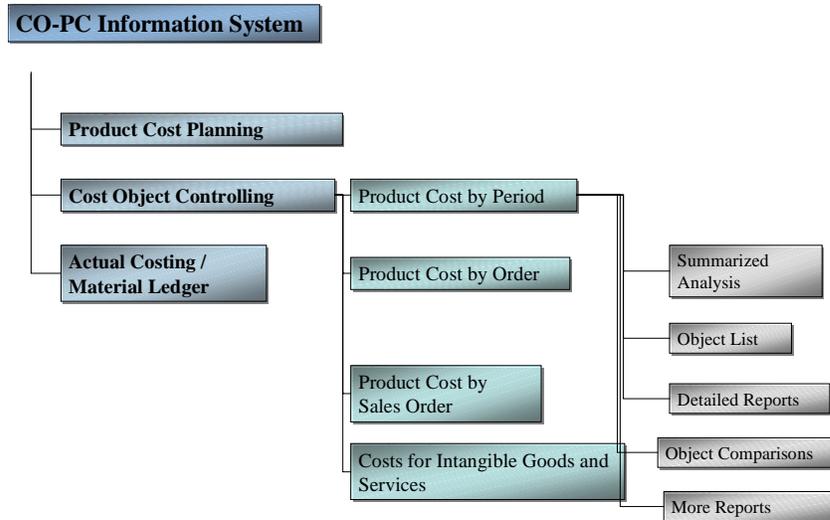
The standard reports provided in the R/3 System are presented in a structure predefined by SAP. You can change this structure to suit your own needs, and add your own custom reports.

The documentation for the *Product Cost Controlling Information System* is oriented around the structure of the SAP menu. This ensures easy access to the desired information in the documentation, as navigating through the documentation mirrors navigating through the menu.

## Structure of the CO-PC Information System

### Structure

The menu structure of the standard information system of *Product Cost Controlling* mirrors the component hierarchy. Each application component of *Product Cost Controlling* is represented by a level. You can branch to the individual reports from these levels.



The following applies in the information systems of the individual application components:

- All reports of a component are collected centrally.
- The reports are grouped into different categories.

The information systems of the individual application components contain the following [report categories \[Page 13\]](#). The report contents are in the second level under the report categories.

### Integration

You can assign the following report types to the information systems of the individual application components:

- Report Writer / Report Painter reports
- Drilldown reports
- ABAP reports
- Transactions

Structure of the CO-PC Information System

## Report Categories

### Use

The report categories subdivide the information systems of the individual application components on the first level according to the most common reporting needs.

### Features

The following report categories are available:

- [Summarized Analysis \[Page 14\]](#)
- [Object lists \[Page 15\]](#)
- [Detailed Reports \[Page 16\]](#)
- [Object Comparisons \[Page 17\]](#)
- [More Reports \[Page 18\]](#)

---

**Summarized Analysis**

## Summarized Analysis

### Definition

In the report category *Summarized Analysis*, you find the reports that show the aggregated data. With these, for example, you can carry out target/actual comparisons at the product group level.

### Use

Summarized analyses are possible when working with report tools with fixed or user-definable structures.

### Structure

The reports are grouped by report content, report tools and objects in the report category *Summarized Analysis*.

### See also:

[Differences in the Summarization Methods \[Page 180\]](#)

[Summarization Hierarchies \[Page 314\]](#)

[Product Drilldowns \[Page 197\]](#)

[Cost Object Hierarchies \[Page 132\]](#)

## Object Lists

### Definition

In the report category *Object List*, 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.

### Use

If you are looking for a specific object but don't know the exact description, you can generate a list of possible objects using the object lists and selection criteria.

Generally, you can branch to a detail report from the list.

### Structure

Under the report category *Object List*, you find the individual reports for selecting different costing objects.

Object lists can be generated using the *order selection* or the *sales order selection*. There are, however, object lists that are used for other selection processes. For example, you can display a list of all materials to be costed in the information system of Product Cost Planning.

#### See also:

[Order Selection \[Page 330\]](#)

[Sales Order Selection \[Page 276\]](#)

---

**Detailed Reports**

## Detailed Reports

### Definition

The report category *Detailed Reports* contains reports that provide data for individual costing objects (such as orders, cost estimates, and sales document items).

### Use

If you are looking for detailed information about a specific costing object, you can get this information with the help of a detailed report. For example, if you are looking for the plan/actual cost comparison report for a particular order, you will find it under the category *Detailed Reports*.

### Structure

The reports are grouped by costing objects in the report category *Detailed Reports*.

The following *detailed reports* are useful in cost analysis:

- Reports for product cost collectors
- Reports for cost object hierarchies
- Reports for manufacturing orders
- Reports for sales order items
- Cost element reports for sales order items

The following *detailed reports* are not useful in cost analysis:

- Reports for production campaigns

## Object Comparisons

### Definition

The report category *Object Comparisons* contains reports that compare costing objects with each other.

### Use

In *Product Cost Planning*, for example, you can compare a standard cost estimate with a modified standard cost estimate. In *Product Cost by Order*, you can, for example, compare the data of two manufacturing orders with each other.

### Structure

You find the individual object comparison reports under the report category *Object Comparisons*.

---

**More Reports**

## More Reports

### Definition

The report category *More Reports* contains the report contents that were not assigned to any other category.

These include various types of line item reports. For example, there are reports for the selection of actual line items, commitment line items and the line items of WIP/results analysis as well as variance calculation.

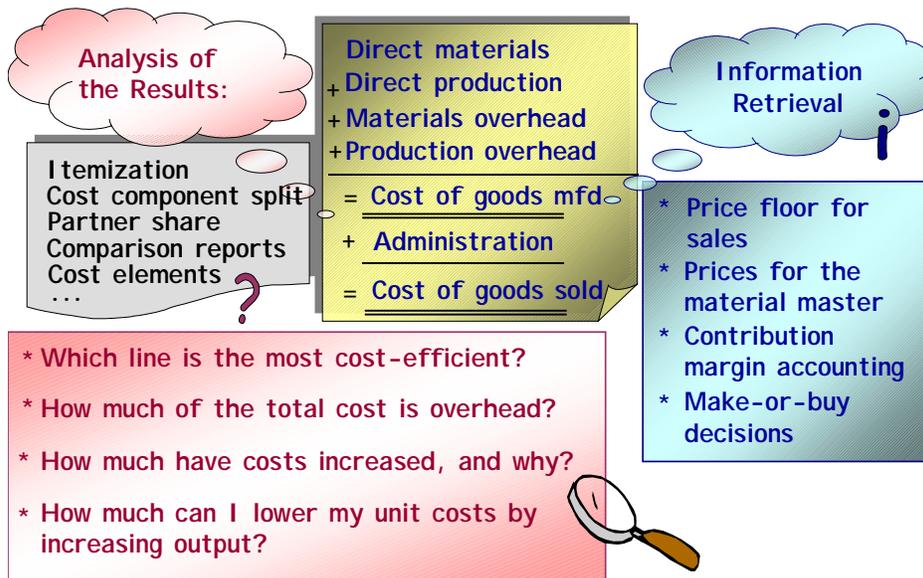
## Information System for Product Cost Planning

### Definition

Description of the reports available in the standard system for [Product Cost Planning \[Ext.\]](#)

### Use

You can use the reports of *Product Cost Planning* to analyze the composition and origin of the cost of goods manufactured and the cost of goods sold from different perspectives:



You can use these reports to format and analyze costing results from the following:

- Material cost estimates (*with and without quantity structure*)
- *Base planning objects*
- *Sales order cost estimates*



You can write material cost estimates to the material master as prices (as a standard price, for example). Before you update costing results to the material master, you should use the reports in the information system to check the costing results. Under the category *Summarized Analysis*, you find for example the report *Price versus Cost Estimate* with which you can compare the results of a costing run with a price in the material master.

### Structure

The different reports are assigned to report categories in order to make a consistent navigation through the information system of *Product Cost Controlling* possible. You can find more information under [Structure of the CO-PC Information System \[Page 11\]](#) and [Report Categories \[Page 13\]](#).

---

**Information System for Product Cost Planning**

You can either adjust the available reports to meet your requirements, or add new reports of your own. For more information, see: [Customer Modification to the Information System \[Ext.\]](#)



Some functions in *Product Cost Controlling* contain special reporting features. For more information, see [More Reports and Other Functions \[Ext.\]](#).

**See also:**

- [Purpose of Product Cost Planning \[Ext.\]](#)
- [Calculation of COGM and COGS \[Ext.\]](#)
- [Information for Other SAP Applications \[Ext.\]](#)
- [Costing Sequence \[Ext.\]](#)

## Summarized Analysis: Costing Run

### Definition

Reports for the analysis of [costing runs \[Ext.\]](#)

Usually, if there is a larger volume of data, a costing run is run in the background over night. For this reason, it is important to quickly receive an overview of the results of a costing run. For example, such an overview enables you to find out which cost estimates were faulty or which costing results greatly vary from the valuation price (standard price or moving average price) of the respective materials.

### Use

The standard system supplies the following three variants of this report:

- [Results of the Costing Run \[Page 24\]](#)  
You can display the results of one or more costing runs.
- [Price vs. Cost Estimate \[Page 25\]](#)  
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 \[Page 28\]](#)  
You can compare costing runs with each other.

Each of these report variants has its own selection screen in which you can specify the criteria by which you want the system to select objects or data for the report.

You can do the following:

- Use the **All selections** function at any time to display all available selection options (fields)
- Define your own selection screens according to your requirements See [Creating Selection Variants \[Ext.\]](#) for more information.

The field...	can be used to...
<i>Material master price</i>	select a price from the material master for comparison with the costing results of the costed materials. If necessary, you can select the key figure Costing/MM to display the variances between the calculated price and the selected material master price.
<i>Cost component view</i>	enter the desired <a href="#">cost component view [Ext.]</a> . The <a href="#">cost component groups [Ext.]</a> and values displayed depend on the cost component view.
<i>Layout</i>	enter a user-defined layout The report is started with the layout that is entered here. If you do not enter a layout, the system will generate a layout dynamically.

The following additional settings can be specified independently of the report variant when you execute the report:

Though <b>Extras</b> → ...	You can...
----------------------------	------------

**Summarized Analysis: Costing Run**

<b>Set currency...</b>	Specify whether the costing results should be displayed in company code or controlling area currency
<b>Activate cost component group...</b>	Specify which <a href="#">cost component group [Ext.]</a> (cost component group 1 or 2) should be used
<b>Hide report header</b>	Hide or show the report header information
<b>Selection scope...</b>	Specify which material cost estimates are displayed You can, for example, only display cost estimates with quantity structure or only additive cost estimates.

**Extracts**

To avoid long runtimes every time you call a report, you can use the function **Extract...** to save the selected report data as an extract For more information, see: [Working with Extracts \[Page 371\]](#)

**Layouts**

A suitable layout is defined for every report variant. This layout is automatically used in the standard system.

You can adjust the report variants supplied in the standard system to suit your requirements. Create a layout with the information you are most interested in. If you want to start the report with your own layout, enter that layout in the selection screen under *Layout*, or define it as an initial variant. In this case, every report variant starts with this layout.



See [Creating, Changing and Managing Layouts \[Ext.\]](#) and [Managing Layouts \[Ext.\]](#) for more information on layouts.

You can find information about the different functions for interactive processing of the results list under [ABAP List Viewer \[Ext.\]](#).

**Available Information**

The following fields or field groups are available in the list screen of the report:

- Key figures:
  - **Costing/MM**  
This key figure represents the absolute variance between the cost estimate value and the *material master price* selected in the selection screen in the report (see the explanation below).
  - **%Costing/MM**  
This key figure represents the percentage variance between the cost estimate value and the material master price selected in the selection screen in the report against the material master price.
  - **Revaluation**

**Summarized Analysis: Costing Run**

This key figure represents the difference between the value according to the cost estimate (costing value for each price unit times the inventory value) and the value of the entire inventory for each material.

– **VarCstRuns**

This key figure represents the absolute variance between two costing runs.

– **%VarCstRuns**

This key figure represents the percentage variance between two costing runs against the first costing run.

- Basic data:
  - contains basic data for the material
- Costing 1 / Costing 2:
  - contains basic data on the cost estimates
- Valuation:
  - contains data on the valuation, such as the standard price and total inventory
- Cost component group 1 / Cost component group 2:
  - contains the defined cost component groups for the cost estimates
- CostCompGr(fix) 1 / CostCompGr(fix) 2:
  - contains the defined cost component groups with fixed costs for the cost estimates

**See also:**

If you are using *mixed costing*, refer to [Special Processing with Mixed Costing \[Page 375\]](#).

---

## Results of Costing Run

# Results of Costing Run

## Definition

Report variant of the [Analyze Costing Run \[Page 21\]](#) report that gives you an overview of all materials that were costed in the costing run.

## Use

You use this report to receive a listing of the costed materials with information concerning the status of the cost estimates as well as the cost estimate value.

Enter the necessary parameters (for example, name and date of the costing run, and the desired [cost component view \[Ext.\]](#)) in the selection screen.

You can further limit the display of the costed materials of the costing run by, for example, selecting according to cost estimate status or plant. In this way, for example, you can generate a list of all the materials that were costed with errors in a costing run or a list of all materials of a plant.

## Structure

In the standard system, this report shows the following information:

- Material, short text for a material, and plant
- Status and value of the cost estimate
- Lot size and base unit of measure

If you, for example, only want to display the materials that were costed with errors, you can use the filter function. You can modify this report to suit your requirements by creating a [layout \[Ext.\]](#).

## Integration

From the report, you can display the cost estimate for each material and call up the following reports:

- BOMs
- Cost components
- Cost elements
- Partner cost component split

### See also:

[Summarized Analysis: Costing Run \[Page 21\]](#)

## Price versus Cost Estimate

### Use

Before you update the standard price with the cost estimate values calculated in a costing run, you can use the report variant *Price versus Cost Estimate* of the report [Summarized Analysis: Costing Run \[Page 21\]](#) to check the amount of the variance between the cost estimate and the standard price, and to see what the effect of releasing the cost estimate for all materials with price control S would be on the value of the total inventory.

This report variant compares the value of the cost estimate with a material master price you selected (such as the standard price). In addition to the variance between the material master price and the cost estimate price, the system calculates the anticipated revaluation of the inventories of all materials whose price control indicator is set to S that would result if the cost estimate were released. However, since materials whose price control indicator is set to V are not affected when the standard cost estimate is released, you should set the relevant filter to the *Price control field* for these materials if you are interested in the effects of the revaluation. This filters the materials in question out of the report display.

You can define exceptions to emphasize critical variances for individual materials. When you use these exceptions, materials will be highlighted with traffic lights symbols if the calculated variance or the anticipated revaluation exceeds predefined threshold values.



You generate a list of materials costed in the costing run, in which you can compare the cost estimate value with the current standard price. The system calculates the variances between the two prices. The system also calculates the value associated with the anticipated inventory revaluation upon release of the cost estimate. You have decided that all materials whose costing result varies from the standard price by more than 10% should be flagged with red traffic lights, and have defined exceptions accordingly.

### Features

The report offers you a range of preselected data. You can modify this structure to suit your own requirements by creating your own custom [layout \[Ext.\]](#).

#### **Material master price field**

You can enter a price from the material master (such as tax-based prices or planned prices) in the selection screen. After you run the report, the selected price is available as a visible field and can be used to compare this price with the calculated price of the material. You can display variances between the price chosen by you and the cost estimate value in the report display via the *Costing/MM* key figure.



You can use the report variant *Costing Run Result* to gain an overview of the materials costed without errors and their costing values.

In the selection screen of the report, enter value 1 (= standard price) in the *material master price* field and execute the report. In the report display, select the fields *Standard Price* and *Costing/MM* from the function *current display variant*. This

## Price versus Cost Estimate

displays the standard price for each material costed. The difference between the standard price and the costing result is shown in the *Costing/MM* field.

## Activities

Enter the necessary selection criteria in the selection screen. You can limit the selection of costed materials. This way you can have only those materials displayed in the report whose costing results deviated from the standard price by at least 10%, for example.

The field *material master price* controls which price is compared with the costing result. In the standard system, this field is not visible and the cost estimate is compared with the standard price to simulate the revaluation of the inventories that would take place if the standard cost estimates were released. You could also compare the costs with Tax Price 1, for example, to see the variances between these two prices. Display the field with *All selections*.

## Exceptions

You can define exceptions if necessary.

Exceptions are used to highlight particularly important materials in the report display with traffic light symbols (red/yellow/green). These traffic light symbols are used when certain values exceed a predefined threshold (for example, when the variance between the costing result and the standard price exceeds 10%). You specify the reference for the threshold values. The percentage and absolute threshold values you specify tell the system by how much this reference value must be exceeded before it displays a traffic light symbol on the material.

The following figures are available for exceptions in the field *Comparison value*:

- Variance between cost estimate and material master price  
(the reference fields of exceptions are the key figures *Costing/MM* and *%Costing/MM*)
- Anticipated revaluation  
(reference field of exceptions is the key figure *revaluation*)

With exceptions, you can specify for example for the variance between the cost estimate and the material master price that:

- A red light is displayed for all materials with variances between the cost estimate value and the material master price exceeding 10%
- A yellow light is set for all materials with variances between the cost estimate value and the material master price of 10% to 5%
- A green light is displayed at all materials with variances between the cost estimate value and the material master price of less than 5%

If you set exceptions for the anticipated revaluation, you can specify for example that:

- A red light is displayed for all materials whose probable revaluation of the inventories is greater than \$2000.
- A yellow light is displayed for all materials whose probable revaluation of the inventories is between \$2000 and \$1000.
- A green light is displayed for all materials whose probable revaluation of the inventories is less than \$1000.

**Price versus Cost Estimate**

You can specify whether only the exceptions are displayed (red and yellow), or all costed materials. If your costing runs contain a large number of materials, it is recommended that you only display the exceptions.

You can also specify whether positive and negative variances are displayed.

If you don't want to see any exceptions, either set the comparison value to *00 <no comparison value>* or don't enter any threshold values.

**Integration**

From the report, you can display the cost estimate for each material and call up the following reports:

- BOMs
- Cost components
- Cost elements
- Partner cost component split

## Variations Between Costing Runs

# Variations Between Costing Runs

## Use

If you have executed multiple costing runs with different costing variants, you can use the reporting variant *Variations in Costing Runs* in the report [Summarized Analysis: Costing Run \[Page 21\]](#) to compare the costing results of two different costing runs and to display the variations between the values of both costing runs. Materials with extremely high variations between the values of both costing runs can be highlighted with red traffic lights.



You compare two costing runs that have selected the same materials but were costed with different costing variants. You are interested in extreme variations between the values from both costing runs. You can define an exception for this variation to have only those materials displayed whose variation between the costing results is at least 100 DM.

## Features

The report offers you a range of preselected data. You can modify this structure to suit your own requirements by creating your own [layouts \[Ext.\]](#).

## Activities

1. Enter the necessary selection criteria in the selection screen.
2. You can define exceptions if necessary.

Exceptions are used to highlight particularly large variations between costing runs by using traffic light symbols (red/yellow/green). These traffic light symbols are used when certain values exceed a predefined threshold (i.e. the variation between the values from both costing runs exceeds \$100). You specify the reference for the threshold value. The percentage and absolute threshold values you specify tell the system by how much the reference value must be exceeded before it displays a traffic light symbol on the material.

For example, you can specify that:

- a. A red light is shown at all materials with variations between the cost estimate value in costing run 1 and costing run 2 of greater than 10%
- b. A yellow light is shown at all materials with variations between the cost estimate values of costing run 1 and costing run 2 between 10% and 5%

You can specify whether only the exceptions are displayed (red and yellow), or all costed materials. If your costing runs contain a large number of materials, it is recommended that you only display the exceptions.

If you don't want to see any exceptions, either set the comparison value to *00 <no comparison value>* or don't enter any threshold values.

3. You can also specify whether positive and negative variations are displayed.

## Integration

From the report, you can call up the following reports for any material:

**Variances Between Costing Runs**

- Cost components
- Cost elements
- Costed BOM
- Partner cost component split
- Object comparisons
  - Cost elements
  - Cost components

---

**Object List for Material**

## Object List for Material

### Definition

This [report category \[Page 15\]](#) contains lists of material cost estimates existing in the system and the report for display of materials to be costed. The object list for material offers an overview that you can print out and use to call up the detail display for each cost estimate.

**See also:**

- [Cost Estimate with Quantity Structure \[Ext.\]](#)
- [Cost Estimate without Quantity Structure \[Ext.\]](#)

## Analysis / Comparison of Material Cost Estimates

### Definition

Existing material cost estimates

### Use

This report generates a list of existing material cost estimates according to various selection criteria.

You can select according to the following search criteria:

- Plant, material
- Costing variant, costing version, and costing date

You can also suppress the display of input materials. To do so, set the indicator to *No Material Components*.

### Structure

The standard report shows a header line for each material, and an item below that for each cost estimate that was selected for the material. The report offers you a range of preselected data. You can modify this structure to suit your own requirements by creating your own [layouts \[Ext.\]](#).

### Integration

You can access detailed reports for a cost estimate (for example, a cost component split or itemization) while in the list:

#### See also:

If you are using *mixed costing*, refer to [Special Processing with Mixed Costing \[Page 375\]](#).

You can find information about the different functions for interactively processing results lists in the documentation for the [ABAP List Viewer \[Ext.\]](#).

---

**Display of Materials to Be Costed**

## Display of Materials to Be Costed

### Use

You can call up this report to obtain a quick overview of the materials to be costed. The report is mainly used for the generation of extracts that can be displayed in a mini-application in the workplace.

### Features

The report displays the following materials:

- Materials that can be costed (the *No Costing* indicator is not set in the costing view of the material master)
- Materials for which no marked or released standard cost estimates exist in the system

### Activities

If you set the *Sorted by Earliest Plan Order* indicator in the selection screen, the dates of the orders for all materials to be costed for which a plan order exists (POrd) are sorted and displayed in the *order start date* column. If you don't set the indicator, performance during execution of the report is improved.

If you don't want to save the extract, you don't have to enter a user. If you save the extract without entering a user, all users can display the extract.

Under *Maximum no. of hits*, enter the maximum number of materials that should be displayed in the list. If you limit the number of hits, performance improves.

### Integration

The extract that you save here is displayed in the mini-application. The report SAPRCKAPP02 allows you to see the contents of the extract in the R/3 system.

#### **Note for System Administration:**

To display the extract in the mini-application, you must carry out the steps described under [Setting Up Mini-Applications \[Ext.\]](#).

## Object Lists for Base Planning Objects

### Definition

Reports for the generation of lists based on existing base planning objects in the system

**See also:**

- [Reference and Simulation Costing \[Ext.\]](#)
- [Reference and Simulation Costing: Flow \[Ext.\]](#)
- [Results of Reference and Simulation Costing \[Ext.\]](#)

## Overview of Base Planning Objects

# Overview of Base Planning Objects

## Definition

List of existing base planning objects

## Use

This report generates a list of existing base planning objects according to various selection criteria.

You can select according to the following search criteria:

- Name of the base planning object
- Sorting field
- Base object group
- Entered by
- Last changed by
- Only base planning objects flagged for deletion

## Structure

You receive a list of the base planning objects found. Detailed information for a base planning object is displayed in each line of this list. You can process this list according to your requirements, for example:

- Sort in ascending and descending order according to columns ( or )
- Set a filter ()
- Change the current layout and save it as a new layout ([Creating, Changing, and Managing Layouts \[Ext.\]](#))

## Integration

You can, for example, access the following from this list:

- The master data and costing items of the base planning object ( *Base Planning Object*)
- The costed multilevel BOM of the base planning object ( *Cost estimate*)
- The where-used list of the base planning object ()

### See also:

[Reference and Simulation Costing \[Ext.\]](#)

[Base Planning Object \[Ext.\]](#)

[Working with Reference and Simulation Costing \[Ext.\]](#)

## Where-Used List of Base Planning Objects

### Definition

Report that shows where a base planning object is used in the system.

### Use

You can use this report to find out in which of the following objects a base planning is used:

- Other base planning objects
- Internal orders
- Production orders
- Projects
- Cost objects

### Structure

You receive a hierarchical list of objects in which the base planning object is used. This list is grouped by object type.

### Integration

You can go to the function of the object that uses the base planning object.

If necessary, you can go from the where-used list to the following reports for objects that use the base planning object:

- Report for costing items
- Report for cost elements and origin
- Report for cost elements and items

## Detailed Reports for Materials

## Detailed Reports for Materials

### Definition

Reports based on the data of the existing material cost estimates in the system

### Use

In the selection screen, you can directly enter the cost estimate data for the report you are calling up or search for it with  *Cost Estimate*.

Before calling up the report, you can make a number of settings (some of which you can change in the report) in the **selection screen**:

- You can specify which *cost base* and which *cost component view* (for example, cost of goods sold) should be displayed in the report. If you don't enter a cost base, the costs are displayed based on the costing lot size.
- You can display the costs in company code or controlling area currency (if the data exists; see [Currencies in Costing \[Ext.\]](#)). To do so, choose *Settings* → *Currency...*
- You can select a predefined layout with .

If you want to have multiple low-level codes displayed in the itemization, choose *Settings* → *BOM Explosion*. You can also specify that only material items should be displayed. You can have an additional field *Level* displayed that shows the low-level codes of the respective report lines.

#### See also:

- [Cost Estimate with Quantity Structure \[Ext.\]](#)
- [Cost Estimate Without Quantity Structure \[Ext.\]](#)
- [Special Processing with Mixed Costing \[Page 375\]](#)
- [Features of the ABAP List Viewer \[Ext.\]](#)
- [Creating, Changing, and Managing Layouts \[Ext.\]](#)

## Costed Multilevel BOM

### Definition

Hierarchical overview of the values for all costing items of a material, sales order or base planning object.

### Prerequisites

If you want to see the costed multilevel BOM in the cost estimate display and the information system, set the *itemization* indicator when you save the cost estimate.

### Use

The display of costs for each component (assemblies and input materials) in the costed multilevel BOM is based on the structure and content of the BOM of the costed material. You can also display all other costing items (for example, internal activities and overhead costs) by choosing . In addition to costs, the respective input quantities are displayed. You can check which valuation strategy was used during costing by also having the field *Price Strategy (text)* displayed.

The structure of the costed multilevel BOM for unit cost estimates is very flat as a result of the costing structure of the unit cost estimate and therefore offers little information on the structure of the costs.

### Structure

In the SAP standard system, you can choose between predefined layouts or adjust information displayed according to your requirements by creating a [layout \[Ext.\]](#).

The values displayed are dependent on the cost component view (for example, cost of goods manufactured, cost of goods sold or stock valuation) and the cost base. If you change these, the costs are immediately converted to the new cost base or displayed in the selected view.

Choose  for an explanation of the symbols next to the materials or items.



The values in the costed multilevel BOM are determined from the values in the itemization. Subsequent changes of the quantity structure or the values are not displayed. A new costing is necessary for this.

### See also:

If you are using *mixed costing*, refer to [Special Processing with Mixed Costing \[Page 375\]](#).

## Cost Components

# Cost Components

## Use

This report shows the costs calculated in a material cost estimate or sales order cost estimate across all production levels, broken down into cost components. You can analyze the costs of the cost component split for the cost of goods manufactured and the costs of the primary cost component split.

The results of a cost estimate are updated as cost components (this is called a *cost component split*). The cost components break down the costs of a material across the entire production structure into 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. In order to present primary costs for internal activities, you can use a primary cost component split as an alternative way of outlining the cost components.

The cost component split enables you to do the following:

- Analyze the cost origin across multiple production levels.  

You can analyze the value added within a multilevel production structure. The costs of the upper level consist of the internal activities and the overhead costs that are incurred at that level. The costs of the lower level include the materials and raw materials. The total costs of the upper level and lower level equal the total costs of the production level being analyzed.
- View the costs by original production factors (primary cost component split).
- Structure the costs according to the requirements of other areas (such as material valuation or profitability analysis).  

In the cost component view, you can specify which cost elements are displayed in the report. For example, you can select the cost of goods manufactured or the cost of goods sold, or the costs that are relevant to inventory valuation. You specify various cost component views in Customizing for *Product Cost Planning*. For each cost component, you can decide which share of the costs contained therein (fixed, variable, full) is displayed in which cost component view.

## Prerequisites

When you save a material cost estimate or a costing run, the system automatically updates a cost component split for each costed material in the BOM. For this to occur, you must have already defined a cost component structure in Customizing.

You specify the following in a cost component structure:

- Which cost components the calculated costs should be assigned to
- Which cost elements are grouped into which cost component

The cost component structure is selected through the company code, plant, and costing variant. You specify this assignment in Customizing for Product Cost Planning under *Basic Settings for Material Costing* → *Define Cost Component Structure*.

If you want to see a primary cost component split for the cost components, you must first generate a primary cost component split in *Cost Center Accounting* or *Activity-Based Costing*.



If you are using mixed costing, you can display the costing results for a specific procurement alternative broken down into cost components. Call up the desired procurement alternative in the report call using the menu option *Settings*. To display the cost component split for a mixed cost estimate that was formed from different cost estimates and procurement alternatives and weighted with equivalence numbers, do not enter a procurement alternative. The split for the mixed cost estimate is displayed automatically if a mixed cost estimate was created for the costing version.

## Features

### Main Cost Component Splits and Auxiliary Cost Component Splits

You can display the costs as a cost component split for the cost of goods manufactured and/or primary cost component split.

- You can calculate the cost component split for the cost of goods manufactured and primary cost component split simultaneously. You can switch between the two cost component views (under *Settings* → *Type of cost component split*). However, you can also generate only the cost component split for the cost of goods manufactured or the primary cost component split.
- If you want to cost both cost component splits simultaneously, you must determine which cost component split is the **main cost component split** in Customizing for *Product Cost Controlling*. You can also generate a further cost component split as an **auxiliary cost component split** for comparison purposes.



The [update of the standard price \[Ext.\]](#) in the material master is effected by the main cost component split.

An itemization is only created for the main cost component split.

In the report, you can switch between the main cost component split and the auxiliary cost component split. With the appropriate setting, you can switch between the cost component split for the cost of goods manufactured and the primary cost component split.

### Upper Level / Lower Level / Aggregate Level

The cost estimate enables you to analyze the value added within a multilevel production structure. You can apportion the costs for each material according to the **lower level** and **upper level**.

You can find the cost component split display under *Costs* → *Display Cost components*. You can make this setting with *Settings* → *Layout*. You can create your own report from a large number of selections options.

When you display the costs:

- For the **upper level**, you see the production costs, overhead costs and costs for external activities that are expected for this production level
- For the **lower level**, you see the costs of all material components that are processed in this production level

## Cost Components

In both cases, the costs are apportioned according to [cost components \[Ext.\]](#). The total cost of the upper level and lower level equals the total costs of the production level being analyzed.

You can go to the following other reports in the same report group:

- Total values
- Upper level
- Lower level

When the costs are apportioned according to cost components, the original identity of the costs (for example, costs of materials or fixed and variable production costs) are maintained throughout all production levels. At every production level, the value added at that level and the costs of the lower level can be separated through the cost component split.

When you save a material cost estimate or a costing run, the system automatically updates a cost component split for each costed material. For more information on saving costing results, see [Saving Costing Results \[Ext.\]](#).

If you want to create a cost component split for raw materials and purchased parts, you can enter additive cost components for each material for these costs. You can then group these cost components in an "External procurement" cost component structure that only contains such costs. For more information, see [Additive Costs \[Ext.\]](#).

## Partner Cost Component Split

### Definition

Report with which you can display the value added of the organizational units ([partners \[Ext.\]](#)) involved in the production process organized according to cost component groups in a hierarchy graphic.

### Use

If production involves more than one partner (for example, multiple profit centers in multiple plants and company codes), you can analyze the value added for each [partner \[Ext.\]](#).

You can analyze the following reports:

- Reports that show the total costs of a product broken down according to [cost components \[Ext.\]](#)
- Reports that show the portion of the partners broken down according to cost component groups

In Customizing, you specify which organizational units the system considers as partners. You can select from the organizational units company code, plant, profit center and business area.

For every resource used, the system can derive the organizational unit that provided this resource. The cost estimate generates a separate cost component split for every involved partner. You can also only display the [direct partner's \[Ext.\]](#) portion.

The partner cost component split can be arranged in multiple dimensions, according to the definition of the partner. The cost component split can be displayed in hierarchy sequences of the partner, as required.

### Structure

The partner cost component split provides 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. Through *Settings* → *Sort Sequence of Partner Cost Splits* in the report, you can change the sort sequence of partner cost splits (order in which the partners are shown in the hierarchy).

Through *Settings* → *Cost Component Groups*, you can switch between cost component groups 1 and 2 in the report. You can also switch between the main and auxiliary cost component splits.

Unless you specify a different lot size, the lot size of the cost estimate is displayed. If you want to use a specific lot size, enter it in the report parameters under *cost base*. The costs are then converted to that lot size. The values displayed depend on the cost component view selected.

### Integration

Through *Settings* → *Partner View*, you can branch from the partner cost component split to reports for the direct partners. The reports on the direct partners are also hierarchical graphics, although they are only single-level. If you choose and display, for example, the profit center as the direct partner, you will see (in addition to the profit center of the material costed) only the profit center that has directly issued your activity or delivery to the profit center of the material costed.

## Partner Cost Component Split

### Prerequisites

To generate and display a partner cost component split, you must do the following in Customizing:

- Define cost component groups
- Define a partner version
- Enter this partner version in the costing type
- Enter this costing type in the costing variant that you use for costing

**See also:**

[Preparing for Material Costing \[Ext.\]](#)

[Cost Component Report \[Page 298\]](#)

## Cost Elements

### Use

The report displays a cost estimate broken down into cost elements. The cost elements show the costs according to origin, such as material costs or labor costs. The cost element itemization thus tells you which costs have arisen for what purpose.

### Integration

If you enter an *origin group* in the material master record or in the credit key of the costing sheet, you can have this displayed in an additional field to further break down the costs into material cost elements and the overhead costs into origin groups.



The values in the cost element itemization are determined from the values in the itemization. Subsequent changes of the quantity structure or the costing items are not displayed. To display such changes, costing must be repeated.

If you use your own programs or reports to evaluate your cost element itemizations, you must use the function module CK11\_ITEMIZATION\_TO\_COSX\_CONV, which creates the cost element itemization from the itemization.

### Prerequisites

If you want to see the cost element itemization in the information system, you must select the *itemization* indicator when you save the cost estimate.

### Activities

In the standard system, you can choose between predefined layouts or adapt the information to your requirements by creating custom layouts. For more information, see [Creating, Changing, and Managing Layouts \[Ext.\]](#).

#### See also:

[Cost Analysis \[Page 77\]](#)

## Itemization

# Itemization

## Definition

Report that lists the calculated costs and contains detailed information on cost origins and elements that make up costs.

## Prerequisites

An itemization is generated automatically with a cost estimate. If you want to display the itemization information in the cost estimate display and the information system, you must set the *Itemization* indicator when saving the cost estimate.



During preliminary costing for a production order or a production campaign, an itemization is generated dynamically. However, this itemization is not stored in the system and therefore cannot be analyzed in the information system. The itemization is available for analysis immediately after you carry out costing. For more information on the itemization of production campaigns, refer to [Reports for Cost Controlling of Production Campaigns \[Page 380\]](#).

## Use

You can use itemization to analyze a costed material, base planning object or sales document item in more detail.

Depending on the questions you need answered, there are different layouts of the itemization available in the SAP standard system. Through the selection of certain fields, you can find various information that is also partially grouped. The costs can be broken down for analysis by cost elements, by operations, or by costing items. The following layouts are described in more detail:

- [Itemization by Costing Items \[Ext.\]](#)
- [Itemization by Cost Components/ Cost Elements \[Ext.\]](#)
- [Itemization by Operations \[Ext.\]](#)
- [Itemization by Cost Elements \[Ext.\]](#)

You can modify this structure to suit your own requirements by creating your own [layouts \[Ext.\]](#). You can create your own layouts to be able to see other information in the itemization. For example, you can add the purchasing info record and the purchasing organization or the origin groups to the report display, or add the text of the activity types or item categories.

The origin group provides detailed information on the source of the material costs or on the origin of the overhead. With material costs, the origin group is entered in the material master record. With overhead costs, the origin group is entered in the credit key of the costing sheet and offers more information on the origin of the overhead.

In the itemization, you can also display the costs broken down into cost elements. Material costs, external activity and non-stock material are assigned to primary cost elements. In this itemization, they are shown under cost elements determined by the system. Costs for internal activity are displayed under the allocation cost element of the activity type that was entered in the master record of the activity type. Overhead costs and process costs are also displayed under

secondary cost elements. Because all actual costs are also assigned to these cost elements, a plan/actual comparison is possible later.

Only a limited selection of layouts are available for **base planning objects**.

## Structure

In the standard system, the itemization is displayed with the layout *Item Categories (grouped)*. Here, 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).



The costing item for a material (M) indicates the plant, the relevant material number, the price of the material, the text in the material master data and the quantity used.

The costing item for an internal activity (E) indicates the cost center, the work center, the activity type, a text, the price of the activity and the quantity used.

See [Creating and Deleting Subtotals \[Ext.\]](#) for general information on grouping in layouts.

For *joint production*, the itemization provides two types of display. You can switch between the process view and the product view in the report. While the product view shows only the costs of the co-product, the process view provides information about the costs of the other co-products, as well as an overview of the total costs of the production process. The other co-products are shown under item category A with negative quantities and values. This negative value is the amount of costs for the co-product that was calculated using the apportionment structure.

## Integration

The itemization is a prerequisite for variance calculation in Product Cost by Period and Product Cost by Order.

From the report, you can display the master data of a costing item.

For operations that are carried out externally, the costs are either entered in the routing, or are determined using a purchasing info record. For operations that are carried out internally, the costs are determined using *Cost Center Accounting*. For the valuation of internal activity using a cost estimate with quantity structure, the system assumes that price calculation was already done in *Cost Center Accounting*.

The system determines overhead on the basis of input quantities, or proportionally on the basis of direct costs (material or production) or costs of goods manufactured. You define the conditions for determining this overhead in a costing sheet in Customizing.

Process costs are determined in [Activity-Based Costing \[Ext.\]](#) and are generally assigned to the product using a template. The template specifies which process costs are consumed and the basis on which these costs are further allocated to the product.

### See also:

If you are using *mixed costing*, refer to [Special Processing with Mixed Costing \[Page 375\]](#).

If you are working with production campaigns, refer to [Reports for Cost Controlling of Production Campaigns \[Page 380\]](#).

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**Detailed Reports for Base Planning Objects**

## Detailed Reports for Base Planning Objects

### Definition

The reports based on the data from the existing base planning objects and their master data.

### Use

In the selection screen, enter the existing base planning object for which you want the report. You call up the report through .

Before calling up the costed multilevel BOM and itemization, you can choose a predefined layout with *Extras* → *Layout...* You can also switch to another layout or modify the current layout directly in the report.

### See also:

- [Features of the ABAP List Viewer \[Ext.\]](#)
- [Creating, Changing, and Managing Layouts \[Ext.\]](#)

## Costed Multilevel BOM

### Definition

Hierarchical overview of the values for all costing items of a material, sales order or base planning object.

### Prerequisites

If you want to see the costed multilevel BOM in the cost estimate display and the information system, set the *itemization* indicator when you save the cost estimate.

### Use

The display of costs for each component (assemblies and input materials) in the costed multilevel BOM is based on the structure and content of the BOM of the costed material. You can also display all other costing items (for example, internal activities and overhead costs) by choosing . In addition to costs, the respective input quantities are displayed. You can check which valuation strategy was used during costing by also having the field *Price Strategy (text)* displayed.

The structure of the costed multilevel BOM for unit cost estimates is very flat as a result of the costing structure of the unit cost estimate and therefore offers little information on the structure of the costs.

### Structure

In the SAP standard system, you can choose between predefined layouts or adjust information displayed according to your requirements by creating a [layout \[Ext.\]](#).

The values displayed are dependent on the cost component view (for example, cost of goods manufactured, cost of goods sold or stock valuation) and the cost base. If you change these, the costs are immediately converted to the new cost base or displayed in the selected view.

Choose  for an explanation of the symbols next to the materials or items.



The values in the costed multilevel BOM are determined from the values in the itemization. Subsequent changes of the quantity structure or the values are not displayed. A new costing is necessary for this.

### See also:

If you are using *mixed costing*, refer to [Special Processing with Mixed Costing \[Page 375\]](#).

## Itemization

# Itemization

## Definition

Report that lists the calculated costs and contains detailed information on cost origins and elements that make up costs.

## Prerequisites

An itemization is generated automatically with a cost estimate. If you want to display the itemization information in the cost estimate display and the information system, you must set the *Itemization* indicator when saving the cost estimate.



During preliminary costing for a production order or a production campaign, an itemization is generated dynamically. However, this itemization is not stored in the system and therefore cannot be analyzed in the information system. The itemization is available for analysis immediately after you carry out costing. For more information on the itemization of production campaigns, refer to [Reports for Cost Controlling of Production Campaigns \[Page 380\]](#).

## Use

You can use itemization to analyze a costed material, base planning object or sales document item in more detail.

Depending on the questions you need answered, there are different layouts of the itemization available in the SAP standard system. Through the selection of certain fields, you can find various information that is also partially grouped. The costs can be broken down for analysis by cost elements, by operations, or by costing items. The following layouts are described in more detail:

- [Itemization by Costing Items \[Ext.\]](#)
- [Itemization by Cost Components/ Cost Elements \[Ext.\]](#)
- [Itemization by Operations \[Ext.\]](#)
- [Itemization by Cost Elements \[Ext.\]](#)

You can modify this structure to suit your own requirements by creating your own [layouts \[Ext.\]](#). You can create your own layouts to be able to see other information in the itemization. For example, you can add the purchasing info record and the purchasing organization or the origin groups to the report display, or add the text of the activity types or item categories.

The origin group provides detailed information on the source of the material costs or on the origin of the overhead. With material costs, the origin group is entered in the material master record. With overhead costs, the origin group is entered in the credit key of the costing sheet and offers more information on the origin of the overhead.

In the itemization, you can also display the costs broken down into cost elements. Material costs, external activity and non-stock material are assigned to primary cost elements. In this itemization, they are shown under cost elements determined by the system. Costs for internal activity are displayed under the allocation cost element of the activity type that was entered in the master record of the activity type. Overhead costs and process costs are also displayed under

secondary cost elements. Because all actual costs are also assigned to these cost elements, a plan/actual comparison is possible later.

Only a limited selection of layouts are available for **base planning objects**.

## Structure

In the standard system, the itemization is displayed with the layout *Item Categories (grouped)*. Here, 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).



The costing item for a material (M) indicates the plant, the relevant material number, the price of the material, the text in the material master data and the quantity used.

The costing item for an internal activity (E) indicates the cost center, the work center, the activity type, a text, the price of the activity and the quantity used.

See [Creating and Deleting Subtotals \[Ext.\]](#) for general information on grouping in layouts.

For *joint production*, the itemization provides two types of display. You can switch between the process view and the product view in the report. While the product view shows only the costs of the co-product, the process view provides information about the costs of the other co-products, as well as an overview of the total costs of the production process. The other co-products are shown under item category A with negative quantities and values. This negative value is the amount of costs for the co-product that was calculated using the apportionment structure.

## Integration

The itemization is a prerequisite for variance calculation in Product Cost by Period and Product Cost by Order.

From the report, you can display the master data of a costing item.

For operations that are carried out externally, the costs are either entered in the routing, or are determined using a purchasing info record. For operations that are carried out internally, the costs are determined using *Cost Center Accounting*. For the valuation of internal activity using a cost estimate with quantity structure, the system assumes that price calculation was already done in *Cost Center Accounting*.

The system determines overhead on the basis of input quantities, or proportionally on the basis of direct costs (material or production) or costs of goods manufactured. You define the conditions for determining this overhead in a costing sheet in Customizing.

Process costs are determined in [Activity-Based Costing \[Ext.\]](#) and are generally assigned to the product using a template. The template specifies which process costs are consumed and the basis on which these costs are further allocated to the product.

### See also:

If you are using *mixed costing*, refer to [Special Processing with Mixed Costing \[Page 375\]](#).

If you are working with production campaigns, refer to [Reports for Cost Controlling of Production Campaigns \[Page 380\]](#).

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**Multilevel Explosion of a Base Planning Object**

## Multilevel Explosion of a Base Planning Object

### Definition

Report that explodes all items of a base planning object and shows the level

### Use

You use this report to show the materials and activities for a base planning object. If other base planning objects were used the base planning object, the base planning objects will be exploded down to the last code.

In the selection screen, enter the base planning object that you want to explode. Execute the report with .

### Structure

You receive a list of all costing items with their corresponding level.

You can also adapt the information supplied to suit your requirements. See the following for more information:

[Features of the ABAP List Viewer \[Ext.\]](#)

[Creating, Changing and Managing Layouts \[Ext.\]](#)

## Detailed Reports on Sales Order Cost Estimates

### Definition

The following reports described are based on the data of a sales order cost estimate. Sales order cost estimates can be created in sales-order-related production.

### Use

In the selection screen, you can select report settings (some of which you can change once in the report) before calling up the report.

- You can specify which *cost base* and which *cost component view* (for example, cost of goods sold) should be displayed in the report. If you don't enter a cost base, the costs are displayed based on the costing lot size.
- You can display the costs in company code or controlling area currency (if the data exists; see [Currencies in Cost Estimates \[Ext.\]](#)). To do so, choose *Settings* → *Currency...*
- You can select a predefined layout with *Settings* → *Layout...*

If you want to have multiple low-level codes displayed in the itemization, choose *Settings* → *BOM Explosion*. You can also specify that only material items should be displayed. You can have an additional field *Level* displayed that shows the low-level codes of the respective report lines.

#### See also:

[Sales Order Costing \[Ext.\]](#)

[Cost Object Controlling: Sales-Order-Related Production \[Ext.\]](#)

## Costed Multilevel BOM

# Costed Multilevel BOM

## Definition

Hierarchical overview of the values for all costing items of a material, sales order or base planning object.

## Prerequisites

If you want to see the costed multilevel BOM in the cost estimate display and the information system, set the *itemization* indicator when you save the cost estimate.

## Use

The display of costs for each component (assemblies and input materials) in the costed multilevel BOM is based on the structure and content of the BOM of the costed material. You can also display all other costing items (for example, internal activities and overhead costs) by choosing . In addition to costs, the respective input quantities are displayed. You can check which valuation strategy was used during costing by also having the field *Price Strategy (text)* displayed.

The structure of the costed multilevel BOM for unit cost estimates is very flat as a result of the costing structure of the unit cost estimate and therefore offers little information on the structure of the costs.

## Structure

In the SAP standard system, you can choose between predefined layouts or adjust information displayed according to your requirements by creating a [layout \[Ext.\]](#).

The values displayed are dependent on the cost component view (for example, cost of goods manufactured, cost of goods sold or stock valuation) and the cost base. If you change these, the costs are immediately converted to the new cost base or displayed in the selected view.

Choose  for an explanation of the symbols next to the materials or items.



The values in the costed multilevel BOM are determined from the values in the itemization. Subsequent changes of the quantity structure or the values are not displayed. A new costing is necessary for this.

### See also:

If you are using *mixed costing*, refer to [Special Processing with Mixed Costing \[Page 375\]](#).

## Cost Components

### Use

This report shows the costs calculated in a material cost estimate or sales order cost estimate across all production levels, broken down into cost components. You can analyze the costs of the cost component split for the cost of goods manufactured and the costs of the primary cost component split.

The results of a cost estimate are updated as cost components (this is called a *cost component split*). The cost components break down the costs of a material across the entire production structure into 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. In order to present primary costs for internal activities, you can use a primary cost component split as an alternative way of outlining the cost components.

The cost component split enables you to do the following:

- Analyze the cost origin across multiple production levels.  

You can analyze the value added within a multilevel production structure. The costs of the upper level consist of the internal activities and the overhead costs that are incurred at that level. The costs of the lower level include the materials and raw materials. The total costs of the upper level and lower level equal the total costs of the production level being analyzed.
- View the costs by original production factors (primary cost component split).
- Structure the costs according to the requirements of other areas (such as material valuation or profitability analysis).  

In the cost component view, you can specify which cost elements are displayed in the report. For example, you can select the cost of goods manufactured or the cost of goods sold, or the costs that are relevant to inventory valuation. You specify various cost component views in Customizing for *Product Cost Planning*. For each cost component, you can decide which share of the costs contained therein (fixed, variable, full) is displayed in which cost component view.

### Prerequisites

When you save a material cost estimate or a costing run, the system automatically updates a cost component split for each costed material in the BOM. For this to occur, you must have already defined a cost component structure in Customizing.

You specify the following in a cost component structure:

- Which cost components the calculated costs should be assigned to
- Which cost elements are grouped into which cost component

The cost component structure is selected through the company code, plant, and costing variant. You specify this assignment in Customizing for Product Cost Planning under *Basic Settings for Material Costing* → *Define Cost Component Structure*.

If you want to see a primary cost component split for the cost components, you must first generate a primary cost component split in *Cost Center Accounting* or *Activity-Based Costing*.

## Cost Components



If you are using mixed costing, you can display the costing results for a specific procurement alternative broken down into cost components. Call up the desired procurement alternative in the report call using the menu option *Settings*. To display the cost component split for a mixed cost estimate that was formed from different cost estimates and procurement alternatives and weighted with equivalence numbers, do not enter a procurement alternative. The split for the mixed cost estimate is displayed automatically if a mixed cost estimate was created for the costing version.

## Features

### Main Cost Component Splits and Auxiliary Cost Component Splits

You can display the costs as a cost component split for the cost of goods manufactured and/or primary cost component split.

- You can calculate the cost component split for the cost of goods manufactured and primary cost component split simultaneously. You can switch between the two cost component views (under *Settings* → *Type of cost component split*). However, you can also generate only the cost component split for the cost of goods manufactured or the primary cost component split.
- If you want to cost both cost component splits simultaneously, you must determine which cost component split is the **main cost component split** in Customizing for *Product Cost Controlling*. You can also generate a further cost component split as an **auxiliary cost component split** for comparison purposes.



The [update of the standard price \[Ext.\]](#) in the material master is effected by the main cost component split.

An itemization is only created for the main cost component split.

In the report, you can switch between the main cost component split and the auxiliary cost component split. With the appropriate setting, you can switch between the cost component split for the cost of goods manufactured and the primary cost component split.

### Upper Level / Lower Level / Aggregate Level

The cost estimate enables you to analyze the value added within a multilevel production structure. You can apportion the costs for each material according to the **lower level** and **upper level**.

You can find the cost component split display under *Costs* → *Display Cost components*. You can make this setting with *Settings* → *Layout*. You can create your own report from a large number of selections options.

When you display the costs:

- For the **upper level**, you see the production costs, overhead costs and costs for external activities that are expected for this production level
- For the **lower level**, you see the costs of all material components that are processed in this production level

**Cost Components**

In both cases, the costs are apportioned according to [cost components \[Ext.\]](#). The total cost of the upper level and lower level equals the total costs of the production level being analyzed.

You can go to the following other reports in the same report group:

- Total values
- Upper level
- Lower level

When the costs are apportioned according to cost components, the original identity of the costs (for example, costs of materials or fixed and variable production costs) are maintained throughout all production levels. At every production level, the value added at that level and the costs of the lower level can be separated through the cost component split.

When you save a material cost estimate or a costing run, the system automatically updates a cost component split for each costed material. For more information on saving costing results, see [Saving Costing Results \[Ext.\]](#).

If you want to create a cost component split for raw materials and purchased parts, you can enter additive cost components for each material for these costs. You can then group these cost components in an "External procurement" cost component structure that only contains such costs. For more information, see [Additive Costs \[Ext.\]](#).

## Cost Elements

# Cost Elements

## Use

The report displays a cost estimate broken down into cost elements. The cost elements show the costs according to origin, such as material costs or labor costs. The cost element itemization thus tells you which costs have arisen for what purpose.

## Integration

If you enter an *origin group* in the material master record or in the credit key of the costing sheet, you can have this displayed in an additional field to further break down the costs into material cost elements and the overhead costs into origin groups.



The values in the cost element itemization are determined from the values in the itemization. Subsequent changes of the quantity structure or the costing items are not displayed. To display such changes, costing must be repeated.

If you use your own programs or reports to evaluate your cost element itemizations, you must use the function module CK11\_ITEMIZATION\_TO\_COSX\_CONV, which creates the cost element itemization from the itemization.

## Prerequisites

If you want to see the cost element itemization in the information system, you must select the *itemization* indicator when you save the cost estimate.

## Activities

In the standard system, you can choose between predefined layouts or adapt the information to your requirements by creating custom layouts. For more information, see [Creating, Changing, and Managing Layouts \[Ext.\]](#).

### See also:

[Cost Analysis \[Page 77\]](#)

## Itemization

### Definition

Report that lists the calculated costs and contains detailed information on cost origins and elements that make up costs.

### Prerequisites

An itemization is generated automatically with a cost estimate. If you want to display the itemization information in the cost estimate display and the information system, you must set the *Itemization* indicator when saving the cost estimate.



During preliminary costing for a production order or a production campaign, an itemization is generated dynamically. However, this itemization is not stored in the system and therefore cannot be analyzed in the information system. The itemization is available for analysis immediately after you carry out costing. For more information on the itemization of production campaigns, refer to [Reports for Cost Controlling of Production Campaigns \[Page 380\]](#).

### Use

You can use itemization to analyze a costed material, base planning object or sales document item in more detail.

Depending on the questions you need answered, there are different layouts of the itemization available in the SAP standard system. Through the selection of certain fields, you can find various information that is also partially grouped. The costs can be broken down for analysis by cost elements, by operations, or by costing items. The following layouts are described in more detail:

- [Itemization by Costing Items \[Ext.\]](#)
- [Itemization by Cost Components/ Cost Elements \[Ext.\]](#)
- [Itemization by Operations \[Ext.\]](#)
- [Itemization by Cost Elements \[Ext.\]](#)

You can modify this structure to suit your own requirements by creating your own [layouts \[Ext.\]](#). You can create your own layouts to be able to see other information in the itemization. For example, you can add the purchasing info record and the purchasing organization or the origin groups to the report display, or add the text of the activity types or item categories.

The origin group provides detailed information on the source of the material costs or on the origin of the overhead. With material costs, the origin group is entered in the material master record. With overhead costs, the origin group is entered in the credit key of the costing sheet and offers more information on the origin of the overhead.

In the itemization, you can also display the costs broken down into cost elements. Material costs, external activity and non-stock material are assigned to primary cost elements. In this itemization, they are shown under cost elements determined by the system. Costs for internal activity are displayed under the allocation cost element of the activity type that was entered in the master record of the activity type. Overhead costs and process costs are also displayed under

## Itemization

secondary cost elements. Because all actual costs are also assigned to these cost elements, a plan/actual comparison is possible later.

Only a limited selection of layouts are available for **base planning objects**.

## Structure

In the standard system, the itemization is displayed with the layout *Item Categories (grouped)*. Here, 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).



The costing item for a material (M) indicates the plant, the relevant material number, the price of the material, the text in the material master data and the quantity used.

The costing item for an internal activity (E) indicates the cost center, the work center, the activity type, a text, the price of the activity and the quantity used.

See [Creating and Deleting Subtotals \[Ext.\]](#) for general information on grouping in layouts.

For *joint production*, the itemization provides two types of display. You can switch between the process view and the product view in the report. While the product view shows only the costs of the co-product, the process view provides information about the costs of the other co-products, as well as an overview of the total costs of the production process. The other co-products are shown under item category A with negative quantities and values. This negative value is the amount of costs for the co-product that was calculated using the apportionment structure.

## Integration

The itemization is a prerequisite for variance calculation in Product Cost by Period and Product Cost by Order.

From the report, you can display the master data of a costing item.

For operations that are carried out externally, the costs are either entered in the routing, or are determined using a purchasing info record. For operations that are carried out internally, the costs are determined using *Cost Center Accounting*. For the valuation of internal activity using a cost estimate with quantity structure, the system assumes that price calculation was already done in *Cost Center Accounting*.

The system determines overhead on the basis of input quantities, or proportionally on the basis of direct costs (material or production) or costs of goods manufactured. You define the conditions for determining this overhead in a costing sheet in Customizing.

Process costs are determined in [Activity-Based Costing \[Ext.\]](#) and are generally assigned to the product using a template. The template specifies which process costs are consumed and the basis on which these costs are further allocated to the product.

### See also:

If you are using *mixed costing*, refer to [Special Processing with Mixed Costing \[Page 375\]](#).

If you are working with production campaigns, refer to [Reports for Cost Controlling of Production Campaigns \[Page 380\]](#).

## Object Comparisons for Materials

### Definition

Reports you can use to compare a material cost estimate with another material cost estimate, or compare a material cost estimate with the preliminary cost estimate of an order.

**See also:**

[Material Cost Estimate with Quantity Structure \[Ext.\]](#)

[Material Cost Estimate Without Quantity Structure \[Ext.\]](#)

[Preliminary Cost Estimate for Manufacturing Order \[Ext.\]](#)

## Material Cost Estimate vs. Preliminary Order Cost Estimate

## Material Cost Estimate vs. Preliminary Order Cost Estimate

### Definition

Report that compares a material cost estimate with the [preliminary cost estimate for a manufacturing order \[Ext.\]](#).

### Use

You can use this report to compare a material cost estimate with the planned costs of manufacturing orders **for this material**.

You can find this report in the following application components of *Product Cost Controlling*:

- *Product Cost Planning*
- *Product Cost by Order*

### Structure

The view of a cost estimate relevant to inventory accounts is compared with a preliminary order cost estimate **on the basis of original cost elements**. The cost element itemization of material costing is derived with the following strategy:

- a. The system reads the cost element itemization of the cost estimate, if it exists.



In the SAP standard system, you can no longer control whether a cost element itemization is saved. The cost element itemization is always generated dynamically on the basis of the itemization.

- b. A cost element itemization is generated dynamically from the itemization of the cost estimate. This dynamically generated cost element itemization is not saved in the system at any time.

The cost base is calculated as follows:

- If you specify a lot size, both the values of the material cost estimate and the values of the preliminary order cost estimate are converted to that lot size.
- If you don't specify a lot size, the system will convert the values to the costing lot size of the material cost estimate.



Because the system cannot convert if the units of measure are different, this comparison is normally only suitable for a material cost estimate with the orders for that material.

#### See also:

[Material Cost Estimate with Quantity Structure \[Ext.\]](#)

[Material Cost Estimate without Quantity Structure \[Ext.\]](#)

[Product Cost by Order \[Ext.\]](#)

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Material Cost Estimate vs. Preliminary Order Cost Estimate

## Cost Components – Comparison

# Cost Components – Comparison

## Definition

Report that compares two material cost estimates on the basis of the cost components.

## Use

Two material cost estimates are compared with each other on the basis of the cost component split by comparing the individual cost components of the cost estimates with each other.

The following conversions are made:

- Conversion of the second cost estimate to the base unit of measure of the first cost estimate, assuming that the conversion factors have been entered in the material master of the product of the second cost estimate.
- Conversion of the lot size referenced to the base unit of measure of the first material.

If you don't specify a lot size, the system uses the lot size of the first cost estimate. The process of converting the lot size proportionalizes all cost components.

You can display different key figures in the report. To do this, go to the desired view from the report display with *Goto* → *Other Reports*.

The desired cost component view (cost of goods manufactured, cost of goods sold, or inventory valuation) is entered in the selection screen in the report parameters, and can be changed in the report.

If you are using more than one cost component split, you can switch between the main cost component split and the auxiliary cost component split while in the report.

The report can be displayed in the following currencies:

- Controlling area currency
- Company code currency / object currency

## Integration

You can access other reports while in the report, such as:

- Cost elements – comparison
- Costed multilevel BOM for a costing item
- Partner cost component splits

## Cost Elements – Comparison

### Definition

Report that compares two material cost estimates on the basis of the cost elements.

### Use

You can compare two material cost estimates with each other on the basis of the cost elements by comparing the cost elements with each other. The system creates a cost element itemization dynamically from the itemization of the cost estimate. This cost element itemization is not saved.

The following conversions are made:

- Conversion of the second cost estimate to the base unit of measure of the first cost estimate, assuming that the conversion factors have been entered in the material master of the product of the second cost estimate.
- Conversion of the lot size referenced to the base unit of measure of the first material.

If you don't specify a lot size, the system uses the lot size of the first cost estimate. The conversion process proportionalizes all cost elements.

### Structure

You can display different key figures in the report. To do this, go to the desired view from the report display with *Goto* → *Other Reports*.

You enter the desired cost component view (cost of goods manufactured, cost of goods sold, or inventory valuation) in the selection screen in the report parameters.

The report can be displayed in the following currencies:

- Controlling area currency
- Company code currency / object currency

### Integration

You access other reports from within the report, such as:

- Cost components – comparison
- Itemizations
- Costed multilevel BOM of a costing object

## Itemization Comparison

## Itemization Comparison

### Definition

Report that compares two cost estimates for materials on the basis of the itemizations.

### Use

You can use this report to compare two itemizations. The report compares the characteristics *item number, item category, cost element, resource, material, cost center, plant/work center, cost center/activity type, operation number, BOM item, assembly indicator, and cost component*.

You can access this report as follows:

- *Accounting* → *Controlling* → *Product Cost Controlling* → *Product Cost Planning* → *Material Costing* → *Cost Estimate with Quantity Structure* or *Cost Estimate Without Quantity Structure* → *Compare*  
or
- *Accounting* → *Controlling* → *Product Cost Controlling* → *Product Cost Planning* → *Information System* → *Object Comparisons* → *For Material* → *Itemization Comparison*



If you access this report through the applications *Cost Estimate with Quantity Structure* or *Cost Estimate Without Quantity Structure*, enter the necessary data for the cost estimates to be compared and choose *Execute*. You can also enter other selection criteria in the same screen. This report is generated automatically.

SAP supplies a number of standard layouts for displaying by item category, by cost component/cost element, by operation, by costing item, and several others. You can also modify the displayed information to suit your particular requirements. For example, you can set filters, display subtotals, sort, display additional information, and save these settings as a new layout.



When you access the report through the information system, you can choose a layout before actually calling up the report. You can also change this directly in the report at any time.

Depending on whether you access the report through the application or through the information system, different settings are available in the selection screen and in the report itself. For example, you can make the following settings in the selection screen of both reports:

- In the field *cost base* or with *Base*, you can enter the lot size which you want the displayed costs to be based on.
- With *Settings* → *Currency...* or *Switch currency...* you can switch between company code currency/object currency and controlling area currency.
- With a mixed cost estimate, you can use *Settings* → *Procurement alternative* to display a cost estimate for a particular procurement alternative.

## Integration

You can use *Goto* to access the detail screen of the cost estimate and to access the material master.

## Object Comparisons for Unit Cost Estimates

### Definition

Reports that compare two unit cost estimates.

### Use

You can use the report *Base Planning Object vs. Other Unit Cost Estimate* to:

- Compare two base object cost estimates with each other
- Compare a base object cost estimate to one of the following unit cost estimates:
  - Unit cost estimate for sales document
  - Unit cost estimate for general cost object
  - Material cost estimate without quantity structure
  - Unit cost estimate for production order, internal order, or WBS element

You can use the report *Unit Costing Comparison* to compare any unit cost estimates with each other.

You can change how information is displayed in these reports by modifying the current layout or creating a new layout. For more information, see [Creating, Changing, and Managing Layouts \[Ext.\]](#) and [Functions of the ABAP List Viewer \[Ext.\]](#).

### Structure

The document header contains information about the costing object, the costing lot size and the total value.

The report lists the data from both cost estimates along with the item category. You can also display only the variances between the two cost estimates.

#### See also:

See [Unit Costing \[Ext.\]](#), for more information on the functions of unit costing and the objects for which you can create a unit cost estimate.

[Reference and Simulation Costing \[Ext.\]](#)

[Material Cost Estimate without Quantity Structure \[Ext.\]](#)

## Background Printing of Costing Reports

### Use

You use this function if you want to print costing reports for many materials simultaneously and the lists are very long. You can print all costing reports in the background, such as cost component reports or itemizations.

### Procedure

1. Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Product Cost Planning* → *Information System* → *More Reports* → *Print Costing Report in Background*.
2. Enter a controlling area.
3. Enter the data for the costing reports.



Through the *BOM explosion* indicator, you specify how the system selects the cost estimates for background printing (*BOM explosion* or *Select cost estimates*).

- If you select the *BOM explosion* indicator, enter the data for material cost estimate selection in the *BOM explosion* section. In this case, the system selects and prints these material cost estimates and the cost estimates of the components in the relevant BOM. You can specify the following:
    - Down to which low-level code the BOM of the materials is exploded
    - Whether materials that appear more than once in the BOM to be exploded are also printed more than once
    - Whether the system selects only materials that were costed in a material cost estimate with quantity structure
  - If you did not set the *BOM explosion* indicator, enter the data for material selection in the *Select cost estimates* section. You can select according to the following criteria:
    - Plant and material number
    - Costing variant and costing version
    - Costing date

Only these cost estimates are selected and printed. The material BOMs are not exploded. That is, the cost estimates for the components in the relevant BOMs are not selected if they were not specifically entered as a material selection.
4. Enter the following in the *Report parameters* section:
    - Which report should be printed (such as [Cost Components \[Page 298\]](#))
    - Which [cost component view \[Ext.\]](#) should be used, for example cost of goods manufactured or cost of goods sold
    - Whether raw materials should also be selected
    - Whether the costing results should be displayed in company code currency or controlling area currency

**Background Printing of Costing Reports**

5. Select .
6. Enter the following data in the *Background processing* dialog box:
  - *Job name*
  - Starting date and time of the background job **or** *Immediate start*
7. Select .

The job will be started at the time specified. If you selected *Immediate start*, the job is started directly.
8. Choose *System* → *Services* → *Jobs* → *Job overview*, to display an overview of all existing background jobs and their statuses.

**See also:**

- [Computing Center Management System \(CCMS\) \[Ext.\]](#)
- [Background Processing \[Ext.\]](#)
- [Background Processing: Concepts and Features \[Ext.\]](#)

## Cost Object Controlling: Information System

### Use

This text describes the contents of the SAP standard reports and cost analyses that can be found in the Information Systems of the standard system under the following application components:

- *Product Cost by Period*
- *Product Cost by Order*
- *Product Cost by Sales Order*
- *Costs for Intangible Goods and Services*

The reports are grouped according to the individual application components and the report categories.

In addition, you receive general information about summarized analysis:

- The summarization of data is explained.
- The various summarization procedures are introduced.
- The summarization procedures are compared with each other.

#### See also:

[Report Categories \[Page 13\]](#)

[Summarized Analysis in Cost Object Controlling \[Page 312\]](#)

For general information on *Cost Object Controlling*, see the following sections in the documentation of *Cost Object Controlling*:

[Cost Object Controlling \[Ext.\]](#)

[Product Cost by Period \[Ext.\]](#)

[Product Cost by Order \[Ext.\]](#)

[Product Cost by Sales Order \[Ext.\]](#)

[Costs for Intangible Goods and Services \[Ext.\]](#)

In view of the reporting features in some processes in *Cost Object Controlling*, please refer to *Specific Processes and their Effects in Cost Object Controlling*. This gives you more information on the subject.

## Key Figures in Cost Object Controlling

# Key Figures in Cost Object Controlling

## Use

Some of the key figures available in *Cost Object Controlling* are listed below. Note that the availability of key figures depends on the application component and the objects used in the application component. For example, you can analyze the planned costs for production orders (in *Product Cost by Order*) and sales orders (in *Product Cost by Sales Order*), but not for product cost collectors (in *Product Cost by Period*).

You can display key figures:

- Using [cost analysis \[Page 77\]](#):
  - For the [cost element itemization for material cost estimates \[Page 301\]](#) and sales order cost estimates
  - For the [detailed reports in Cost Object Controlling \[Page 340\]](#)
  - For all [summarization hierarchies \[Page 314\]](#) (including order hierarchies with classification)
  - For reports for [cost object hierarchies \[Page 134\]](#)
- Using [product drilldown \[Page 197\]](#)
- Using [special reports \[Page 349\]](#)
- In the report categories [Object Lists \[Page 329\]](#), [Object Comparisons \[Page 344\]](#), and [More Reports \[Page 349\]](#)

**See the following sections for information on the key figures available for each application component:**

- [Key Figures in Product Cost by Period \[Page 81\]](#)
- [Key Figures in Product Cost by Order \[Page 169\]](#)
- [Key Figures in Product Cost by Sales Order \[Page 255\]](#)
- [Key Figures in Costs for Intangible Goods and Services \[Page 81\]](#)

If you are using cost analysis reports, it is recommended that you read these sections, because in this case the individual reports are not explicitly described.

## Functions of Cost Analysis

Reports of [cost analysis \[Page 77\]](#) use the functionality of the ABAP List Viewer while offering additional functions in cost analysis. You can define layouts in cost analysis containing the key figures that you want to analyze. The column selection for the layouts contains different field groups (column lists) that separate the key figures into logical groups.

**See also:**

- General information on [cost analysis \[Page 77\]](#)
- General information on the [ABAP List Viewer \[Ext.\]](#)
- For general information on working with layouts, see the following:

## Key Figures in Cost Object Controlling

- [Creating, Changing, and Managing Layouts \[Ext.\]](#)
- [Defining Current Layouts \[Ext.\]](#)
- [Saving Layouts \[Ext.\]](#)
- [Managing Layouts \[Ext.\]](#)

For general information on grouping information in layouts, see [Creating and Deleting Subtotals \[Ext.\]](#).

See the following text for detailed information on the most important key figures:

### Planned Costs

You can display planned costs for the following objects in the information system of Cost Object Controlling as long as the planned costs have been updated to the object.

- Production orders, process orders (if the costs were updated to the manufacturing order and not to a product cost collector)
- CO production orders
- Sales order items

Planned costs are only updated to a sales order item if the sales order item carries costs and revenues. You can also create a sales order cost estimate if the sales order item does **not** carry costs and revenues. A sales order cost estimate can also be analyzed if no planned costs are updated.

In *Product Cost by Sales Order*, a differentiation is made between the planned costs that were planned directly on the sales order cost estimate and the planned costs on the assigned objects.

An additional view is available with a planned cost report for a sales order that displays the planned costs for the sales order item and for the assigned objects (manufacturing orders).

- Internal orders
- General cost objects

No planned costs are updated for product cost collectors. You analyze the results of the preliminary cost estimates of product cost collectors in the information system of *Product Cost Planning* in the same way as you do with other material cost estimates with quantity structure.

**For information on preliminary costing in Product Cost by Order, see the following sections:**

[Preliminary Cost Estimate for Manufacturing Order \[Ext.\]](#)

For information on planned value calculation in *Product Cost by Sales Order*, see the following section:

[Calculation of Planned Values in Product Cost by Sales Order \[Ext.\]](#)

**For information on costing sales orders, see the following section:**

[Sales Order Costing \[Ext.\]](#)

## Key Figures in Cost Object Controlling

For information on cost planning for general cost objects in *Costs for Intangible Goods and Services*, see the following section:

[Cost Planning for General Cost Objects \[Ext.\]](#)

For information on cost planning for internal orders in *Costs for Intangible Goods and Services*, see the document *CO Internal Orders*.

## Actual Costs

Both the true actual costs and statistical actual costs are displayed in the *Actual* column in reports for the sales order item. The true actual costs can be differentiated from the statistical actual costs through the cost element. The layout *Funds Commitment in Inventory* makes it possible to report true actual costs separately from statistical actual costs.

## Work in Process

Work in process can be calculated for the following objects.

### Product Cost Collectors

Work in process for product cost collectors is always calculated at target costs.

### Production Orders and Process Orders

As a rule, manufacturing orders are settled cumulatively (settlement type FUL (full)). In this case, work in process is calculated at actual cost. If manufacturing orders are settled by period (settlement type PER), work in process is calculated at target cost.



### Note on Summarized Analysis with Product Drilldown

Work in process is derived from the results analysis cost elements for both objects with settlement type *Periodic* and objects with settlement type *Full Settlement*. If the results analysis cost elements are not assigned in the cost component structure for product drilldown, the work in process appears in the cost component *Other* (if defined) or as not assigned.

Results analysis data (including work in process) can be displayed separated into creation and usage if the indicator *Split creation/usage* is selected in Customizing for the results analysis version. If this indicator is not selected, the system displays the balance. Check this Customizing setting in the implementation guide of the respective application component of *Product Cost Controlling* under *Period-End Closing* → *Results Analysis* → *Define Results Analysis Versions*. The screen *Change View Results Analysis Versions: Overview* appears. Select the line to display the screen: *Display Results Analysis Versions: Detail*.

Creation and usage are not separated here. For the work in process, the report also shows the actual debits, the actual credits, and the balance.

Make sure that you have calculated work in process in period-end closing in the respective results analysis version.



### Note on Reserves for Unrealized Costs

Reserves for unrealized costs only exist for work in process at actual cost.

## Key Figures in Cost Object Controlling

Results analysis data (reserves for unrealized costs) can be displayed separately according to creation and usage if the indicator *Split creation/usage* is selected in Customizing for the results analysis version. If this indicator is not selected, the system displays the balance.

Check this Customizing setting in the implementation guide of the respective application component of *Product Cost Controlling* under *Period-End Closing* → *Results Analysis* → *Define Results Analysis Versions*. The screen *Change View Results Analysis Versions: Overview* appears. Select the line to display the screen: *Display Results Analysis Versions: Detail*.

Reserves for unrealized costs are only created if the value of the credit associated with the order delivery exceeds the value of the debits. In a particular period the object has either *WIP* or *reserves for unrealized costs*. This does **not** apply to summarization objects. With summarization objects, both work in process (at actual costs) and reserves for unrealized costs can exist within a period.

You must have performed results analysis in period-end closing in the respective results analysis version.

The key figures can be displayed and analyzed in detailed reports for individual objects as well as summarized.



### Note on Summarized Analysis with Product Drilldown

In summarized analysis with product drilldown, creation and usage are not separated, and reserves are not displayed. You must have calculated work in process in period-end closing in the respective results analysis version.

#### See also:

- [Calculate Work in Process \[Ext.\]](#)
- [Work in Process in Product Cost by Order \[Ext.\]](#)
- [Work in Process in Product Cost by Period \[Ext.\]](#)

Work in process, including goods in transport and goods at construction site, can also be calculated with results analysis for the sales order item or internal order.

Results analysis data (including work in process) can be displayed separated into creation and usage if the indicator *Split creation/usage* is selected in Customizing for the results analysis version. If this indicator is not selected, the system displays the balance.

You must have performed results analysis in period-end closing in the respective results analysis version. The key figures can be displayed and analyzed in detailed reports for individual objects as well as summarized.

In results analysis for sales order items or internal orders, a variety of results analysis data can be calculated. You can find more information on results analysis data in the following sections:

- [Results Analysis \[Ext.\]](#)
- [Results Analysis Methods \[Ext.\]](#)

## Variations

You can display the following variations:

## Key Figures in Cost Object Controlling

### Plan/Actual Variances

Plan/actual variances can be displayed for all objects for which plan and actual values were updated. A variance is the difference between planned and actual cost.



Plan/actual variances can be displayed for sales order items and for production orders and process orders. They cannot be displayed for product cost collectors, because no planned costs are updated on product cost collectors. Instead, you can use the report *Material vs. Order* in the report category *Object Comparisons* for comparisons between *Actual Costs of Product Cost Collectors* and *Preliminary Cost Estimates of Product Cost Collectors*.

### Target/Actual Variances

Target/actual variances can be calculated for product cost collectors and manufacturing orders.



Planned values are adjusted to a reference base in order to calculate variances between target costs and actual costs. This adjustment is performed during the variance calculation process. You calculate variances in period-end closing of *Product Cost by Period* and *Product Cost by Order*. During variance calculation, the variances to be analyzed are distributed to individual [variance categories \[Page 216\]](#). These variance categories can be displayed in the information system.

If variances have not yet been calculated, target costs can be calculated dynamically in the information system. The target costs are calculated on the basis of a target cost version.



The target credit in the report is calculated by multiplying the actual quantity by the standard price (with standard price control).

A target credit, however, is only displayed if the comparison object used for calculating target costs is a cost estimate that is independent of an order. Therefore, no target credit record is displayed in a report for target version 1. In the SAP standard system, target costs calculated using the planned costs for an order would be compared with the actual costs (or the net actual costs). Likewise, no target credit record is generated if the target costs were calculated by the report itself rather than during period-end closing.



## Notes on Detailed Reports with Original Cost Elements

### Scenario: Variances Not Yet Calculated

- Target cost calculation is initiated dynamically
- No variances are calculated (no variance categories that can be settled exist)
- No data is updated

This option enables an ad hoc target/actual comparison for a single object.

**Scenario: Variances Have Been Calculated**

- Target costs according to variance calculation
- Variances according to variance calculation

**You can find more information on variance calculation under:**

[Variance Calculation \[Ext.\]](#)

[Types of Variance Calculation \[Ext.\]](#)

[Variance Categories \[Ext.\]](#)

[Scrap Variances \[Ext.\]](#)

[Addendum: Scrap in Product Cost Controlling \[Ext.\]](#)

[Target Cost Versions in Variance Calculation \[Ext.\]](#)

[Calculation of Target Costs \[Ext.\]](#)

[Calculation of Control Costs \[Ext.\]](#)

[Variances with Valuated Sales Order Stock \[Ext.\]](#)

[Variance Calculation: Process Flow \[Ext.\]](#)

[Variance Calculation: Example \[Ext.\]](#)

[Periodic Variance Calculation: Value Flow \[Ext.\]](#)

[Calculate Variances \[Ext.\]](#)

[User-Defined Error Management in Cost Object Controlling \[Ext.\]](#)

**Results Analysis Data**

In results analysis for sales order items or internal orders, a variety of results analysis data can be calculated.

Results analysis data (including work in process) can be displayed separated into creation and usage if the indicator *Split creation/usage* is selected in Customizing for the results analysis version. If this indicator is not selected, the system displays the balance.

You must have performed results analysis in period-end closing in the respective results analysis version.

The key figures can be displayed and analyzed in detailed reports for individual objects as well as summarized.

**See also:****See the following sections for information on product drilldown reports:**

- [Product Drilldown \[Page 197\]](#)
- [Access to Drilldown Reports with the Characteristic Order \[Ext.\]](#)
- [Product Groups in Product Drilldowns \[Page 202\]](#)
- [Creating CO Product Groups \[Page 204\]](#)

**Key Figures in Cost Object Controlling**

- [Data Collection for Product Drilldowns \[Page 206\]](#)
- [Data Collection for Product Drilldowns \[Page 207\]](#)
- [Functions of Product Drilldown \[Ext.\]](#)
- [Variance Analysis \[Page 208\]](#)

**See the following sections for information on object lists:**

- [Object List \[Page 329\]](#)
- [Order Selection \[Page 330\]](#)
- [Selection Parameters for Order Selection \[Page 333\]](#)
- [Display Fields of the Results List \[Page 336\]](#)
- [Using Extracts \[Page 371\]](#)
- [Order Hierarchy and Order Selection with Classification \[Page 231\]](#)
- [Summarization Hierarchy Overview \[Page 338\]](#)
- [Cost Object Hierarchy Overview \[Page 151\]](#)
- [Finding/Displaying Cost Object Hierarchies \[Page 153\]](#)

**Information on Object Comparisons:**

- [Object Comparisons \[Page 344\]](#)
- [Order vs. Order Plan/Actual Comparison \[Page 345\]](#)
- [Summarization Hierarchy vs. Summarization Hierarchy - Plan/Actual Comparison \[Page 347\]](#)

**More Reports:**

- [Line Item Reports \[Page 349\]](#)

For detailed information on other reports, see the sections of the documentation relating to the position in the menu structure.

## Cost Analysis

### Use

*Cost analysis* is an interactive tool for analyzing data generated in *Cost Object Controlling* and *Product Cost Planning*, such as costs and quantities. Starting from basic lists, the user can define his own views, called *layouts*, using techniques such as *field selection*, *sum*, *sort*, *filter*, and so on, and store his layouts in the system for later use, or to make them available to other users.

The display can be varied by functions that switch the time frame, the versions, and the currency. It is also possible to branch to line item displays and master data transactions.

The data available for analysis (characteristics and key figures) is broken down into individual field groups. In addition, the user can add additional grouping characteristics in the configuration menu.

The functionality of *cost analysis* is enhanced by interfaces to applications such as Microsoft Excel, Word, and Crystal Reports. *Cost analysis* is available for all objects of *Cost Object Controlling*. It is also used for cost element analysis in *Product Cost Planning*.

### Application Scenario

For each report object, SAP supplies number of standard layouts (such as cost element analysis, cost development). User can also create their own custom layouts. For example, by means of interactive subtotaling and grouping it would be possible to realize variance analysis for material usage in a plant in general object summarization through a combination of suitable column contents (actual, target, variance, etc.) from the key figure list with characteristics such as *material* and *material text*. A further grouping using material master attributes can be defined by appropriate Customizing settings.

In layout management it is possible to specify the new layout as a default value for specific users or for all users.

### Features

*Cost analysis* uses the functions of the *ABAP List Viewer*.

For general information on working with layouts and the ABAP List Viewer, see the following:

- General information on the [ABAP List Viewer \[Ext.\]](#)
- [Creating, Changing, and Managing Layouts \[Ext.\]](#)

In addition to the generic functions of the ABAP List Viewer, *cost analysis* supplies the following functions:

#### Goto line items

You can go to actual line item analysis of a selected detail line.

#### Set currency type

Choose *currency type* to switch between the currency types *controlling area currency* and *company code/object currency*.

#### Time frame

You can set the reporting time frame to:

**Cost Analysis**

- Cumulated
- Limited (range of periods)

**Valuation view**

You can choose between different valuation views:

- Legal valuation
- Group valuation
- Profit center valuation

**Value base**

You can choose between:

- Absolute
- Per unit

*Cost analysis* is available for:

- The analysis of [summarization hierarchies \[Page 314\]](#) (orders, projects, cost objects)
- The [detailed reports in Cost Object Controlling \[Page 340\]](#)
- The [cost element itemization for material cost estimates \[Page 301\]](#) and sales order cost estimates

**For general information on the key figures available in the different application components, see:**

- [Key Figures in Cost Object Controlling \[Page 70\]](#)
- [Key Figures in Product Cost by Period \[Page 81\]](#)
- [Key Figures in Product Cost by Order \[Page 169\]](#)
- [Key Figures in Product Cost by Sales Order \[Page 255\]](#)
- [Key Figures in Costs for Intangible Goods and Services \[Page 81\]](#)

It is recommended that you read these sections, since the reports that use *cost analysis* are not explicitly described.

## Information System for Product Cost by Period

### Use

The information system for the Product Cost by Period component enables you to analyze the data updated to the product cost collectors and cost object hierarchies.

### Features

#### Analysis of Product Cost Collectors

You can view the following data on product cost collectors in the *Information System*:

- The values from preliminary costing (see also: [Preliminary Cost Estimates for Product Cost Collectors \[Ext.\]](#))

When you create a preliminary cost estimate for a product cost collector, the cost estimate is saved with reference to a [procurement alternative \[Ext.\]](#). You can use the reports of *Product Cost Planning* component to analyze the calculated cost of the procurement alternative. However, you view reports on preliminary costing for product cost collectors in the information system of *Product Cost Planning* and not in the information system of *Product Cost by Period*.

In the reports of *Product Cost Planning*, a cost estimate for a product cost collector will also show a procurement alternative (such as in the reports *List of Existing Cost Estimates*, *Cost Components*, and *Itemization*).



The preliminary cost estimate of a product cost collector does **not** update planned costs to the product cost collector.

- The actual costs (see also: [Actual Costs in Cost Object Controlling \[Ext.\]](#))
- The target costs (see also: [Calculation of Target Costs \[Ext.\]](#))
- The work in process (see also: [Work in Process in Product Cost by Period \[Ext.\]](#))
- The variances (see also: [Variance Calculation \[Ext.\]](#))



You **cannot** analyze the planned costs of the manufacturing orders assigned to the product cost collector. Although it is possible to determine the planned costs of the manufacturing orders, these costs cannot be updated to the manufacturing orders.

#### Accessing a Detailed Report

To access a detailed report, instead of entering an order number enter the material, plant, and characteristic values of the [production process \[Ext.\]](#) (example: material P-105, plant 1000, production version 0001). The system finds the product cost collector through these entries. The report shows you the name of the production process.

## Information System for Product Cost by Period

### Analysis of Cost Object Hierarchies

To analyze the data of the [cost object hierarchies \[Page 132\]](#), use the corresponding reports for the data entry object or for the summarization object of the cost object hierarchy (see also: [Cost Object Hierarchies in the Information System \[Page 134\]](#)).

**See also:**

[Product Cost Controlling Information System \[Page 10\]](#)

## Key Figures in Product Cost by Period

### Use

The following cost objects are used in *Product Cost by Period*:

- [Product Cost Collectors \[Ext.\]](#)
- [Cost Object Hierarchies \[Page 132\]](#)

A large number of key figures are available in *Product Cost by Period*. You can display key figures:

- Using [cost analysis \[Page 77\]](#):
  - For the [detailed reports for product cost collectors \[Page 157\]](#) and for [cost object hierarchies \[Page 158\]](#)
  - For all [summarization hierarchies \[Page 314\]](#)
- Using [product drilldown \[Page 197\]](#)
- In the report categories [object lists \[Page 329\]](#) and [object comparisons \[Page 344\]](#)

Which key figures can be analyzed depends on the object. For general information on the key figures in *Cost Object Controlling*, see the following:

[Key Figures in Cost Object Controlling \[Page 70\]](#)

### Functions of Cost Analysis

In cost analysis, you determine which key figures you analyze in *Product Cost by Period*. Reports of [cost analysis \[Page 77\]](#) use the functionality of the ABAP List Viewer while offering additional functions in cost analysis. You can define layouts in cost analysis containing the key figures that you want to analyze. The column selection for the layouts contains different field groups (column lists) that separate the key figures into logical groups.

#### See also:

- General information on [cost analysis \[Page 77\]](#)
- General information on the [ABAP List Viewer \[Ext.\]](#)
- For general information on working with layouts, see the following:
  - [Creating, Changing and Managing Layouts \[Ext.\]](#)
  - [Defining Current Layouts \[Ext.\]](#)
  - [Saving Layouts \[Ext.\]](#)
  - [Managing Layouts \[Ext.\]](#)
- For general information on grouping in layouts, see [Creating and Deleting Subtotals \[Ext.\]](#).

#### You can analyze the following for product cost collectors:

- Key figures that result from actual postings (such as total actual costs, actual fixed costs, actual variable costs, and the yield)
- Work in process at target cost (see also: [Work in Process in Product Cost by Period \[Ext.\]](#))

**Key Figures in Product Cost by Period**

- Data generated by variance calculation Examples:
  - Target costs
  - Control costs
  - Individual variance categories
  - Absolute and percentage variances

You cannot analyze planned costs for product cost collectors because no planned costs are updated for product cost collectors in preliminary costing. You can analyze the results of preliminary cost estimates for product cost collectors in the information system of *Product Cost Planning* in the reports for material cost estimates with a quantity structure.

**See also:**

[Creating, Changing, and Displaying Product Cost Collectors \[Ext.\]](#)

[Editing Product Cost Collectors \[Ext.\]](#)

[Displaying Product Cost Collectors and CO Production Orders: Display List \[Ext.\]](#)

[Variance Calculation \[Ext.\]](#)

[Example: Value Flow with Work in Process at Target Costs \[Ext.\]](#)

[Scrap Variances \[Ext.\]](#)

[Target Cost Versions in Variance Calculation \[Ext.\]](#)

[Calculation of Target Costs \[Ext.\]](#)

[Calculation of Control Costs \[Ext.\]](#)

[Variances with Valuated Sales Order Stock \[Ext.\]](#)

[Periodic Variance Calculation: Value Flow \[Ext.\]](#)

**You can analyze the following for cost object hierarchies:**

- Key figures that result from actual postings (such as total actual costs, actual fixed costs, actual variable costs, and the yield)
- Planned costs, provided that the planned costs were updated on the manufacturing orders assigned to a cost object hierarchy (such as summarization of the planned costs that were calculated in preliminary costing for the manufacturing orders assigned to a cost object hierarchy). Planned costs cannot be displayed for product cost collectors that are assigned to a cost object hierarchy.
- Plan/actual comparisons
- Work in process at target costs, provided that work in process was calculated for the orders assigned to the cost object hierarchy No work in process can be determined for cost object hierarchies.
- Data generated by variance calculation Examples:
  - Target costs
  - Control costs
  - Individual variance categories

## Key Figures in Product Cost by Period

- Absolute and percentage variances

See also:

[Key Figures in Cost Object Controlling \[Page 70\]](#)

[Actual Cost Distribution in Cost Object Hierarchies \[Ext.\]](#)

[Work in Process in Product Cost by Period \[Ext.\]](#)

[Variance Calculation \[Ext.\]](#)

[Example: Value Flow with Work in Process at Target Costs \[Ext.\]](#)

[Scrap Variances \[Ext.\]](#)

[Target Cost Versions in Variance Calculation \[Ext.\]](#)

[Calculation of Target Costs \[Ext.\]](#)

[Calculation of Control Costs \[Ext.\]](#)

[Variances with Valuated Sales Order Stock \[Ext.\]](#)

[Periodic Variance Calculation: Value Flow \[Ext.\]](#)



#### Note on Summarized Analysis with Summarization Hierarchy

If variances are calculated for an order (product cost collector or manufacturing order), the system sets the status VCAL (variances calculated) on the order. To assure comparability, you should only summarize objects for which variances have been calculated. Use the status selection profile in the required data collection. Select the orders for which the status VCAL is active.

If objects with the settlement type *periodic* or *full* are summarized together and analyzed by period, this should be taken into account when the report is interpreted.

[Background Information on Summarized Analysis \[Page 180\]](#)

#### See the following sections for information on product drilldown reports:

- [Product Drilldown \[Page 197\]](#)
- [Access to Drilldown Reports with the Characteristic Order \[Ext.\]](#)
- [Product Groups in Product Drilldowns \[Page 202\]](#)
- [Creating CO Product Groups \[Page 204\]](#)
- [Data Collection for Product Drilldowns \[Page 206\]](#)
- [Data Collection for Product Drilldowns \[Page 207\]](#)
- [Functions of Product Drilldown \[Ext.\]](#)
- [Variance Analysis \[Page 208\]](#)

#### See the following sections for information on object lists:

- [Object List \[Page 329\]](#)
- [Order Selection \[Page 330\]](#)

**Key Figures in Product Cost by Period**

- [Selection Parameters for Order Selection \[Page 333\]](#)
- [Display Fields of the Results List \[Page 336\]](#)
- [Using Extracts \[Page 371\]](#)
- [Order Hierarchy and Order Selection with Classification \[Page 231\]](#)
- [Summarization Hierarchy Overview \[Page 338\]](#)
- [Cost Object Hierarchy Overview \[Page 151\]](#)
- [Finding/Displaying Cost Object Hierarchies \[Page 153\]](#)

**Information on Object Comparisons:**

- [Object Comparisons \[Page 344\]](#)
- [Order vs. Order Plan/Actual Comparison \[Page 345\]](#)
- [Summarization Hierarchy vs. Summarization Hierarchy - Plan/Actual Comparison \[Page 347\]](#)

You can display summarized data for cost object hierarchies in the report categories *Object Lists* and *Detailed Reports*.

## Summarized Analysis

### In Cost Object Controlling

#### Use

The report category *Summarized Analysis* contains reports that show aggregated data. For example, you can do target/actual comparisons at the product group level. The following summarization methods can be used in *Cost Object Controlling* depending on the application component and the objects:

- In *Product Cost by Period*:
  - Summarization hierarchy
    - With a summarization hierarchy, you are free to define the structures used to save the data as you wish.
  - Product drilldown
    - With a product drilldown, the structures used to aggregate the data are predetermined.
  - Order hierarchy with classification

In summarized analysis in *Product Cost by Period*, the data updated on product cost collectors is summarized at higher levels. If you want to display the summarized data for a cost object hierarchy, use the report category *detailed reports*.

- In *Product Cost by Order*:
  - Summarization hierarchy
  - Product drilldown
  - Order hierarchy with classification
    - With an order hierarchy with classification, you are free to define the summarized structures as you wish. However, you must use classification. This reduces performance as compared to a summarization hierarchy. Therefore, you should only use classification when you need to work with user-defined characteristics.

In summarized analysis in *Product Cost by Order*, the data updated on production orders and product cost collectors is summarized at higher levels.

Note: Whenever possible, you should use a summarization hierarchy instead of an order hierarchy with classification.

- In *Product Cost by Sales Order*:
  - Summarization hierarchy
    - In summarized analysis in *Product Cost by Sales Order*, the data updated on the sales document items (normally the sales order items) is summarized at higher levels (such as the sold-to party).
- In *Costs for Intangible Goods and Services*:
  - Summarization hierarchy

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**Use**

In summarized analysis in *Costs for Intangible Goods and Services*, the data updated on internal orders with revenue is summarized at higher levels. Summarization for general cost objects is not supported.

For information on how the different methods of data summarization function, see:

**See also:**

**For information on interpreting the report data, see the following section:**

[Background Information on Summarized Analysis \[Page 174\]](#)

For information on the different summarization methods, refer to the following sections:

[Product Drilldown \[Page 197\]](#)

[Summarization Hierarchies \[Page 314\]](#)

[Cost Object Hierarchies \[Ext.\]](#)

[Order Hierarchy and Order Selection with Classification \[Page 231\]](#)

See the following section for information on how these methods of summarization differ:

[Differences in the Summarization Methods \[Page 180\]](#)

## Background Information on Summarized Analysis

### Use

The goal of this section is to explain the business methodology of summarization in Cost Object Controlling. In addition, the consequences of that methodology for the interpretation of the data on the part of the user will be explained.

The following aspects will be discussed:

1. How is the data on original objects summarized (such as production orders)?
2. Costs of semifinished products in summarized analysis
3. Objects with full settlement
4. Summarization time frame

### Summarizing Data on Original Objects

A common feature of all methods of summarized analysis in *Cost Object Controlling* (product drilldown, summarization hierarchy, cost object hierarchy) is that they are based on the data of the original objects (such as production orders and product cost collectors).

The data is updated to these original objects as follows:

- With original period
- With original cost element

A further subdivision is:

- Planned costs (debit / credit)
- Actual costs (debit / credit)
- Target costs (debit / credit)
- Work in process (results analysis data)
- Variance categories

The necessary data collection runs transfer the data for the summarization time frame to the summarization structures **by period**:

- As key figures in product drilldowns
- With original cost element for the summarization hierarchy or cost object hierarchy

### Example

The following example is divided into a master data part and a scenario.

The master data includes:

- BOM
- Routing with valuated operations
- Standard prices

The scenario describes a production process over two periods:

**Background Information on Summarized Analysis**

- A production order for 1 semifinished product (HALB) is completely manufactured in period 1.
- A production order for 1 finished product (FERT) is created in period 1 and withdraws the required materials in this period (1 raw material and a semifinished product). In period 2, additional activities are posted to the production order. The order is delivered to stock in period 2.

Both orders have a settlement rule with settlement type FUL (Full settlement). At the end of each period, period-end closing is carried out in *Product Cost by Order*.

**Master Data**

BOM	Routing	Standard Prices
FERT # 1ROH # 1HALB	Operation 1 100.00 Operation 2 200.00	950.00
HALB # 1ROH	Operation 1 100.00 Operation 2 100.00	400.00
ROH		100.00

Overhead on activities: 50.00%

Overhead is applied to the internal activities. The planned overhead rate is 50%, but the actual rate is 75% – resulting in variances.

Background Information on Summarized Analysis

Production order <b>HALB</b> 1 Unit	Period 1 Transact.1   Transaction 2 1 ROH
Production order <b>FERT</b> 1 Unit	Period 1   Period 2 Transaction 1   Transaction 2 1 ROH, 1 HALB

	Period 1					Period 2				
Production order <b>HALB</b>										
1 Unit	Plan	Act.	Trgt	WIP	Var.cat.	Plan	Act.	Trgt	WIP	Var.cat.
Debits										
Raw materials	100	100	100							
Activities	200	200	200							
Overhead	100	150	100		50					
Total Debits	400	450	400							
Credits	400	400	400							
Goods receipt	1PC	1PC								
Production order <b>FERT</b>										
1 unit	Plan	Act.	Trgt	WIP	Var.cat.	Plan	Act.	Trgt	WIP	Var.cat.
Debits										
Raw materials	100	100						100		
Activities	100	100				200	200	300		
Overhead	50	75				100	150	150		75
Semifin.prods	400	400						400		
Total debits	650	675		675		300	350	950	-675	
Credits						950	950	950		
Goods receipt						1PC	1PC	1PC		

## Background Information on Summarized Analysis

	Period 1					Period 2				
Cost elements summarization	Plan	Act.	Trgt	WIP	Var.cat.	Plan	Act.	Trgt	WIP	Var.cat.
Debits				675					-675	
Raw materials	200	200	100					100		
Activities	300	300	200			200	200	300		
Overhead	150	225	100		50	100	150	150		75
Semifin.prods.	400	400						400		
Credits	400	400	400			950	950	950		
Key figures - production order HALB										
	Plan	Act.	Trgt	WIP	Var.cat.	Plan	Act.	Trgt	WIP	Var.cat.
Debits	400	450	400		50					
Credits	400	400	400							
Key figures - production order FERT										
	Plan	Act.	Trgt	WIP	Var.cat.	Plan	Act.	Trgt	WIP	Var.cat.
Debits	650	675		675		300	350	950	-675	75
Credits						950	950	950		
Key figures summarization										
	Plan	Act.	Trgt	WIP	Var.cat.	Plan	Act.	Trgt	WIP	Var.cat.
Debits	1050	1125	400	675	50	300	350	950	-675	75
Credits	400	400	400			950	950	950		

## Costs of Semifinished Products in Summarized Analysis

The costs of the semifinished products are usually a special case with summarization characteristics that are higher in the hierarchy than the material.

While raw materials consumption, activities consumption, overhead, work in process, variance categories, and plan/actual comparisons can easily be aggregated by cost element on the individual summarization levels, the summarized key figures for planned costs, actual costs, and target costs have to be interpreted separately.

Consider, for example, summarization at the key figure level for period 1. At the material level, the actual cost debit of 450 USD for the semi-finished product and 675 USD for the finished product cause no problems in the interpretation of data.

But now look at the actual cost debits of both orders summarized as a key figure ( $\$450 + \$675 = \$1125$ ). You cannot interpret this value as the entire actual cost of the period, because this key figure includes both the production costs of the semifinished product and the withdrawal of a semifinished product for the production of the finished product.

Even if you offset the actual cost debits of \$1125 with the summarized actual cost credits of \$400, this is still not the actual cost of the period.

A similar problem arises for the key figures for the planned costs and target costs.

## Recommendation

**Analyze the costs for semifinished products separately from other costs.** You can do this in the summarization hierarchy and in the cost object hierarchy by means of cost-element-based summarization and an appropriately defined material account determination (separate cost element for the update of the consumption of semifinished products).

For the product drilldown you can define an appropriate cost component structure that assigns the cost element for the consumption of semifinished products to a separate cost component. You specify this cost component structure in Customizing for the *Information System* under *Maintain Report Parameters for Product Cost Controlling*.

When you interpret the costs of semifinished products, you must decide which percentage is already reflected in the costs of the period or which semifinished products were already manufactured in the previous periods. This cannot be supported by the system.

## Objects with Full Settlement

Many users make use of summarized analysis for periodic reporting. The costs of the individual objects are normally cumulated. With manufacturing orders, this is achieved by the use of settlement type FUL (full settlement). The following explains the problem of periodic analysis of objects with full settlement.

The example production order above is a case where a production order with the settlement type *full settlement* runs over two periods. The total target costs are only calculated and updated on the database in the period in which the order is delivered or technically completed. In the SAP System, target costs are calculated and updated during [variance calculation \[Ext.\]](#).

Note the key figures for the target costs and for the actual cost debit of the production order for the finished product. While the actual costs of period 1 have no corresponding target costs, the actual costs of period 2 have corresponding target costs cumulated across both periods in the amount of \$950. Separate analysis of an individual period would lead to wrong results.

On highly summarized levels or reporting over extended periods of time, this periodic effect normally tends to zero.

## Summarization Time Frame

With a data collection run you must specify a summarization time frame in the form "from period"/"to period".

The time frame specifies the following:

- Data on the summarization object for periods within the summarization time frame of the data collection run is reset and recalculated on the original objects.
- Data on the summarization object for periods outside the specified time frame of the data collection run is retained. This prevents the data calculated in an earlier data collection run from being deleted by a new summarization run.

## Background Information on Summarized Analysis



The restriction of the validity period in the data collection run has **NO** influence on the selection of the objects whose data are summarized. You specify the objects to be selected by defining a summarization hierarchy, for example.

## Recommendation

Specify at least the open periods in *Financial Accounting* as the summarization time frame, because the data on the original objects could still change within the open periods. You normally choose the closing period and the period prior to that.

## Special Processing with Status-Dependent Selection

If you use the summarization hierarchy in conjunction with a status selection profile, you must take this into account in the definition of the summarization time frame.



You are using a summarization hierarchy with a status selection profile that only includes objects for which variances have been calculated. At the same time, you specify the summarization time frame as from period 2 to period 2. This would result in the production order for the finished product from the numerical example above being included for the first time, but only the data of period 2 would be summarized. This would result in the cumulative target costs only having partial corresponding actual costs in the summarization report - as explained under *Objects with Full Settlement*.

To obtain usable results, you should therefore choose a summarization time frame that reflects the **maximum life of the original objects**.

Therefore you should make sure that the summarization time frame includes the maximum life of the objects that are being summarized for the first time.

## Differences in the Summarization Methods

The Information System for *Cost Object Controlling* provides a number of different procedures for analyzing the costs of a material or order at a summarized level. Data is summarized with the following methods:

- Product drilldowns
- Summarization hierarchies
- Cost object hierarchies

The following presents short examples of the different reports for summarized analysis. These examples serve to illustrate the differences between the individual summarization methods.

### Product Drilldowns

A product drilldown is an interactive tool for evaluation and presentation of data in *Cost Object Controlling*. The data is summarized according to predefined structures. You can expand this summarized dataset using different criteria to access the lower levels.



You have a report that summarizes the data by the characteristics *plant* and *material*.

Suppose you manufacture materials M1 and M2 in plants A and B (i.e., each material is manufactured in both plants). With product drilldown you can analyze them from different perspectives:

Which materials accounted for which production costs in plant A?

Plant A

- |               |          |
|---------------|----------|
| – Material M1 | USD 1000 |
| – Material M2 | USD 3000 |

What were the production costs for material M1 in the two plants?

Material M1

- |           |          |
|-----------|----------|
| – Plant A | USD 1000 |
| – Plant B | USD 6000 |

### Summarization Hierarchies

In the summarization hierarchy, the data is also summarized upwards according to a predefined structure that you can define yourself. In contrast to product drilldowns, you can only expand this summarized dataset in accordance with the predefined structure from the top downwards. The summarization is by original cost element.

## Differences in the Summarization Methods



Suppose you manufacture materials M1 and M2 in plants A and B (i.e., each material is manufactured in both plants). You define an order hierarchy (structure) in the following sequence:

1. Plant
2. Material

You then have the following analysis options in the report:

Plant A

Material M1	USD 100
Material M2	USD 200

Plant B

Material M1	USD 300
Material M2	USD 120

In contrast to product drilldowns, it is not possible to dynamically reverse the order of the characteristics *plant* and *material*.

## Cost Object Hierarchies

Cost object hierarchies are objects of *Product Cost by Period* that consist of cost object nodes arranged hierarchically. In contrast to summarization hierarchies, they do not represent primary report structures. You can post actual costs directly to cost object hierarchies. In contrast, the summarization hierarchy is not an object to which you can make postings, but rather a construct for the structured summarization of data.

The costs updated to the cost object hierarchy and the objects assigned to the cost object hierarchy (for example, product cost collectors) can be summarized. For summarized analysis, the cost object hierarchy is a predefined structure that is summarized in the same way as a summarization hierarchy. You can analyze the values summarized on the individual cost object nodes in the Information System of *Product Cost by Period*.

### See also:

For detailed information on the methods, see the following sections:

[Product Drilldowns \[Page 197\]](#)

[Summarization Hierarchies \[Page 314\]](#)

[Cost Object Hierarchies \[Page 132\]](#)

[Cost Object Hierarchies in the Information System \[Page 134\]](#)

## Product Drilldowns

### Use

The product drilldown is a tool for interactive evaluation and presentation of data in *Product Cost by Period* and *Product Cost by Order*.

Examples of characteristics used in data summarization are material, plant and product groups. This enables you to see data at a higher level (such as all planned costs and actual costs for a particular order type) and then go to a deeper level of that dataset (such as the planned costs and actual costs for the individual orders).

Product drilldown reports offer easy-to-use functions for navigating in the dataset (such as the next level, or the next object within a level). There are also a number of interactive functions in the report (such as hiding columns, sorting within a column, top node selection, and so forth).

Since product drilldown reporting is based on the same technique as drilldown reporting in *Profitability Analysis* (CO-PA), you can find detailed information on navigation functions in the documentation [Drilldown Reporting \[Ext.\]](#) in the cross-application topics.



You have a report that summarizes the data by the characteristics *plant* and *material*.

Suppose you manufacture materials M1 and M2 in plants A and B (i.e., each material is manufactured in both plants). With product drilldown you can analyze them from different perspectives:

Which materials accounted for which production costs in plant A?

Plant A

- Material M1            USD 1000
- Material M2            USD 3000

What were the production costs for material M1 in the two plants?

Material M1

- Plant A            USD 1000
- Plant B            USD 6000

### Integration

You can go from the characteristic level *Material* to a product drilldown report with the additional characteristic *Order*. This enables you to see the data for all orders for a material.

From there you can call up a cost element itemization for a single order.

### Prerequisites

The following points refer to the use of product drilldowns:

## Product Drilldowns

### Import Product Drilldown Reports

Import the product drilldown reports of the standard system in Customizing for *Product Cost Controlling* under *Information System* → *Cost Object Controlling* → *Settings for Summarized Analysis/Order Selection* → *Product Drilldown* → *Import/Transport Reports* → *Import Reports*.

### Import Form

You also import the form 7GLOBALVARIS (global variables) in Customizing for *Product Cost Controlling* under *Information System* → *Cost Object Controlling* → *Settings for Summarized Analysis/Order Selection* → *Product Drilldown* → *Import/Transport Reports* → [Import Forms \[Ext.\]](#).

### Create Product Group Type

The characteristic *product group* is used in the drilldown reports in the standard system. The value of this characteristic can be derived in different ways. You specify the method by selecting a product group type. If you want to use the characteristic *product group type*, choose the product group type that you want to use in Customizing for *Product Cost Controlling* under *Information System* → [Control Parameters \[Ext.\]](#).

You can find more information under [Product Groups in Product Drilldown \[Page 202\]](#).

### Check Cost Component Structure for Product Drilldown

You create a cost component structure for displaying cost elements grouped into cost components in the Information System. You must first create this cost component structure in Customizing for *Product Cost Planning* for the Information System. You specify this cost component structure in Customizing for *Product Cost Controlling* under *Information System* → [Control Parameters \[Ext.\]](#).

Why is a special cost component structure needed here?



Work in process is derived from the results analysis cost elements for both objects with settlement type "Periodic" and objects with settlement type "Full settlement". If the results analysis cost elements are not assigned in the cost component structure for product drilldown, the work in process appears in the cost component *Other* (if defined) or as not assigned.

### Check Order Types for Summarization of Product Drilldown

Check the order types that are to be summarized in the data collection, and change them if necessary in Customizing for *Product Cost Controlling* under *Information System* → *Control Parameters*.

### Create Your Own Reports

If the reports provided in the standard system do not meet your requirements, you can define your own reports.

You define reports in Customizing for *Product Cost Controlling* under *Information System* → *User-Defined Reports*. There you can also access information on the procedure for doing so.

### Data Collection Run

Execute a data collection run to select current data for your reports.



If you later change the product group type, the cost component structure, the order types to be summarized, or other settings, you must then execute the data collection run for the entire time frame in order to update the dataset.

For more detailed information on the Customizing activities, see the Implementation Guide for the *Product Cost Controlling Information System*.

## Features

The standard system provides a number of drilldown reports designed to meet your requirements.

Each standard drilldown report is supplied as a periodic report and as a cumulative report.

### Periodic Reports

In this format the report key figures are by period. These reports are useful for fast navigation between periods and are intended for monthly reporting. These reports also offer a view of up to 16 past periods for each combination of characteristics.

To call up the report, enter the plant if you want to limit the selection to a particular plant.

You must enter the period/fiscal year that is to be at the beginning of the report. You can use the arrows *Next Column* and *Previous Column* to go from one period to the next. The selection screen includes the specified period and the 15 preceding periods.

Two views can be selected:

- Detail list
- Drilldown list

The detail list for a periodic report shows the same key figures in the columns as in the drilldown list. However, the detail list shows all 16 available periods for the selected object. The drilldown list shows the values of the selected characteristic.



### Drilldown List

January 2000

**Product Drilldowns**

Material	(Characteristic)	Planned costs	Actual costs
ROH1		100	120
ROH2		140	200
ROH3		120	130

**Detail List**

Characteristic: ROH1

Period	Planned costs	Actual costs
January	100	140
December	1040	200
November	1320	130

**Cumulative Reports**

Cumulative reports show you summarized values for a specified time period. You specify this time period when you access the report. For example, you can see the key figures for:

- A quarterly analysis
- An analysis of the previous 5 months
- An analysis of the previous year

Enter the following data:

- From period/fiscal year
- To period/fiscal year

In a cumulative report, the detail list and the drilldown list offer you a similar result as with periodic reports. Instead of reporting by periods, the values are reported by the categories debit, credit, settlement credit, delivery credit.

The standard product drilldown reports summarize the dataset across the following characteristics:

Cumulative Reports	Periodic Reports
Plant	Plant
Product group	Product group
Material	Material
Period / year	Cost component
Cost component	

**See also:**

[Access to Drilldown Report with Characteristic Order \[Ext.\]](#)

[Differences in the Summarization Methods \[Page 180\]](#)

## Product Groups in Product Drilldowns

# Product Groups in Product Drilldowns

## Use

The drilldown reports in the standard system use the characteristic *product group*. This enables you to analyze data at the product group level.

## Features

You specify the content of the characteristic *product group* by defining a product group type in Customizing. You can assign the following product group types:

- 0 = no product group  
If you do not select a product group, there is no assignment to the characteristic product group in the product drilldown report.
- 1 = product hierarchy of material master record  
This concerns a character string for grouping materials through the combination of various characteristics. The product hierarchy is maintained in the *Basic data* view of the material master record, and is used for evaluation as well as price determination in materials management.
- 2 = product hierarchy of material master record  
Characteristic by which you can group materials or services with the same attributes. The material group is also maintained in the master record of a material, but in this case it is not a hierarchy, but rather a grouping.
- 3 = CO product group

You can group materials into CO product groups to be able to analyze data at the product group level in the *Information System of Product Cost Controlling*. CO product groups are master data in the *Product Cost Controlling Information System*.

You set up a product group in the menu of *Product Cost by Period* or *Product Cost by Order*. You assign materials to the hierarchy nodes. Each material can only be assigned to one CO product group. If you create a new material, you must assign it manually to a CO product group.

If you do not assign a material to any CO product group, the values appear in the product drilldown report for the characteristic product group in the line *not assigned*.



If you choose one of the above product group types, you can then drill down on the basis of that characteristic when you are in a drilldown report. For example, if you are using the product group type *material group*, the value for the field *material group* for each material is read from the material's master record. The data is summed in the report by material groups. You can display the data in the report by material group and analyze how the values are distributed among the materials in the material group.

## Activities

You assign the product group type in Customizing for *Product Cost Controlling* under *Information System* → *Control Parameters* in the field *Product group type*.

---

**Creating a CO Product Group**

## Creating a CO Product Group

### Single Entry

To create a single CO product group:

1. Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Cost Object Controlling* → *Product Cost by Period* or *Product Cost by Order*. → *Information System* → *Summarized Analysis* → *Product Groups* → *Create*.

The screen *Create Product Group:Basic Screen* appears.

2. Enter the name of the new product group.

This name is language-independent.

3. Enter a product group as a template if desired (*Copy from*).

4. Choose *Basic screen*.

The screen *Create Product Group:Basic Screen* appears.

5. Enter a description for the product group.

This description is language-dependent.

6. If the product group you are creating is not the highest level of the hierarchy, enter the name of the higher-level product group.

7. Enter the controlling area for which this product group is valid.

To assign single objects (materials) to the product group:

8. Choose *Goto* → *Single objects* → *Change assignment*.

The screen *Assign Single Objects: Overview* appears.

9. Choose *Edit* → *New entries*.

10. Enter the following data for each material you want to assign to the product group:

- Plant
- Material

11. Go back.

12. Save the product group.

### Collective Entry

To create multiple CO product groups using list entry:

1. Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Cost Object Controlling* → *Product Cost by Period* or *Product Cost by Order*. → *Information System* → *Tools* → *Summarized Analysis* → *Product Groups* → *Collective Entry*.

The screen *Create Product Groups: Basic Screen* appears.

2. Enter the following data for each product group that you want to create:

## Creating a CO Product Group

- Name of the product group
  - Higher-level product group (if the product group you are creating is not the highest level of the hierarchy).
  - Controlling area
  - Short text for product group
3. Save the product groups.

## Material Assignment

To assign materials to the CO product groups:

1. Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Cost Object Controlling* → *Product Cost by Period* or *Product Cost by Order*. → *Information System* → *Tools* → *Summarized Analysis* → *Product Groups* → *Material Assignment*.

The screen *Assignment of Materials to CO Product Group* appears.

2. Enter the product group to which you want to assign materials.
3. Choose whether you want to make a *standard selection* or a *selection through the function module exit*.
4. Limit the materials by plant, material number and material type.
5. Choose *Execute*.

A list appears with all the materials that meet your selection criteria.

6. Delete the selections of the materials that you don't want to assign to the product group.
7. Save your data.



If errors occur during assignment of a material to your product group, you will receive a list on which these materials are selected. Note that a particular material can only be assigned to one product group.

## Data Collection for Product Drilldown

### Use

To select data for a drilldown report, you must first execute a data collection run. The selected dataset is saved. You access this saved dataset when you execute the report.

### Features

You can execute the data collection for one plant or for all plants in a Controlling area.

You can also select the summarization time frame. The values in the summarization time frame are resummarized and any old values are overwritten. Summarized values that are outside of the summarization time frame are retained.

SAP recommends choosing the summarization time frame such that all open periods in *Financial Accounting (FI)* are summarized.



If you turn on the indicator *Delete values outside time period* all the data that is not within the selection time frame will be deleted.

### Notes on Performance

To **reduce runtimes**, you can execute the data collection run on multiple servers simultaneously. Ask your system administrator for a server group.

#### See also:

[Performance in Product Cost-Controlling \[Ext.\]](#)

## Collecting Data for a Product Drilldown

### Use

You collect data for a product drilldown when you want to analyze aggregated data in drilldown reports.

### Procedure

To perform data collection for the product drilldown:

1. Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Cost Object Controlling*. Choose the relevant application components, for example *Product Cost by Period*, and then *Information System* → *Tools* → *Data Collection* → *Product Drilldown*.

The screen *Data Collection for Product Drilldown* appears.

2. Enter the following data:

- Plant

You can select a special plant from which the data is to be summarized. If you leave this field empty, all plants in the Controlling area will be summarized.

- A summarization time frame

SAP recommends summarizing across all open periods in Financial Accounting.

3. Turn on the indicator *Delete values outside time period* if desired.
4. If you want to use **parallel processing** for the data collection to **reduce runtimes**, enter a server group and change, if necessary, the maximum number of tasks and the data records per task.
5. Turn on the indicator for *background processing* if desired.
6. Choose *Execute*.

The system brings up an overview of the completed data collection.

## Variance Analysis

# Variance Analysis

## Use

You can use product drilldown to display the existing variances between planned and actual costs, or target and actual costs (see also: [Terminology in Product Cost Controlling \[Ext.\]](#))

Variances are the difference between planned and actual costs.

Planned values are adjusted to a reference base, as a rule to the actual values, in order to calculate variances between target and actual costs. This adjustment is performed during variance calculation. You calculate variances in period-end closing of *Product Cost by Period* or *Product Cost by Order*. During variance calculation, the variances to be analyzed are distributed to individual [variance categories \[Page 216\]](#). These variance categories can be displayed in the information system.

If variances have not yet been calculated, target costs can be calculated dynamically in the information system. The target costs are calculated on the basis of a target cost version.

## Prerequisites

Before you use the reports **Target/Actual/Production Variances** and **Variance Categories**, you must have already performed **variance calculation** in period-end closing of *Product Cost by Order* or *Product Cost by Period*.

### See also:

[Product Cost by Period \[Ext.\]](#)

[Period-End Closing in Product Cost by Period: Scenario \[Ext.\]](#)

[Product Cost by Order \[Ext.\]](#)

[Period-End Closing in Product Cost by Order: Scenario \[Ext.\]](#)

[Variance Calculation \[Ext.\]](#)

[Target Cost Versions in Variance Calculation \[Ext.\]](#)

[Types of Variance Calculation \[Ext.\]](#)

## Target / Actual / Production Variances

### Use

Report with which you can analyze the results of [Variance Calculation \[Ext.\]](#) in the following application components of *Product Cost Controlling* using product drilldown:

- *Product Cost by Period*
- *Product Cost by Order*

The reporting time frame can be cumulative or limited.

This report shows the results of variance calculation. The results are dependent on which target version was specified at report call. (see also: [Types of Variance Calculation \[Ext.\]](#), [Target Cost Versions in Variance Calculation \[Ext.\]](#))

You can call up a detailed report for the variance categories to investigate the production variances in more detail. There are two scenarios for the interpretation of the data:

- Scenario 1: Standard costs, alternative material cost estimate, preliminary order cost estimate versus (if necessary, net) actual costs

See also:

[Terminology in Product Cost Controlling \[Ext.\]](#)

[Valuated Sales Order Stock: Valuation \[Ext.\]](#)

- Scenario 2: Standard cost estimate for the material versus planned costs for the order

Standard cost estimate for the material versus planned costs for the order corresponds to target cost version 2 (planning variance)

See also:

[Calculation of Target Costs \[Ext.\]](#)

[Calculation of Control Costs \[Ext.\]](#)

### Structure

#### Data Displayed

##### **Scenario 1: Standard costs, alternative material cost estimate, preliminary order cost estimate versus (net) actual costs**

The data is based on key figures and/or cost elements:

- Target costs = values of the standard cost estimate / alternative material cost estimate / preliminary order cost estimate adjusted to the actual quantity
- Actual costs
- Variances = calculated variances without [scrap variances \[Ext.\]](#)
- Scrap variances
- Work in process (WIP)

### Target / Actual / Production Variances

- Control costs = Actual costs – WIP – Scrap variance

### Scenario 2: Standard cost estimate versus preliminary order cost estimate (planning variance)

The data is based on key figures and/or cost elements:

- Target costs = values of the standard cost estimate adjusted to plan quantity of the order (planned lot size of the manufacturing order)
- Actual costs
- Variances = Calculated variances between preliminary order cost estimate and target costs calculated on basis of standard cost estimate
- Scrap variance (has no relevance for planning variances)
- Work in process (WIP) (has no relevance for planning variances)
- Control costs = planned costs for the order

### Header Information:

- Object information
- Reporting time frame

## Integration

### Prerequisites

Make sure that the **variances** have been **calculated** for the specific target cost version in the relevant reporting time frame. Reports of summarized analysis require that a **data collection run** be executed beforehand.

### Notes

When you interpret this report, note whether objects with a settlement rule with only one settlement type PER (*periodic*) or FUL (full settlement) are included, or whether you are accessing a report in summarized analysis in which objects have been summarized with both settlement types.

### Settlement type "Periodic"

The following interpretations for each period under consideration apply only to a report for an object with the settlement type *periodic*:

Variances = Target costs – Control costs

Control costs = Actual costs - WIP - Scrap variances (only for SAP standard target cost versions 0,1, and 3)

**Target / Actual / Production Variances**

In a report with original cost elements, work in process is displayed in its source cost elements. The cost estimate used to calculate the source cost element is the same as the one used to value work in process at target costs. You determine which cost estimate is used by determining the valuation variant for work in process and scrap (see also: [Work in Process in Product Cost by Period \[Ext.\]](#)).

**Settlement type "Full Settlement"**

Note the following points with objects that have the settlement type *full settlement*:

- Work in process is not displayed in its source cost elements, because no target costs are calculated on the basis of another cost estimate for valuation of work in process. Rather, work in process corresponds to the balance of the order for which final delivery has not yet taken place (see also: [Work in Process in Product Cost by Order \[Ext.\]](#)). Work in process is updated under results analysis cost elements. To analyze work in process, use the report *Work in Process*.
- Target costs and variances are only calculated and updated cumulatively in the period in which the status DLV (*Delivered*) or TECO (*Technically completed*) has been reached for the manufacturing order.

**Notes on Summarized Analysis with Product Drilldown**

Work in process is derived from the results analysis cost elements for both objects with settlement type "Periodic" and objects with settlement type "Full settlement". If the results analysis cost elements are not assigned in the cost component structure for product drilldown, the work in process appears in the cost component *Other* (if defined) or as not assigned.

**Notes on Detailed Reports with Original Cost Elements****Scenario: variances have not yet been calculated**

- Target cost calculation is initiated dynamically
- No variances are calculated
- No data is updated

This option enables an ad hoc target/actual comparison for a single object.

**Scenario: variances have been calculated**

- Target costs according to variance calculation
- Variances according to variance calculation

---

**Target / Actual Comparison**

## Target / Actual Comparison

### Use

**Use for product drilldowns:**

Report with which you can analyze the target and actual data in the following application components of *Product Cost Controlling* using product drilldown:

- *Product Cost by Period*
- *Product Cost by Order*

The reporting time frame can be cumulative or limited.

This report is used to compare the target and actual data that was determined during [Variance Calculation \[Ext.\]](#). The results of variance calculation are based on the target cost versions specified for the report: Different variances are considered, depending on the target cost version (also see: [Types of Variance Calculation \[Ext.\]](#), [Target Cost Versions in Variance Calculation \[Ext.\]](#)).

### Features

#### Data Displayed

The following data is shown based on key figures and/or original cost elements:

- Target costs
- Actual costs
- Target costs per unit
- Actual costs per unit
- Absolute variances = Actual costs – Target costs
- Percentage variances = Absolute variances / Target costs

The variances can also be displayed per unit.

The above figures are based on the costs per unit of output.

- Target quantity
- Confirmed quantity
- Absolute variances = Target quantity – Confirmed quantity
- Percentage variances = Absolute variances / Confirmed quantity

#### Header Information:

- Object information

- Reporting time frame

## Integration

### Prerequisites

Make sure that the **variances** have been calculated for the specific target cost version in the relevant reporting time frame. Reports of summarized analysis require that a **data collection run** be executed beforehand.

## Notes

### Recommendation

For more information on the production variances, use the [target / actual / production variances \[Page 209\]](#) - reports, or the reports on the [variance categories \[Page 216\]](#).

### For Product Drilldown

If you would like to analyze target costs in summarized reports, note the information in [Background Information on Summarized Analysis \[Page 174\]](#) to ensure a proper interpretation of the data.

## Variance Categories

# Variance Categories

## Use

Report that you can use with product drilldown to analyze the individual variance categories for the following application components:

- *Product Cost by Order*
- *Product Cost by Period*

The reporting time frame can be cumulative or limited.

This report makes it possible for you to analyze the results of the variance calculation. The results of variance calculation are different depending on the target cost version specified for the report.

You can compare the following costs:

- Target costs that have been calculated on the basis of standard costs against actual costs (without work in process and scrap variances).
- Target costs that have been calculated on the basis of a preliminary cost estimate of an order (product cost collector or manufacturing order) against actual costs (without work in process and scrap variances).
- Target costs that have been calculated on the basis of an alternative material cost estimate (for example, modified standard cost estimate, current cost estimate) against net actual costs (without work in process and scrap variances).
- Target costs calculated on the basis of standard costs against planned costs of manufacturing orders.

## Structure

### Data Displayed

The following variance categories are shown based on key figures and/or original cost elements:

- Scrap variance
- Input price variance
- Input quantity variance
- Resource-usage variance
- Remaining input variance
- Mixed price variance
- Output price variance
- Lot size variance
- Remaining variance

### Header Information:

- Object information

- Reporting time frame

## Prerequisites

Make sure that the **variances** have been calculated for the specific target cost version in the relevant reporting time frame. Reports of summarized analysis require that a **data collection run** be executed beforehand.

## Recommendation

This report is intended as a more detailed analysis for a target / actual / production variances report. You can normally go from product drilldowns to the variance categories report.

### See also:

In the documentation for *Cost Object Controlling*:

Basic information on variance calculation can be found in:

[Variance Calculation \[Ext.\]](#)

**Detailed information on the individual variance categories can be found in the following:**

[Variance Categories \[Ext.\]](#)

[Scrap Variances \[Ext.\]](#)

Information on the target cost versions and their resulting comparison values can be found in the following:

[Types of Variance Calculation \[Ext.\]](#)

[Target Cost Versions in Variance Calculation \[Ext.\]](#)

[Calculation of Target Costs \[Ext.\]](#)

[Calculation of Control Costs \[Ext.\]](#)

---

**Work in Process**

## Work in Process

### Use

Report with which you can analyze work in process (WIP) in the following areas of *Product Cost Controlling* using product drilldown:

- *Product Cost by Order*
- *Product Cost by Period*

The reporting time frame can be cumulative or limited.

### Structure

#### Data Displayed

- Creation
- Usage
- Balance

#### Header Information:

- Object information
- Reporting time frame

#### Notes (for Production Campaigns):

##### Note on Summarized Analysis with Product Drilldown

In summarized analysis with product drilldown, you cannot separate creation and usage and you cannot report reserves. With product drilldowns, the report also shows the actual debits, actual credits, and balance for the *work in process*.

### Prerequisites

You have determined work in process (or performed results analysis for product drilldowns) for the object to be analyzed in period-end closing for the particular results analysis version.

#### See also:

For detailed information on determining work in process, refer to the following:

[Work in Process in Product Cost by Order \[Ext.\]](#)

[Work in Process in Product Cost by Period \[Ext.\]](#)

[Results Analysis \[Ext.\]](#)



## Actual Costs

# Actual Costs

## Use

Report that shows the actual costs in the following areas of *Product Cost Controlling*:

- *Product Cost by Order*
- *Product Cost by Period*

The reporting time frame can be cumulative or limited. This report shows the updated actual costs and figures and serves as an analysis of the cost situation in your actuals.

## Data Displayed

The following data is shown based on key figures and/or original cost elements:

- Total actual costs
- Actual fixed costs
- Actual variable costs
- Actual input quantity
- Yield (actual output quantity)

Generally, the report shows the differences between the debits and the credits. This enables you to analyze the balance of an object.

## Header Information

- Object information
- Reporting time frame

## Integration

The actual values are based on the data updated by the simultaneous cost estimate.

### See also:

[Actual Costs in Cost Object Controlling \[Ext.\]](#)

## Summarization Hierarchies

### Use

Summarization hierarchies are analysis tools with which you can summarize values upwards in hierarchical structures that you define. This makes it possible to analyze values and quantities on higher levels such as at plant level. You use a summarization hierarchy in *Cost Object Controlling* to analyze costs and quantities that arose in the production process, summarized for a particular analysis period, at a higher level.



For example, suppose you specified that your order data is to be summarized by the following:

- Plant
- Order type

You can then display all data for a particular plant and analyze the data for that plant for the different order types.

You can use a summarization hierarchy to summarize the values of the following objects:

- Maintenance and service orders
- Internal orders
- Projects
- Sales orders and their items
- Manufacturing orders, QM orders and product cost collectors

Depending on your needs, you can summarize only objects of a certain object type (production orders, for example) or you can summarize multiple object types together. When summarizing objects of certain object types (projects, for example), dependent objects of another object type will be summarized as well (such as, internal orders assigned to that project). When summarizing sales orders, you can choose whether or not to have manufacturing orders which were assigned to that sales order summarized with that sales order.

You can define exception rules to specify that specific nodes of the hierarchy that fit certain requirements are indicated with colored traffic lights (red, yellow, green). This way, you can highlight areas that must be analyzed further. You can expand the hierarchy overview in cost element reports into the individual nodes and then analyze the nodes more closely.

### Prerequisites

The summarization hierarchy has to be defined before summarizing objects. When defining a summarization hierarchy, you determine which fields are involved in the data summarization and which objects will be summarized. The values in the object currency are only summarized if the summarization hierarchy contains a *plant* or *company code* node.

You define a summarization hierarchy in Customizing for the Information System under *Controlling* → *Product Cost Controlling* → *Information System* → *Cost Object Controlling* → *Settings for Summarized Analysis/Order Selection* → *Maintain Summarization Hierarchy*.

## Summarization Hierarchies

If the master data fields in the step *Maintain Summarization Hierarchy* do not cover your requirements in defining hierarchy levels for the summarization of orders or projects, you can work with [classification \[Page 231\]](#). For this, you can use classifying attributes to make other fields cover your requirements. On the basis of the additional volume of data and **performance problems** in master data maintenance which result from this, you should consider your need for additional fields carefully. You do not work with the step *Maintain Summarization Hierarchy* to create additional fields; instead you define a so-called order hierarchy in Customizing for the Information System under *Controlling → Product Cost Controlling → Information System → Cost Object Controlling → Settings for Summarized Analysis/Order Selection → Order Hierarchy and Selection with Classification → Create Order Hierarchies*.

If you want to make the summarization dependent on the order status, you must have already created a status selection profile in Customizing and entered this in the definition of the summarization hierarchy. You can find this step in Customizing for the Information System under *Product Cost Controlling → Information System → Cost Object Controlling → Settings for Summarized Analysis/Order Selection → Define Status Selection Profiles [Ext.]*.

## Features

The individual levels of a summarization hierarchy contain master data fields or parts of master data fields. For each value in a field (such as plant 1000, plant 1100, plant 1200), the system creates totals by period and cost element and writes them to a summarization object. The values on the different summarization objects can be analyzed in the Information System.

Many reports are available for this purpose in the Information System of the SAP standard system under the report category *Summarized Analysis*. For example, you can call up a plan/actual comparison for a summarization object (sales office 1000).

Alternatively, you can display a hierarchy report for a specific summarization hierarchy. You receive a hierarchical overview of the summarization objects that were generated by the summarization. If you created an exception rule when executing a data collection run, you will see the colored traffic lights in the overview.

The following data, for example, is summarized with the help of a summarization hierarchy:

- Planned values (for example, total planned costs, fixed planned costs, variable planned costs, planned output quantity)
- Actual costs (for example, total actual costs, fixed actual costs, variable actual costs, actual output quantity)
- Actual costs (for example, total actual costs, fixed actual costs, variable actual costs, actual output quantity)
- Variances (percentage plan/actual variances, absolute plan/actual variances, percentage target/actual variances, variance categories)
- Input quantities (target input quantities, actual input quantities)
- Work in process
- Results analysis data from results analysis

The run time of the data base run is better when you summarize less data.

The master data fields, which you can use to summarize data, are pre-set and dependent on the type of object that is to be summarized. Accordingly, when summarizing sales orders, the master data fields that are available to you when defining a summarization hierarchy are different from

## Summarization Hierarchies

those available when you are summarizing an internal order. If these fields do not cover all of your requirements, you can use additional self-defined fields for summarizing orders or projects. You must, however, work with classification here.

You can limit the scope of the summarized data by making the summarization of order values dependent on the status of the order. You can, for example, just have the data summarized from orders that already have variances calculated for them.

The data summarized with a summarization hierarchy is collected in a data collection run. You have to execute this before you can use reports for summarization. This means that a report for summarization objects always shows the dataset that was current at the time of the last data collection run. You must therefore execute a new data collection run if you want to see current values in your reports.

## Integration

You can call up cost element reports for individual summarization objects from the hierarchy display. The reports that are available are displayed in a dialog box. When you select a report, this report is called up for the selected summarization object. You can, for example, display the summarized actual values, plan values, and variances for a particular plant.

It is also possible to call up the hierarchy overview from the selection screen of a report for the analysis of a summarization object.

## Notes on Calling up Reports for the Summarization Hierarchy

Reports for analyzing summarization objects are found in the Information Systems of the individual application components of the SAP standard system under the report category *Summarized Analysis*.

To call up a report for a summarization object, enter the technical name of the summarization hierarchy in the selection screen. You must also enter the hierarchy type. Usually the hierarchy type is *CO*. If, however, you ran a summarization for an order hierarchy using classification, you have to choose hierarchy type *OR*.

In the field *Subhierarchy*, specify the summarization object to be analyzed. Display the possible entries (F4) for this field and choose the summarization object that you want to analyze.

### See also:

For more information about collecting and updating data for summarization, see [Data Collection for Summarization Hierarchy \[Page 323\]](#)

[Joint Production in the Information System \[Ext.\]](#)

You use the cost analysis to analyze the data aggregated with the summarization hierarchy. You can find information on this under [Cost Analysis \[Page 77\]](#)

## Maintain Summarization Hierarchies

# Maintain Summarization Hierarchies

In this step in Customizing for the *Product Cost Controlling Information System*, you specify the structure of your summarization hierarchies. In the definition of a summarization hierarchy, you specify what criteria are used to summarize the costs and quantities of objects.

You can use a summarization hierarchy to summarize the values of the following objects:

- Internal orders (order category 01 and 02)
- Maintenance/service orders (order category 30)
- Manufacturing orders, QM orders, and product cost collectors
- This includes the following order categories:  
CO production orders (order category 04), product cost collectors (order category 05), QM orders (order category 06), PP production orders (order category 10), process orders (order category 40)
- Projects

When projects are summarized, the system also summarizes the dependent objects (such as assigned orders or WBS elements) automatically.

- Sales orders without dependent orders
- Sales orders with dependent orders

When you summarize sales orders, you can control whether the system summarizes the data of the manufacturing orders assigned to the sales order by selecting the corresponding object type.

You can later summarize the values of individual objects upwards in accordance with the defined hierarchy structure.

You use the master data fields of the account assignment objects as the summarization criteria. Each level of the summarization hierarchy corresponds to one master data field. Using the master data fields, the system selects the account assignment objects for summarization and sums the costs and quantities for each characteristic value of a master data field (such as plant 1000, plant 2000).

**Note:**

If you are using customer-specific fields to summarize internal orders, the case (upper/lowercase) must be the same as used in these fields.

The system saves the calculated sums to summarization objects that correspond to the nodes of the hierarchy generated during the summarization run. You can analyze the summarization objects in the information system.

You can use summarization hierarchies to summarize data such as the following:

- Planned costs
- Actual costs
- Target costs
- Variances
- Work in process

## Maintain Summarization Hierarchies

- Results analysis data
- Input quantities
- Output quantities
- Scrap

### Example

You can use a summarization hierarchy to summarize the costs incurred in each period by the orders to produce a particular material in a particular plant.

### Notes

The highest node in the hierarchy is always the controlling area.

If you specify a status selection profile when you create summarization hierarchies, the only objects selected for summarization are those whose status matches the selection criteria specified in the status selection profile at the time of summarization. If you want to summarize on the object type *sales orders*, the status selection profile specified in the hierarchy definition refers to the production orders assigned to the sales order.

Once the system has executed a summarization run for a hierarchy, you can no longer change the summarization hierarchy. If you want to change the summarization hierarchy, you must first execute a deletion run to delete all summarized data.

You can specify selection variants to preselect internal orders.

### Notes on Joint Production

To enable status-dependent selection of orders in joint production, you can enter separate status selection profiles for the order header and the order item, since in joint production the status of the order header can differ from the status of the order item.

In joint production, the system summarizes only the values of the order items. Values on the order header are not summarized. Therefore, you should execute the function *Distribution for Co-Products* before starting a summarization run.

### Prerequisites

If you want to use status selection profiles, you must first carry out the step [Define Status Selection Profiles \[Ext.\]](#).

If you want to use selection variants, you must first carry out the step [Define Selection Variants \[Ext.\]](#).

### Activities

To define a summarization hierarchy, proceed as follows:

1. Choose *New entries*.
2. Give the hierarchy a name and a description.

To summarize input quantities, select *Summarize input quantities*.

3. If you want to limit the data scope using form routines, enter the user exit pool that contains those form routines (see also step 6).

## Maintain Summarization Hierarchies

4. Save your entries and go back.

You return to the overview of all summarization hierarchies.

5. To specify which type of account assignment objects are included in the summarization run, choose *Data scope (object types)*.

- Select the object types to be summarized.

If you only summarize projects, the system also summarizes the data of assigned objects such as dependent orders. If you want to summarize sales orders, you can control whether the system summarizes the data of the manufacturing orders assigned to the sales order by selecting the corresponding object type.

If you select more than one object type (such as sales orders and production orders), you must specify a priority. This is necessary because the sales order for a master data field, for example, can have a value that differs from the value of the production order below it for the same field. If the system were to summarize on this master data field, the production order would be included both in summarization on the value of the master data field in the sales order and in summarization on the value of the master data field in the production order. To prevent this from happening, in the hierarchy definition specify priority 1 for the object type *sales order* and priority 2 for the object type *production order*.

6. To specify which costs and quantities should be summarized, choose *Data Scope (Totals Records Tables)*.

- To exclude individual totals records tables from summarization, select *Not summarized*.
- To improve performance, you can summarize the records of the totals records file without the origin. To do this, select *No origin*. Selecting this indicator is recommended when you are interested in pure cost element reports. However, it is then no longer possible to expand the values at cost element level down to the origins.

If you want to limit the data scope using a user exit, enter the name of the user exit form routine. To do this, you must have entered the name of the user exit pool when you created the summarization hierarchy.

7. To assign master data fields to the levels of your summarization hierarchy, choose *Hierarchy levels*.

You can define up to 9 hierarchy levels.

In the column *Hierarchy field*, specify the desired master data field for each hierarchy level. If you want to create a hierarchy level using part of a master data field, enter the *Offset* and the *Length*.

8. If you want to group account assignment objects for which a characteristic is not filled under the node *other*, select *Blank*.

## Further Notes

For more information on creating summarization hierarchies and on their use in *Product Cost Controlling*, refer to the SAP Library under [Summarization Hierarchy \[Page 314\]](#).

## Function Module Exits for Summarization

### Use

The SAP System provides a number of function module exits for additional summarization functions. These are explained briefly in the following. These exits are documented. For detailed documentation, refer to the enhancement transaction (CMOD). Look at all SAP enhancements of development class KKR. You can access the documentation on an exit by pressing the pushbutton *SAP documentation*.

### Exit for Selection of Data Collection

The function module exit EXIT\_SAPLKKRB\_001 enables you to reassign objects, delete objects, or add objects after the selection for a data collection run but before data collection actually begins.

### Exit for Text Generation for Summarization Objects

The function module EXIT\_SAPLKKRU\_001 of enhancement KKRU0001 enables self-programmed assignment of texts for summarization objects. These texts are generated during a data collection run.

## Maintaining Texts for Summarization Objects

# Maintaining Texts for Summarization Objects

## Use

The system can generate texts for each summarization object generated in a summarization run. You can also enter such texts manually. In the standard system, texts are automatically generated for the summarization objects during the data collection run. The texts are generated based on the designation of the field value.



You summarize on plant 1000 (plant 1000 = Walldorf) The generated summarization objects receive the designation *Walldorf*.

The texts for summarization objects can also be entered manually. When you execute the data collection run, you choose whether you want the manually entered texts to be retained, or overwritten by the designation of the field value.



If the system can't find a text for a summarization object, it uses the value of the field.

## Procedure

To enter manual texts for summarization objects:

1. Go to the appropriate application menu in *Cost Object Controlling*.
2. Choose *Information System* → *Tools* → *Data Collection* → *Summarization Hierarchy*.
3. Enter the summarization hierarchy in the field *Hierarchy*.
4. Choose *Edit* → *Hierarchy*.
5. Position the cursor on the summarization object and choose *Edit* → *Maintain text*.
6. Enter a text and save your entries.

To specify which text is updated for summarization objects during the data collection run:

- a. Go to the appropriate application menu in *Cost Object Controlling*.
  - b. Choose *Information System* → *Tools* → *Data Collection* → *Summarization Hierarchy*.
  - c. Enter the summarization hierarchy in the field *Hierarchy*.
  - d. Choose *Extras* → *Standard texts*.
  - e. Choose how you want the system to handle texts during the data collection run:
- Do not generate texts
    - No texts are generated from the field values during the data collection run. Only previously existing texts – whether generated in an earlier data collection run or entered manually – are displayed.
  - Generate texts (do not overwrite)

**Maintaining Texts for Summarization Objects**

The system generates texts for the summarization objects using the designation of the field value. If any nodes already have texts – whether generated in an earlier data collection run or entered manually – the texts are not overwritten.

This is the standard setting. It is preferred over *Generate texts (overwrite)* for performance reasons.

- Generate texts (overwrite)

The system generates texts for the summarization objects using the designation of the field value. Any existing texts (including texts entered manually) are overwritten.

- f. Execute the data collection run for your summarization hierarchy. The system generates texts for the summarization objects in accordance with the option you chose.

## Data Collection for Summarization Hierarchy

## Data Collection for Summarization Hierarchy

### Use

The data summarized with a summarization hierarchy is collected in a data collection run. The data collection run is usually carried out for each summarization hierarchy after period-end closing in *Cost Object Controlling*.

The following occurs during a data collection run:

The system reads the quantities and values of the selected objects as defined by the summarization hierarchy for the period being closed. This data is summarized upwards according to the structure of the hierarchy and it is updated by period and cost element in the summarization objects. A summarization object is built for each field characteristic for all fields in a summarization hierarchy.



If your summarization hierarchy consists of the fields plant and order type, for example, the system creates the following summarization objects:

Plant A

Plant B

Plant A, order type 1

Plant B, order type 1

If a data collection run was already executed, the data selected for a new data collection run is updated as follows:

- Data on the summarization object for periods within the summarization time frame of the new data collection run is reset and recalculated.
- Data on the summarization object for periods outside the specified time frame of the new data collection run is retained. This prevents the data calculated in an earlier summarization run from being deleted by a new data collection run.

You can make the selection of objects for the summarization dependent on the status of the object. To do this, create a status selection profile when defining the summarization hierarchy. In the status selection profile you can specify which status the selected objects should have (released, or confirmed, for example). If you work with status selection, you should keep this in mind when you choose the summarization time frame.



If, for example you want to summarize only settled orders and limit the summarization time frame to the last two periods, even though one order runs over four periods, the values (such as actual costs) of the first two periods of the order will not be summarized and will therefore not be in the summarization hierarchy. Because the total target costs are only calculated and updated in the period in which the order was delivered or technically completed, the cumulated target costs are presented against partial actual costs in the summarization hierarchy.

If you are using status selection, specify a summarization time frame that is large enough to include the entire life of an order.

## Data Collection for Summarization Hierarchy

If you are not using status selection, it is sufficient to specify a summarization time frame that includes all open periods in *Financial Accounting*.

You can find more information under [Background Information on Summarized Analysis \[Page 174\]](#).

### Prerequisites

If you are using joint production, you must execute the function [Preliminary Settlement for Co-Products, Rework \[Ext.\]](#) before executing the data collection run. This is due to the fact that summarizations for joint production only summarize the values of the order items upwards, and not the values in the order header. You can find more information under [Special Processing with Joint Production \[Page 373\]](#).

### Features

You can carry out a data collection run for:

- the entire summarization hierarchy
  - If you carry out a data collection run for the entire hierarchy, you can display a report for each summarization object of the hierarchy.
- for a partial hierarchy

## Data Collection for Summarization Hierarchy

For example, if you want to calculate the costs for all orders for a particular material, you can carry out the data collection run for the appropriate subhierarchy. In addition, you can display reports for all summarization objects in this subhierarchy.

You can also perform a deletion run. This will delete the data for all summarization objects in the specified hierarchy. It is meaningless to enter a time frame when performing a deletion run. A deletion run is necessary, for example, if you want to make subsequent changes to the definition of a summarization hierarchy.

In addition, you can execute a data collection run in which the summarization hierarchy is built but no data is selected. If a summarization was already executed for this time frame, the summarization objects were updated in the data collection run without writing over existing data.

## Notes on Performance

**To reduce runtimes**, you can run the summarization run for summarization hierarchies on multiple servers simultaneously. You can improve the performance of simultaneous processing by defining the number of summarization nodes.

In addition, in the summarization hierarchy you can stipulate that individual totals records files should not be summarized, or that the records of totals records files without origin should be summarized. It is recommended that you set this indicator if you are interested in simple cost element reports without much detail.

For performance reasons it is also recommended that you do not choose the field *Order number* as a hierarchy level when defining the summarization hierarchy.

If you work with an order hierarchy with classification, you should execute the function *Characteristic Statistics* on a regular basis. You can change the sequence of the selected characteristics, which will speed up the selection of the classification characteristics. You can find this function in the application menu of the particular component in Cost Object Controlling under *Information System* → *Data Collection* → *Order Hierarchy (Classification)* → *Environment* → *Characteristic Statistics* → *Generate*.

Before executing the data collection run, set the indicator *Classification* in Customizing of *Cost Object Controlling* in *Product Cost by Period* or in *Product Cost by Order* under *Check Order Types* in the *Change Order Type* view and classify the orders with the report RKO CLASS. Then, deactivate the indicator.

### See also:

[Special Requirements in Joint Production \[Ext.\]](#)

[Performance in Product Cost Controlling \[Ext.\]](#)

## Executing Data Collection for Summarization Hierarchy

### Prerequisites

- You created a summarization hierarchy.
- If you want to use **parallel processing to shorten the runtime of a data collection run**, you should have your system administrator set up a server group and tell you the maximum number of tasks.

### Defining a Server Group (Only for System Administrators)

To specify which servers the summarization run should run on, choose *Tools → Administration → Administration → Network → RFC destinations → RFC → RFC groups*.

It is recommended that you execute the data collection run after each period-end closing, thus summarizing current data such as target costs, work in process and variances.

If you want to monitor actual costs, it can also be helpful to execute a data collection run during a period before period-end closing activities.

### Procedure

To perform a data collection run:

1. Choose *Accounting → Controlling → Product Cost Controlling → Cost Object Controlling → Product Cost by Period / Product Cost by Order / Product Cost by Sales Order / Costs for Intangible Goods and Services → Information System → Tools → Data Collection → Summarization Hierarchy*.

The screen *CO Summarization* appears.

2. Enter the following data:

- Hierarchy

For a list of summarization hierarchies in the controlling area, press F4.

To see a list of hierarchies that have been summarized, choose *Extras → Summarized Hierarchies*.

- Subhierarchy

If you only want to summarize part of the hierarchy, choose the arrow symbol button *Set Subhierarchy*. All fields are listed for which summarization has been carried out (such as the plant or material). Enter the field attributes for which the summarization is to be carried out.



For example, if you enter plant 0001 and material PROD-1, the costs of all orders will be summarized that were created for material PROD-1 in plant 0001.

If you enter only plant 0001, only the costs for all orders in plant 0001 will be summarized.

- From Period/Fiscal Year and To Period/Fiscal Year

The values for these periods will be displayed for the objects selected according to

## Executing Data Collection for Summarization Hierarchy

the summarization hierarchy. If an object does not have any values in the periods specified, it is considered in principle during data retrieval, but with no values.

3. Turn on one of the following indicators:
  - Summarization run  
In the summarization run the data for the periods within the specified summarization time frame are reset and recalculated. Data on the summarization object for periods outside of the summarization time frame is retained.
  - Deletion run  
The deletion run deletes all summarization objects created by previous data collections. After that, the hierarchy definition is changeable again.
  - Hierarchy without data  
Set this indicator if you want just want the structure of a summarization object without data.
4. Choose *Extras* → *Exception* → *Set rule*. This allows colored traffic light symbols to be displayed at hierarchy nodes for which predefined threshold values have been exceeded. You first define the rules for exceptions in Customizing. Here you specify the basis for the threshold values and by how much the threshold value has to be exceeded before a traffic light is set.
5. In the standard system, the indicator *Background processing* is turned on. If you want to perform the summarization run online, you must turn off this indicator.
6. Select *Parallel Processing* if you want to use **parallel processing** for a data collection run.

The dialog box *Parallel Processing* appears.

Set the indicator *Parallel processing online* and enter the following data:

- Maximum number of tasks (number of system sessions on the servers)
- Number of nodes (task)
- Server group

Choose *Confirm*.



System resources are utilized in accordance with the number of tasks. For this reason you should limit the number of tasks or only use parallel processing when there are sufficient system resources available.

7. Choose *Execute*.

If you have turned off the indicator for *background processing*, a dialog box appears in which you must confirm the order summarization run.

## Result

An overview screen is now displayed that shows the processed nodes of the hierarchy.

You can use the following functions:

- Message log

---

**Executing Data Collection for Summarization Hierarchy**

The message log lists any errors that occurred and any information messages that were issued during summarization.

– Table statistics

The table statistics specify how many totals records were written during summarization.

**See also:**

[Performance in Product Cost Controlling \[Ext.\]](#)

## Cost Object Hierarchies

# Cost Object Hierarchies

## Definition

A cost object hierarchy is a hierarchy consisting of cost object nodes.

## Use

A cost object hierarchy can be used to analyze target costs, actual costs, and variances in situations where costs are not collected at the level of orders or materials.

## Structure

A cost object hierarchy consists of cost object nodes to which the following can be assigned:

- Material/plant
- Material/plant/[production process \[Ext.\]](#)



Starting in Release 4.5A you can define a [cost object hierarchy \[Page 132\]](#) for a material/plant or for a material/plant and production process. If you were using cost object hierarchies in an earlier release, you were able to define them for the following objects:

- Material / plant
- Material / plant / production version
- Material / plant / run schedule header

If you have already defined a cost object hierarchy for the combination *material/plant/production version* or for the combination *material/plant/run schedule header*, then starting in Release 4.5A these are converted into a cost object hierarchy for the combination *material/plant/[production process \[Ext.\]](#)*.

## Integration

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.

### See also:

See the following sections of the documentation *Cost Object Controlling*:

[Cost Object Nodes \[Ext.\]](#)

[Basic Information on Cost Object Hierarchies \[Ext.\]](#)

[Examples for Cost Object Hierarchies \[Ext.\]](#)

[Settlement Rules for Cost Object Hierarchies \[Ext.\]](#)

[Creation of a Cost Object Hierarchy: Scenario \[Ext.\]](#)

[Creating a Cost Object Hierarchy \[Ext.\]](#)

[Conversion of Cost Object Hierarchies \[Ext.\]](#)

[Special Requirements in Joint Production \[Ext.\]](#)

See the following sections of the documentation *Cost Object Controlling Information System*:

[Cost Object Hierarchies in the Information System \[Page 134\]](#)

[Collecting Data for a Cost Object Hierarchy \[Page 135\]](#)

[Overview of Cost Object Hierarchies \[Ext.\]](#)

[Displaying/Finding Cost Object Hierarchies \[Page 153\]](#)

## Cost Object Hierarchies in the Information System

# Cost Object Hierarchies in the Information System

You can display the cost object hierarchy and the values posted to the individual cost object nodes in the information system of *Product Cost by Period*.

If the posting data for the cost object hierarchy is displayed, the cost object hierarchy is referred to as a **data entry object**. In addition, you can display the values posted to the orders (product cost collectors or manufacturing orders) assigned to the cost object hierarchy.

You can summarize the values for the cost object hierarchy level by level and display the summarized values in the information system. If the summarized data should be analyzed, the cost object hierarchy is referred to as a **summarization object**. Every cost object node can become a summarization object. It is a prerequisite that a data collection run for summarization has been carried out (see: [Collecting Data for a Cost Object Hierarchy \[Page 135\]](#)).

You can find reports for the cost object hierarchy in the report categories *Detailed Reports* and *Object Lists*. They are not found under *Summarized Analysis*.

### See also:

[Cost Object Hierarchies \[Page 132\]](#)

[Differences in the Summarization Methods \[Page 180\]](#)

[Hierarchy Display and Summarized Analysis \[Page 151\]](#)

[Collecting Data for a Cost Object Hierarchy \[Page 135\]](#)

[Detailed Reports for Data Entry Objects \[Page 158\]](#)

[Overview of Cost Object Hierarchies \[Ext.\]](#)

In [Finding/Displaying Cost Object Hierarchies \[Page 153\]](#), the following are described:

- How to display the cost object hierarchy as a graphic
- How to display the costs for the cost object hierarchy
- How to switch between the data entry object and the summarization object

## Collecting Data for a Cost Object Hierarchy

### Use

When you execute a data collection run for a cost object hierarchy, the values of orders assigned to the cost object hierarchy are rolled up. The system generates a summarization object for every cost object node. A summarization object contains the values that were added together corresponding to the original period and cost element.

The following data that was posted to a cost object node or an order assigned to a cost object node can be summarized:

- Planned values
- Actual values
- Target values
- Work in Process
- Variances
- Plan/actual quantities



The system can summarize only the entire cost object hierarchy, but not a subhierarchy (as is the case with summarization hierarchies).

### Prerequisites

It is recommended that you execute the data collection run after each period-end closing, thus summarizing current data such as target costs, work in process and variances.

If you want to monitor actual costs, it can also be helpful to execute a data collection run during a period before period-end closing activities.

### Procedure

To summarize the data for a cost object hierarchy:

1. Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Cost Object Controlling* → *Product Cost by Period* → *Information System* → *Tools* → *Data Collection* → *Cost Object Hierarchy*.

The screen *Cost Object Summarization* appears.

2. Enter the following data:
  - Cost object (must be flagged as the top of the hierarchy)
  - From period/fiscal year and to period/fiscal year

In the summarization run the values for the periods within the specified summarization time frame are reset and recalculated. Data on the summarization object for periods outside of the summarization time frame is retained. This prevents the data calculated in an earlier summarization run from being deleted when the orders are reorganized.

### Collecting Data for a Cost Object Hierarchy

3. In the standard system, the indicator *Background processing* is turned on. If you want to perform the summarization run online, you must turn off this indicator.
4. Choose *Execute*.

If you have turned off the indicator for *background processing*, a dialog box appears in which you must confirm the summarization run.

An overview screen is now displayed that shows the nodes of the hierarchy processed. The different levels of the hierarchy and the designations (such as the designation of the cost object ID and the material number) are shown.

You can use the following functions:

- Message log

The message log lists any errors that occurred and any information messages that were issued during summarization.

- Table statistics

The table statistics specify how many totals records were written during summarization.

**See also:**

[Cost Object Hierarchies \[Page 132\]](#)

[Cost Object Hierarchies in the Information System \[Page 134\]](#)

## Object Lists

### In Cost Object Controlling

#### Use

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

## Order Selection

# Order Selection

## Definition

Using order selection, you can generate a list of orders with the associated data and key figures.

## Use

Order selection allows you to select orders according to different criteria. The result of your selection is in the form of a list of orders containing specific master data and key figures on the orders.

You can create exceptions to specify that all orders that fulfill certain conditions are identified with colored traffic lights (red, yellow, green) in the results list. This way, you can filter out orders that should be analyzed further.

The results list has a number of navigation and formatting options and can be modified by the user. From the results list in detail reports, you can branch off to single orders or to a comparison of two orders, in order to examine these orders more closely. You can also go to the master data display for characteristics from the results list. You can, for example, display the master record of the manufactured material for an order to be analyzed.

Order selection is not a summarized analysis and is **not** based on classification. It mainly serves to answer ad-hoc questions that arise in *Cost Object Controlling*.

## Integration

From the order list in the order selection you can call up detail reports with the original cost elements for any order. The reports that are available are displayed in a dialog box. When you choose a report, the system calls up this report for the chosen order. For a more detailed analysis of an order, there are reports about planning data, actual data, and numerous reports about variances as well as a report about work in process.

Furthermore, there are additional reports available for the comparison of two orders.



If you want to add more reports to the dialogue box so that you can jump to the results list for these reports, you must first add these reports to your list of reports in Customizing.

The data is displayed with the [ABAP List Viewer \[Ext.\]](#).

## Prerequisites

If you want to display specific master data in the list of selected orders, make the proper adjustments in the IMG for the Information System under *Product Cost Controlling* → *Information System* → *Control Parameters* in the section [Display Fields Order Selection \[Ext.\]](#). Here you choose the fields of the order master as well as the order header and order item that you want displayed in the results list of the order selection. For performance reasons, try to limit the selections to only those fields that are really necessary.

If you want to use order status as one of the selection criteria, you must first create a status selection profile in Customizing. You can find this step in the IMG for the Information System under *Product Cost Controlling* → *Information System* → *Cost Object Controlling* → *Settings for*

*Summarized Analysis/Order Selection* → *Order Hierarchy and Selection with Classification* → [Define Selection Profiles for the Order List \[Ext.\]](#).

To save layouts for all users, set the *Shared* indicator in IMG for the Information System under *Product Cost Controlling* → *Information System* → [Control Parameters \[Ext.\]](#).

## Features

The list with the selected orders consists of master data and key figures. The structure of the list is determined by the layout entered in the selection screen. By creating a layout, you can determine yourself, which master data and key figures will be displayed in the results list. The key figures that you can choose from are listed here. You determine the master data to be shown in the results list in Customizing for the Information System. Exit the results list and go to an order's detail screen to see all the master data and key figures (independent of the layout chosen) for an order, insofar as values exist.

This way, you can edit the results list interactively. Use the functions or the ABAP List Viewer for this. You can, for example, set a filter to exclude all orders except orders whose plan/actual variance lies between two specific amounts. Additionally, you can perform an ABC analysis within a results list and calculate a total across individual key figures, among other things.

A number of different criteria are available to limit the selection of the orders. The fields of the general order master, the order header, and the order item for manufacturing orders can be used as selection criteria. In addition, you have the option of applying the order status in selection, or limiting the scope of the selection to a specific time frame. If you work with classification, you can also use classifying attributes as selection criteria. You can display the selection criteria used for the report call in the results list.

The setup of the selection screen is determined by a selection variant. You can adjust the selection screen to suit your particular requirements by creating a selection variant.

Order selection is supplied in three standard selection variants.

- Standard selection variants (can be displayed in *Product Cost by Order* and *Product Cost by Period* and *Costs for Intangible Goods and Services*)
- Selection variants for sales order production
- Selection variants for joint production

## Special Processing with Joint Production

The key figures for the selected orders are displayed at the order header level or additionally at the order items level. In joint production, the values are displayed at the order item level.

For more information, see *Special Requirements with Joint Production*.

## Notes on Performance

To avoid long **runtimes** during report calls, you can use extracts. An extract is a saved dataset containing the report data selected at the time the extract was generated. An extract is created from the selection parameters entered before the report call. In particular, an extract is dependent on whether the order selection happened for orders without items or for orders with items. Depending on the setting, the system will display only those orders with items or without when reading the extract later.

### See also:

[Display Fields of the Results List \[Page 336\]](#)

## Order Selection

For information on different navigation and formatting functions, see the documentation [ABAP List Viewer \[Ext.\]](#).

For more information about selection options, see: [Selection Parameters for Order Selection \[Page 333\]](#).

You can find detailed information on joint production in the following section:

[Special Requirements in Joint Production \[Ext.\]](#)

For information on working with extracts, see [Using Extracts \[Page 371\]](#).

See the following for additional information on performance improvements:

[Performance in Product Cost Controlling \[Ext.\]](#)

## Selection Parameters for Order Selection

### Use

The following criteria are available in the selection screen to limit the selection of the orders:

- You can limit the reporting time frame to be analyzed.



Limiting the reporting time frame specifies the periods from which key figures can be read; it does not affect the order selection. Orders are selected according to entries specified in the selection screen and, if necessary, the requirements of the status selection profile.

- The fields of the general order master, the order header, and the order item for manufacturing orders are available as selection criteria.
- You can select according to sales order and sales order item in sales order production.
- By defining a status selection profile, you can limit the selection range to orders with a certain status. You can, for example, specify that only orders for which variances have already been calculated should be selected.
- If you work with classification, you can also use classifying attributes as selection criteria.

### Prerequisites

If you want to use classifying attributes as selection criteria, you must have added these attributes to the selection screen of the classification or defined an additional selection screen containing the attributes. For more information about the procedure, see *Customizing for the Information System under Product Cost Controlling → Information System → Cost Object Controlling → Settings Summarized Analysis/Order Selection → Order Hierarchy and Selection → Define Selection Screens for the Order List*. The selection screens or additional selection screens created here are only needed to select orders according to classifying attributes, and must contain the attributes which you require for your selection. These are usually user-defined characteristics for order classification.

To make the selection of orders dependent on a certain status, you must have defined status selection profiles in *Customizing for the Information System*. You make this definition under *Product Cost Controlling → Information System → Cost Object Controlling → Settings Summarized Analysis/Order selection → Order Hierarchy and Selection → Define Status Selection Profiles*.

### Features

The fields of the general order master, the order header, and the order item for manufacturing orders are available as selection criteria. In the standard system, only a selection of the total fields available is in the selection screen of the reports. However, you can adapt the selection screens to your requirements and access other fields of the above tables by creating your own selection variants. By defining a selection variant, you determine the structure of the selection screen. You can define and set up your own selection variants in your personal work area (favorites).

## Selection Parameters for Order Selection

If you work with classification, you can also use classifying attributes as selection criteria. This is only of use with user-defined characteristics, because, for the most part, the existing object characteristics agree with the above-mentioned master data fields available for selection.

Classification provides several order selection options, as follows:

- You use the classifying attributes as selection criteria.
  - Go from the selection screen for the order selection to the *classification* screen and start the selection by entering the characteristic values. After selecting the orders that correspond to the characteristic values, go back to the selection screen for order selection. This screen displays only those orders selected by classification (in the *order* field). If required, you can limit the selection range by entering further selection criteria.
- You only use the existing master data fields as selection criteria for order selection. If orders are read during selection for which classification is active, you can extend the display to include the classifying attributes of these orders.

To do this, enter the desired selection criteria in the screen for the order selection. You must also turn on the indicator *W/ classification chars*. When the report is executed, the classifying attributes of the classified orders are read from the databank and output. You can display these attributes by defining a display variant in the results list.

You can limit selection to orders with a particular status by entering a **status selection profile** in the selection screen. You use status selection profiles to lay down conditions for the selection of orders according to user status or system status.



Suppose you want to select all partially delivered orders for a particular material. You use a status selection profile that allows only the status *partially delivered*.

You can also define **exceptions** in the selection screen of the report. Exceptions are used to display traffic light symbols (red/yellow/green) at orders whose values exceed a predefined threshold. You specify the reference for the threshold values by choosing a rule basis (such as *actual costs absolute*). The percentage and absolute threshold values that you specify tell the system by how much the reference value must be exceeded before it displays a traffic light symbol on the order.

## Special Processing with Joint Production

To enable the status-dependent selection of orders in joint production, you can enter separate status selection profiles for the order header and order item, since both statuses can be different in joint production.

You decide in the selection screen of the report whether the key figures for the selected orders should be displayed at the order header level or additionally at the order items level. In joint production, the values must be displayed at the order item level. In addition to the selected setting, you also specify which display variant should be used for the structure of the results list.

## Notes on Performance

To avoid long runtimes when you execute reports, you should limit the selection range as much as possible and use extracts, if necessary. Please note that the length of the runtime is also dependent on the selection of display fields for the results list that you defined in Customizing.

**See also:**

[Order Selection \[Page 330\]](#)

**Selection Parameters for Order Selection**

For information on creating your own selection variants, see [Creating Selection Variants \[Ext.\]](#).

If you are considering the use of classification, read the section [Classification \[Page 231\]](#) and pay particular attention to the comments on performance.

[Performance in Product Cost Controlling \[Ext.\]](#)

[Special Requirements in Joint Production \[Ext.\]](#)

## Display Fields in the Results List

# Display Fields in the Results List

## Structure

The results list of order selection can be used to analyze master data and key figures in a number of ways. You use the layout in the selection screen of the report to control which fields are displayed in the results list. The standard system contains layouts that use only some of the available fields. You can also create your own layouts according to your requirements. You can indicate these as initial variants that will be set as default values when you call up a report. You can save your layouts as user-specific or shared. If you don't create the layout as a user-specific layout, it is also available to other users. However, you can only save shared layouts if the *Shared* indicator was selected under *Control Parameters* in Customizing for the Information System.

## Key Figures

The key figures for the structure of the results list are predefined according to field groups. The following field groups are available:

- Order header (such as order quantity)
- Planning data (such as fixed / variable planned costs, planned quantity)
- Actual data (such as fixed / variable actual costs, actual quantity)
- Target data and variances (including the categories of variance calculation)
- Data to calculate work in process or results analysis (such as confirmations for missing costs)
- Comparison key figures (such as plan/actual variance)
- Units (such as units for production quantities)

You can display these key figures in controlling area currency, company code currency, and object currency.

## Master Data

You determine the master data to be shown in the results list in Customizing for the Information System. The following fields are available to you for this selection:

- Fields in the order master
- Fields in the order header and in the order item for manufacturing orders



However, you should select the fields in Customizing that you want to use later as display fields in your results list, since all the selected fields must be read when executing a report from the database.

If you select *With classification chars.* in the report selection screen, the classifying characteristics will be extended for every order for which classification is active when you execute a report. You also have user-defined characteristics available for the classification as display fields for the results list.

## Display Fields in the Results List



Do not transport or import layouts in which user-defined characteristics are used as display fields. If you want to use corresponding layouts, you must create them again in the productive system.

**See also:**

You can find information on the procedure during the creation of layouts under [Creating, Changing, and Managing Layouts \[Ext.\]](#).

## Order Hierarchy and Order Selection with Classification

### Use

You can use the classification system in *Cost Object Controlling* for:

- Order selection

You can use classifying attributes as selection criteria in addition to the existing master data fields. In most cases this is only appropriate with user-defined characteristics, because most of the available master data fields match the object characteristics. You also have the option of using just the existing master data fields for selections and using classifying attributes to enhance the output. These attributes are available as display fields in the output list for this purpose.

- Summarizing orders

If the available master data fields are not sufficient to define a summarization hierarchy for orders or projects, you can use classification for summarizing orders or reports. This enables you to use classifying attributes to create a hierarchy.



Check if the available master data fields fulfil your requirements. Only use classification when classifying attributes for selection or summarization are essential or when you must use user-defined characteristics. Classification has negative effects on system **performance** (see below).

Classification can be used in *Cost Object Controlling* for manufacturing orders, product cost collectors and internal orders.

To be able to use classification, you must set an indicator in Customizing for the applicable order type. This activates classification for that order type. All new orders that are created with that order type are then classified automatically. The system does this by filling and updating attributes called *object characteristics* with the values from the order (such as the name of the creator or the controlling area). Other characteristics (user-defined characteristics), in contrast, must be filled in manually when creating the order master.

These characteristics can then be used to select orders through a characteristic (such as all orders in controlling area 0001) or to summarize data through that characteristic (such as all order costs in plant 0001). The system creates a total for each characteristic value and updates it to what is called a *summarization object*.

Two types of characteristics are available for classification:

- Reference characteristics

These are supplied by SAP in the standard system. From a list of characteristics, you select those that you want to use and generate them in each client in which you want to use these characteristics. The reference characteristics are fields in the order master that are summarized automatically.

- User-defined characteristics

If your requirements are not met by the reference characteristics, you can create your own characteristics. These characteristics are not classified automatically. They must be supplied with a value manually when you create a new order.

## Prerequisites

Carry out the following steps in Customizing for *Product Cost Controlling Information Systems [Ext.]* and *Cost Object Controlling [Ext.]*:

- Check Order Types for PP and CO Production Orders

You must activate classification for the relevant order types in Customizing.

Activate classification for the order types that you want to use for order hierarchies or order selection with classification or with classification attributes. You can also activate classification afterwards (after the orders have been created). In this case you must perform a recalculation run to reclassify existing orders.

- Choose and Generate Characteristics
- Define User-Defined Characteristics

These characteristics can contain information such as the sales order number in a non-SAP system or a product-specific attribute (color, etc.). It only makes sense to use classification in *Cost Object Controlling* if you are using user-defined characteristics in the classification.

Any user-defined characteristics that you create must be assigned to class SAP\_KKR\_CLASS, class type 013. You can define object dependencies for user-defined characteristics.

## Features

You can display the order hierarchy in the respective application component under *Information System → Reports for... → Summarized Analysis → With Defined Summarization Hierarchy* with the hierarchy type *order summarization*.

## Notes on Performance

If classification is activated in the order type, processing time is longer for creating and changing orders. Every time the order is saved, the classification data is updated again. This is especially limiting in logistical processing, because the saving of orders takes up more time than desired. If you want to avoid these negative effects (especially those which appear in shop floor control), deactivate classification in the order type during the period. Only activate it again before executing the data collection run for the order hierarchy. Subsequently start report RKOCLASS. This report allows you to classify orders at a later time. Afterwards execute the data collection run. Deactivate classification in the order type again for the following period. In this way, for example, you can carry out classification on a weekly basis.

### See also:

For more information about how to use classification, see the Implementation Guide for *Product Cost Controlling Information System* under *Cost Object Controlling → Settings Summarized Analysis/Order selection → Order Hierarchy and Selection with Classification*.

### See also:

[Order Selection \[Page 330\]](#)

[Data Collection for Summarization Hierarchy \[Page 323\]](#)

[Executing Data Collection for Summarization Hierarchies \[Page 326\]](#)

[Performance in Product Cost Controlling \[Ext.\]](#)

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Order Hierarchy and Order Selection with Classification

## Overview of Summarization Hierarchies

### Use

This report shows a list of defined summarization hierarchies in the following areas:

- *Product Cost by Order*
- *Product Cost by Period*
- *Costs for Intangible Goods and Services*

From this list of the summarization hierarchy you go to the hierarchy graphics for summarization. This report belongs to the report category *Object list*.

The object list for summarization hierarchies offers you all summarization hierarchies in the current controlling area. Choose a hierarchy and go to the hierarchy graphic.

The hierarchy graphic offers you predefined views with the associated figures. You can adapt the standard figures to your own particular requirements. Create a layout with the figures you are most interested in. For information on the procedure, see [Creating, Changing, and Managing Layouts \[Ext.\]](#).

### Features

#### List of Summarization Hierarchies

The following values are displayed in the list of the summarization hierarchies:

- Hierarchy name
- Hierarchy designation
- Status
  - Summarized
  - Partially summarized
  - Not summarized

#### Hierarchy Graphic

The standard hierarchy graphic offers you the following views and figures:

- Plan/actual costs:
  - Planned costs
  - Actual costs
  - Currency
- Plan/actual quantities:
  - Planned quantity
  - Confirmed quantity
  - Unit of measure
- Target/actual costs:

### Overview of Summarization Hierarchies

- Target costs
- Actual costs
- Currency
- Planned costs fixed/variable:
  - Planned costs
  - Planned fixed costs
  - Planned variable costs
  - Currency
- Actual costs fixed/variable:
  - Actual costs
  - Actual fixed costs
  - Actual variable costs
  - Currency

You can access the following field groups when you define your custom layout:

- Costs
- Revenues / profits
- Quantities
- Results analysis data
- Variances
- Other

The report can be displayed in the following currencies:

- Controlling area currency
- Company code currency (only in sub-hierarchies that are assigned to exclusively one company code)

You can also choose the reporting time frame in the report.

## Integration

From the hierarchy graphic you can go to reports with the original cost elements. The data is displayed with the [ABAP List Viewer \[Ext.\]](#).

## Overview of Cost Object Hierarchies

### Use:

Report that displays the following:

- Cost object hierarchy (hierarchical display)

In the hierarchy display, you can switch between the **data entry object** and the **summarization object** (see [Cost Object Hierarchies in the Information System \[Page 134\]](#)).
- Summarized data

You can summarize the values for the cost object hierarchy level by level and display the summarized values in the information system. If the data is summarized for analysis purposes, the cost object hierarchy is referred to as a **summarization object**. Every cost object node can become a summarization object. It is a prerequisite that a data collection run for summarization has been carried out (see: [Collecting Data for a Cost Object Hierarchy \[Page 135\]](#)).
- The report can also be used to search for cost object hierarchies.

For example, you can display a list of the highest cost object nodes, or search for the cost object hierarchy of a specific material.

### Features

The report displays the following:

- The cost object nodes of a cost object hierarchy
- The key figures for the cost object hierarchy

The data is displayed using cost analysis. Cost analysis is based on the ABAP List Viewer but offers additional functions. Using the layout technique in the report, you can display the key figures that you want to analyze.

#### See also:

- General information on [cost analysis \[Page 77\]](#)
- General information on the [ABAP List Viewer \[Ext.\]](#)
- For general information on working with layouts, see the following:
  - [Creating, Changing, and Managing Layouts \[Ext.\]](#)
  - [Defining Current Layouts \[Ext.\]](#)
  - [Saving Layouts \[Ext.\]](#)
  - [Managing Layouts \[Ext.\]](#)
  - For general information on grouping information in layouts, see [Creating and Deleting Subtotals \[Ext.\]](#).

You can define exceptions in the report.

## Overview of Cost Object Hierarchies

Exceptions are used to display traffic light symbols (red/yellow/green) for objects whose variances exceed a predefined threshold. You specify the reference for the threshold values by choosing a rule basis (such as *actual costs absolute*). The percentage and absolute threshold values you specify tell the system by how much the reference value must be exceeded before it displays a traffic light symbol on the object.

### See also:

[Finding/Displaying Cost Object Hierarchies \[Page 153\]](#)

[Cost Object Hierarchies in the Information System \[Page 134\]](#)

## Displaying/Finding Cost Object Hierarchies

Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Cost Object Controlling* → *Product Cost by Period* → *Information System* → *Reports for Product Cost by Period* → *Object List* → *Overview of Cost Object Hierarchies*.

The screen *Display Cost Object Hierarchy: Selection* appears.

You can now:

- Display the structure of a particular cost object hierarchy by entering the key of a cost object node (in large cost object hierarchies it is best not to enter the highest cost object node)
- Display a list of all cost object nodes (not just the highest cost object node)
- Display the cost object hierarchy for a particular material (or material/production process) You access a hierarchical display directly.

In the list displays, the highest node of the cost object hierarchies is indicated as such. To go from the list display to the hierarchical display for the relevant cost object hierarchy, choose a cost object node by double-clicking.

To go directly into the hierarchical display, enter the relevant cost object or material (or material and production process) and choose *Execute*.

To first access the list display, choose *Choose from list of cost objects at highest level* or *Choose from list of all cost objects*.

Then double-click to access the hierarchy display of the relevant hierarchy. Both the list display and the hierarchy display use the functions of the ABAP List Viewer. If the cost object hierarchy is displayed as a hierarchy, you should be in the screen *Display Cost Object Hierarchy*.

### Displaying the Values for a Cost Object Hierarchy

Starting from the screen *Display Cost Object Hierarchy*, you can access different key figures by changing the [layout \[Ext.\]](#).

Other Settings

From the screen *Display Cost Object Hierarchy*, you can make further settings as follows:

- To switch between the data entry object and the summarization object, choose *Settings* → *Report Object Type* → *Summarization Object* or *Data Entry Object*.

For the **data entry object**, the system displays the data assigned directly to the cost object node.



Note that debits and credits from the distribution are not shown in the hierarchy display. This means that there will still be values on the cost object node even after distribution.

For the **summarization object**, the system displays the data summarized by a data collection run.

- To switch between the company code currency and the controlling area currency, choose *Settings* → *Object Currency/CO Area Currency*.

### Displaying/Finding Cost Object Hierarchies

- To see the target/actual values on the basis of another target cost version, choose *Settings* → *Select Target Cost Version*.
- To have the system assign red, yellow, or green traffic light symbols to cost object nodes with certain values, define exceptions under *Settings* → *Exception Rule*.
- To change the reporting time frame, choose *Settings* → *Choose Time Frame*.

### Displaying a Cost Object Hierarchy as a List

- To see all nodes of the cost object hierarchy, choose *Edit* → *Expand All*.

### Displaying Cost Reports for Cost Object Nodes

From the screen *Display Cost Object Hierarchy*, you can view the summarized costs for the cost object node as follows:

1. Choose a cost object by double-clicking. You access the cost element report and can choose a layout in which the sum of the costs for the cost object node is displayed.

The data is displayed with the [cost analysis \[Page 77\]](#) function.

#### See also:

For general information on cost object hierarchies, see the following section:

[Cost Object Hierarchies \[Page 132\]](#)

For information on data entry objects and summarization objects, see the following section:

[Cost Object Hierarchies in the Information System \[Page 134\]](#)

For information on target cost versions in actual cost distribution, see the following section:

[Target Cost Versions in Actual Cost Distribution \[Ext.\]](#)

## Detailed Reports in Cost Object Controlling

### Use

The report category *Detailed Reports* contains reports that provide special data for individual objects. The objects (cost objects) to be analyzed in reporting differ depending on the application component in *Cost Object Controlling*. If you are using *Product Cost by Sales Order*, for example, it may be useful to analyze costs at the level of a sales order item that carries costs and revenues. In *Product Cost by Period*, the product cost collector is the cost object. Accordingly, the sales order item with costs and revenues is used as the report object in *Product Cost by Sales Order*, and the product cost collector is used as the report object in *Product Cost by Period*.

The Information System for *Product Cost by Period* provides detailed reports for the following objects:

- [Product Cost Collectors \[Ext.\]](#)
- [Cost Object Hierarchies \[Page 132\]](#)

The Information System for *Product Cost by Order* provides detailed reports for the following objects:

- [Production Orders \[Ext.\]](#)
- [Production Orders without Quantity Structure \[Ext.\]](#)
- [Process Orders \[Ext.\]](#)

The Information System for *Product Cost by Sales Order* provides detailed reports for the following objects:

- Sales document items that carry costs and revenues  
Usually, these are [sales order items that carry costs and revenues \[Ext.\]](#).
- [Sales order cost estimates \[Ext.\]](#)
- Sales orders with assigned orders

The Information System for *Costs for Intangible Goods and Services* provides detailed reports for the following objects:

- [General cost objects \[Ext.\]](#)
- Internal orders with revenue

#### See also:

[Cost Objects in the R/3 System \[Ext.\]](#)

[Product Cost by Period \[Ext.\]](#)

[Product Cost by Order: Scenario \[Ext.\]](#)

[Product Cost by Sales Order \[Ext.\]](#)

[Costs for Intangible Goods and Services \[Ext.\]](#)

Detailed Reports

## Detailed Reports on Product Cost Collectors

### Use

Reports used for the detailed analysis of individual product cost collectors

### Features

The data is displayed using the cost analysis. The cost analysis is based on the functionality of the ABAP List Viewer and offers additional functions. Using the layout technology in the report, you can show the key figures that you want to analyze.

#### See also:

- General information on [cost analysis \[Page 77\]](#)
- General information on the [ABAP List Viewer \[Ext.\]](#)
- See the following for general information on working with layouts:
  - [Creating, Changing and Managing Layouts \[Ext.\]](#)
  - [Defining Current Layouts \[Ext.\]](#)
  - [Saving Layouts \[Ext.\]](#)
  - [Managing Layouts \[Ext.\]](#)
  - See [Creating and Deleting Subtotals \[Ext.\]](#) for general information on grouping in layouts.

You can find general information on the key figures that you can analyze for the product cost collector under the following:

[Key Figures in Product Cost by Period \[Page 81\]](#)

See the following sections of documentation for the *Product Cost Controlling Information System*:

[Product Cost by Period Information System \[Page 79\]](#)

and the documentation for *Cost Object Controlling*:

[Product Cost by Period \[Ext.\]](#)

[Product Cost Collectors \[Ext.\]](#)

## Cost Object Hierarchy: Detailed Reports for Data Entry Objects

### Use

The report for the data entry object displays the values that were posted directly to the cost object nodes. Values on the data entry object can be displayed immediately. No summarization is necessary.

### Features

The data is displayed using the cost analysis. The cost analysis is based on the functionality of the ABAP List Viewer and offers additional functions. Using the layout technology in the report, you can show the key figures that you want to analyze.

#### See also:

- General information on [cost analysis \[Page 77\]](#)
- General information on the [ABAP List Viewer \[Ext.\]](#)
- See the following for general information on working with layouts:
  - [Creating, Changing and Managing Layouts \[Ext.\]](#)
  - [Defining Current Layouts \[Ext.\]](#)
  - [Saving Layouts \[Ext.\]](#)
  - [Managing Layouts \[Ext.\]](#)
  - See [Creating and Deleting Subtotals \[Ext.\]](#) for general information on grouping in layouts.

You can find general information on the key figures that you can analyze for the data entry object under the following:

[Key Figures in Product Cost by Period \[Page 81\]](#)

Also refer to the following sections:

[Cost Object Hierarchies \[Page 132\]](#)

[Cost Object Hierarchies in the Information System \[Page 134\]](#)

## Object Comparisons in Cost Object Controlling

### Use

The report category *Object Comparisons* in *Cost Object Controlling* contains reports that compare two objects, such as two orders:

#### Product Cost by Period:

- Order versus Order Plan/Actual Comparison
- Summarization Hierarchy versus Summarization Hierarchy –Plan/Actual Comparison

#### Product Cost by Order:

- Material Cost Estimate versus Preliminary Order Cost Estimate
- Order versus Order Plan/Actual Comparison
- Summarization Hierarchy versus Summarization Hierarchy –Plan/Actual Comparison

#### Costs for Intangible Goods and Services:

- Order versus Order Plan/Actual Comparison
- Summarization Hierarchy versus Summarization Hierarchy –Plan/Actual Comparison

## Order vs. Order Plan/Actual Comparison

# Order vs. Order Plan/Actual Comparison

## Use

Report that compares two manufacturing orders (product cost collectors or manufacturing orders).

The reporting time frame can be cumulative or limited. This report belongs to the report category *Object Comparisons*.

Two orders are compared with each other on the basis of cost elements.

Planned and actual costs can be compared with each other in *Product Cost by Order*.

In *Product Cost by Period*, only the actual costs of two product cost collectors can be compared, because no planned costs are updated on product cost collectors.



This report does not show planned costs for manufacturing orders that are assigned to a product cost collector. Although a preliminary costing can be carried out for these manufacturing orders, the planned costs are not updated to the manufacturing order.

## Data Displayed

- Plan value object 1 (only for manufacturing orders)
- Actual values object 1
- Plan value object 2 (only for manufacturing orders)
- Actual values object 2
- Output quantity, planned, object 1 (only for manufacturing orders)
- Output quantity, actual, object 1
- Planned output quantity object 2 (only for manufacturing orders)
- Output quantity, actual, object 2

## Header Information:

The header shows you the following for each comparison object:

- Object information
- Currency

The report can be displayed in the following currencies:

- Controlling area currency
- Company code currency / object currency

## Integration

You should normally choose cumulative values. Note that there is no conversion of values to the planned or confirmed quantity.

**See also:**

[Product Cost by Order \[Ext.\]](#)

[Production Orders in Cost Object Controlling \[Ext.\]](#)

[Production Orders without Quantity Structure \[Ext.\]](#)

[Process Orders in Cost Object Controlling \[Ext.\]](#)

[Preliminary Cost Estimate for Manufacturing Order \[Ext.\]](#)

[Preliminary Costing of CO Production Orders \[Ext.\]](#)

[Preliminary Costing of Product Cost Collectors \[Ext.\]](#)

[Actual Costs in Cost Object Controlling \[Ext.\]](#)

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**Summarization Hierarchies: Plan / Actual Comparison**

## Summarization Hierarchies: Plan / Actual Comparison

### Use

Report that compares two summarization hierarchies or two subhierarchies of summarization hierarchies. It is used in:

- *Product Cost by Period*
- *Product Cost by Order*
- *Costs for Intangible Goods and Services*

The reporting time frame can be cumulative or limited. This report belongs to the report category *Object Comparisons*.

The planned and actual data of two summarization hierarchies (or sections of them) are compared against each other on the basis of the original cost elements.

### Data Displayed

- Planned values object 1
- Actual values object 1
- Planned values object 2
- Actual values object 2

### Header Information:

The header shows you the following for each comparison object:

- Object information
- Currency

The report can be displayed in the following currencies:

- Controlling area currency
- Company code currency / object currency

### Integration

You can go to the hierarchy graphic of either hierarchy.



When the quantities are summarized, no units of measure are converted. It may be necessary to execute a data collection run again, depending on when the order hierarchies were last summarized.

**Summarization Hierarchies: Plan / Actual Comparison**

**See also:**

See the document *CO Internal Orders* for information on internal orders.

**More Reports: Line Items**

## More Reports: Line Items

### Use

Line item reports provide a detailed analysis of objects and their data. Line items are based on the lines of a document created by a posting in the R/3 System. The reports are available in the following areas:

- *Product Cost by Order*
- *Product Cost by Period*
- *Product Cost by Sales Order*
- *Costs for Intangible Goods and Services*

Line item reports enable you to make a detailed analysis of the values posted. You can access the original documents (such as the FI or MM document) from the individual lines in the line item report. (*Environment* → *Source document / Accounting document*)

Technical information is also available.

Line item reports are of limited importance in *Cost Object Controlling*, because the posting amounts from production confirmations are generally high, and analysis of the line items is only worthwhile in exceptional circumstances.

You can limit the line items to be displayed through the cost element or cost element group and via the period.

Line item reports are available for the following account assignment objects:

### **Manufacturing orders (production orders and process orders):**

- Line items actual
- Line items for WIP calculation
- Line items variance
- Line items commitment

### **Product cost collectors**

- Line items actual
- Line items WIP calculation (if the corresponding settings in the results analysis version were made, see also *Prerequisites*)
- Line items variance

### **Cost Object ID (Cost Object Nodes in Cost Object Hierarchies and General Cost Objects)**

- Line items actual (for cost object nodes of cost object hierarchies and for general cost objects)
- Line item variance (only for cost object nodes of a cost object hierarchy)

### Sales document item: normally a sales order item:

- Line items actual
- Line items for results analysis
- Line items commitment

The line item reports are supplied with a predefined layout. You can also create your own custom layouts so that you can see other fields of the CO line item in the line item report. You can usually display all the fields of the Controlling document in the line item report. These fields were grouped for clarity into:

- Account assignment
- Time characteristics
- References
- Value key figures
- Technical fields
- Organizational units
- Partner account assignment
- Object
- Other objects
- Quantity key figures
- Investment management
- Not assigned

### Prerequisites

#### Manufacturing orders (production orders and process orders):

- Line items for WIP calculation

The line items for the WIP calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Order* under *Period-End Closing* → *Work in Process* → *Define Results Analysis Version*. Go into *Extended Control*.

- Line items variance

The line items for the variance calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Order* under *Period-End Closing* → *Variance Calculation* → *Define Variance Key*.

### More Reports: Line Items

- Commitment line items in orders are only updated if you have activated commitments management for the controlling area and for the order type.

### Product cost collectors

- Line items variance

The line items for the variance calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Period* under *Period-End Closing* → *Variance Calculation* → *Variance Calculation for Product Cost Collectors* → *Define Variance Key*.

### Cost Object ID (Cost Object Nodes in Cost Object Hierarchies and General Cost Objects)

- Line item variance (only for cost object nodes of a cost object hierarchy)

The line items for the variance calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Period* under *Period-End Closing* → *Variance Calculation* → *Variance Calculation for Cost Object Hierarchies* → *Define Variance Key*.

### Sales document item: normally a sales order item

- Line items for results analysis

The line items for the results analysis are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Sales Order* under *Period-End Closing* → *Results Analysis* → *Define Results Analysis Versions*. Go into *Extended Control*.

## Integration

Only actual line items are always updated in the standard system. Line items in WIP calculation, results analysis and variance calculation, and for commitments must be explicitly allowed in Customizing for the application.

If you want to write the commitment values to the sales order items that carry costs and revenues, you must set the *with commitments management* indicator in the fiscal-year-dependent control parameters of the controlling area.

Line items for results analysis data of the WIP calculation and results analysis are only saved if you have set the appropriate indicator in Customizing for the results analysis version.

Line items for variances are updated if you switch on the update of line items in the variance key.

Check the following settings in Customizing:

- Results analysis version for the lines items of the WIP calculation and the results analysis
- Variance key for the line items of the variance calculation

**More Reports: Line Items**

- Order type – commitments management for line item commitments
- Control parameters of the controlling area

**Notes on Performance**

In most cases, it is not necessary to update the line items for WIP calculation, results analysis, or variance calculation in your live system. For this reason, it is best to make sure that the relevant indicator in Customizing is **not** set. If you decide not to update the line items, the runtime in WIP calculation, results analysis, and variance calculation is significantly improved. Of course, in these cases, it is not possible to display a corresponding line item report.

**See also:**

A detailed description of line item reports can be found in the documentation *Overhead Cost Controlling*.

See the following sections for information on commitments:

[Commitments \[Ext.\]](#)

See the following sections for information on actual costs:

[Actual Costs in Cost Object Controlling \[Ext.\]](#)

See the following sections for basic information on WIP calculation and results analysis:

[Work in Process in Product Cost by Period \[Ext.\]](#)

[Work in Process in Product Cost by Order \[Ext.\]](#)

[Results Analysis \[Ext.\]](#)

See the following section for basic information on variance calculation:

[Variance Calculation \[Ext.\]](#)

See the following for general information on performance improvement:

[Performance in Product Cost Controlling \[Ext.\]](#)

## Information System for Product Cost by Order

### Use

In the information system for *Product Cost by Order*, you analyze the data updated to the manufacturing orders.

### Features

#### Analyses for Manufacturing Orders

In the information system for *Product Cost by Order*, you can view the following data on manufacturing orders:

- Actual costs (see also: [Actual Costs in Cost Object Controlling \[Ext.\]](#))
- Target costs (see also: [Calculation of Target Costs \[Ext.\]](#))
- Work in process (see also: [Work in Process in Product Cost by Period \[Ext.\]](#))
- Variances (see also: [Variance Calculation \[Ext.\]](#))

#### See also:

[Product Cost Controlling Information System \[Page 10\]](#)

## Key Figures in Product Cost by Order

### Use

The following cost objects are used in *Product Cost by Order*:

- [Production orders in PP \[Ext.\]](#)
- [Production orders in CO \(production orders without a quantity structure\) \[Ext.\]](#)
- [Process orders in PP-PI \[Ext.\]](#)

A large number of key figures are available in *Product Cost by Order*. You can display key figures:

- Using [cost analysis \[Page 77\]](#):
  - For the [detailed reports in Cost Object Controlling \[Page 340\]](#)
  - For all [summarization hierarchies \[Page 314\]](#) (including order hierarchies with classification)
- Using [product drilldown \[Page 197\]](#)

In the report categories [object lists \[Page 329\]](#) and [object comparisons \[Page 344\]](#)

Which key figures can be analyzed depends on the object. For general information on the key figures in *Cost Object Controlling*, see the following:

[Key Figures in Cost Object Controlling \[Page 70\]](#)

### Functions of Cost Analysis

Reports of [cost analysis \[Page 77\]](#) use the functionality of the ABAP List Viewer while offering additional functions in cost analysis. You can define layouts in cost analysis containing the key figures that you want to analyze. The column selection for the layouts contains different field groups (column lists) that separate the key figures into logical groups.

#### See also:

- General information on [cost analysis \[Page 77\]](#)
- General information on the [ABAP List Viewer \[Ext.\]](#)
- For general information on working with layouts, see the following:
  - [Creating, Changing and Managing Layouts \[Ext.\]](#)
  - [Defining Current Layouts \[Ext.\]](#)
  - [Saving Layouts \[Ext.\]](#)
  - [Managing Layouts \[Ext.\]](#)
- For general information on grouping in layouts, see [Creating and Deleting Subtotals \[Ext.\]](#).

#### In *Product Cost by Order*, you can analyze:

- Planned values (such as total planned costs, planned fixed costs, planned variable costs, and planned yield)

### Key Figures in Product Cost by Order

- Key figures that result from actual postings (such as total actual costs, actual fixed costs, actual variable costs, and the actual yield)
- Variances between planned and actual values
- Work in process at actual costs, provided that the manufacturing orders use settlement type FUL (full settlement) (see also: [Work in Process in Product Cost by Order \[Ext.\]](#))
- Work in process at target costs, provided that the manufacturing orders use settlement type PER (periodic settlement) (see also: [Work in Process in Product Cost by Period \[Ext.\]](#))
- For production orders without a quantity structure, work in process is always determined at actual cost.
- Data generated by variance calculation Examples:
  - Target costs
  - Control costs
  - Individual variance categories
  - Absolute and percentage variances



### Note on Summarized Analysis with Summarization Hierarchy

If variances are calculated for an order (product cost collector or manufacturing order), the system sets the status VCAL (variances calculated) on the order. To assure comparability, you should only summarize objects for which variances have been calculated. Use the status selection profile in the required data collection. Select the orders for which the status VCAL is active.

If objects with the settlement type *periodic* or *full* are summarized together and analyzed by period, this should be taken into account when the report is interpreted.

[Background Information on Summarized Analysis \[Page 180\]](#)

### See the following sections for information on product drilldown reports:

- [Product Drilldown \[Page 197\]](#)
- [Access to Drilldown Reports with the Characteristic Order \[Ext.\]](#)
- [Product Groups in Product Drilldowns \[Page 202\]](#)
- [Creating CO Product Groups \[Page 204\]](#)
- [Data Collection for Product Drilldowns \[Page 206\]](#)
- [Data Collection for Product Drilldowns \[Page 207\]](#)
- [Functions of Product Drilldown \[Ext.\]](#)
- [Variance Analysis \[Page 208\]](#)

### See the following sections for information on object lists:

- [Object List \[Page 329\]](#)

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**Key Figures in Product Cost by Order**

- [Order Selection \[Page 330\]](#)
- [Selection Parameters for Order Selection \[Page 333\]](#)
- [Display Fields of the Results List \[Page 336\]](#)
- [Using Extracts \[Page 371\]](#)
- [Order Hierarchy and Order Selection with Classification \[Page 231\]](#)
- [Summarization Hierarchy Overview \[Page 338\]](#)
- [Cost Object Hierarchy Overview \[Page 151\]](#)
- [Finding/Displaying Cost Object Hierarchies \[Page 153\]](#)

**Information on Object Comparisons:**

- [Object Comparisons \[Page 344\]](#)
- [Order vs. Order Plan/Actual Comparison \[Page 345\]](#)
- [Summarization Hierarchy vs. Summarization Hierarchy - Plan/Actual Comparison \[Page 347\]](#)

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**Summarized Analysis**

## Summarized Analysis

### In Cost Object Controlling

#### Use

The report category *Summarized Analysis* contains reports that show aggregated data. For example, you can do target/actual comparisons at the product group level. The following summarization methods can be used in *Cost Object Controlling* depending on the application component and the objects:

- In *Product Cost by Period*:
  - Summarization hierarchy
    - With a summarization hierarchy, you are free to define the structures used to save the data as you wish.
  - Product drilldown
    - With a product drilldown, the structures used to aggregate the data are predetermined.
  - Order hierarchy with classification

In summarized analysis in *Product Cost by Period*, the data updated on product cost collectors is summarized at higher levels. If you want to display the summarized data for a cost object hierarchy, use the report category *detailed reports*.

- In *Product Cost by Order*:
  - Summarization hierarchy
  - Product drilldown
  - Order hierarchy with classification
    - With an order hierarchy with classification, you are free to define the summarized structures as you wish. However, you must use classification. This reduces performance as compared to a summarization hierarchy. Therefore, you should only use classification when you need to work with user-defined characteristics.

In summarized analysis in *Product Cost by Order*, the data updated on production orders and product cost collectors is summarized at higher levels.

Note: Whenever possible, you should use a summarization hierarchy instead of an order hierarchy with classification.

- In *Product Cost by Sales Order*:
  - Summarization hierarchy
    - In summarized analysis in *Product Cost by Sales Order*, the data updated on the sales document items (normally the sales order items) is summarized at higher levels (such as the sold-to party).
- In *Costs for Intangible Goods and Services*:
  - Summarization hierarchy

In summarized analysis in *Costs for Intangible Goods and Services*, the data updated on internal orders with revenue is summarized at higher levels. Summarization for general cost objects is not supported.

For information on how the different methods of data summarization function, see:

**See also:**

**For information on interpreting the report data, see the following section:**

[Background Information on Summarized Analysis \[Page 174\]](#)

For information on the different summarization methods, refer to the following sections:

[Product Drilldown \[Page 197\]](#)

[Summarization Hierarchies \[Page 314\]](#)

[Cost Object Hierarchies \[Ext.\]](#)

[Order Hierarchy and Order Selection with Classification \[Page 231\]](#)

See the following section for information on how these methods of summarization differ:

[Differences in the Summarization Methods \[Page 180\]](#)

## Background Information on Summarized Analysis

# Background Information on Summarized Analysis

## Use

The goal of this section is to explain the business methodology of summarization in Cost Object Controlling. In addition, the consequences of that methodology for the interpretation of the data on the part of the user will be explained.

The following aspects will be discussed:

5. How is the data on original objects summarized (such as production orders)?
6. Costs of semifinished products in summarized analysis
7. Objects with full settlement
8. Summarization time frame

## Summarizing Data on Original Objects

A common feature of all methods of summarized analysis in *Cost Object Controlling* (product drilldown, summarization hierarchy, cost object hierarchy) is that they are based on the data of the original objects (such as production orders and product cost collectors).

The data is updated to these original objects as follows:

- With original period
- With original cost element

A further subdivision is:

- Planned costs (debit / credit)
- Actual costs (debit / credit)
- Target costs (debit / credit)
- Work in process (results analysis data)
- Variance categories

The necessary data collection runs transfer the data for the summarization time frame to the summarization structures **by period**:

- As key figures in product drilldowns
- With original cost element for the summarization hierarchy or cost object hierarchy

## Example

The following example is divided into a master data part and a scenario.

The master data includes:

- BOM
- Routing with valuated operations
- Standard prices

The scenario describes a production process over two periods:

**Background Information on Summarized Analysis**

- A production order for 1 semifinished product (HALB) is completely manufactured in period 1.
- A production order for 1 finished product (FERT) is created in period 1 and withdraws the required materials in this period (1 raw material and a semifinished product). In period 2, additional activities are posted to the production order. The order is delivered to stock in period 2.

Both orders have a settlement rule with settlement type FUL (Full settlement). At the end of each period, period-end closing is carried out in *Product Cost by Order*.

**Master Data**

BOM	Routing	Standard Prices
FERT # 1ROH # 1HALB	Operation 1 100.00 Operation 2 200.00	950.00
HALB # 1ROH	Operation 1 100.00 Operation 2 100.00	400.00
ROH		100.00

Overhead on activities: 50.00%

Overhead is applied to the internal activities. The planned overhead rate is 50%, but the actual rate is 75% – resulting in variances.

Background Information on Summarized Analysis

Production order <b>HALB</b> 1 Unit	Period 1 Transact.1   Transaction 2 1 ROH
Production order <b>FERT</b> 1 Unit	Period 1   Period 2 Transaction 1   Transaction 2 1 ROH, 1 HALB

	Period 1					Period 2				
Production order <b>HALB</b>										
1 Unit	Plan	Act.	Trgt	WIP	Var.cat.	Plan	Act.	Trgt	WIP	Var.cat.
Debits										
Raw materials	100	100	100							
Activities	200	200	200							
Overhead	100	150	100		50					
Total Debits	400	450	400							
Credits	400	400	400							
Goods receipt	1PC	1PC								
Production order <b>FERT</b>										
1 unit	Plan	Act.	Trgt	WIP	Var.cat.	Plan	Act.	Trgt	WIP	Var.cat.
Debits										
Raw materials	100	100						100		
Activities	100	100				200	200	300		
Overhead	50	75				100	150	150		75
Semifin.prods	400	400						400		
Total debits	650	675		675		300	350	950	-675	
Credits						950	950	950		
Goods receipt						1PC	1PC	1PC		

Background Information on Summarized Analysis

	Period 1					Period 2				
Cost elements summarization	Plan	Act.	Trgt	WIP	Var.cat.	Plan	Act.	Trgt	WIP	Var.cat.
Debits				675					-675	
Raw materials	200	200	100					100		
Activities	300	300	200			200	200	300		
Overhead	150	225	100		50	100	150	150		75
Semifin.prods.	400	400						400		
Credits	400	400	400			950	950	950		
Key figures - production order HALB										
	Plan	Act.	Trgt	WIP	Var.cat.	Plan	Act.	Trgt	WIP	Var.cat.
Debits	400	450	400		50					
Credits	400	400	400							
Key figures - production order FERT										
	Plan	Act.	Trgt	WIP	Var.cat.	Plan	Act.	Trgt	WIP	Var.cat.
Debits	650	675		675		300	350	950	-675	75
Credits						950	950	950		
Key figures summarization										
	Plan	Act.	Trgt	WIP	Var.cat.	Plan	Act.	Trgt	WIP	Var.cat.
Debits	1050	1125	400	675	50	300	350	950	-675	75
Credits	400	400	400			950	950	950		

### Costs of Semifinished Products in Summarized Analysis

The costs of the semifinished products are usually a special case with summarization characteristics that are higher in the hierarchy than the material.

While raw materials consumption, activities consumption, overhead, work in process, variance categories, and plan/actual comparisons can easily be aggregated by cost element on the individual summarization levels, the summarized key figures for planned costs, actual costs, and target costs have to be interpreted separately.

Consider, for example, summarization at the key figure level for period 1. At the material level, the actual cost debit of 450 USD for the semi-finished product and 675 USD for the finished product cause no problems in the interpretation of data.

But now look at the actual cost debits of both orders summarized as a key figure ( $\$450 + \$675 = \$1125$ ). You cannot interpret this value as the entire actual cost of the period, because this key figure includes both the production costs of the semifinished product and the withdrawal of a semifinished product for the production of the finished product.

Even if you offset the actual cost debits of \$1125 with the summarized actual cost credits of \$400, this is still not the actual cost of the period.

A similar problem arises for the key figures for the planned costs and target costs.

## Background Information on Summarized Analysis

### Recommendation

**Analyze the costs for semifinished products separately from other costs.** You can do this in the summarization hierarchy and in the cost object hierarchy by means of cost-element-based summarization and an appropriately defined material account determination (separate cost element for the update of the consumption of semifinished products).

For the product drilldown you can define an appropriate cost component structure that assigns the cost element for the consumption of semifinished products to a separate cost component. You specify this cost component structure in Customizing for the *Information System* under *Maintain Report Parameters for Product Cost Controlling*.

When you interpret the costs of semifinished products, you must decide which percentage is already reflected in the costs of the period or which semifinished products were already manufactured in the previous periods. This cannot be supported by the system.

### Objects with Full Settlement

Many users make use of summarized analysis for periodic reporting. The costs of the individual objects are normally cumulated. With manufacturing orders, this is achieved by the use of settlement type FUL (full settlement). The following explains the problem of periodic analysis of objects with full settlement.

The example production order above is a case where a production order with the settlement type *full settlement* runs over two periods. The total target costs are only calculated and updated on the database in the period in which the order is delivered or technically completed. In the SAP System, target costs are calculated and updated during [variance calculation \[Ext.\]](#).

Note the key figures for the target costs and for the actual cost debit of the production order for the finished product. While the actual costs of period 1 have no corresponding target costs, the actual costs of period 2 have corresponding target costs cumulated across both periods in the amount of \$950. Separate analysis of an individual period would lead to wrong results.

On highly summarized levels or reporting over extended periods of time, this periodic effect normally tends to zero.

### Summarization Time Frame

With a data collection run you must specify a summarization time frame in the form “from period”/”to period”.

The time frame specifies the following:

- Data on the summarization object for periods within the summarization time frame of the data collection run is reset and recalculated on the original objects.
- Data on the summarization object for periods outside the specified time frame of the data collection run is retained. This prevents the data calculated in an earlier data collection run from being deleted by a new summarization run.

## Background Information on Summarized Analysis



The restriction of the validity period in the data collection run has **NO** influence on the selection of the objects whose data are summarized. You specify the objects to be selected by defining a summarization hierarchy, for example.

## Recommendation

Specify at least the open periods in *Financial Accounting* as the summarization time frame, because the data on the original objects could still change within the open periods. You normally choose the closing period and the period prior to that.

## Special Processing with Status-Dependent Selection

If you use the summarization hierarchy in conjunction with a status selection profile, you must take this into account in the definition of the summarization time frame.



You are using a summarization hierarchy with a status selection profile that only includes objects for which variances have been calculated. At the same time, you specify the summarization time frame as from period 2 to period 2. This would result in the production order for the finished product from the numerical example above being included for the first time, but only the data of period 2 would be summarized. This would result in the cumulative target costs only having partial corresponding actual costs in the summarization report - as explained under *Objects with Full Settlement*.

To obtain usable results, you should therefore choose a summarization time frame that reflects the **maximum life of the original objects**.

Therefore you should make sure that the summarization time frame includes the maximum life of the objects that are being summarized for the first time.

## Differences in the Summarization Methods

# Differences in the Summarization Methods

The Information System for *Cost Object Controlling* provides a number of different procedures for analyzing the costs of a material or order at a summarized level. Data is summarized with the following methods:

- Product drilldowns
- Summarization hierarchies
- Cost object hierarchies

The following presents short examples of the different reports for summarized analysis. These examples serve to illustrate the differences between the individual summarization methods.

## Product Drilldowns

A product drilldown is an interactive tool for evaluation and presentation of data in *Cost Object Controlling*. The data is summarized according to predefined structures. You can expand this summarized dataset using different criteria to access the lower levels.



You have a report that summarizes the data by the characteristics *plant* and *material*.

Suppose you manufacture materials M1 and M2 in plants A and B (i.e., each material is manufactured in both plants). With product drilldown you can analyze them from different perspectives:

Which materials accounted for which production costs in plant A?

Plant A

- |               |          |
|---------------|----------|
| – Material M1 | USD 1000 |
| – Material M2 | USD 3000 |

What were the production costs for material M1 in the two plants?

Material M1

- |           |          |
|-----------|----------|
| – Plant A | USD 1000 |
| – Plant B | USD 6000 |

## Summarization Hierarchies

In the summarization hierarchy, the data is also summarized upwards according to a predefined structure that you can define yourself. In contrast to product drilldowns, you can only expand this summarized dataset in accordance with the predefined structure from the top downwards. The summarization is by original cost element.

## Differences in the Summarization Methods



Suppose you manufacture materials M1 and M2 in plants A and B (i.e., each material is manufactured in both plants). You define an order hierarchy (structure) in the following sequence:

3. Plant
4. Material

You then have the following analysis options in the report:

Plant A

Material M1	USD 100
Material M2	USD 200

Plant B

Material M1	USD 300
Material M2	USD 120

In contrast to product drilldowns, it is not possible to dynamically reverse the order of the characteristics *plant* and *material*.

## Cost Object Hierarchies

Cost object hierarchies are objects of *Product Cost by Period* that consist of cost object nodes arranged hierarchically. In contrast to summarization hierarchies, they do not represent primary report structures. You can post actual costs directly to cost object hierarchies. In contrast, the summarization hierarchy is not an object to which you can make postings, but rather a construct for the structured summarization of data.

The costs updated to the cost object hierarchy and the objects assigned to the cost object hierarchy (for example, product cost collectors) can be summarized. For summarized analysis, the cost object hierarchy is a predefined structure that is summarized in the same way as a summarization hierarchy. You can analyze the values summarized on the individual cost object nodes in the Information System of *Product Cost by Period*.

### See also:

For detailed information on the methods, see the following sections:

[Product Drilldowns \[Page 197\]](#)

[Summarization Hierarchies \[Page 314\]](#)

[Cost Object Hierarchies \[Page 132\]](#)

[Cost Object Hierarchies in the Information System \[Page 134\]](#)

## Summarization Hierarchies

# Summarization Hierarchies

## Use

Summarization hierarchies are analysis tools with which you can summarize values upwards in hierarchical structures that you define. This makes it possible to analyze values and quantities on higher levels such as at plant level. You use a summarization hierarchy in *Cost Object Controlling* to analyze costs and quantities that arose in the production process, summarized for a particular analysis period, at a higher level.



For example, suppose you specified that your order data is to be summarized by the following:

- Plant
- Order type

You can then display all data for a particular plant and analyze the data for that plant for the different order types.

You can use a summarization hierarchy to summarize the values of the following objects:

- Maintenance and service orders
- Internal orders
- Projects
- Sales orders and their items
- Manufacturing orders, QM orders and product cost collectors

Depending on your needs, you can summarize only objects of a certain object type (production orders, for example) or you can summarize multiple object types together. When summarizing objects of certain object types (projects, for example), dependent objects of another object type will be summarized as well (such as, internal orders assigned to that project). When summarizing sales orders, you can choose whether or not to have manufacturing orders which were assigned to that sales order summarized with that sales order.

You can define exception rules to specify that specific nodes of the hierarchy that fit certain requirements are indicated with colored traffic lights (red, yellow, green). This way, you can highlight areas that must be analyzed further. You can expand the hierarchy overview in cost element reports into the individual nodes and then analyze the nodes more closely.

## Prerequisites

The summarization hierarchy has to be defined before summarizing objects. When defining a summarization hierarchy, you determine which fields are involved in the data summarization and which objects will be summarized. The values in the object currency are only summarized if the summarization hierarchy contains a *plant* or *company code* node.

You define a summarization hierarchy in Customizing for the Information System under *Controlling* → *Product Cost Controlling* → *Information System* → *Cost Object Controlling* → *Settings for Summarized Analysis/Order Selection* → *Maintain Summarization Hierarchy*.

## Summarization Hierarchies

If the master data fields in the step *Maintain Summarization Hierarchy* do not cover your requirements in defining hierarchy levels for the summarization of orders or projects, you can work with [classification \[Page 231\]](#). For this, you can use classifying attributes to make other fields cover your requirements. On the basis of the additional volume of data and **performance problems** in master data maintenance which result from this, you should consider your need for additional fields carefully. You do not work with the step *Maintain Summarization Hierarchy* to create additional fields; instead you define a so-called order hierarchy in Customizing for the Information System under *Controlling → Product Cost Controlling → Information System → Cost Object Controlling → Settings for Summarized Analysis/Order Selection → Order Hierarchy and Selection with Classification → Create Order Hierarchies*.

If you want to make the summarization dependent on the order status, you must have already created a status selection profile in Customizing and entered this in the definition of the summarization hierarchy. You can find this step in Customizing for the Information System under *Product Cost Controlling → Information System → Cost Object Controlling → Settings for Summarized Analysis/Order Selection → Define Status Selection Profiles [Ext.]*.

## Features

The individual levels of a summarization hierarchy contain master data fields or parts of master data fields. For each value in a field (such as plant 1000, plant 1100, plant 1200), the system creates totals by period and cost element and writes them to a summarization object. The values on the different summarization objects can be analyzed in the Information System.

Many reports are available for this purpose in the Information System of the SAP standard system under the report category *Summarized Analysis*. For example, you can call up a plan/actual comparison for a summarization object (sales office 1000).

Alternatively, you can display a hierarchy report for a specific summarization hierarchy. You receive a hierarchical overview of the summarization objects that were generated by the summarization. If you created an exception rule when executing a data collection run, you will see the colored traffic lights in the overview.

The following data, for example, is summarized with the help of a summarization hierarchy:

- Planned values (for example, total planned costs, fixed planned costs, variable planned costs, planned output quantity)
- Actual costs (for example, total actual costs, fixed actual costs, variable actual costs, actual output quantity)
- Actual costs (for example, total actual costs, fixed actual costs, variable actual costs, actual output quantity)
- Variances (percentage plan/actual variances, absolute plan/actual variances, percentage target/actual variances, variance categories)
- Input quantities (target input quantities, actual input quantities)
- Work in process
- Results analysis data from results analysis

The run time of the data base run is better when you summarize less data.

The master data fields, which you can use to summarize data, are pre-set and dependent on the type of object that is to be summarized. Accordingly, when summarizing sales orders, the master data fields that are available to you when defining a summarization hierarchy are different from

## Summarization Hierarchies

those available when you are summarizing an internal order. If these fields do not cover all of your requirements, you can use additional self-defined fields for summarizing orders or projects. You must, however, work with classification here.

You can limit the scope of the summarized data by making the summarization of order values dependent on the status of the order. You can, for example, just have the data summarized from orders that already have variances calculated for them.

The data summarized with a summarization hierarchy is collected in a data collection run. You have to execute this before you can use reports for summarization. This means that a report for summarization objects always shows the dataset that was current at the time of the last data collection run. You must therefore execute a new data collection run if you want to see current values in your reports.

## Integration

You can call up cost element reports for individual summarization objects from the hierarchy display. The reports that are available are displayed in a dialog box. When you select a report, this report is called up for the selected summarization object. You can, for example, display the summarized actual values, plan values, and variances for a particular plant.

It is also possible to call up the hierarchy overview from the selection screen of a report for the analysis of a summarization object.

## Notes on Calling up Reports for the Summarization Hierarchy

Reports for analyzing summarization objects are found in the Information Systems of the individual application components of the SAP standard system under the report category *Summarized Analysis*.

To call up a report for a summarization object, enter the technical name of the summarization hierarchy in the selection screen. You must also enter the hierarchy type. Usually the hierarchy type is *CO*. If, however, you ran a summarization for an order hierarchy using classification, you have to choose hierarchy type *OR*.

In the field *Subhierarchy*, specify the summarization object to be analyzed. Display the possible entries (F4) for this field and choose the summarization object that you want to analyze.

### See also:

For more information about collecting and updating data for summarization, see [Data Collection for Summarization Hierarchy \[Page 323\]](#)

[Joint Production in the Information System \[Ext.\]](#)

You use the cost analysis to analyze the data aggregated with the summarization hierarchy. You can find information on this under [Cost Analysis \[Page 77\]](#)

## Maintain Summarization Hierarchies

In this step in Customizing for the *Product Cost Controlling Information System*, you specify the structure of your summarization hierarchies. In the definition of a summarization hierarchy, you specify what criteria are used to summarize the costs and quantities of objects.

You can use a summarization hierarchy to summarize the values of the following objects:

- Internal orders (order category 01 and 02)
- Maintenance/service orders (order category 30)
- Manufacturing orders, QM orders, and product cost collectors
- This includes the following order categories:  
CO production orders (order category 04), product cost collectors (order category 05),  
QM orders (order category 06), PP production orders (order category 10), process orders  
(order category 40)
- Projects

When projects are summarized, the system also summarizes the dependent objects (such as assigned orders or WBS elements) automatically.

- Sales orders without dependent orders
- Sales orders with dependent orders

When you summarize sales orders, you can control whether the system summarizes the data of the manufacturing orders assigned to the sales order by selecting the corresponding object type.

You can later summarize the values of individual objects upwards in accordance with the defined hierarchy structure.

You use the master data fields of the account assignment objects as the summarization criteria. Each level of the summarization hierarchy corresponds to one master data field. Using the master data fields, the system selects the account assignment objects for summarization and sums the costs and quantities for each characteristic value of a master data field (such as plant 1000, plant 2000).

**Note:**

If you are using customer-specific fields to summarize internal orders, the case (upper/lowercase) must be the same as used in these fields.

The system saves the calculated sums to summarization objects that correspond to the nodes of the hierarchy generated during the summarization run. You can analyze the summarization objects in the information system.

You can use summarization hierarchies to summarize data such as the following:

- Planned costs
- Actual costs
- Target costs
- Variances
- Work in process

## Maintain Summarization Hierarchies

- Results analysis data
- Input quantities
- Output quantities
- Scrap

## Example

You can use a summarization hierarchy to summarize the costs incurred in each period by the orders to produce a particular material in a particular plant.

## Notes

The highest node in the hierarchy is always the controlling area.

If you specify a status selection profile when you create summarization hierarchies, the only objects selected for summarization are those whose status matches the selection criteria specified in the status selection profile at the time of summarization. If you want to summarize on the object type *sales orders*, the status selection profile specified in the hierarchy definition refers to the production orders assigned to the sales order.

Once the system has executed a summarization run for a hierarchy, you can no longer change the summarization hierarchy. If you want to change the summarization hierarchy, you must first execute a deletion run to delete all summarized data.

You can specify selection variants to preselect internal orders.

## Notes on Joint Production

To enable status-dependent selection of orders in joint production, you can enter separate status selection profiles for the order header and the order item, since in joint production the status of the order header can differ from the status of the order item.

In joint production, the system summarizes only the values of the order items. Values on the order header are not summarized. Therefore, you should execute the function *Distribution for Co-Products* before starting a summarization run.

## Prerequisites

If you want to use status selection profiles, you must first carry out the step [Define Status Selection Profiles \[Ext.\]](#).

If you want to use selection variants, you must first carry out the step [Define Selection Variants \[Ext.\]](#).

## Activities

To define a summarization hierarchy, proceed as follows:

1. Choose *New entries*.
2. Give the hierarchy a name and a description.

To summarize input quantities, select *Summarize input quantities*.

3. If you want to limit the data scope using form routines, enter the user exit pool that contains those form routines (see also step 6).

## Maintain Summarization Hierarchies

4. Save your entries and go back.

You return to the overview of all summarization hierarchies.

5. To specify which type of account assignment objects are included in the summarization run, choose *Data scope (object types)*.

- Select the object types to be summarized.

If you only summarize projects, the system also summarizes the data of assigned objects such as dependent orders. If you want to summarize sales orders, you can control whether the system summarizes the data of the manufacturing orders assigned to the sales order by selecting the corresponding object type.

If you select more than one object type (such as sales orders and production orders), you must specify a priority. This is necessary because the sales order for a master data field, for example, can have a value that differs from the value of the production order below it for the same field. If the system were to summarize on this master data field, the production order would be included both in summarization on the value of the master data field in the sales order and in summarization on the value of the master data field in the production order. To prevent this from happening, in the hierarchy definition specify priority 1 for the object type *sales order* and priority 2 for the object type *production order*.

6. To specify which costs and quantities should be summarized, choose *Data Scope (Totals Records Tables)*.

- To exclude individual totals records tables from summarization, select *Not summarized*.
- To improve performance, you can summarize the records of the totals records file without the origin. To do this, select *No origin*. Selecting this indicator is recommended when you are interested in pure cost element reports. However, it is then no longer possible to expand the values at cost element level down to the origins.

If you want to limit the data scope using a user exit, enter the name of the user exit form routine. To do this, you must have entered the name of the user exit pool when you created the summarization hierarchy.

7. To assign master data fields to the levels of your summarization hierarchy, choose *Hierarchy levels*.

You can define up to 9 hierarchy levels.

In the column *Hierarchy field*, specify the desired master data field for each hierarchy level. If you want to create a hierarchy level using part of a master data field, enter the *Offset* and the *Length*.

8. If you want to group account assignment objects for which a characteristic is not filled under the node *other*, select *Blank*.

## Further Notes

For more information on creating summarization hierarchies and on their use in *Product Cost Controlling*, refer to the SAP Library under [Summarization Hierarchy \[Page 314\]](#).

## Function Module Exits for Summarization

### Use

The SAP System provides a number of function module exits for additional summarization functions. These are explained briefly in the following. These exits are documented. For detailed documentation, refer to the enhancement transaction (CMOD). Look at all SAP enhancements of development class KKR. You can access the documentation on an exit by pressing the pushbutton *SAP documentation*.

### Exit for Selection of Data Collection

The function module exit EXIT\_SAPLKKRB\_001 enables you to reassign objects, delete objects, or add objects after the selection for a data collection run but before data collection actually begins.

### Exit for Text Generation for Summarization Objects

The function module EXIT\_SAPLKKRU\_001 of enhancement KKRU0001 enables self-programmed assignment of texts for summarization objects. These texts are generated during a data collection run.

## Maintaining Texts for Summarization Objects

### Use

The system can generate texts for each summarization object generated in a summarization run. You can also enter such texts manually. In the standard system, texts are automatically generated for the summarization objects during the data collection run. The texts are generated based on the designation of the field value.



You summarize on plant 1000 (plant 1000 = Walldorf) The generated summarization objects receive the designation *Walldorf*.

The texts for summarization objects can also be entered manually. When you execute the data collection run, you choose whether you want the manually entered texts to be retained, or overwritten by the designation of the field value.



If the system can't find a text for a summarization object, it uses the value of the field.

### Procedure

To enter manual texts for summarization objects:

7. Go to the appropriate application menu in *Cost Object Controlling*.
8. Choose *Information System* → *Tools* → *Data Collection* → *Summarization Hierarchy*.
9. Enter the summarization hierarchy in the field *Hierarchy*.
10. Choose *Edit* → *Hierarchy*.
11. Position the cursor on the summarization object and choose *Edit* → *Maintain text*.
12. Enter a text and save your entries.

To specify which text is updated for summarization objects during the data collection run:

- g. Go to the appropriate application menu in *Cost Object Controlling*.
- h. Choose *Information System* → *Tools* → *Data Collection* → *Summarization Hierarchy*.
- i. Enter the summarization hierarchy in the field *Hierarchy*.
- j. Choose *Extras* → *Standard texts*.
- k. Choose how you want the system to handle texts during the data collection run:
  - Do not generate texts
    - No texts are generated from the field values during the data collection run. Only previously existing texts – whether generated in an earlier data collection run or entered manually – are displayed.
  - Generate texts (do not overwrite)

---

**Maintaining Texts for Summarization Objects**

The system generates texts for the summarization objects using the designation of the field value. If any nodes already have texts – whether generated in an earlier data collection run or entered manually – the texts are not overwritten.

This is the standard setting. It is preferred over *Generate texts (overwrite)* for performance reasons.

- **Generate texts (overwrite)**

The system generates texts for the summarization objects using the designation of the field value. Any existing texts (including texts entered manually) are overwritten.

- I. Execute the data collection run for your summarization hierarchy. The system generates texts for the summarization objects in accordance with the option you chose.

## Data Collection for Summarization Hierarchy

### Use

The data summarized with a summarization hierarchy is collected in a data collection run. The data collection run is usually carried out for each summarization hierarchy after period-end closing in *Cost Object Controlling*.

The following occurs during a data collection run:

The system reads the quantities and values of the selected objects as defined by the summarization hierarchy for the period being closed. This data is summarized upwards according to the structure of the hierarchy and it is updated by period and cost element in the summarization objects. A summarization object is built for each field characteristic for all fields in a summarization hierarchy.



If your summarization hierarchy consists of the fields plant and order type, for example, the system creates the following summarization objects:

- Plant A
- Plant B
- Plant A, order type 1
- Plant B, order type 1

If a data collection run was already executed, the data selected for a new data collection run is updated as follows:

- Data on the summarization object for periods within the summarization time frame of the new data collection run is reset and recalculated.
- Data on the summarization object for periods outside the specified time frame of the new data collection run is retained. This prevents the data calculated in an earlier summarization run from being deleted by a new data collection run.

You can make the selection of objects for the summarization dependent on the status of the object. To do this, create a status selection profile when defining the summarization hierarchy. In the status selection profile you can specify which status the selected objects should have (released, or confirmed, for example). If you work with status selection, you should keep this in mind when you choose the summarization time frame.



If, for example you want to summarize only settled orders and limit the summarization time frame to the last two periods, even though one order runs over four periods, the values (such as actual costs) of the first two periods of the order will not be summarized and will therefore not be in the summarization hierarchy. Because the total target costs are only calculated and updated in the period in which the order was delivered or technically completed, the cumulated target costs are presented against partial actual costs in the summarization hierarchy.

If you are using status selection, specify a summarization time frame that is large enough to include the entire life of an order.

## Data Collection for Summarization Hierarchy

If you are not using status selection, it is sufficient to specify a summarization time frame that includes all open periods in *Financial Accounting*.

You can find more information under [Background Information on Summarized Analysis \[Page 174\]](#).

## Prerequisites

If you are using joint production, you must execute the function [Preliminary Settlement for Co-Products, Rework \[Ext.\]](#) before executing the data collection run. This is due to the fact that summarizations for joint production only summarize the values of the order items upwards, and not the values in the order header. You can find more information under [Special Processing with Joint Production \[Page 373\]](#).

## Features

You can carry out a data collection run for:

- the entire summarization hierarchy
  - If you carry out a data collection run for the entire hierarchy, you can display a report for each summarization object of the hierarchy.
- for a partial hierarchy

### Data Collection for Summarization Hierarchy

For example, if you want to calculate the costs for all orders for a particular material, you can carry out the data collection run for the appropriate subhierarchy. In addition, you can display reports for all summarization objects in this subhierarchy.

You can also perform a deletion run. This will delete the data for all summarization objects in the specified hierarchy. It is meaningless to enter a time frame when performing a deletion run. A deletion run is necessary, for example, if you want to make subsequent changes to the definition of a summarization hierarchy.

In addition, you can execute a data collection run in which the summarization hierarchy is built but no data is selected. If a summarization was already executed for this time frame, the summarization objects were updated in the data collection run without writing over existing data.

### Notes on Performance

**To reduce runtimes**, you can run the summarization run for summarization hierarchies on multiple servers simultaneously. You can improve the performance of simultaneous processing by defining the number of summarization nodes.

In addition, in the summarization hierarchy you can stipulate that individual totals records files should not be summarized, or that the records of totals records files without origin should be summarized. It is recommended that you set this indicator if you are interested in simple cost element reports without much detail.

For performance reasons it is also recommended that you do not choose the field *Order number* as a hierarchy level when defining the summarization hierarchy.

If you work with an order hierarchy with classification, you should execute the function *Characteristic Statistics* on a regular basis. You can change the sequence of the selected characteristics, which will speed up the selection of the classification characteristics. You can find this function in the application menu of the particular component in Cost Object Controlling under *Information System* → *Data Collection* → *Order Hierarchy (Classification)* → *Environment* → *Characteristic Statistics* → *Generate*.

Before executing the data collection run, set the indicator *Classification* in Customizing of *Cost Object Controlling* in *Product Cost by Period* or in *Product Cost by Order* under *Check Order Types* in the *Change Order Type* view and classify the orders with the report RKO CLASS. Then, deactivate the indicator.

#### See also:

[Special Requirements in Joint Production \[Ext.\]](#)

[Performance in Product Cost Controlling \[Ext.\]](#)

## Executing Data Collection for Summarization Hierarchy

# Executing Data Collection for Summarization Hierarchy

## Prerequisites

- You created a summarization hierarchy.
- If you want to use **parallel processing to shorten the runtime of a data collection run**, you should have your system administrator set up a server group and tell you the maximum number of tasks.

## Defining a Server Group (Only for System Administrators)

To specify which servers the summarization run should run on, choose *Tools* → *Administration* → *Administration* → *Network* → *RFC destinations* → *RFC* → *RFC groups*.

It is recommended that you execute the data collection run after each period-end closing, thus summarizing current data such as target costs, work in process and variances.

If you want to monitor actual costs, it can also be helpful to execute a data collection run during a period before period-end closing activities.

## Procedure

To perform a data collection run:

3. Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Cost Object Controlling* → *Product Cost by Period / Product Cost by Order / Product Cost by Sales Order / Costs for Intangible Goods and Services* → *Information System* → *Tools* → *Data Collection* → *Summarization Hierarchy*.

The screen *CO Summarization* appears.

4. Enter the following data:

- Hierarchy

For a list of summarization hierarchies in the controlling area, press F4.

To see a list of hierarchies that have been summarized, choose *Extras* → *Summarized Hierarchies*.

- Subhierarchy

If you only want to summarize part of the hierarchy, choose the arrow symbol button *Set Subhierarchy*. All fields are listed for which summarization has been carried out (such as the plant or material). Enter the field attributes for which the summarization is to be carried out.



For example, if you enter plant 0001 and material PROD-1, the costs of all orders will be summarized that were created for material PROD-1 in plant 0001.

If you enter only plant 0001, only the costs for all orders in plant 0001 will be summarized.

- From Period/Fiscal Year and To Period/Fiscal Year

The values for these periods will be displayed for the objects selected according to

## Executing Data Collection for Summarization Hierarchy

the summarization hierarchy. If an object does not have any values in the periods specified, it is considered in principle during data retrieval, but with no values.

4. Turn on one of the following indicators:
  - Summarization run  
In the summarization run the data for the periods within the specified summarization time frame are reset and recalculated. Data on the summarization object for periods outside of the summarization time frame is retained.
  - Deletion run  
The deletion run deletes all summarization objects created by previous data collections. After that, the hierarchy definition is changeable again.
  - Hierarchy without data  
Set this indicator if you want just want the structure of a summarization object without data.
8. Choose *Extras* → *Exception* → *Set rule*. This allows colored traffic light symbols to be displayed at hierarchy nodes for which predefined threshold values have been exceeded. You first define the rules for exceptions in Customizing. Here you specify the basis for the threshold values and by how much the threshold value has to be exceeded before a traffic light is set.
9. In the standard system, the indicator *Background processing* is turned on. If you want to perform the summarization run online, you must turn off this indicator.
10. Select *Parallel Processing* if you want to use **parallel processing** for a data collection run.

The dialog box *Parallel Processing* appears.

Set the indicator *Parallel processing online* and enter the following data:

- Maximum number of tasks (number of system sessions on the servers)
- Number of nodes (task)
- Server group

Choose *Confirm*.



System resources are utilized in accordance with the number of tasks. For this reason you should limit the number of tasks or only use parallel processing when there are sufficient system resources available.

11. Choose *Execute*.

If you have turned off the indicator for *background processing*, a dialog box appears in which you must confirm the order summarization run.

## Result

An overview screen is now displayed that shows the processed nodes of the hierarchy.

You can use the following functions:

- Message log

---

**Executing Data Collection for Summarization Hierarchy**

The message log lists any errors that occurred and any information messages that were issued during summarization.

- Table statistics

The table statistics specify how many totals records were written during summarization.

**See also:**

[Performance in Product Cost Controlling \[Ext.\]](#)

## Product Drilldowns

### Use

The product drilldown is a tool for interactive evaluation and presentation of data in *Product Cost by Period* and *Product Cost by Order*.

Examples of characteristics used in data summarization are material, plant and product groups. This enables you to see data at a higher level (such as all planned costs and actual costs for a particular order type) and then go to a deeper level of that dataset (such as the planned costs and actual costs for the individual orders).

Product drilldown reports offer easy-to-use functions for navigating in the dataset (such as the next level, or the next object within a level). There are also a number of interactive functions in the report (such as hiding columns, sorting within a column, top node selection, and so forth).

Since product drilldown reporting is based on the same technique as drilldown reporting in *Profitability Analysis* (CO-PA), you can find detailed information on navigation functions in the documentation [Drilldown Reporting \[Ext.\]](#) in the cross-application topics.



You have a report that summarizes the data by the characteristics *plant* and *material*.

Suppose you manufacture materials M1 and M2 in plants A and B (i.e., each material is manufactured in both plants). With product drilldown you can analyze them from different perspectives:

Which materials accounted for which production costs in plant A?

Plant A

- Material M1            USD 1000
- Material M2            USD 3000

What were the production costs for material M1 in the two plants?

Material M1

- Plant A            USD 1000
- Plant B            USD 6000

### Integration

You can go from the characteristic level *Material* to a product drilldown report with the additional characteristic *Order*. This enables you to see the data for all orders for a material.

From there you can call up a cost element itemization for a single order.

### Prerequisites

The following points refer to the use of product drilldowns:

## Product Drilldowns

### Import Product Drilldown Reports

Import the product drilldown reports of the standard system in Customizing for *Product Cost Controlling* under *Information System* → *Cost Object Controlling* → *Settings for Summarized Analysis/Order Selection* → *Product Drilldown* → *Import/Transport Reports* → *Import Reports*.

### Import Form

You also import the form 7GLOBALVARIS (global variables) in Customizing for *Product Cost Controlling* under *Information System* → *Cost Object Controlling* → *Settings for Summarized Analysis/Order Selection* → *Product Drilldown* → *Import/Transport Reports* → [Import Forms \[Ext.\]](#).

### Create Product Group Type

The characteristic *product group* is used in the drilldown reports in the standard system. The value of this characteristic can be derived in different ways. You specify the method by selecting a product group type. If you want to use the characteristic *product group type*, choose the product group type that you want to use in Customizing for *Product Cost Controlling* under *Information System* → [Control Parameters \[Ext.\]](#).

You can find more information under [Product Groups in Product Drilldown \[Page 202\]](#).

### Check Cost Component Structure for Product Drilldown

You create a cost component structure for displaying cost elements grouped into cost components in the Information System. You must first create this cost component structure in Customizing for *Product Cost Planning* for the Information System. You specify this cost component structure in Customizing for *Product Cost Controlling* under *Information System* → [Control Parameters \[Ext.\]](#).

Why is a special cost component structure needed here?



Work in process is derived from the results analysis cost elements for both objects with settlement type "Periodic" and objects with settlement type "Full settlement". If the results analysis cost elements are not assigned in the cost component structure for product drilldown, the work in process appears in the cost component *Other* (if defined) or as not assigned.

### Check Order Types for Summarization of Product Drilldown

Check the order types that are to be summarized in the data collection, and change them if necessary in Customizing for *Product Cost Controlling* under *Information System* → *Control Parameters*.

### Create Your Own Reports

If the reports provided in the standard system do not meet your requirements, you can define your own reports.

You define reports in Customizing for *Product Cost Controlling* under *Information System* → *User-Defined Reports*. There you can also access information on the procedure for doing so.

### Data Collection Run

Execute a data collection run to select current data for your reports.



If you later change the product group type, the cost component structure, the order types to be summarized, or other settings, you must then execute the data collection run for the entire time frame in order to update the dataset.

For more detailed information on the Customizing activities, see the Implementation Guide for the *Product Cost Controlling Information System*.

## Features

The standard system provides a number of drilldown reports designed to meet your requirements.

Each standard drilldown report is supplied as a periodic report and as a cumulative report.

### Periodic Reports

In this format the report key figures are by period. These reports are useful for fast navigation between periods and are intended for monthly reporting. These reports also offer a view of up to 16 past periods for each combination of characteristics.

To call up the report, enter the plant if you want to limit the selection to a particular plant.

You must enter the period/fiscal year that is to be at the beginning of the report. You can use the arrows *Next Column* and *Previous Column* to go from one period to the next. The selection screen includes the specified period and the 15 preceding periods.

Two views can be selected:

- Detail list
- Drilldown list

The detail list for a periodic report shows the same key figures in the columns as in the drilldown list. However, the detail list shows all 16 available periods for the selected object. The drilldown list shows the values of the selected characteristic.



### Drilldown List

January 2000

**Product Drilldowns**

Material	(Characteristic)	Planned costs	Actual costs
ROH1		100	120
ROH2		140	200
ROH3		120	130

**Detail List**

Characteristic: ROH1

Period	Planned costs	Actual costs
January	100	140
December	1040	200
November	1320	130

**Cumulative Reports**

Cumulative reports show you summarized values for a specified time period. You specify this time period when you access the report. For example, you can see the key figures for:

- A quarterly analysis
- An analysis of the previous 5 months
- An analysis of the previous year

Enter the following data:

- From period/fiscal year
- To period/fiscal year

In a cumulative report, the detail list and the drilldown list offer you a similar result as with periodic reports. Instead of reporting by periods, the values are reported by the categories debit, credit, settlement credit, delivery credit.

The standard product drilldown reports summarize the dataset across the following characteristics:

Cumulative Reports	Periodic Reports
Plant	Plant
Product group	Product group
Material	Material
Period / year	Cost component
Cost component	

**See also:**

[Access to Drilldown Report with Characteristic Order \[Ext.\]](#)

[Differences in the Summarization Methods \[Page 180\]](#)

## Product Groups in Product Drilldowns

# Product Groups in Product Drilldowns

## Use

The drilldown reports in the standard system use the characteristic *product group*. This enables you to analyze data at the product group level.

## Features

You specify the content of the characteristic *product group* by defining a product group type in Customizing. You can assign the following product group types:

- 0 = no product group  
If you do not select a product group, there is no assignment to the characteristic product group in the product drilldown report.
- 1 = product hierarchy of material master record  
This concerns a character string for grouping materials through the combination of various characteristics. The product hierarchy is maintained in the *Basic data* view of the material master record, and is used for evaluation as well as price determination in materials management.
- 2 = product hierarchy of material master record  
Characteristic by which you can group materials or services with the same attributes. The material group is also maintained in the master record of a material, but in this case it is not a hierarchy, but rather a grouping.
- 3 = CO product group

You can group materials into CO product groups to be able to analyze data at the product group level in the *Information System of Product Cost Controlling*. CO product groups are master data in the *Product Cost Controlling Information System*.

You set up a product group in the menu of *Product Cost by Period* or *Product Cost by Order*. You assign materials to the hierarchy nodes. Each material can only be assigned to one CO product group. If you create a new material, you must assign it manually to a CO product group.

If you do not assign a material to any CO product group, the values appear in the product drilldown report for the characteristic product group in the line *not assigned*.



If you choose one of the above product group types, you can then drill down on the basis of that characteristic when you are in a drilldown report. For example, if you are using the product group type *material group*, the value for the field *material group* for each material is read from the material's master record. The data is summed in the report by material groups. You can display the data in the report by material group and analyze how the values are distributed among the materials in the material group.

## Activities

You assign the product group type in Customizing for *Product Cost Controlling* under *Information System* → *Control Parameters* in the field *Product group type*.

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**Creating a CO Product Group**

## Creating a CO Product Group

### Single Entry

To create a single CO product group:

11. Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Cost Object Controlling* → *Product Cost by Period* or *Product Cost by Order*. → *Information System* → *Summarized Analysis* → *Product Groups* → *Create*.

The screen *Create Product Group:Basic Screen* appears.

12. Enter the name of the new product group.

This name is language-independent.

13. Enter a product group as a template if desired (*Copy from*).

14. Choose *Basic screen*.

The screen *Create Product Group:Basic Screen* appears.

15. Enter a description for the product group.

This description is language-dependent.

16. If the product group you are creating is not the highest level of the hierarchy, enter the name of the higher-level product group.

17. Enter the controlling area for which this product group is valid.

To assign single objects (materials) to the product group:

18. Choose *Goto* → *Single objects* → *Change assignment*.

The screen *Assign Single Objects: Overview* appears.

19. Choose *Edit* → *New entries*.

20. Enter the following data for each material you want to assign to the product group:

- Plant
- Material

13. Go back.

14. Save the product group.

### Collective Entry

To create multiple CO product groups using list entry:

3. Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Cost Object Controlling* → *Product Cost by Period* or *Product Cost by Order*. → *Information System* → *Tools* → *Summarized Analysis* → *Product Groups* → *Collective Entry*.

The screen *Create Product Groups: Basic Screen* appears.

4. Enter the following data for each product group that you want to create:

- Name of the product group
  - Higher-level product group (if the product group you are creating is not the highest level of the hierarchy).
  - Controlling area
  - Short text for product group
4. Save the product groups.

## Material Assignment

To assign materials to the CO product groups:

8. Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Cost Object Controlling* → *Product Cost by Period* or *Product Cost by Order*. → *Information System* → *Tools* → *Summarized Analysis* → *Product Groups* → *Material Assignment*.

The screen *Assignment of Materials to CO Product Group* appears.

9. Enter the product group to which you want to assign materials.
10. Choose whether you want to make a *standard selection* or a *selection through the function module exit*.
11. Limit the materials by plant, material number and material type.
12. Choose *Execute*.

A list appears with all the materials that meet your selection criteria.

13. Delete the selections of the materials that you don't want to assign to the product group.
14. Save your data.



If errors occur during assignment of a material to your product group, you will receive a list on which these materials are selected. Note that a particular material can only be assigned to one product group.

## Data Collection for Product Drilldown

### Use

To select data for a drilldown report, you must first execute a data collection run. The selected dataset is saved. You access this saved dataset when you execute the report.

### Features

You can execute the data collection for one plant or for all plants in a Controlling area.

You can also select the summarization time frame. The values in the summarization time frame are resummarized and any old values are overwritten. Summarized values that are outside of the summarization time frame are retained.

SAP recommends choosing the summarization time frame such that all open periods in *Financial Accounting (FI)* are summarized.



If you turn on the indicator *Delete values outside time period* all the data that is not within the selection time frame will be deleted.

### Notes on Performance

To **reduce runtimes**, you can execute the data collection run on multiple servers simultaneously. Ask your system administrator for a server group.

#### See also:

[Performance in Product Cost-Controlling \[Ext.\]](#)

## Collecting Data for a Product Drilldown

### Use

You collect data for a product drilldown when you want to analyze aggregated data in drilldown reports.

### Procedure

To perform data collection for the product drilldown:

3. Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Cost Object Controlling*. Choose the relevant application components, for example *Product Cost by Period*, and then *Information System* → *Tools* → *Data Collection* → *Product Drilldown*.

The screen *Data Collection for Product Drilldown* appears.

4. Enter the following data:

- Plant

You can select a special plant from which the data is to be summarized. If you leave this field empty, all plants in the Controlling area will be summarized.

- A summarization time frame

SAP recommends summarizing across all open periods in Financial Accounting.

7. Turn on the indicator *Delete values outside time period* if desired.
8. If you want to use **parallel processing** for the data collection to **reduce runtimes**, enter a server group and change, if necessary, the maximum number of tasks and the data records per task.
9. Turn on the indicator for *background processing* if desired.
10. Choose *Execute*.

The system brings up an overview of the completed data collection.

---

## Variance Analysis

# Variance Analysis

## Use

You can use product drilldown to display the existing variances between planned and actual costs, or target and actual costs (see also: [Terminology in Product Cost Controlling \[Ext.\]](#))

Variances are the difference between planned and actual costs.

Planned values are adjusted to a reference base, as a rule to the actual values, in order to calculate variances between target and actual costs. This adjustment is performed during variance calculation. You calculate variances in period-end closing of *Product Cost by Period* or *Product Cost by Order*. During variance calculation, the variances to be analyzed are distributed to individual [variance categories \[Page 216\]](#). These variance categories can be displayed in the information system.

If variances have not yet been calculated, target costs can be calculated dynamically in the information system. The target costs are calculated on the basis of a target cost version.

## Prerequisites

Before you use the reports **Target/Actual/Production Variances** and **Variance Categories**, you must have already performed **variance calculation** in period-end closing of *Product Cost by Order* or *Product Cost by Period*.

### See also:

[Product Cost by Period \[Ext.\]](#)

[Period-End Closing in Product Cost by Period: Scenario \[Ext.\]](#)

[Product Cost by Order \[Ext.\]](#)

[Period-End Closing in Product Cost by Order: Scenario \[Ext.\]](#)

[Variance Calculation \[Ext.\]](#)

[Target Cost Versions in Variance Calculation \[Ext.\]](#)

[Types of Variance Calculation \[Ext.\]](#)

## Target / Actual / Production Variances

### Use

Report with which you can analyze the results of [Variance Calculation \[Ext.\]](#) in the following application components of *Product Cost Controlling* using product drilldown:

- *Product Cost by Period*
- *Product Cost by Order*

The reporting time frame can be cumulative or limited.

This report shows the results of variance calculation. The results are dependent on which target version was specified at report call. (see also: [Types of Variance Calculation \[Ext.\]](#), [Target Cost Versions in Variance Calculation \[Ext.\]](#))

You can call up a detailed report for the variance categories to investigate the production variances in more detail. There are two scenarios for the interpretation of the data:

- Scenario 1: Standard costs, alternative material cost estimate, preliminary order cost estimate versus (if necessary, net) actual costs

See also:

[Terminology in Product Cost Controlling \[Ext.\]](#)

[Valuated Sales Order Stock: Valuation \[Ext.\]](#)

- Scenario 2: Standard cost estimate for the material versus planned costs for the order

Standard cost estimate for the material versus planned costs for the order corresponds to target cost version 2 (planning variance)

See also:

[Calculation of Target Costs \[Ext.\]](#)

[Calculation of Control Costs \[Ext.\]](#)

### Structure

#### Data Displayed

##### **Scenario 1: Standard costs, alternative material cost estimate, preliminary order cost estimate versus (net) actual costs**

The data is based on key figures and/or cost elements:

- Target costs = values of the standard cost estimate / alternative material cost estimate / preliminary order cost estimate adjusted to the actual quantity
- Actual costs
- Variances = calculated variances without [scrap variances \[Ext.\]](#)
- Scrap variances
- Work in process (WIP)

### Target / Actual / Production Variances

- Control costs = Actual costs – WIP – Scrap variance

### Scenario 2: Standard cost estimate versus preliminary order cost estimate (planning variance)

The data is based on key figures and/or cost elements:

- Target costs = values of the standard cost estimate adjusted to plan quantity of the order (planned lot size of the manufacturing order)
- Actual costs
- Variances = Calculated variances between preliminary order cost estimate and target costs calculated on basis of standard cost estimate
- Scrap variance (has no relevance for planning variances)
- Work in process (WIP) (has no relevance for planning variances)
- Control costs = planned costs for the order

### Header Information:

- Object information
- Reporting time frame

## Integration

### Prerequisites

Make sure that the **variances** have been **calculated** for the specific target cost version in the relevant reporting time frame. Reports of summarized analysis require that a **data collection run** be executed beforehand.

### Notes

When you interpret this report, note whether objects with a settlement rule with only one settlement type PER (*periodic*) or FUL (full settlement) are included, or whether you are accessing a report in summarized analysis in which objects have been summarized with both settlement types.

### Settlement type "Periodic"

The following interpretations for each period under consideration apply only to a report for an object with the settlement type *periodic*:

Variances = Target costs – Control costs

Control costs = Actual costs - WIP - Scrap variances (only for SAP standard target cost versions 0,1, and 3)

**Target / Actual / Production Variances**

In a report with original cost elements, work in process is displayed in its source cost elements. The cost estimate used to calculate the source cost element is the same as the one used to value work in process at target costs. You determine which cost estimate is used by determining the valuation variant for work in process and scrap (see also: [Work in Process in Product Cost by Period \[Ext.\]](#)).

**Settlement type "Full Settlement"**

Note the following points with objects that have the settlement type *full settlement*:

- Work in process is not displayed in its source cost elements, because no target costs are calculated on the basis of another cost estimate for valuation of work in process. Rather, work in process corresponds to the balance of the order for which final delivery has not yet taken place (see also: [Work in Process in Product Cost by Order \[Ext.\]](#)). Work in process is updated under results analysis cost elements. To analyze work in process, use the report *Work in Process*.
- Target costs and variances are only calculated and updated cumulatively in the period in which the status DLV (*Delivered*) or TECO (*Technically completed*) has been reached for the manufacturing order.

**Notes on Summarized Analysis with Product Drilldown**

Work in process is derived from the results analysis cost elements for both objects with settlement type "Periodic" and objects with settlement type "Full settlement". If the results analysis cost elements are not assigned in the cost component structure for product drilldown, the work in process appears in the cost component *Other* (if defined) or as not assigned.

**Notes on Detailed Reports with Original Cost Elements****Scenario: variances have not yet been calculated**

- Target cost calculation is initiated dynamically
- No variances are calculated
- No data is updated

This option enables an ad hoc target/actual comparison for a single object.

**Scenario: variances have been calculated**

- Target costs according to variance calculation
- Variances according to variance calculation

---

**Target / Actual Comparison**

## Target / Actual Comparison

### Use

**Use for product drilldowns:**

Report with which you can analyze the target and actual data in the following application components of *Product Cost Controlling* using product drilldown:

- *Product Cost by Period*
- *Product Cost by Order*

The reporting time frame can be cumulative or limited.

This report is used to compare the target and actual data that was determined during [Variance Calculation \[Ext.\]](#). The results of variance calculation are based on the target cost versions specified for the report: Different variances are considered, depending on the target cost version (also see: [Types of Variance Calculation \[Ext.\]](#), [Target Cost Versions in Variance Calculation \[Ext.\]](#)).

### Features

#### Data Displayed

The following data is shown based on key figures and/or original cost elements:

- Target costs
- Actual costs
- Target costs per unit
- Actual costs per unit
- Absolute variances = Actual costs – Target costs
- Percentage variances = Absolute variances / Target costs

The variances can also be displayed per unit.

The above figures are based on the costs per unit of output.

- Target quantity
- Confirmed quantity
- Absolute variances = Target quantity – Confirmed quantity
- Percentage variances = Absolute variances / Confirmed quantity

#### Header Information:

- Object information

- Reporting time frame

## Integration

### Prerequisites

Make sure that the **variances** have been calculated for the specific target cost version in the relevant reporting time frame. Reports of summarized analysis require that a **data collection run** be executed beforehand.

## Notes

### Recommendation

For more information on the production variances, use the [target / actual / production variances \[Page 209\]](#) - reports, or the reports on the [variance categories \[Page 216\]](#).

### For Product Drilldown

If you would like to analyze target costs in summarized reports, note the information in [Background Information on Summarized Analysis \[Page 174\]](#) to ensure a proper interpretation of the data.

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**Plan / Actual Comparison**

## Plan / Actual Comparison

### Use

Report that shows the planned and actual figures in the following reports of *Product Cost Controlling*:

- *Product Cost by Order* with product drilldown
- *Costs for Intangible Goods and Services* as a detail report for general cost objects

The reporting time frame can be cumulative or limited.

This report compares the planned and actual data and shows the absolute and percentage variances. The following applies to the variances displayed here:

- They show the difference between planned data and actual data.
- They are **not** the same as the variances determined in variance calculation.

### Features

#### Data Displayed

The following data is shown based on key figures and/or original cost elements:

- Planned costs
- Actual costs
- Absolute variances = actual costs – planned costs
- Percentage variances = absolute variances / planned costs

Both the true actual costs and statistical actual costs are displayed in the column *Actual* in reports for the sales order item. The true actual costs can be differentiated from the statistical actual costs through the cost element. The report *Funds Commitment in Inventory* enables true actual costs to be reported separately from statistical actual costs.

#### In addition with cost element reports:

- Planned costs per unit = planned costs / planned quantity
- Actual costs per unit = actual costs / confirmed quantity
- Absolute variances = actual costs per unit – planned costs per unit
- Percentage variances = absolute variances / planned costs per unit
- Planned quantity
- Confirmed quantity
- Absolute variances = planned quantity – confirmed quantity
- Percentage variances = absolute variances / confirmed quantity

**Header Information:**

- Object information
- Reporting time frame

**Integration****Prerequisites**

The planned data are based on a preliminary cost estimate for the object; the actual data are updated by simultaneous costing.

**See also:**

[Preliminary Cost Estimate for Manufacturing Order \[Ext.\]](#)

[Preliminary Costing of CO Production Orders \[Ext.\]](#)

No plan/actual comparison is possible in Product Cost by Period, because no planned costs are updated for product cost collectors. You display the result of a preliminary cost estimate for product cost collectors as a material cost estimate in Product Cost Planning. See also:

[Preliminary Costing of Product Cost Collectors \[Ext.\]](#)

[Actual Costs in Cost Object Controlling \[Ext.\]](#)

[General Cost Objects \[Ext.\]](#)

[Product Drilldown \[Page 197\]](#)

## Variance Categories

# Variance Categories

## Use

Report that you can use with product drilldown to analyze the individual variance categories for the following application components:

- *Product Cost by Order*
- *Product Cost by Period*

The reporting time frame can be cumulative or limited.

This report makes it possible for you to analyze the results of the variance calculation. The results of variance calculation are different depending on the target cost version specified for the report.

You can compare the following costs:

- Target costs that have been calculated on the basis of standard costs against actual costs (without work in process and scrap variances).
- Target costs that have been calculated on the basis of a preliminary cost estimate of an order (product cost collector or manufacturing order) against actual costs (without work in process and scrap variances).
- Target costs that have been calculated on the basis of an alternative material cost estimate (for example, modified standard cost estimate, current cost estimate) against net actual costs (without work in process and scrap variances).
- Target costs calculated on the basis of standard costs against planned costs of manufacturing orders.

## Structure

### Data Displayed

The following variance categories are shown based on key figures and/or original cost elements:

- Scrap variance
- Input price variance
- Input quantity variance
- Resource-usage variance
- Remaining input variance
- Mixed price variance
- Output price variance
- Lot size variance
- Remaining variance

### Header Information:

- Object information

- Reporting time frame

## Prerequisites

Make sure that the **variances** have been calculated for the specific target cost version in the relevant reporting time frame. Reports of summarized analysis require that a **data collection run** be executed beforehand.

## Recommendation

This report is intended as a more detailed analysis for a target / actual / production variances report. You can normally go from product drilldowns to the variance categories report.

### See also:

In the documentation for *Cost Object Controlling*:

Basic information on variance calculation can be found in:

[Variance Calculation \[Ext.\]](#)

**Detailed information on the individual variance categories can be found in the following:**

[Variance Categories \[Ext.\]](#)

[Scrap Variances \[Ext.\]](#)

Information on the target cost versions and their resulting comparison values can be found in the following:

[Types of Variance Calculation \[Ext.\]](#)

[Target Cost Versions in Variance Calculation \[Ext.\]](#)

[Calculation of Target Costs \[Ext.\]](#)

[Calculation of Control Costs \[Ext.\]](#)

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## Work in Process

# Work in Process

## Use

Report with which you can analyze work in process (WIP) in the following areas of *Product Cost Controlling* using product drilldown:

- *Product Cost by Order*
- *Product Cost by Period*

The reporting time frame can be cumulative or limited.

## Structure

### Data Displayed

- Creation
- Usage
- Balance

### Header Information:

- Object information
- Reporting time frame

### Notes (for Production Campaigns):

#### Note on Summarized Analysis with Product Drilldown

In summarized analysis with product drilldown, you cannot separate creation and usage and you cannot report reserves. With product drilldowns, the report also shows the actual debits, actual credits, and balance for the *work in process*.

## Prerequisites

You have determined work in process (or performed results analysis for product drilldowns) for the object to be analyzed in period-end closing for the particular results analysis version.

### See also:

For detailed information on determining work in process, refer to the following:

[Work in Process in Product Cost by Order \[Ext.\]](#)

[Work in Process in Product Cost by Period \[Ext.\]](#)

[Results Analysis \[Ext.\]](#)



## Planned Costs

# Planned Costs

## Use

Report with which you can analyze planned costs using product drilldown in *Product Cost by Order*. The reporting time frame can be cumulative or limited.

This report displays the planned costs and plan quantities updated to an object and can be used in the analysis of planning data.

In *Product Cost by Order*, the planned costs on a costing object result from the preliminary cost estimate of the manufacturing order.

## Data Displayed

The following data is shown based on key figures and/or original cost elements:

- Total planned costs
- Planned fixed costs
- Planned variable costs
- Planned input quantity
- Planned output quantity

## Header Information

- Object information
- Reporting time frame

## Prerequisites

You must create a preliminary cost estimate for the manufacturing order.

## Notes

### Product Cost by Period

No planned costs are updated to the product cost collector during a preliminary costing of the product cost collector in *Product Cost by Period* (see also: [Product Cost by Period Information System \[Page 79\]](#)).

#### See also:

See the following sections for information on preliminary costing in *Product Cost by Order*:

[Preliminary Cost Estimate for Manufacturing Order \[Ext.\]](#)

[Preliminary Costing of CO Production Orders \[Ext.\]](#)

See the following section for information on the presentation of values determined during preliminary costing of product cost collectors.

[Preliminary Cost Estimates for Product Cost Collectors \[Ext.\]](#)

## Actual Costs

### Use

Report that shows the actual costs in the following areas of *Product Cost Controlling*:

- *Product Cost by Order*
- *Product Cost by Period*

The reporting time frame can be cumulative or limited. This report shows the updated actual costs and figures and serves as an analysis of the cost situation in your actuals.

### Data Displayed

The following data is shown based on key figures and/or original cost elements:

- Total actual costs
- Actual fixed costs
- Actual variable costs
- Actual input quantity
- Yield (actual output quantity)

Generally, the report shows the differences between the debits and the credits. This enables you to analyze the balance of an object.

### Header Information

- Object information
- Reporting time frame

### Integration

The actual values are based on the data updated by the simultaneous cost estimate.

#### See also:

[Actual Costs in Cost Object Controlling \[Ext.\]](#)

---

**Object Lists**

## Object Lists

### In Cost Object Controlling

#### Use

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

## Order Selection

### Definition

Using order selection, you can generate a list of orders with the associated data and key figures.

### Use

Order selection allows you to select orders according to different criteria. The result of your selection is in the form of a list of orders containing specific master data and key figures on the orders.

You can create exceptions to specify that all orders that fulfill certain conditions are identified with colored traffic lights (red, yellow, green) in the results list. This way, you can filter out orders that should be analyzed further.

The results list has a number of navigation and formatting options and can be modified by the user. From the results list in detail reports, you can branch off to single orders or to a comparison of two orders, in order to examine these orders more closely. You can also go to the master data display for characteristics from the results list. You can, for example, display the master record of the manufactured material for an order to be analyzed.

Order selection is not a summarized analysis and is **not** based on classification. It mainly serves to answer ad-hoc questions that arise in *Cost Object Controlling*.

### Integration

From the order list in the order selection you can call up detail reports with the original cost elements for any order. The reports that are available are displayed in a dialog box. When you choose a report, the system calls up this report for the chosen order. For a more detailed analysis of an order, there are reports about planning data, actual data, and numerous reports about variances as well as a report about work in process.

Furthermore, there are additional reports available for the comparison of two orders.



If you want to add more reports to the dialogue box so that you can jump to the results list for these reports, you must first add these reports to your list of reports in Customizing.

The data is displayed with the [ABAP List Viewer \[Ext.\]](#).

### Prerequisites

If you want to display specific master data in the list of selected orders, make the proper adjustments in the IMG for the Information System under *Product Cost Controlling* → *Information System* → *Control Parameters* in the section [Display Fields Order Selection \[Ext.\]](#). Here you choose the fields of the order master as well as the order header and order item that you want displayed in the results list of the order selection. For performance reasons, try to limit the selections to only those fields that are really necessary.

If you want to use order status as one of the selection criteria, you must first create a status selection profile in Customizing. You can find this step in the IMG for the Information System under *Product Cost Controlling* → *Information System* → *Cost Object Controlling* → *Settings for*

## Order Selection

*Summarized Analysis/Order Selection* → *Order Hierarchy and Selection with Classification* → [Define Selection Profiles for the Order List \[Ext.\]](#).

To save layouts for all users, set the *Shared* indicator in IMG for the Information System under *Product Cost Controlling* → *Information System* → [Control Parameters \[Ext.\]](#).

## Features

The list with the selected orders consists of master data and key figures. The structure of the list is determined by the layout entered in the selection screen. By creating a layout, you can determine yourself, which master data and key figures will be displayed in the results list. The key figures that you can choose from are listed here. You determine the master data to be shown in the results list in Customizing for the Information System. Exit the results list and go to an order's detail screen to see all the master data and key figures (independent of the layout chosen) for an order, insofar as values exist.

This way, you can edit the results list interactively. Use the functions or the ABAP List Viewer for this. You can, for example, set a filter to exclude all orders except orders whose plan/actual variance lies between two specific amounts. Additionally, you can perform an ABC analysis within a results list and calculate a total across individual key figures, among other things.

A number of different criteria are available to limit the selection of the orders. The fields of the general order master, the order header, and the order item for manufacturing orders can be used as selection criteria. In addition, you have the option of applying the order status in selection, or limiting the scope of the selection to a specific time frame. If you work with classification, you can also use classifying attributes as selection criteria. You can display the selection criteria used for the report call in the results list.

The setup of the selection screen is determined by a selection variant. You can adjust the selection screen to suit your particular requirements by creating a selection variant.

Order selection is supplied in three standard selection variants.

- Standard selection variants (can be displayed in *Product Cost by Order* and *Product Cost by Period* and *Costs for Intangible Goods and Services*)
- Selection variants for sales order production
- Selection variants for joint production

## Special Processing with Joint Production

The key figures for the selected orders are displayed at the order header level or additionally at the order items level. In joint production, the values are displayed at the order item level.

For more information, see *Special Requirements with Joint Production*.

## Notes on Performance

To avoid long **runtimes** during report calls, you can use extracts. An extract is a saved dataset containing the report data selected at the time the extract was generated. An extract is created from the selection parameters entered before the report call. In particular, an extract is dependent on whether the order selection happened for orders without items or for orders with items. Depending on the setting, the system will display only those orders with items or without when reading the extract later.

### See also:

[Display Fields of the Results List \[Page 336\]](#)

For information on different navigation and formatting functions, see the documentation [ABAP List Viewer \[Ext.\]](#).

For more information about selection options, see: [Selection Parameters for Order Selection \[Page 333\]](#).

You can find detailed information on joint production in the following section:

[Special Requirements in Joint Production \[Ext.\]](#)

For information on working with extracts, see [Using Extracts \[Page 371\]](#).

See the following for additional information on performance improvements:

[Performance in Product Cost Controlling \[Ext.\]](#)

## Selection Parameters for Order Selection

# Selection Parameters for Order Selection

## Use

The following criteria are available in the selection screen to limit the selection of the orders:

- You can limit the reporting time frame to be analyzed.



Limiting the reporting time frame specifies the periods from which key figures can be read; it does not affect the order selection. Orders are selected according to entries specified in the selection screen and, if necessary, the requirements of the status selection profile.

- The fields of the general order master, the order header, and the order item for manufacturing orders are available as selection criteria.
- You can select according to sales order and sales order item in sales order production.
- By defining a status selection profile, you can limit the selection range to orders with a certain status. You can, for example, specify that only orders for which variances have already been calculated should be selected.
- If you work with classification, you can also use classifying attributes as selection criteria.

## Prerequisites

If you want to use classifying attributes as selection criteria, you must have added these attributes to the selection screen of the classification or defined an additional selection screen containing the attributes. For more information about the procedure, see *Customizing for the Information System under Product Cost Controlling → Information System → Cost Object Controlling → Settings Summarized Analysis/Order Selection → Order Hierarchy and Selection → Define Selection Screens for the Order List*. The selection screens or additional selection screens created here are only needed to select orders according to classifying attributes, and must contain the attributes which you require for your selection. These are usually user-defined characteristics for order classification.

To make the selection of orders dependent on a certain status, you must have defined status selection profiles in *Customizing for the Information System*. You make this definition under *Product Cost Controlling → Information System → Cost Object Controlling → Settings Summarized Analysis/Order selection → Order Hierarchy and Selection → Define Status Selection Profiles*.

## Features

The fields of the general order master, the order header, and the order item for manufacturing orders are available as selection criteria. In the standard system, only a selection of the total fields available is in the selection screen of the reports. However, you can adapt the selection screens to your requirements and access other fields of the above tables by creating your own selection variants. By defining a selection variant, you determine the structure of the selection screen. You can define and set up your own selection variants in your personal work area (favorites).

## Selection Parameters for Order Selection

If you work with classification, you can also use classifying attributes as selection criteria. This is only of use with user-defined characteristics, because, for the most part, the existing object characteristics agree with the above-mentioned master data fields available for selection.

Classification provides several order selection options, as follows:

- You use the classifying attributes as selection criteria.
  - Go from the selection screen for the order selection to the *classification* screen and start the selection by entering the characteristic values. After selecting the orders that correspond to the characteristic values, go back to the selection screen for order selection. This screen displays only those orders selected by classification (in the *order* field). If required, you can limit the selection range by entering further selection criteria.
- You only use the existing master data fields as selection criteria for order selection. If orders are read during selection for which classification is active, you can extend the display to include the classifying attributes of these orders.

To do this, enter the desired selection criteria in the screen for the order selection. You must also turn on the indicator *W/ classification chars*. When the report is executed, the classifying attributes of the classified orders are read from the databank and output. You can display these attributes by defining a display variant in the results list.

You can limit selection to orders with a particular status by entering a **status selection profile** in the selection screen. You use status selection profiles to lay down conditions for the selection of orders according to user status or system status.



Suppose you want to select all partially delivered orders for a particular material. You use a status selection profile that allows only the status *partially delivered*.

You can also define **exceptions** in the selection screen of the report. Exceptions are used to display traffic light symbols (red/yellow/green) at orders whose values exceed a predefined threshold. You specify the reference for the threshold values by choosing a rule basis (such as *actual costs absolute*). The percentage and absolute threshold values that you specify tell the system by how much the reference value must be exceeded before it displays a traffic light symbol on the order.

## Special Processing with Joint Production

To enable the status-dependent selection of orders in joint production, you can enter separate status selection profiles for the order header and order item, since both statuses can be different in joint production.

You decide in the selection screen of the report whether the key figures for the selected orders should be displayed at the order header level or additionally at the order items level. In joint production, the values must be displayed at the order item level. In addition to the selected setting, you also specify which display variant should be used for the structure of the results list.

## Notes on Performance

To avoid long runtimes when you execute reports, you should limit the selection range as much as possible and use extracts, if necessary. Please note that the length of the runtime is also dependent on the selection of display fields for the results list that you defined in Customizing.

**See also:**

[Order Selection \[Page 330\]](#)

### Selection Parameters for Order Selection

For information on creating your own selection variants, see [Creating Selection Variants \[Ext.\]](#).

If you are considering the use of classification, read the section [Classification \[Page 231\]](#) and pay particular attention to the comments on performance.

[Performance in Product Cost Controlling \[Ext.\]](#)

[Special Requirements in Joint Production \[Ext.\]](#)

## Display Fields in the Results List

### Structure

The results list of order selection can be used to analyze master data and key figures in a number of ways. You use the layout in the selection screen of the report to control which fields are displayed in the results list. The standard system contains layouts that use only some of the available fields. You can also create your own layouts according to your requirements. You can indicate these as initial variants that will be set as default values when you call up a report. You can save your layouts as user-specific or shared. If you don't create the layout as a user-specific layout, it is also available to other users. However, you can only save shared layouts if the *Shared* indicator was selected under *Control Parameters* in Customizing for the Information System.

### Key Figures

The key figures for the structure of the results list are predefined according to field groups. The following field groups are available:

- Order header (such as order quantity)
- Planning data (such as fixed / variable planned costs, planned quantity)
- Actual data (such as fixed / variable actual costs, actual quantity)
- Target data and variances (including the categories of variance calculation)
- Data to calculate work in process or results analysis (such as confirmations for missing costs)
- Comparison key figures (such as plan/actual variance)
- Units (such as units for production quantities)

You can display these key figures in controlling area currency, company code currency, and object currency.

### Master Data

You determine the master data to be shown in the results list in Customizing for the Information System. The following fields are available to you for this selection:

- Fields in the order master
- Fields in the order header and in the order item for manufacturing orders



However, you should select the fields in Customizing that you want to use later as display fields in your results list, since all the selected fields must be read when executing a report from the database.

If you select *With classification chars.* in the report selection screen, the classifying characteristics will be extended for every order for which classification is active when you execute a report. You also have user-defined characteristics available for the classification as display fields for the results list.

## Display Fields in the Results List



Do not transport or import layouts in which user-defined characteristics are used as display fields. If you want to use corresponding layouts, you must create them again in the productive system.

### See also:

You can find information on the procedure during the creation of layouts under [Creating, Changing, and Managing Layouts \[Ext.\]](#).

## Order Hierarchy and Order Selection with Classification

### Use

You can use the classification system in *Cost Object Controlling* for:

- Order selection

You can use classifying attributes as selection criteria in addition to the existing master data fields. In most cases this is only appropriate with user-defined characteristics, because most of the available master data fields match the object characteristics. You also have the option of using just the existing master data fields for selections and using classifying attributes to enhance the output. These attributes are available as display fields in the output list for this purpose.

- Summarizing orders

If the available master data fields are not sufficient to define a summarization hierarchy for orders or projects, you can use classification for summarizing orders or reports. This enables you to use classifying attributes to create a hierarchy.



Check if the available master data fields fulfil your requirements. Only use classification when classifying attributes for selection or summarization are essential or when you must use user-defined characteristics. Classification has negative effects on system **performance** (see below).

Classification can be used in *Cost Object Controlling* for manufacturing orders, product cost collectors and internal orders.

To be able to use classification, you must set an indicator in Customizing for the applicable order type. This activates classification for that order type. All new orders that are created with that order type are then classified automatically. The system does this by filling and updating attributes called *object characteristics* with the values from the order (such as the name of the creator or the controlling area). Other characteristics (user-defined characteristics), in contrast, must be filled in manually when creating the order master.

These characteristics can then be used to select orders through a characteristic (such as all orders in controlling area 0001) or to summarize data through that characteristic (such as all order costs in plant 0001). The system creates a total for each characteristic value and updates it to what is called a *summarization object*.

Two types of characteristics are available for classification:

- Reference characteristics

These are supplied by SAP in the standard system. From a list of characteristics, you select those that you want to use and generate them in each client in which you want to use these characteristics. The reference characteristics are fields in the order master that are summarized automatically.

- User-defined characteristics

If your requirements are not met by the reference characteristics, you can create your own characteristics. These characteristics are not classified automatically. They must be supplied with a value manually when you create a new order.

## Order Hierarchy and Order Selection with Classification

### Prerequisites

Carry out the following steps in Customizing for *Product Cost Controlling Information Systems [Ext.]* and *Cost Object Controlling [Ext.]*:

- Check Order Types for PP and CO Production Orders

You must activate classification for the relevant order types in Customizing.

Activate classification for the order types that you want to use for order hierarchies or order selection with classification or with classification attributes. You can also activate classification afterwards (after the orders have been created). In this case you must perform a recalculation run to reclassify existing orders.

- Choose and Generate Characteristics
- Define User-Defined Characteristics

These characteristics can contain information such as the sales order number in a non-SAP system or a product-specific attribute (color, etc.). It only makes sense to use classification in *Cost Object Controlling* if you are using user-defined characteristics in the classification.

Any user-defined characteristics that you create must be assigned to class SAP\_KKR\_CLASS, class type 013. You can define object dependencies for user-defined characteristics.

### Features

You can display the order hierarchy in the respective application component under *Information System → Reports for... → Summarized Analysis → With Defined Summarization Hierarchy* with the hierarchy type *order summarization*.

### Notes on Performance

If classification is activated in the order type, processing time is longer for creating and changing orders. Every time the order is saved, the classification data is updated again. This is especially limiting in logistical processing, because the saving of orders takes up more time than desired. If you want to avoid these negative effects (especially those which appear in shop floor control), deactivate classification in the order type during the period. Only activate it again before executing the data collection run for the order hierarchy. Subsequently start report RKOCLASS. This report allows you to classify orders at a later time. Afterwards execute the data collection run. Deactivate classification in the order type again for the following period. In this way, for example, you can carry out classification on a weekly basis.

#### See also:

For more information about how to use classification, see the Implementation Guide for *Product Cost Controlling Information System* under *Cost Object Controlling → Settings Summarized Analysis/Order selection → Order Hierarchy and Selection with Classification*.

#### See also:

[Order Selection \[Page 330\]](#)

[Data Collection for Summarization Hierarchy \[Page 323\]](#)

[Executing Data Collection for Summarization Hierarchies \[Page 326\]](#)

[Performance in Product Cost Controlling \[Ext.\]](#)



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## Overview of Summarization Hierarchies

# Overview of Summarization Hierarchies

## Use

This report shows a list of defined summarization hierarchies in the following areas:

- *Product Cost by Order*
- *Product Cost by Period*
- *Costs for Intangible Goods and Services*

From this list of the summarization hierarchy you go to the hierarchy graphics for summarization. This report belongs to the report category *Object list*.

The object list for summarization hierarchies offers you all summarization hierarchies in the current controlling area. Choose a hierarchy and go to the hierarchy graphic.

The hierarchy graphic offers you predefined views with the associated figures. You can adapt the standard figures to your own particular requirements. Create a layout with the figures you are most interested in. For information on the procedure, see [Creating, Changing, and Managing Layouts \[Ext.\]](#).

## Features

### List of Summarization Hierarchies

The following values are displayed in the list of the summarization hierarchies:

- Hierarchy name
- Hierarchy designation
- Status
  - Summarized
  - Partially summarized
  - Not summarized

### Hierarchy Graphic

The standard hierarchy graphic offers you the following views and figures:

- Plan/actual costs:
  - Planned costs
  - Actual costs
  - Currency
- Plan/actual quantities:
  - Planned quantity
  - Confirmed quantity
  - Unit of measure
- Target/actual costs:

## Overview of Summarization Hierarchies

- Target costs
  - Actual costs
  - Currency
- Planned costs fixed/variable:
  - Planned costs
  - Planned fixed costs
  - Planned variable costs
  - Currency
- Actual costs fixed/variable:
  - Actual costs
  - Actual fixed costs
  - Actual variable costs
  - Currency

You can access the following field groups when you define your custom layout:

- Costs
- Revenues / profits
- Quantities
- Results analysis data
- Variances
- Other

The report can be displayed in the following currencies:

- Controlling area currency
- Company code currency (only in sub-hierarchies that are assigned to exclusively one company code)

You can also choose the reporting time frame in the report.

## Integration

From the hierarchy graphic you can go to reports with the original cost elements. The data is displayed with the [ABAP List Viewer \[Ext.\]](#).

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**Detailed Reports**

## Detailed Reports in Cost Object Controlling

### Use

The report category *Detailed Reports* contains reports that provide special data for individual objects. The objects (cost objects) to be analyzed in reporting differ depending on the application component in *Cost Object Controlling*. If you are using *Product Cost by Sales Order*, for example, it may be useful to analyze costs at the level of a sales order item that carries costs and revenues. In *Product Cost by Period*, the product cost collector is the cost object. Accordingly, the sales order item with costs and revenues is used as the report object in *Product Cost by Sales Order*, and the product cost collector is used as the report object in *Product Cost by Period*.

The Information System for *Product Cost by Period* provides detailed reports for the following objects:

- [Product Cost Collectors \[Ext.\]](#)
- [Cost Object Hierarchies \[Page 132\]](#)

The Information System for *Product Cost by Order* provides detailed reports for the following objects:

- [Production Orders \[Ext.\]](#)
- [Production Orders without Quantity Structure \[Ext.\]](#)
- [Process Orders \[Ext.\]](#)

The Information System for *Product Cost by Sales Order* provides detailed reports for the following objects:

- Sales document items that carry costs and revenues  
Usually, these are [sales order items that carry costs and revenues \[Ext.\]](#).
- [Sales order cost estimates \[Ext.\]](#)
- Sales orders with assigned orders

The Information System for *Costs for Intangible Goods and Services* provides detailed reports for the following objects:

- [General cost objects \[Ext.\]](#)
- Internal orders with revenue

**See also:**

[Cost Objects in the R/3 System \[Ext.\]](#)

[Product Cost by Period \[Ext.\]](#)

[Product Cost by Order: Scenario \[Ext.\]](#)

[Product Cost by Sales Order \[Ext.\]](#)

[Costs for Intangible Goods and Services \[Ext.\]](#)



## Detailed Reports for Orders

# Detailed Reports for Orders

## Use

These reports are used for the detailed analysis of individual orders. You can use the detailed reports for orders to analyze the following objects:

- In Controlling of Product Cost by Order:
  - Production orders of production planning
  - CO production orders
  - Process orders of production planning for the process industries
- In Controlling of Costs for Intangible Goods and Services:
  - Internal orders

For information on the analysis on individual product cost collectors, read the section: [Detailed Reports for Product Cost Collectors \[Page 157\]](#)

## Features

The data is displayed using the cost analysis. The cost analysis is based on the functionality of the ABAP List Viewer and offers additional functions. Using the layout technology in the report, you can show the key figures that you want to analyze.

### See also:

- General information on [cost analysis \[Page 77\]](#)
- General information on the [ABAP List Viewer \[Ext.\]](#)
- See the following for general information on working with layouts:
  - [Creating, Changing and Managing Layouts \[Ext.\]](#)
  - [Defining Current Layouts \[Ext.\]](#)
  - [Saving Layouts \[Ext.\]](#)
  - [Managing Layouts \[Ext.\]](#)
  - See [Creating and Deleting Subtotals \[Ext.\]](#) for general information on grouping in layouts.

You can find general information on the key figures that you can analyze for orders under the following:

[Key Figures in Product Cost by Order \[Page 169\]](#)

### See also:

Special considerations should be taken into account when using the Information System for some processes in *Product Cost Controlling*. For this reason, you should read (according to the functions you are using) the following sections of documentation in the *Product Cost Controlling* Information System.

[Special Processing with Joint Production \[Page 373\] \(regarding the Information System\)](#)

[Special Processing with Collective Orders \[Page 377\] \(regarding the Information System\)](#)

From these reports, you can branch to extended information on the respective topics.

See the following sections of the *Cost Object Controlling* documentation for information on the individual order types and their role in *Cost Object Controlling*.

[Product Cost Collectors \[Ext.\]](#)

[Production Orders in Cost Object Controlling \[Ext.\]](#)

[Process Orders in Cost Object Controlling \[Ext.\]](#)

[Production Orders without Quantity Structure \[Ext.\]](#)

See the document *CO Internal Orders* for detailed information on internal orders with revenue.

See the following sections for information on the above-mentioned application components:

[Product Cost by Order \[Ext.\]](#)

[Costs for Intangible Goods and Services \[Ext.\]](#)

## Collective Orders in the Information System

### Use

If you use collective orders in logistics, you can analyze production costs from an order-related perspective for all collective orders or, alternatively, for a single production step in the *Information System of Product Cost Controlling*. The following text contains information to facilitate a correct interpretation of the displayed report data.

### Features

#### Detailed Reports

You can use the detailed reports of *Product Cost by Order* to analyze costs for:

- The entire collective order
- An individual manufacturing order assigned to the collective order
- A section of a collective order – that is, for a particular subsection of production

For detailed information on individual orders, use the detailed reports in the Information System of *Product Cost by Order*. These include reports on planned costs, target costs, actual costs, work in process and variances.

If you want to identify the costs of the entire manufacturing process for the production of a finished product, you can also use the above-mentioned detailed reports to give an account of a complete collective order. Proceed as follows:

After entering the order number of the **leading order** (highest order in the collective order) on the selection screen of a detailed report, choose **Settings → Collective order → On / off**. The selection screen of the report then shows the text *Including subordinate orders*. Carry out the report for the desired time frame.

The report shows the debits and credits of all manufacturing orders assigned to the collective order.



You have created a collective order that contains two production orders. You have specified in the order type that goods movements are to take place between the production levels. One production order was created for the finished product being manufactured (FERT). The other production order was created for a semifinished product used in the finished product (HALB). Both materials are valued at the standard price.

If you look at the planned costs for the entire collective order using the detailed report *Planned Costs*, the report shows the following:

#### Debit Side

Planned debit with the planned costs to manufacture the semifinished product

- Planned credit through delivery of the semifinished product to stock, valued with the standard price of the semifinished product

Collective Orders in the Information System

- + Planned debit with withdrawal of the semifinished product to manufacture the finished product
- + Planned debit with other costs incurred in the manufacture of the finished product

-----  
 -----  
 = Total debits

**Credit Side**

Planned credit through delivery of the finished product to stock, valuated with the standard price of the finished product

= Total credits

The debit side of the report therefore shows the costs of *all* production levels. The total of these debits equals the costs of the entire production process.

If you only want to see the costs of a particular section of the collective order, choose *Settings* → *Collective order* → *On / off* on the selection screen of the detailed report. In the selection screen of the report, first enter the order number of a manufacturing order in the collective order. In addition to the costs of this order, the report also shows the costs of the orders that are below this order in the collective order.

**Hierarchy Graphic**

You can use the hierarchy graphic to:

- Obtain an overview of all orders assigned to the collective order
- View the costs on the individual production levels

You access the hierarchy graphic from the selection screen of a detailed report in *Product Cost by Order* by entering the order number and choosing *Settings* → *Collective order* → *On / off*. The *Overview* button then appears on the selection screen of the report. Use this button to access the hierarchy graphic.

This report shows an overview of all orders assigned to the collective order, whereby the individual hierarchy levels correspond to the production levels in manufacture. You can add key figures such as planned costs, actual costs, or work in process to the hierarchy graphic. This allows you to analyze the cost of goods manufactured on the individual production levels. You can also view the costs of the individual production levels summarized upwards. The total costs of the production process are shown at the highest level of the collective order. To see the costs by production levels, choose *Settings* → *Aggregation values* → *Object-based* in the hierarchy display. To summarize the costs of the individual production levels upwards, choose *Settings* → *Aggregation values* → *Aggregate* in the hierarchy display. The difference between the credit and debit is summarized upwards.



Note that you can use the field catalog of the layouts to add key figures such as work in process or reserves for unrealized costs to the hierarchy graphic.

## Collective Orders in the Information System

To analyze a single order in a collective order, you can go from the hierarchy display to a detailed report for the order.

You can also go from the hierarchy display to a detailed report for the entire collective order. This allows you to see the overall costs of the collective order broken down into cost elements, and to see the credit side of the collective order that results from the delivery of the leading order to stock.

### See also:

[Collective Orders \[Ext.\]](#)

[Collective Orders with Automatic Goods Movement \[Ext.\]](#)

[Collective Orders with Automatic Goods Movement: Scenario \[Ext.\]](#)

[Collective Orders without Automatic Goods Movement \[Ext.\]](#)

[Collective Orders without Automatic Goods Movement: Scenario \[Ext.\]](#)



SAP recommends the use of collective orders with automatic goods movement.

## Object Comparisons in Cost Object Controlling

### Use

The report category *Object Comparisons* in *Cost Object Controlling* contains reports that compare two objects, such as two orders:

#### Product Cost by Period:

- Order versus Order Plan/Actual Comparison
- Summarization Hierarchy versus Summarization Hierarchy –Plan/Actual Comparison

#### Product Cost by Order:

- Material Cost Estimate versus Preliminary Order Cost Estimate
- Order versus Order Plan/Actual Comparison
- Summarization Hierarchy versus Summarization Hierarchy –Plan/Actual Comparison

#### Costs for Intangible Goods and Services:

- Order versus Order Plan/Actual Comparison
- Summarization Hierarchy versus Summarization Hierarchy –Plan/Actual Comparison

## Material Cost Estimate vs. Preliminary Order Cost Estimate

## Material Cost Estimate vs. Preliminary Order Cost Estimate

### Definition

Report that compares a material cost estimate with the [preliminary cost estimate for a manufacturing order \[Ext.\]](#).

### Use

You can use this report to compare a material cost estimate with the planned costs of manufacturing orders **for this material**.

You can find this report in the following application components of *Product Cost Controlling*:

- *Product Cost Planning*
- *Product Cost by Order*

### Structure

The view of a cost estimate relevant to inventory accounts is compared with a preliminary order cost estimate **on the basis of original cost elements**. The cost element itemization of material costing is derived with the following strategy:

- b. The system reads the cost element itemization of the cost estimate, if it exists.



In the SAP standard system, you can no longer control whether a cost element itemization is saved. The cost element itemization is always generated dynamically on the basis of the itemization.

- c. A cost element itemization is generated dynamically from the itemization of the cost estimate. This dynamically generated cost element itemization is not saved in the system at any time.

The cost base is calculated as follows:

- If you specify a lot size, both the values of the material cost estimate and the values of the preliminary order cost estimate are converted to that lot size.
- If you don't specify a lot size, the system will convert the values to the costing lot size of the material cost estimate.



Because the system cannot convert if the units of measure are different, this comparison is normally only suitable for a material cost estimate with the orders for that material.

#### See also:

[Material Cost Estimate with Quantity Structure \[Ext.\]](#)

[Material Cost Estimate without Quantity Structure \[Ext.\]](#)

[Product Cost by Order \[Ext.\]](#)

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Material Cost Estimate vs. Preliminary Order Cost Estimate

## Order vs. Order Plan/Actual Comparison

# Order vs. Order Plan/Actual Comparison

## Use

Report that compares two manufacturing orders (product cost collectors or manufacturing orders).

The reporting time frame can be cumulative or limited. This report belongs to the report category *Object Comparisons*.

Two orders are compared with each other on the basis of cost elements.

Planned and actual costs can be compared with each other in *Product Cost by Order*.

In *Product Cost by Period*, only the actual costs of two product cost collectors can be compared, because no planned costs are updated on product cost collectors.



This report does not show planned costs for manufacturing orders that are assigned to a product cost collector. Although a preliminary costing can be carried out for these manufacturing orders, the planned costs are not updated to the manufacturing order.

## Data Displayed

- Plan value object 1 (only for manufacturing orders)
- Actual values object 1
- Plan value object 2 (only for manufacturing orders)
- Actual values object 2
- Output quantity, planned, object 1 (only for manufacturing orders)
- Output quantity, actual, object 1
- Planned output quantity object 2 (only for manufacturing orders)
- Output quantity, actual, object 2

## Header Information:

The header shows you the following for each comparison object:

- Object information
- Currency

The report can be displayed in the following currencies:

- Controlling area currency
- Company code currency / object currency

## Integration

You should normally choose cumulative values. Note that there is no conversion of values to the planned or confirmed quantity.

**See also:**

[Product Cost by Order \[Ext.\]](#)

[Production Orders in Cost Object Controlling \[Ext.\]](#)

[Production Orders without Quantity Structure \[Ext.\]](#)

[Process Orders in Cost Object Controlling \[Ext.\]](#)

[Preliminary Cost Estimate for Manufacturing Order \[Ext.\]](#)

[Preliminary Costing of CO Production Orders \[Ext.\]](#)

[Preliminary Costing of Product Cost Collectors \[Ext.\]](#)

[Actual Costs in Cost Object Controlling \[Ext.\]](#)

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**Summarization Hierarchies: Plan / Actual Comparison**

## Summarization Hierarchies: Plan / Actual Comparison

### Use

Report that compares two summarization hierarchies or two subhierarchies of summarization hierarchies. It is used in:

- *Product Cost by Period*
- *Product Cost by Order*
- *Costs for Intangible Goods and Services*

The reporting time frame can be cumulative or limited. This report belongs to the report category *Object Comparisons*.

The planned and actual data of two summarization hierarchies (or sections of them) are compared against each other on the basis of the original cost elements.

### Data Displayed

- Planned values object 1
- Actual values object 1
- Planned values object 2
- Actual values object 2

### Header Information:

The header shows you the following for each comparison object:

- Object information
- Currency

The report can be displayed in the following currencies:

- Controlling area currency
- Company code currency / object currency

### Integration

You can go to the hierarchy graphic of either hierarchy.



When the quantities are summarized, no units of measure are converted. It may be necessary to execute a data collection run again, depending on when the order hierarchies were last summarized.

Summarization Hierarchies: Plan / Actual Comparison

**See also:**

See the document *CO Internal Orders* for information on internal orders.

**More Reports: Line Items**

## More Reports: Line Items

### Use

Line item reports provide a detailed analysis of objects and their data. Line items are based on the lines of a document created by a posting in the R/3 System. The reports are available in the following areas:

- *Product Cost by Order*
- *Product Cost by Period*
- *Product Cost by Sales Order*
- *Costs for Intangible Goods and Services*

Line item reports enable you to make a detailed analysis of the values posted. You can access the original documents (such as the FI or MM document) from the individual lines in the line item report. (*Environment* → *Source document / Accounting document*)

Technical information is also available.

Line item reports are of limited importance in *Cost Object Controlling*, because the posting amounts from production confirmations are generally high, and analysis of the line items is only worthwhile in exceptional circumstances.

You can limit the line items to be displayed through the cost element or cost element group and via the period.

Line item reports are available for the following account assignment objects:

### **Manufacturing orders (production orders and process orders):**

- Line items actual
- Line items for WIP calculation
- Line items variance
- Line items commitment

### **Product cost collectors**

- Line items actual
- Line items WIP calculation (if the corresponding settings in the results analysis version were made, see also *Prerequisites*)
- Line items variance

### **Cost Object ID (Cost Object Nodes in Cost Object Hierarchies and General Cost Objects)**

- Line items actual (for cost object nodes of cost object hierarchies and for general cost objects)
- Line item variance (only for cost object nodes of a cost object hierarchy)

### Sales document item: normally a sales order item:

- Line items actual
- Line items for results analysis
- Line items commitment

The line item reports are supplied with a predefined layout. You can also create your own custom layouts so that you can see other fields of the CO line item in the line item report. You can usually display all the fields of the Controlling document in the line item report. These fields were grouped for clarity into:

- Account assignment
- Time characteristics
- References
- Value key figures
- Technical fields
- Organizational units
- Partner account assignment
- Object
- Other objects
- Quantity key figures
- Investment management
- Not assigned

### Prerequisites

#### Manufacturing orders (production orders and process orders):

- Line items for WIP calculation

The line items for the WIP calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Order* under *Period-End Closing* → *Work in Process* → *Define Results Analysis Version*. Go into *Extended Control*.

- Line items variance

The line items for the variance calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Order* under *Period-End Closing* → *Variance Calculation* → *Define Variance Key*.

### More Reports: Line Items

- Commitment line items in orders are only updated if you have activated commitments management for the controlling area and for the order type.

### Product cost collectors

- Line items variance

The line items for the variance calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Period* under *Period-End Closing* → *Variance Calculation* → *Variance Calculation for Product Cost Collectors* → *Define Variance Key*.

### Cost Object ID (Cost Object Nodes in Cost Object Hierarchies and General Cost Objects)

- Line item variance (only for cost object nodes of a cost object hierarchy)

The line items for the variance calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Period* under *Period-End Closing* → *Variance Calculation* → *Variance Calculation for Cost Object Hierarchies* → *Define Variance Key*.

### Sales document item: normally a sales order item

- Line items for results analysis

The line items for the results analysis are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Sales Order* under *Period-End Closing* → *Results Analysis* → *Define Results Analysis Versions*. Go into *Extended Control*.

## Integration

Only actual line items are always updated in the standard system. Line items in WIP calculation, results analysis and variance calculation, and for commitments must be explicitly allowed in Customizing for the application.

If you want to write the commitment values to the sales order items that carry costs and revenues, you must set the *with commitments management* indicator in the fiscal-year-dependent control parameters of the controlling area.

Line items for results analysis data of the WIP calculation and results analysis are only saved if you have set the appropriate indicator in Customizing for the results analysis version.

Line items for variances are updated if you switch on the update of line items in the variance key.

Check the following settings in Customizing:

- Results analysis version for the lines items of the WIP calculation and the results analysis
- Variance key for the line items of the variance calculation

**More Reports: Line Items**

- Order type – commitments management for line item commitments
- Control parameters of the controlling area

**Notes on Performance**

In most cases, it is not necessary to update the line items for WIP calculation, results analysis, or variance calculation in your live system. For this reason, it is best to make sure that the relevant indicator in Customizing is **not** set. If you decide not to update the line items, the runtime in WIP calculation, results analysis, and variance calculation is significantly improved. Of course, in these cases, it is not possible to display a corresponding line item report.

**See also:**

A detailed description of line item reports can be found in the documentation *Overhead Cost Controlling*.

See the following sections for information on commitments:

[Commitments \[Ext.\]](#)

See the following sections for information on actual costs:

[Actual Costs in Cost Object Controlling \[Ext.\]](#)

See the following sections for basic information on WIP calculation and results analysis:

[Work in Process in Product Cost by Period \[Ext.\]](#)

[Work in Process in Product Cost by Order \[Ext.\]](#)

[Results Analysis \[Ext.\]](#)

See the following section for basic information on variance calculation:

[Variance Calculation \[Ext.\]](#)

See the following for general information on performance improvement:

[Performance in Product Cost Controlling \[Ext.\]](#)

## Information System for Product Cost by Sales Order

### Use

The information system for *Product Cost by Sales Order* enables you to evaluate the data generated in *Product Cost by Sales Order*. It provides reports for both standard and specialized analysis purposes.

**See also:**

[Product Cost Controlling Information System \[Page 10\]](#)

## Key Figures in Product Cost by Sales Order

### Use

In *Product Cost by Sales Order*, sales document items (usually [sales order items \[Ext.\]](#)) are used as cost objects. A large number of key figures are available in *Product Cost by Sales Order*. You can display key figures:

- Using [cost analysis \[Page 77\]](#):
  - For the detailed reports for sales order items
  - For all [summarization hierarchies \[Page 314\]](#)
- In the report category [object lists \[Page 329\]](#)

For general information on the key figures in *Cost Object Controlling*, see the following:

[Key Figures in Cost Object Controlling \[Page 70\]](#)

### Functions of Cost Analysis

In cost analysis, you determine which key figures you analyze in *Product Cost by Sales Order*. Reports of [cost analysis \[Page 77\]](#) use the functionality of the ABAP List Viewer while offering additional functions in cost analysis. You can define layouts in cost analysis containing the key figures that you want to analyze. The column selection for the layouts contains different field groups (column lists) that separate the key figures into logical groups.

#### See also:

- General information on [cost analysis \[Page 77\]](#)
- General information on the [ABAP List Viewer \[Ext.\]](#)
- For general information on working with layouts, see the following:
  - [Creating, Changing and Managing Layouts \[Ext.\]](#)
  - [Defining Current Layouts \[Ext.\]](#)
  - [Saving Layouts \[Ext.\]](#)
  - [Managing Layouts \[Ext.\]](#)
- For general information on grouping in layouts, see [Creating and Deleting Subtotals \[Ext.\]](#).

### Key Figures in Product Cost by Sales Order

In *Product Cost by Sales Order*, you can analyze:

- Planned values (such as total planned costs, planned fixed costs, planned variable costs, and planned revenues)
- Key figures that result from actual postings (such as total actual costs, actual fixed costs, actual variable costs, and actual revenues)
- Statistical actual costs

Note that both the true actual costs and the statistical actual costs are displayed in the column *Actual* in reports for the sales order item. Both true actual costs and statistical

## Key Figures in Product Cost by Sales Order

actual costs can be differentiated from statistical actual costs through the cost element. The layout *Funds Commitment in Inventory* makes it possible to show true actual costs in a different column from the statistical actual costs.

- Variances between planned and actual values
- Results analysis data
- Commitments
- Funds commitment in inventory



With regard to the objects in the area of *Product Cost by Sales Order*, see the detailed information on sales order costing and the topics that discuss valuated versus nonvaluated sales order stocks in the documentation for *Product Cost by Sales Order*.

In *Product Cost by Sales Order*, there is a distinction made between the planned costs that were planned directly in sales order costing and the planned costs on the assigned objects.

An additional view is available with a planned cost report for a sales order that displays the planned costs for the sales order item and for the assigned objects (manufacturing orders).

### See also:

[Results Analysis \[Ext.\]](#)

[Results Analysis Methods \[Ext.\]](#)

See the following section for information on planned value calculation in Product Cost by Sales Order:

[Calculation of Planned Values in Product Cost by Sales Order \[Ext.\]](#)

See the following section for information on sales order cost estimates:

[Sales Order Costing \[Ext.\]](#)



## Note on Analyzing the Order Profit for Sales Orders and Internal Orders with Revenue

If you want to analyze results analysis data for sales document items that carry costs and revenues (in *Product Cost by Sales Order*) or for internal orders that carry revenue (such as in *Costs for Intangible Goods and Services*), make sure that results analysis has been performed for the sales document items that carry costs and revenues, or for the internal orders that carry revenue, in the relevant reporting time frame for the results analysis version to be analyzed.

You can analyze the results analysis data for a sales document item (usually a sales order item) or for an internal order with revenue. You can also analyze the results analysis data that was summarized across multiple sales document items or multiple internal orders. The results analysis data displayed depends on the results analysis version used.

Results analysis updates the results analysis data under results analysis cost elements that are defined and assigned in Customizing for results analysis. These results analysis cost elements are used for all reports.

## Key Figures in Product Cost by Sales Order

In individual processing for results analysis, detailed information (for example, an explanation of how the values of the individual categories are calculated) is available as a list.

### See also:

[Sales Order Item That Carries Costs and Revenues \[Ext.\]](#)

[Product Cost by Sales Order \[Ext.\]](#)

[Costs for Intangible Goods and Services \[Ext.\]](#)

[Results Analysis \[Ext.\]](#)

[Product Cost by Sales Order \[Ext.\]](#)



### Note on Reserves for Unrealized Costs

Reserves for unrealized costs can be calculated in results analysis with different results analysis approaches.

Results analysis data (reserves for unrealized costs) can be displayed separately according to creation and consumption if the indicator *Split creation/usage* is selected in Customizing for the results analysis version. If this indicator is not selected, the system displays the balance.

Check this Customizing setting in the implementation guide of the respective application component of *Product Cost Controlling* under *Period-End Closing* → *Results Analysis* → *Define Results Analysis Versions*. The screen *Change View Results Analysis Versions: Overview* appears. Select the line to display the screen: *Display Results Analysis Versions: Detail*.

Reserves for unrealized costs are only created if the credit of the order exceeds the debits. In a particular period the object has either *WIP* or *reserves for unrealized costs*. This does **not** apply to summarization objects. With summarization objects, both work in process (at actual costs) and reserves for unrealized costs can exist within a period.

You must have performed results analysis in period-end closing in the respective results analysis version.

The key figures can be displayed and analyzed in detailed reports for individual objects as well as summarized.

### See the following sections for information on object lists:

- [Object List \[Page 329\]](#)
- [Order Selection \[Page 330\]](#)
- [Selection Parameters for Order Selection \[Page 333\]](#)
- [Display Fields of the Results List \[Page 336\]](#)
- [Using Extracts \[Page 371\]](#)
- [Order Hierarchy and Order Selection with Classification \[Page 231\]](#)
- [Summarization Hierarchy Overview \[Page 338\]](#)
- [Cost Object Hierarchy Overview \[Page 151\]](#)
- [Finding/Displaying Cost Object Hierarchies \[Page 153\]](#)

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**Summarized Analysis**

## Summarized Analysis

### In Cost Object Controlling

#### Use

The report category *Summarized Analysis* contains reports that show aggregated data. For example, you can do target/actual comparisons at the product group level. The following summarization methods can be used in *Cost Object Controlling* depending on the application component and the objects:

- In *Product Cost by Period*:
  - Summarization hierarchy
    - With a summarization hierarchy, you are free to define the structures used to save the data as you wish.
  - Product drilldown
    - With a product drilldown, the structures used to aggregate the data are predetermined.
  - Order hierarchy with classification

In summarized analysis in *Product Cost by Period*, the data updated on product cost collectors is summarized at higher levels. If you want to display the summarized data for a cost object hierarchy, use the report category *detailed reports*.

- In *Product Cost by Order*:
  - Summarization hierarchy
  - Product drilldown
  - Order hierarchy with classification
    - With an order hierarchy with classification, you are free to define the summarized structures as you wish. However, you must use classification. This reduces performance as compared to a summarization hierarchy. Therefore, you should only use classification when you need to work with user-defined characteristics.

In summarized analysis in *Product Cost by Order*, the data updated on production orders and product cost collectors is summarized at higher levels.

Note: Whenever possible, you should use a summarization hierarchy instead of an order hierarchy with classification.

- In *Product Cost by Sales Order*:
  - Summarization hierarchy
    - In summarized analysis in *Product Cost by Sales Order*, the data updated on the sales document items (normally the sales order items) is summarized at higher levels (such as the sold-to party).
- In *Costs for Intangible Goods and Services*:
  - Summarization hierarchy

In summarized analysis in *Costs for Intangible Goods and Services*, the data updated on internal orders with revenue is summarized at higher levels. Summarization for general cost objects is not supported.

For information on how the different methods of data summarization function, see:

**See also:**

**For information on interpreting the report data, see the following section:**

[Background Information on Summarized Analysis \[Page 174\]](#)

For information on the different summarization methods, refer to the following sections:

[Product Drilldown \[Page 197\]](#)

[Summarization Hierarchies \[Page 314\]](#)

[Cost Object Hierarchies \[Ext.\]](#)

[Order Hierarchy and Order Selection with Classification \[Page 231\]](#)

See the following section for information on how these methods of summarization differ:

[Differences in the Summarization Methods \[Page 180\]](#)

## Summarization Hierarchies

# Summarization Hierarchies

## Use

Summarization hierarchies are analysis tools with which you can summarize values upwards in hierarchical structures that you define. This makes it possible to analyze values and quantities on higher levels such as at plant level. You use a summarization hierarchy in *Cost Object Controlling* to analyze costs and quantities that arose in the production process, summarized for a particular analysis period, at a higher level.



For example, suppose you specified that your order data is to be summarized by the following:

- Plant
- Order type

You can then display all data for a particular plant and analyze the data for that plant for the different order types.

You can use a summarization hierarchy to summarize the values of the following objects:

- Maintenance and service orders
- Internal orders
- Projects
- Sales orders and their items
- Manufacturing orders, QM orders and product cost collectors

Depending on your needs, you can summarize only objects of a certain object type (production orders, for example) or you can summarize multiple object types together. When summarizing objects of certain object types (projects, for example), dependent objects of another object type will be summarized as well (such as, internal orders assigned to that project). When summarizing sales orders, you can choose whether or not to have manufacturing orders which were assigned to that sales order summarized with that sales order.

You can define exception rules to specify that specific nodes of the hierarchy that fit certain requirements are indicated with colored traffic lights (red, yellow, green). This way, you can highlight areas that must be analyzed further. You can expand the hierarchy overview in cost element reports into the individual nodes and then analyze the nodes more closely.

## Prerequisites

The summarization hierarchy has to be defined before summarizing objects. When defining a summarization hierarchy, you determine which fields are involved in the data summarization and which objects will be summarized. The values in the object currency are only summarized if the summarization hierarchy contains a *plant* or *company code* node.

You define a summarization hierarchy in Customizing for the Information System under *Controlling* → *Product Cost Controlling* → *Information System* → *Cost Object Controlling* → *Settings for Summarized Analysis/Order Selection* → *Maintain Summarization Hierarchy*.

## Summarization Hierarchies

If the master data fields in the step *Maintain Summarization Hierarchy* do not cover your requirements in defining hierarchy levels for the summarization of orders or projects, you can work with [classification \[Page 231\]](#). For this, you can use classifying attributes to make other fields cover your requirements. On the basis of the additional volume of data and **performance problems** in master data maintenance which result from this, you should consider your need for additional fields carefully. You do not work with the step *Maintain Summarization Hierarchy* to create additional fields; instead you define a so-called order hierarchy in Customizing for the Information System under *Controlling → Product Cost Controlling → Information System → Cost Object Controlling → Settings for Summarized Analysis/Order Selection → Order Hierarchy and Selection with Classification → Create Order Hierarchies*.

If you want to make the summarization dependent on the order status, you must have already created a status selection profile in Customizing and entered this in the definition of the summarization hierarchy. You can find this step in Customizing for the Information System under *Product Cost Controlling → Information System → Cost Object Controlling → Settings for Summarized Analysis/Order Selection → Define Status Selection Profiles [Ext.]*.

## Features

The individual levels of a summarization hierarchy contain master data fields or parts of master data fields. For each value in a field (such as plant 1000, plant 1100, plant 1200), the system creates totals by period and cost element and writes them to a summarization object. The values on the different summarization objects can be analyzed in the Information System.

Many reports are available for this purpose in the Information System of the SAP standard system under the report category *Summarized Analysis*. For example, you can call up a plan/actual comparison for a summarization object (sales office 1000).

Alternatively, you can display a hierarchy report for a specific summarization hierarchy. You receive a hierarchical overview of the summarization objects that were generated by the summarization. If you created an exception rule when executing a data collection run, you will see the colored traffic lights in the overview.

The following data, for example, is summarized with the help of a summarization hierarchy:

- Planned values (for example, total planned costs, fixed planned costs, variable planned costs, planned output quantity)
- Actual costs (for example, total actual costs, fixed actual costs, variable actual costs, actual output quantity)
- Actual costs (for example, total actual costs, fixed actual costs, variable actual costs, actual output quantity)
- Variances (percentage plan/actual variances, absolute plan/actual variances, percentage target/actual variances, variance categories)
- Input quantities (target input quantities, actual input quantities)
- Work in process
- Results analysis data from results analysis

The run time of the data base run is better when you summarize less data.

The master data fields, which you can use to summarize data, are pre-set and dependent on the type of object that is to be summarized. Accordingly, when summarizing sales orders, the master data fields that are available to you when defining a summarization hierarchy are different from

## Summarization Hierarchies

those available when you are summarizing an internal order. If these fields do not cover all of your requirements, you can use additional self-defined fields for summarizing orders or projects. You must, however, work with classification here.

You can limit the scope of the summarized data by making the summarization of order values dependent on the status of the order. You can, for example, just have the data summarized from orders that already have variances calculated for them.

The data summarized with a summarization hierarchy is collected in a data collection run. You have to execute this before you can use reports for summarization. This means that a report for summarization objects always shows the dataset that was current at the time of the last data collection run. You must therefore execute a new data collection run if you want to see current values in your reports.

## Integration

You can call up cost element reports for individual summarization objects from the hierarchy display. The reports that are available are displayed in a dialog box. When you select a report, this report is called up for the selected summarization object. You can, for example, display the summarized actual values, plan values, and variances for a particular plant.

It is also possible to call up the hierarchy overview from the selection screen of a report for the analysis of a summarization object.

## Notes on Calling up Reports for the Summarization Hierarchy

Reports for analyzing summarization objects are found in the Information Systems of the individual application components of the SAP standard system under the report category *Summarized Analysis*.

To call up a report for a summarization object, enter the technical name of the summarization hierarchy in the selection screen. You must also enter the hierarchy type. Usually the hierarchy type is *CO*. If, however, you ran a summarization for an order hierarchy using classification, you have to choose hierarchy type *OR*.

In the field *Subhierarchy*, specify the summarization object to be analyzed. Display the possible entries (F4) for this field and choose the summarization object that you want to analyze.

### See also:

For more information about collecting and updating data for summarization, see [Data Collection for Summarization Hierarchy \[Page 323\]](#)

[Joint Production in the Information System \[Ext.\]](#)

You use the cost analysis to analyze the data aggregated with the summarization hierarchy. You can find information on this under [Cost Analysis \[Page 77\]](#)

## Maintain Summarization Hierarchies

In this step in Customizing for the *Product Cost Controlling Information System*, you specify the structure of your summarization hierarchies. In the definition of a summarization hierarchy, you specify what criteria are used to summarize the costs and quantities of objects.

You can use a summarization hierarchy to summarize the values of the following objects:

- Internal orders (order category 01 and 02)
- Maintenance/service orders (order category 30)
- Manufacturing orders, QM orders, and product cost collectors
- This includes the following order categories:  
CO production orders (order category 04), product cost collectors (order category 05),  
QM orders (order category 06), PP production orders (order category 10), process orders  
(order category 40)
- Projects

When projects are summarized, the system also summarizes the dependent objects (such as assigned orders or WBS elements) automatically.

- Sales orders without dependent orders
- Sales orders with dependent orders

When you summarize sales orders, you can control whether the system summarizes the data of the manufacturing orders assigned to the sales order by selecting the corresponding object type.

You can later summarize the values of individual objects upwards in accordance with the defined hierarchy structure.

You use the master data fields of the account assignment objects as the summarization criteria. Each level of the summarization hierarchy corresponds to one master data field. Using the master data fields, the system selects the account assignment objects for summarization and sums the costs and quantities for each characteristic value of a master data field (such as plant 1000, plant 2000).

**Note:**

If you are using customer-specific fields to summarize internal orders, the case (upper/lowercase) must be the same as used in these fields.

The system saves the calculated sums to summarization objects that correspond to the nodes of the hierarchy generated during the summarization run. You can analyze the summarization objects in the information system.

You can use summarization hierarchies to summarize data such as the following:

- Planned costs
- Actual costs
- Target costs
- Variances
- Work in process

## Maintain Summarization Hierarchies

- Results analysis data
- Input quantities
- Output quantities
- Scrap

## Example

You can use a summarization hierarchy to summarize the costs incurred in each period by the orders to produce a particular material in a particular plant.

## Notes

The highest node in the hierarchy is always the controlling area.

If you specify a status selection profile when you create summarization hierarchies, the only objects selected for summarization are those whose status matches the selection criteria specified in the status selection profile at the time of summarization. If you want to summarize on the object type *sales orders*, the status selection profile specified in the hierarchy definition refers to the production orders assigned to the sales order.

Once the system has executed a summarization run for a hierarchy, you can no longer change the summarization hierarchy. If you want to change the summarization hierarchy, you must first execute a deletion run to delete all summarized data.

You can specify selection variants to preselect internal orders.

## Notes on Joint Production

To enable status-dependent selection of orders in joint production, you can enter separate status selection profiles for the order header and the order item, since in joint production the status of the order header can differ from the status of the order item.

In joint production, the system summarizes only the values of the order items. Values on the order header are not summarized. Therefore, you should execute the function *Distribution for Co-Products* before starting a summarization run.

## Prerequisites

If you want to use status selection profiles, you must first carry out the step [Define Status Selection Profiles \[Ext.\]](#).

If you want to use selection variants, you must first carry out the step [Define Selection Variants \[Ext.\]](#).

## Activities

To define a summarization hierarchy, proceed as follows:

1. Choose *New entries*.
2. Give the hierarchy a name and a description.

To summarize input quantities, select *Summarize input quantities*.

3. If you want to limit the data scope using form routines, enter the user exit pool that contains those form routines (see also step 6).

## Maintain Summarization Hierarchies

4. Save your entries and go back.

You return to the overview of all summarization hierarchies.

5. To specify which type of account assignment objects are included in the summarization run, choose *Data scope (object types)*.

- Select the object types to be summarized.

If you only summarize projects, the system also summarizes the data of assigned objects such as dependent orders. If you want to summarize sales orders, you can control whether the system summarizes the data of the manufacturing orders assigned to the sales order by selecting the corresponding object type.

If you select more than one object type (such as sales orders and production orders), you must specify a priority. This is necessary because the sales order for a master data field, for example, can have a value that differs from the value of the production order below it for the same field. If the system were to summarize on this master data field, the production order would be included both in summarization on the value of the master data field in the sales order and in summarization on the value of the master data field in the production order. To prevent this from happening, in the hierarchy definition specify priority 1 for the object type *sales order* and priority 2 for the object type *production order*.

6. To specify which costs and quantities should be summarized, choose *Data Scope (Totals Records Tables)*.

- To exclude individual totals records tables from summarization, select *Not summarized*.
- To improve performance, you can summarize the records of the totals records file without the origin. To do this, select *No origin*. Selecting this indicator is recommended when you are interested in pure cost element reports. However, it is then no longer possible to expand the values at cost element level down to the origins.

If you want to limit the data scope using a user exit, enter the name of the user exit form routine. To do this, you must have entered the name of the user exit pool when you created the summarization hierarchy.

7. To assign master data fields to the levels of your summarization hierarchy, choose *Hierarchy levels*.

You can define up to 9 hierarchy levels.

In the column *Hierarchy field*, specify the desired master data field for each hierarchy level. If you want to create a hierarchy level using part of a master data field, enter the *Offset* and the *Length*.

8. If you want to group account assignment objects for which a characteristic is not filled under the node *other*, select *Blank*.

## Further Notes

For more information on creating summarization hierarchies and on their use in *Product Cost Controlling*, refer to the SAP Library under [Summarization Hierarchy \[Page 314\]](#).

## Function Module Exits for Summarization

### Use

The SAP System provides a number of function module exits for additional summarization functions. These are explained briefly in the following. These exits are documented. For detailed documentation, refer to the enhancement transaction (CMOD). Look at all SAP enhancements of development class KKR. You can access the documentation on an exit by pressing the pushbutton *SAP documentation*.

### Exit for Selection of Data Collection

The function module exit EXIT\_SAPLKKRB\_001 enables you to reassign objects, delete objects, or add objects after the selection for a data collection run but before data collection actually begins.

### Exit for Text Generation for Summarization Objects

The function module EXIT\_SAPLKKRU\_001 of enhancement KKRU0001 enables self-programmed assignment of texts for summarization objects. These texts are generated during a data collection run.

## Maintaining Texts for Summarization Objects

### Use

The system can generate texts for each summarization object generated in a summarization run. You can also enter such texts manually. In the standard system, texts are automatically generated for the summarization objects during the data collection run. The texts are generated based on the designation of the field value.



You summarize on plant 1000 (plant 1000 = Walldorf) The generated summarization objects receive the designation *Walldorf*.

The texts for summarization objects can also be entered manually. When you execute the data collection run, you choose whether you want the manually entered texts to be retained, or overwritten by the designation of the field value.



If the system can't find a text for a summarization object, it uses the value of the field.

### Procedure

To enter manual texts for summarization objects:

13. Go to the appropriate application menu in *Cost Object Controlling*.
14. Choose *Information System* → *Tools* → *Data Collection* → *Summarization Hierarchy*.
15. Enter the summarization hierarchy in the field *Hierarchy*.
16. Choose *Edit* → *Hierarchy*.
17. Position the cursor on the summarization object and choose *Edit* → *Maintain text*.
18. Enter a text and save your entries.

To specify which text is updated for summarization objects during the data collection run:

- m. Go to the appropriate application menu in *Cost Object Controlling*.
- n. Choose *Information System* → *Tools* → *Data Collection* → *Summarization Hierarchy*.
- o. Enter the summarization hierarchy in the field *Hierarchy*.
- p. Choose *Extras* → *Standard texts*.
- q. Choose how you want the system to handle texts during the data collection run:
  - Do not generate texts
    - No texts are generated from the field values during the data collection run. Only previously existing texts – whether generated in an earlier data collection run or entered manually – are displayed.
  - Generate texts (do not overwrite)

---

**Maintaining Texts for Summarization Objects**

The system generates texts for the summarization objects using the designation of the field value. If any nodes already have texts – whether generated in an earlier data collection run or entered manually – the texts are not overwritten.

This is the standard setting. It is preferred over *Generate texts (overwrite)* for performance reasons.

- Generate texts (overwrite)

The system generates texts for the summarization objects using the designation of the field value. Any existing texts (including texts entered manually) are overwritten.

- r. Execute the data collection run for your summarization hierarchy. The system generates texts for the summarization objects in accordance with the option you chose.

## Data Collection for Summarization Hierarchy

### Use

The data summarized with a summarization hierarchy is collected in a data collection run. The data collection run is usually carried out for each summarization hierarchy after period-end closing in *Cost Object Controlling*.

The following occurs during a data collection run:

The system reads the quantities and values of the selected objects as defined by the summarization hierarchy for the period being closed. This data is summarized upwards according to the structure of the hierarchy and it is updated by period and cost element in the summarization objects. A summarization object is built for each field characteristic for all fields in a summarization hierarchy.



If your summarization hierarchy consists of the fields plant and order type, for example, the system creates the following summarization objects:

- Plant A
- Plant B
- Plant A, order type 1
- Plant B, order type 1

If a data collection run was already executed, the data selected for a new data collection run is updated as follows:

- Data on the summarization object for periods within the summarization time frame of the new data collection run is reset and recalculated.
- Data on the summarization object for periods outside the specified time frame of the new data collection run is retained. This prevents the data calculated in an earlier summarization run from being deleted by a new data collection run.

You can make the selection of objects for the summarization dependent on the status of the object. To do this, create a status selection profile when defining the summarization hierarchy. In the status selection profile you can specify which status the selected objects should have (released, or confirmed, for example). If you work with status selection, you should keep this in mind when you choose the summarization time frame.



If, for example you want to summarize only settled orders and limit the summarization time frame to the last two periods, even though one order runs over four periods, the values (such as actual costs) of the first two periods of the order will not be summarized and will therefore not be in the summarization hierarchy. Because the total target costs are only calculated and updated in the period in which the order was delivered or technically completed, the cumulated target costs are presented against partial actual costs in the summarization hierarchy.

If you are using status selection, specify a summarization time frame that is large enough to include the entire life of an order.

## Data Collection for Summarization Hierarchy

If you are not using status selection, it is sufficient to specify a summarization time frame that includes all open periods in *Financial Accounting*.

You can find more information under [Background Information on Summarized Analysis \[Page 174\]](#).

## Prerequisites

If you are using joint production, you must execute the function [Preliminary Settlement for Co-Products, Rework \[Ext.\]](#) before executing the data collection run. This is due to the fact that summarizations for joint production only summarize the values of the order items upwards, and not the values in the order header. You can find more information under [Special Processing with Joint Production \[Page 373\]](#).

## Features

You can carry out a data collection run for:

- the entire summarization hierarchy
  - If you carry out a data collection run for the entire hierarchy, you can display a report for each summarization object of the hierarchy.
- for a partial hierarchy

### Data Collection for Summarization Hierarchy

For example, if you want to calculate the costs for all orders for a particular material, you can carry out the data collection run for the appropriate subhierarchy. In addition, you can display reports for all summarization objects in this subhierarchy.

You can also perform a deletion run. This will delete the data for all summarization objects in the specified hierarchy. It is meaningless to enter a time frame when performing a deletion run. A deletion run is necessary, for example, if you want to make subsequent changes to the definition of a summarization hierarchy.

In addition, you can execute a data collection run in which the summarization hierarchy is built but no data is selected. If a summarization was already executed for this time frame, the summarization objects were updated in the data collection run without writing over existing data.

### Notes on Performance

**To reduce runtimes**, you can run the summarization run for summarization hierarchies on multiple servers simultaneously. You can improve the performance of simultaneous processing by defining the number of summarization nodes.

In addition, in the summarization hierarchy you can stipulate that individual totals records files should not be summarized, or that the records of totals records files without origin should be summarized. It is recommended that you set this indicator if you are interested in simple cost element reports without much detail.

For performance reasons it is also recommended that you do not choose the field *Order number* as a hierarchy level when defining the summarization hierarchy.

If you work with an order hierarchy with classification, you should execute the function *Characteristic Statistics* on a regular basis. You can change the sequence of the selected characteristics, which will speed up the selection of the classification characteristics. You can find this function in the application menu of the particular component in Cost Object Controlling under *Information System* → *Data Collection* → *Order Hierarchy (Classification)* → *Environment* → *Characteristic Statistics* → *Generate*.

Before executing the data collection run, set the indicator *Classification* in Customizing of *Cost Object Controlling* in *Product Cost by Period* or in *Product Cost by Order* under *Check Order Types* in the *Change Order Type* view and classify the orders with the report RKO CLASS. Then, deactivate the indicator.

#### See also:

[Special Requirements in Joint Production \[Ext.\]](#)

[Performance in Product Cost Controlling \[Ext.\]](#)

## Executing Data Collection for Summarization Hierarchy

## Executing Data Collection for Summarization Hierarchy

### Prerequisites

- You created a summarization hierarchy.
- If you want to use **parallel processing to shorten the runtime of a data collection run**, you should have your system administrator set up a server group and tell you the maximum number of tasks.

### Defining a Server Group (Only for System Administrators)

To specify which servers the summarization run should run on, choose *Tools* → *Administration* → *Administration* → *Network* → *RFC destinations* → *RFC* → *RFC groups*.

It is recommended that you execute the data collection run after each period-end closing, thus summarizing current data such as target costs, work in process and variances.

If you want to monitor actual costs, it can also be helpful to execute a data collection run during a period before period-end closing activities.

### Procedure

To perform a data collection run:

5. Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Cost Object Controlling* → *Product Cost by Period / Product Cost by Order / Product Cost by Sales Order / Costs for Intangible Goods and Services* → *Information System* → *Tools* → *Data Collection* → *Summarization Hierarchy*.

The screen *CO Summarization* appears.

6. Enter the following data:

- Hierarchy

For a list of summarization hierarchies in the controlling area, press F4.

To see a list of hierarchies that have been summarized, choose *Extras* → *Summarized Hierarchies*.

- Subhierarchy

If you only want to summarize part of the hierarchy, choose the arrow symbol button *Set Subhierarchy*. All fields are listed for which summarization has been carried out (such as the plant or material). Enter the field attributes for which the summarization is to be carried out.



For example, if you enter plant 0001 and material PROD-1, the costs of all orders will be summarized that were created for material PROD-1 in plant 0001.

If you enter only plant 0001, only the costs for all orders in plant 0001 will be summarized.

- From Period/Fiscal Year and To Period/Fiscal Year

The values for these periods will be displayed for the objects selected according to

### Executing Data Collection for Summarization Hierarchy

the summarization hierarchy. If an object does not have any values in the periods specified, it is considered in principle during data retrieval, but with no values.

5. Turn on one of the following indicators:
  - Summarization run  
In the summarization run the data for the periods within the specified summarization time frame are reset and recalculated. Data on the summarization object for periods outside of the summarization time frame is retained.
  - Deletion run  
The deletion run deletes all summarization objects created by previous data collections. After that, the hierarchy definition is changeable again.
  - Hierarchy without data  
Set this indicator if you want just want the structure of a summarization object without data.
12. Choose *Extras* → *Exception* → *Set rule*. This allows colored traffic light symbols to be displayed at hierarchy nodes for which predefined threshold values have been exceeded. You first define the rules for exceptions in Customizing. Here you specify the basis for the threshold values and by how much the threshold value has to be exceeded before a traffic light is set.
13. In the standard system, the indicator *Background processing* is turned on. If you want to perform the summarization run online, you must turn off this indicator.
14. Select *Parallel Processing* if you want to use **parallel processing** for a data collection run.

The dialog box *Parallel Processing* appears.

Set the indicator *Parallel processing online* and enter the following data:

- Maximum number of tasks (number of system sessions on the servers)
- Number of nodes (task)
- Server group

Choose *Confirm*.



System resources are utilized in accordance with the number of tasks. For this reason you should limit the number of tasks or only use parallel processing when there are sufficient system resources available.

15. Choose *Execute*.  
If you have turned off the indicator for *background processing*, a dialog box appears in which you must confirm the order summarization run.

## Result

An overview screen is now displayed that shows the processed nodes of the hierarchy.

You can use the following functions:

- Message log

---

**Executing Data Collection for Summarization Hierarchy**

The message log lists any errors that occurred and any information messages that were issued during summarization.

- Table statistics

The table statistics specify how many totals records were written during summarization.

**See also:**

[Performance in Product Cost Controlling \[Ext.\]](#)

## Object Lists

### In Cost Object Controlling

#### Use

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

## Sales Order Selection

# Sales Order Selection

## Use

List with master data on the sales order and associated key figures in *Product Cost by Sales Order*. This report belongs to the report category *object list*.

You use sales order selection to analyze sales order items that carry costs and revenues. You select these sales order items according to various criteria. The sales order items with costs and revenues that meet the selection criteria are shown in user-definable results lists. From an order in the results list, you can go to the detailed reports.

The following criteria are available in the standard system to limit the selection of the sales orders:

- Time frame of posting periods  
(key figures are only taken from data within the specified posting periods)
- Characteristics of the sales order header
- Limit characteristics of the sales order item

See also:

[Selection Parameters for Sales Order Selection \[Ext.\]](#).

The sales order selection is available for the following sales documents:

- Sales orders
- Customer quotation
- Customer inquiry

Sales order selection is **not** summarized analysis and is **not** based on classification. It mainly serves to answer ad-hoc questions that arise in *Product Cost by Sales Order*. The key figures determined are taken from the data with original cost element. The key figures are **not** in saved form, so you may experience long runtimes with mass data analysis of large results lists.

## Notes on Performance

To reduce runtimes during report data formatting, you can use extracts. An extract is a saved dataset containing the report data selected at the time the extract was generated.

The following standard analyses with adapted selection screen are available:

- Analysis of item data
- Analysis of header and item data
- Analysis of header data

You may create your own selection screen based on other requirements. To do this, define your own selection variant that determines the structure of the selection screen.

## Sales Order List

The list with the selected sales orders consists of characteristics and key figures.

The data is displayed with the ABAP List Viewer. You can adapt the format of the results list to your individual needs by selecting the characteristics and key figures that you are most interested in. Create a layout and save it.

You can alter the sales order list interactively by choosing a different layout.

You can also switch between the following views within the sales order list:

- Sales document items
- Sales documents and their items
- Sales documents

Depending on the view of the sales order list, only characteristics and key figures of the order header or order item can be selected:

	Header	Item
Sales document items	No	Yes
Sales documents and item	Yes	Yes
Sales documents	Yes	No

Note that in a report for header and item data you can only summarize on characteristics of the sales order header. Note that the data displayed on the sales document header level is obtained from aggregation of only those items that carry costs and revenues. This data is calculated at the time the report is called up and is **not** saved.

Use the following interactive features to analyze your results list:

- Setting a filter
- Create subtotals from header characteristics
- Sort

**Notes**

Subtotals on long results lists may require long runtimes to calculate.

**Possible Key Figures for the Results List of Sales Order Selection**

**Characteristics**

The following characteristics are available for the sales document header:

- Created on
- Created by
- Document date
- Bus.transaction, such as order, inquiry, quotation
- Purchase order number
- Sales document type
- Sales organization

## Use

- Distribution channel
- Division
- Sales group
- Sales office
- Business area

The following characteristics are available for the sales document item:

- Material
- Batch
- Name
- Item category
- Previous document
- Previous document item
- Plant
- Created on
- Created by
- Profit center
- Results analysis key
- Costing sheet

## Key Figures

In the R/3 System, the account assignment object can only be the sales document item, and not the sales document. This means that values such as actual costs and actual revenues, planned costs and planned revenues, and results analysis data are only on sales document items that are relevant to account assignment. This report first dynamically summarizes the key figures to the sales document items, and then dynamically summarizes this data to the sales document header. Note that these key figures are **not** saved and must be built up from the data again each time the report is accessed.

The following field groups with key figures are available for the sales document header and sales document items:

- General key figures
- Results analysis data
- Comparison key figures

### **The field group *general key figures* contains:**

- Planned costs
- Actual costs
- Actual costs (balance of debits and credits)
- Gross planned revenue (without sales deduction)

- Gross actual revenue (without sales deduction)
- Planned sales deduction
- Actual sales deduction
- Planned revenue (including sales deduction)
- Actual revenue (including sales deduction)
- Planned profit
- Actual profit
- Item balance against actual (costs and revenues)
- Planned quantity
- Confirmed quantity
- Planned unit of measure
- Actual unit of measure

**The field group *results analysis* contains:**

- Results analysis: inventory (WIP)
- Results analysis: revenue in excess of billings
- Results analysis: total inventory
- Results analysis: reserves for unrealized costs
- Results analysis: revenue surplus
- Results analysis: reserves for imminent loss
- Results analysis: total reserves
- Results analysis: cost of sales
- Results analysis: revenue affecting net income
- Results analysis: result

**The field group *comparison key figures* contains:**

- Variance plan/actual costs absolute
- Variance plan/actual revenue absolute
- Variance plan/actual profit absolute
- Variance plan/actual costs percentage
- Variance plan/actual revenue percentage
- Variance plan/actual profit percentage
- Planned profit percentage (on basis of planned costs)
- Actual profit percentage (on basis of actual costs)

## Use

### Exceptions

Exceptions are used to display traffic light symbols (red/yellow/green) at objects whose variances exceed a predefined threshold. You specify the reference for the threshold values by choosing a rule basis (such as *actual costs absolute*). The percentage or absolute threshold values you specify tell the system by how much the reference value must be exceeded before it displays a traffic light symbol on the material.

In sales order lists that display the sales document headers, an exception is set for the sales document header if at least one item fulfills the exception rule.

### Integration

From the results list of the sales order selection you can call up detailed reports with original cost elements for any sales order item. The reports available are offered in a dialog box.

The following jumps to detailed reports are possible:

- Sales order and assigned orders
- Master data (display sales order)
- Line item report, actuals / sales order

#### See also:

[Product Cost by Sales Order \[Ext.\]](#)

[Sales Order Item That Carries Costs and Revenues \[Ext.\]](#)

[Results Analysis \[Ext.\]](#)

For more information on creating selection variants, see:

[Creating Selection Variants \[Ext.\]](#)

For more information on creating your own display variants, see [Creating Display Variants \[Ext.\]](#).

For information on using extracts, see [Using Extracts \[Page 371\]](#).

For information on navigation and formatting functions, see the documentation *ABAP List Viewer*.

See the following for general information on performance:

[Performance in Product Cost Controlling \[Ext.\]](#)

## Order Selection

### Definition

Using order selection, you can generate a list of orders with the associated data and key figures.

### Use

Order selection allows you to select orders according to different criteria. The result of your selection is in the form of a list of orders containing specific master data and key figures on the orders.

You can create exceptions to specify that all orders that fulfill certain conditions are identified with colored traffic lights (red, yellow, green) in the results list. This way, you can filter out orders that should be analyzed further.

The results list has a number of navigation and formatting options and can be modified by the user. From the results list in detail reports, you can branch off to single orders or to a comparison of two orders, in order to examine these orders more closely. You can also go to the master data display for characteristics from the results list. You can, for example, display the master record of the manufactured material for an order to be analyzed.

Order selection is not a summarized analysis and is **not** based on classification. It mainly serves to answer ad-hoc questions that arise in *Cost Object Controlling*.

### Integration

From the order list in the order selection you can call up detail reports with the original cost elements for any order. The reports that are available are displayed in a dialog box. When you choose a report, the system calls up this report for the chosen order. For a more detailed analysis of an order, there are reports about planning data, actual data, and numerous reports about variances as well as a report about work in process.

Furthermore, there are additional reports available for the comparison of two orders.



If you want to add more reports to the dialogue box so that you can jump to the results list for these reports, you must first add these reports to your list of reports in Customizing.

The data is displayed with the [ABAP List Viewer \[Ext.\]](#).

### Prerequisites

If you want to display specific master data in the list of selected orders, make the proper adjustments in the IMG for the Information System under *Product Cost Controlling* → *Information System* → *Control Parameters* in the section [Display Fields Order Selection \[Ext.\]](#). Here you choose the fields of the order master as well as the order header and order item that you want displayed in the results list of the order selection. For performance reasons, try to limit the selections to only those fields that are really necessary.

If you want to use order status as one of the selection criteria, you must first create a status selection profile in Customizing. You can find this step in the IMG for the Information System under *Product Cost Controlling* → *Information System* → *Cost Object Controlling* → *Settings for*

## Order Selection

*Summarized Analysis/Order Selection* → *Order Hierarchy and Selection with Classification* → [Define Selection Profiles for the Order List \[Ext.\]](#).

To save layouts for all users, set the *Shared* indicator in IMG for the Information System under *Product Cost Controlling* → *Information System* → [Control Parameters \[Ext.\]](#).

## Features

The list with the selected orders consists of master data and key figures. The structure of the list is determined by the layout entered in the selection screen. By creating a layout, you can determine yourself, which master data and key figures will be displayed in the results list. The key figures that you can choose from are listed here. You determine the master data to be shown in the results list in Customizing for the Information System. Exit the results list and go to an order's detail screen to see all the master data and key figures (independent of the layout chosen) for an order, insofar as values exist.

This way, you can edit the results list interactively. Use the functions or the ABAP List Viewer for this. You can, for example, set a filter to exclude all orders except orders whose plan/actual variance lies between two specific amounts. Additionally, you can perform an ABC analysis within a results list and calculate a total across individual key figures, among other things.

A number of different criteria are available to limit the selection of the orders. The fields of the general order master, the order header, and the order item for manufacturing orders can be used as selection criteria. In addition, you have the option of applying the order status in selection, or limiting the scope of the selection to a specific time frame. If you work with classification, you can also use classifying attributes as selection criteria. You can display the selection criteria used for the report call in the results list.

The setup of the selection screen is determined by a selection variant. You can adjust the selection screen to suit your particular requirements by creating a selection variant.

Order selection is supplied in three standard selection variants.

- Standard selection variants (can be displayed in *Product Cost by Order* and *Product Cost by Period* and *Costs for Intangible Goods and Services*)
- Selection variants for sales order production
- Selection variants for joint production

## Special Processing with Joint Production

The key figures for the selected orders are displayed at the order header level or additionally at the order items level. In joint production, the values are displayed at the order item level.

For more information, see *Special Requirements with Joint Production*.

## Notes on Performance

To avoid long **runtimes** during report calls, you can use extracts. An extract is a saved dataset containing the report data selected at the time the extract was generated. An extract is created from the selection parameters entered before the report call. In particular, an extract is dependent on whether the order selection happened for orders without items or for orders with items. Depending on the setting, the system will display only those orders with items or without when reading the extract later.

### See also:

[Display Fields of the Results List \[Page 336\]](#)

For information on different navigation and formatting functions, see the documentation [ABAP List Viewer \[Ext.\]](#).

For more information about selection options, see: [Selection Parameters for Order Selection \[Page 333\]](#).

You can find detailed information on joint production in the following section:

[Special Requirements in Joint Production \[Ext.\]](#)

For information on working with extracts, see [Using Extracts \[Page 371\]](#).

See the following for additional information on performance improvements:

[Performance in Product Cost Controlling \[Ext.\]](#)

## Selection Parameters for Order Selection

# Selection Parameters for Order Selection

## Use

The following criteria are available in the selection screen to limit the selection of the orders:

- You can limit the reporting time frame to be analyzed.



Limiting the reporting time frame specifies the periods from which key figures can be read; it does not affect the order selection. Orders are selected according to entries specified in the selection screen and, if necessary, the requirements of the status selection profile.

- The fields of the general order master, the order header, and the order item for manufacturing orders are available as selection criteria.
- You can select according to sales order and sales order item in sales order production.
- By defining a status selection profile, you can limit the selection range to orders with a certain status. You can, for example, specify that only orders for which variances have already been calculated should be selected.
- If you work with classification, you can also use classifying attributes as selection criteria.

## Prerequisites

If you want to use classifying attributes as selection criteria, you must have added these attributes to the selection screen of the classification or defined an additional selection screen containing the attributes. For more information about the procedure, see *Customizing for the Information System under Product Cost Controlling → Information System → Cost Object Controlling → Settings Summarized Analysis/Order Selection → Order Hierarchy and Selection → Define Selection Screens for the Order List*. The selection screens or additional selection screens created here are only needed to select orders according to classifying attributes, and must contain the attributes which you require for your selection. These are usually user-defined characteristics for order classification.

To make the selection of orders dependent on a certain status, you must have defined status selection profiles in Customizing for the Information System. You make this definition under *Product Cost Controlling → Information System → Cost Object Controlling → Settings Summarized Analysis/Order selection → Order Hierarchy and Selection → Define Status Selection Profiles*.

## Features

The fields of the general order master, the order header, and the order item for manufacturing orders are available as selection criteria. In the standard system, only a selection of the total fields available is in the selection screen of the reports. However, you can adapt the selection screens to your requirements and access other fields of the above tables by creating your own selection variants. By defining a selection variant, you determine the structure of the selection screen. You can define and set up your own selection variants in your personal work area (favorites).

## Selection Parameters for Order Selection

If you work with classification, you can also use classifying attributes as selection criteria. This is only of use with user-defined characteristics, because, for the most part, the existing object characteristics agree with the above-mentioned master data fields available for selection.

Classification provides several order selection options, as follows:

- You use the classifying attributes as selection criteria.
  - Go from the selection screen for the order selection to the *classification* screen and start the selection by entering the characteristic values. After selecting the orders that correspond to the characteristic values, go back to the selection screen for order selection. This screen displays only those orders selected by classification (in the *order* field). If required, you can limit the selection range by entering further selection criteria.
- You only use the existing master data fields as selection criteria for order selection. If orders are read during selection for which classification is active, you can extend the display to include the classifying attributes of these orders.

To do this, enter the desired selection criteria in the screen for the order selection. You must also turn on the indicator *W/ classification chars*. When the report is executed, the classifying attributes of the classified orders are read from the databank and output. You can display these attributes by defining a display variant in the results list.

You can limit selection to orders with a particular status by entering a **status selection profile** in the selection screen. You use status selection profiles to lay down conditions for the selection of orders according to user status or system status.



Suppose you want to select all partially delivered orders for a particular material. You use a status selection profile that allows only the status *partially delivered*.

You can also define **exceptions** in the selection screen of the report. Exceptions are used to display traffic light symbols (red/yellow/green) at orders whose values exceed a predefined threshold. You specify the reference for the threshold values by choosing a rule basis (such as *actual costs absolute*). The percentage and absolute threshold values that you specify tell the system by how much the reference value must be exceeded before it displays a traffic light symbol on the order.

## Special Processing with Joint Production

To enable the status-dependent selection of orders in joint production, you can enter separate status selection profiles for the order header and order item, since both statuses can be different in joint production.

You decide in the selection screen of the report whether the key figures for the selected orders should be displayed at the order header level or additionally at the order items level. In joint production, the values must be displayed at the order item level. In addition to the selected setting, you also specify which display variant should be used for the structure of the results list.

## Notes on Performance

To avoid long runtimes when you execute reports, you should limit the selection range as much as possible and use extracts, if necessary. Please note that the length of the runtime is also dependent on the selection of display fields for the results list that you defined in Customizing.

**See also:**

[Order Selection \[Page 330\]](#)

### Selection Parameters for Order Selection

For information on creating your own selection variants, see [Creating Selection Variants \[Ext.\]](#).

If you are considering the use of classification, read the section [Classification \[Page 231\]](#) and pay particular attention to the comments on performance.

[Performance in Product Cost Controlling \[Ext.\]](#)

[Special Requirements in Joint Production \[Ext.\]](#)

## Display Fields in the Results List

### Structure

The results list of order selection can be used to analyze master data and key figures in a number of ways. You use the layout in the selection screen of the report to control which fields are displayed in the results list. The standard system contains layouts that use only some of the available fields. You can also create your own layouts according to your requirements. You can indicate these as initial variants that will be set as default values when you call up a report. You can save your layouts as user-specific or shared. If you don't create the layout as a user-specific layout, it is also available to other users. However, you can only save shared layouts if the *Shared* indicator was selected under *Control Parameters* in Customizing for the Information System.

### Key Figures

The key figures for the structure of the results list are predefined according to field groups. The following field groups are available:

- Order header (such as order quantity)
- Planning data (such as fixed / variable planned costs, planned quantity)
- Actual data (such as fixed / variable actual costs, actual quantity)
- Target data and variances (including the categories of variance calculation)
- Data to calculate work in process or results analysis (such as confirmations for missing costs)
- Comparison key figures (such as plan/actual variance)
- Units (such as units for production quantities)

You can display these key figures in controlling area currency, company code currency, and object currency.

### Master Data

You determine the master data to be shown in the results list in Customizing for the Information System. The following fields are available to you for this selection:

- Fields in the order master
- Fields in the order header and in the order item for manufacturing orders



However, you should select the fields in Customizing that you want to use later as display fields in your results list, since all the selected fields must be read when executing a report from the database.

If you select *With classification chars.* in the report selection screen, the classifying characteristics will be extended for every order for which classification is active when you execute a report. You also have user-defined characteristics available for the classification as display fields for the results list.

## Display Fields in the Results List



Do not transport or import layouts in which user-defined characteristics are used as display fields. If you want to use corresponding layouts, you must create them again in the productive system.

### See also:

You can find information on the procedure during the creation of layouts under [Creating, Changing, and Managing Layouts \[Ext.\]](#).

## Display of Sales Order Items to Be Costed

### Use

You can call up this report to obtain a quick overview of the sales order items to be costed. You generate an extract that can be displayed in a MiniApp in the mySAP.com Workplace.

### Features

The report displays the following sales order items:

- Sales order items that have the status *COST*, or
- Sales order items for which no marked cost estimates exist in the system due to incorrect costing. This only applies to items in sales orders that were created with a requirements class for which the setting *B (automatically calculate and mark)* was entered under *Cost Estimate* and the indicator *Without valuation strategy* was not set so that valuation should take place with an order cost estimate.

The sales order items are sorted and displayed according to the earliest desired delivery date. The columns *Status SD* and *Costing status* show which selection criteria correspond to which customer order position. If the *Status SD* is *ZKAL* then no cost estimate exists, and therefore no *Costing status* is shown. If a cost estimate has already been performed, the *Status SD* will not be displayed.

### Activities

If you don't want to save the extract, you don't have to enter a user. If you save the extract without entering a user, all users can display the extract.

Under *Maximum no. of hits*, enter the maximum number of sales order items that should be displayed in the list. If you limit the number of hits, performance improves. Note that selection is terminated when the specified number of sales order items have been found. The found items are first sorted according to the desired delivery date. For this reason, it is possible that additional items exist in the system that correspond to the selection criteria and have an earlier desired delivery date than the ones found.

### Integration

The extract that you save here is displayed in the MiniApp: *Sales order items to be edited*. The report SAPRCKAPP02 allows you to see the contents of the extract in the R/3 system.

#### Note for System Administration:

To display the extract in the MiniApp, you must carry out the steps described under [Setting Up Mini-Applications \[Ext.\]](#).

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**Detailed Reports**

## Detailed Reports in Cost Object Controlling

### Use

The report category *Detailed Reports* contains reports that provide special data for individual objects. The objects (cost objects) to be analyzed in reporting differ depending on the application component in *Cost Object Controlling*. If you are using *Product Cost by Sales Order*, for example, it may be useful to analyze costs at the level of a sales order item that carries costs and revenues. In *Product Cost by Period*, the product cost collector is the cost object. Accordingly, the sales order item with costs and revenues is used as the report object in *Product Cost by Sales Order*, and the product cost collector is used as the report object in *Product Cost by Period*.

The Information System for *Product Cost by Period* provides detailed reports for the following objects:

- [Product Cost Collectors \[Ext.\]](#)
- [Cost Object Hierarchies \[Page 132\]](#)

The Information System for *Product Cost by Order* provides detailed reports for the following objects:

- [Production Orders \[Ext.\]](#)
- [Production Orders without Quantity Structure \[Ext.\]](#)
- [Process Orders \[Ext.\]](#)

The Information System for *Product Cost by Sales Order* provides detailed reports for the following objects:

- Sales document items that carry costs and revenues  
Usually, these are [sales order items that carry costs and revenues \[Ext.\]](#).
- [Sales order cost estimates \[Ext.\]](#)
- Sales orders with assigned orders

The Information System for *Costs for Intangible Goods and Services* provides detailed reports for the following objects:

- [General cost objects \[Ext.\]](#)
- Internal orders with revenue

**See also:**

[Cost Objects in the R/3 System \[Ext.\]](#)

[Product Cost by Period \[Ext.\]](#)

[Product Cost by Order: Scenario \[Ext.\]](#)

[Product Cost by Sales Order \[Ext.\]](#)

[Costs for Intangible Goods and Services \[Ext.\]](#)



## Sales Order with Assigned Orders

### Use

Report that shows the sales order items of a sales order with the associated orders in a hierarchy graphic.

The data is displayed with the ABAP List Viewer (ALV Tree).

The report provides predefined layouts with associated data. For example, you can display the following data with the standard layout *plan/actual comparison* supplied by SAP: planned costs, actual costs, planned output quantity, actual output quantity, and currency.

You can create custom layouts containing the information you are most interested in.

See also:

[Defining Current Layouts \[Ext.\]](#)

[Functions of the ABAP List Viewer \[Ext.\]](#)

You can switch between the following display formats:

- **No aggregation**
- **Exclude plan values**



**Note on the display format *exclude plan values*:**

With collective orders and joint production, the difference between the debit and credit in the planned data is aggregated upwards (up to the object beneath the sales order item). This means that with collective orders, the cumulative planned value of the entire collective order is shown on the leading order. In joint production, you can display the cumulative planned value of the production process on the order header.

You use the display format *exclude plan values* in sales-order-related production when a sales order cost estimate exists. If you used the display format *include plan values* in this case, the planned costs of the assigned orders would be added to the planned costs of the sales order cost estimate, resulting in the planned costs being reported twice.

- **Include plan values**



**Note on the display format *include plan values*:**

You use the display format *include plan values* when no sales order cost estimate exists. The total planned cost of all assigned orders is aggregated upwards (to the sales order item).



**Note on the display formats *exclude plan values* and *include plan values*:**

Displaying the aggregated values (*exclude plan values* and *include plan values*) is only appropriate when you are using a nonvaluated sales order stock. If you are using a

### Sales Order with Assigned Orders

valuated sales order stock, aggregating the data may result in meaningless data in some cases (especially with *include plan values* without a sales order cost estimate).

In the **actual data**, both *include plan values* and *exclude plan values* aggregate the value upwards (to the sales order item). To ensure that you get meaningful data, particularly with the display formats *include plan values* and *exclude plan values*, you should do the following before executing the report:

- Settle the assigned orders
- Debit the sales order item with the actual costs of the period (such as with sales and administrative costs)

*No aggregation* displays the values updated on the object.

The report can be displayed in the following currencies:

- Controlling area currency
- Company code currency / object currency

You can define exceptions in the report.

Exceptions are used to display traffic light symbols (red/yellow/green) at objects whose variances exceed a predefined threshold. You specify the reference for the threshold values by choosing a rule basis (such as *actual costs absolute*). The percentage and absolute threshold values you specify tell the system by how much the reference value must be exceeded before it displays a traffic light symbol on the object.

## Integration

You can access detailed reports for sales order items or assigned manufacturing orders while in the report.

[Product Cost by Sales Order \[Ext.\]](#)

[Key Figures in Product Cost by Sales Order \[Page 255\]](#)

[Sales Order Item That Carries Costs and Revenues \[Ext.\]](#)

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**Detailed Reports on Sales Order Items**

## Detailed Reports on Sales Order Items

### Use

These reports are used for the detailed analysis of individual sales order items.

### Features

To display the items assigned to the sales order and the orders that have been assigned to the items, enter the sales order number and choose *Settings* → *Suborders* → *Overview*

This brings you to the report *Sales order hierarchy*.

You can specify whether only the costs updated to the sales order item are included, or whether the costs that were updated on the orders assigned to sales order item are also included in the report. The setting necessary for this can be found under *Settings* → *Suborders* → *On/Off*.

If, for example, the assigned orders are included, you can perform a plan/actual comparison of the entire production structure, taking into account the original cost elements. The costs of the production orders that have been started but are not yet finished are also included. This, for example, makes it possible for you to analyze the direct costs of production. This report is particularly useful in complex make-to-order production. It can be used with both valuated and non-valuated sales order stock.

See also:

[Valuated Sales Order Stock \[Ext.\]](#)

Complex Make-To-Order Production

The data is displayed using the cost analysis. The cost analysis is based on the functionality of the ABAP List Viewer and offers additional functions. Using the layout technology in the report, you can show the key figures that you want to analyze.

**See also:**

- General information on [cost analysis \[Page 77\]](#)
- General information on the [ABAP List Viewer \[Ext.\]](#)
- See the following for general information on working with layouts:
  - [Creating, Changing and Managing Layouts \[Ext.\]](#)
  - [Defining Current Layouts \[Ext.\]](#)
  - [Saving Layouts \[Ext.\]](#)
  - [Managing Layouts \[Ext.\]](#)
  - See [Creating and Deleting Subtotals \[Ext.\]](#) for general information on grouping in layouts.

You can find general information on the key figures that you can analyze for the sales order item under the following:

[Key Figures in Product Cost by Sales Order \[Page 255\]](#)

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**Detailed Reports on Sales Order Items**

See the following sections in the documentation of *Cost Object Controlling*:

[Product Cost by Sales Order \[Ext.\]](#)

[Sales Order Item That Carries Costs and Revenues \[Ext.\]](#)

[Costs for Intangible Goods and Services \[Ext.\]](#)

See the document *CO Internal Orders* for information on internal orders with revenue.

## Detailed Reports on Sales Order Cost Estimates

### Definition

The following reports described are based on the data of a sales order cost estimate. Sales order cost estimates can be created in sales-order-related production.

### Use

In the selection screen, you can select report settings (some of which you can change once in the report) before calling up the report.

- You can specify which *cost base* and which *cost component view* (for example, cost of goods sold) should be displayed in the report. If you don't enter a cost base, the costs are displayed based on the costing lot size.
- You can display the costs in company code or controlling area currency (if the data exists; see [Currencies in Cost Estimates \[Ext.\]](#)). To do so, choose *Settings* → *Currency...*
- You can select a predefined layout with *Settings* → *Layout...*

If you want to have multiple low-level codes displayed in the itemization, choose *Settings* → *BOM Explosion*. You can also specify that only material items should be displayed. You can have an additional field *Level* displayed that shows the low-level codes of the respective report lines.

#### See also:

[Sales Order Costing \[Ext.\]](#)

[Cost Object Controlling: Sales-Order-Related Production \[Ext.\]](#)

## Costed Multilevel BOM

### Definition

Hierarchical overview of the values for all costing items of a material, sales order or base planning object.

### Prerequisites

If you want to see the costed multilevel BOM in the cost estimate display and the information system, set the *itemization* indicator when you save the cost estimate.

### Use

The display of costs for each component (assemblies and input materials) in the costed multilevel BOM is based on the structure and content of the BOM of the costed material. You can also display all other costing items (for example, internal activities and overhead costs) by choosing . In addition to costs, the respective input quantities are displayed. You can check which valuation strategy was used during costing by also having the field *Price Strategy (text)* displayed.

The structure of the costed multilevel BOM for unit cost estimates is very flat as a result of the costing structure of the unit cost estimate and therefore offers little information on the structure of the costs.

### Structure

In the SAP standard system, you can choose between predefined layouts or adjust information displayed according to your requirements by creating a [layout \[Ext.\]](#).

The values displayed are dependent on the cost component view (for example, cost of goods manufactured, cost of goods sold or stock valuation) and the cost base. If you change these, the costs are immediately converted to the new cost base or displayed in the selected view.

Choose  for an explanation of the symbols next to the materials or items.



The values in the costed multilevel BOM are determined from the values in the itemization. Subsequent changes of the quantity structure or the values are not displayed. A new costing is necessary for this.

### See also:

If you are using *mixed costing*, refer to [Special Processing with Mixed Costing \[Page 375\]](#).

## Cost Components

# Cost Components

## Use

This report shows the costs calculated in a material cost estimate or sales order cost estimate across all production levels, broken down into cost components. You can analyze the costs of the cost component split for the cost of goods manufactured and the costs of the primary cost component split.

The results of a cost estimate are updated as cost components (this is called a *cost component split*). The cost components break down the costs of a material across the entire production structure into 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. In order to present primary costs for internal activities, you can use a primary cost component split as an alternative way of outlining the cost components.

The cost component split enables you to do the following:

- Analyze the cost origin across multiple production levels.  
You can analyze the value added within a multilevel production structure. The costs of the upper level consist of the internal activities and the overhead costs that are incurred at that level. The costs of the lower level include the materials and raw materials. The total costs of the upper level and lower level equal the total costs of the production level being analyzed.
- View the costs by original production factors (primary cost component split).
- Structure the costs according to the requirements of other areas (such as material valuation or profitability analysis).  
In the cost component view, you can specify which cost elements are displayed in the report. For example, you can select the cost of goods manufactured or the cost of goods sold, or the costs that are relevant to inventory valuation. You specify various cost component views in Customizing for *Product Cost Planning*. For each cost component, you can decide which share of the costs contained therein (fixed, variable, full) is displayed in which cost component view.

## Prerequisites

When you save a material cost estimate or a costing run, the system automatically updates a cost component split for each costed material in the BOM. For this to occur, you must have already defined a cost component structure in Customizing.

You specify the following in a cost component structure:

- Which cost components the calculated costs should be assigned to
- Which cost elements are grouped into which cost component

The cost component structure is selected through the company code, plant, and costing variant. You specify this assignment in Customizing for Product Cost Planning under *Basic Settings for Material Costing* → *Define Cost Component Structure*.

If you want to see a primary cost component split for the cost components, you must first generate a primary cost component split in *Cost Center Accounting* or *Activity-Based Costing*.



If you are using mixed costing, you can display the costing results for a specific procurement alternative broken down into cost components. Call up the desired procurement alternative in the report call using the menu option *Settings*. To display the cost component split for a mixed cost estimate that was formed from different cost estimates and procurement alternatives and weighted with equivalence numbers, do not enter a procurement alternative. The split for the mixed cost estimate is displayed automatically if a mixed cost estimate was created for the costing version.

## Features

### Main Cost Component Splits and Auxiliary Cost Component Splits

You can display the costs as a cost component split for the cost of goods manufactured and/or primary cost component split.

- You can calculate the cost component split for the cost of goods manufactured and primary cost component split simultaneously. You can switch between the two cost component views (under *Settings* → *Type of cost component split*). However, you can also generate only the cost component split for the cost of goods manufactured or the primary cost component split.
- If you want to cost both cost component splits simultaneously, you must determine which cost component split is the **main cost component split** in Customizing for *Product Cost Controlling*. You can also generate a further cost component split as an **auxiliary cost component split** for comparison purposes.



The [update of the standard price \[Ext.\]](#) in the material master is effected by the main cost component split.

An itemization is only created for the main cost component split.

In the report, you can switch between the main cost component split and the auxiliary cost component split. With the appropriate setting, you can switch between the cost component split for the cost of goods manufactured and the primary cost component split.

### Upper Level / Lower Level / Aggregate Level

The cost estimate enables you to analyze the value added within a multilevel production structure. You can apportion the costs for each material according to the **lower level** and **upper level**.

You can find the cost component split display under *Costs* → *Display Cost components*. You can make this setting with *Settings* → *Layout*. You can create your own report from a large number of selections options.

When you display the costs:

- For the **upper level**, you see the production costs, overhead costs and costs for external activities that are expected for this production level
- For the **lower level**, you see the costs of all material components that are processed in this production level

## Cost Components

In both cases, the costs are apportioned according to [cost components \[Ext.\]](#). The total cost of the upper level and lower level equals the total costs of the production level being analyzed.

You can go to the following other reports in the same report group:

- Total values
- Upper level
- Lower level

When the costs are apportioned according to cost components, the original identity of the costs (for example, costs of materials or fixed and variable production costs) are maintained throughout all production levels. At every production level, the value added at that level and the costs of the lower level can be separated through the cost component split.

When you save a material cost estimate or a costing run, the system automatically updates a cost component split for each costed material. For more information on saving costing results, see [Saving Costing Results \[Ext.\]](#).

If you want to create a cost component split for raw materials and purchased parts, you can enter additive cost components for each material for these costs. You can then group these cost components in an "External procurement" cost component structure that only contains such costs. For more information, see [Additive Costs \[Ext.\]](#).

## Cost Elements

### Use

The report displays a cost estimate broken down into cost elements. The cost elements show the costs according to origin, such as material costs or labor costs. The cost element itemization thus tells you which costs have arisen for what purpose.

### Integration

If you enter an *origin group* in the material master record or in the credit key of the costing sheet, you can have this displayed in an additional field to further break down the costs into material cost elements and the overhead costs into origin groups.



The values in the cost element itemization are determined from the values in the itemization. Subsequent changes of the quantity structure or the costing items are not displayed. To display such changes, costing must be repeated.

If you use your own programs or reports to evaluate your cost element itemizations, you must use the function module CK11\_ITEMIZATION\_TO\_COSX\_CONV, which creates the cost element itemization from the itemization.

### Prerequisites

If you want to see the cost element itemization in the information system, you must select the *itemization* indicator when you save the cost estimate.

### Activities

In the standard system, you can choose between predefined layouts or adapt the information to your requirements by creating custom layouts. For more information, see [Creating, Changing, and Managing Layouts \[Ext.\]](#).

#### See also:

[Cost Analysis \[Page 77\]](#)

## Itemization

# Itemization

## Definition

Report that lists the calculated costs and contains detailed information on cost origins and elements that make up costs.

## Prerequisites

An itemization is generated automatically with a cost estimate. If you want to display the itemization information in the cost estimate display and the information system, you must set the *Itemization* indicator when saving the cost estimate.



During preliminary costing for a production order or a production campaign, an itemization is generated dynamically. However, this itemization is not stored in the system and therefore cannot be analyzed in the information system. The itemization is available for analysis immediately after you carry out costing. For more information on the itemization of production campaigns, refer to [Reports for Cost Controlling of Production Campaigns \[Page 380\]](#).

## Use

You can use itemization to analyze a costed material, base planning object or sales document item in more detail.

Depending on the questions you need answered, there are different layouts of the itemization available in the SAP standard system. Through the selection of certain fields, you can find various information that is also partially grouped. The costs can be broken down for analysis by cost elements, by operations, or by costing items. The following layouts are described in more detail:

- [Itemization by Costing Items \[Ext.\]](#)
- [Itemization by Cost Components/ Cost Elements \[Ext.\]](#)
- [Itemization by Operations \[Ext.\]](#)
- [Itemization by Cost Elements \[Ext.\]](#)

You can modify this structure to suit your own requirements by creating your own [layouts \[Ext.\]](#). You can create your own layouts to be able to see other information in the itemization. For example, you can add the purchasing info record and the purchasing organization or the origin groups to the report display, or add the text of the activity types or item categories.

The origin group provides detailed information on the source of the material costs or on the origin of the overhead. With material costs, the origin group is entered in the material master record. With overhead costs, the origin group is entered in the credit key of the costing sheet and offers more information on the origin of the overhead.

In the itemization, you can also display the costs broken down into cost elements. Material costs, external activity and non-stock material are assigned to primary cost elements. In this itemization, they are shown under cost elements determined by the system. Costs for internal activity are displayed under the allocation cost element of the activity type that was entered in the master record of the activity type. Overhead costs and process costs are also displayed under

secondary cost elements. Because all actual costs are also assigned to these cost elements, a plan/actual comparison is possible later.

Only a limited selection of layouts are available for **base planning objects**.

## Structure

In the standard system, the itemization is displayed with the layout *Item Categories (grouped)*. Here, 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).



The costing item for a material (M) indicates the plant, the relevant material number, the price of the material, the text in the material master data and the quantity used.

The costing item for an internal activity (E) indicates the cost center, the work center, the activity type, a text, the price of the activity and the quantity used.

See [Creating and Deleting Subtotals \[Ext.\]](#) for general information on grouping in layouts.

For *joint production*, the itemization provides two types of display. You can switch between the process view and the product view in the report. While the product view shows only the costs of the co-product, the process view provides information about the costs of the other co-products, as well as an overview of the total costs of the production process. The other co-products are shown under item category A with negative quantities and values. This negative value is the amount of costs for the co-product that was calculated using the apportionment structure.

## Integration

The itemization is a prerequisite for variance calculation in Product Cost by Period and Product Cost by Order.

From the report, you can display the master data of a costing item.

For operations that are carried out externally, the costs are either entered in the routing, or are determined using a purchasing info record. For operations that are carried out internally, the costs are determined using *Cost Center Accounting*. For the valuation of internal activity using a cost estimate with quantity structure, the system assumes that price calculation was already done in *Cost Center Accounting*.

The system determines overhead on the basis of input quantities, or proportionally on the basis of direct costs (material or production) or costs of goods manufactured. You define the conditions for determining this overhead in a costing sheet in Customizing.

Process costs are determined in [Activity-Based Costing \[Ext.\]](#) and are generally assigned to the product using a template. The template specifies which process costs are consumed and the basis on which these costs are further allocated to the product.

### See also:

If you are using *mixed costing*, refer to [Special Processing with Mixed Costing \[Page 375\]](#).

If you are working with production campaigns, refer to [Reports for Cost Controlling of Production Campaigns \[Page 380\]](#).

**More Reports: Line Items**

## More Reports: Line Items

### Use

Line item reports provide a detailed analysis of objects and their data. Line items are based on the lines of a document created by a posting in the R/3 System. The reports are available in the following areas:

- *Product Cost by Order*
- *Product Cost by Period*
- *Product Cost by Sales Order*
- *Costs for Intangible Goods and Services*

Line item reports enable you to make a detailed analysis of the values posted. You can access the original documents (such as the FI or MM document) from the individual lines in the line item report. (*Environment* → *Source document / Accounting document*)

Technical information is also available.

Line item reports are of limited importance in *Cost Object Controlling*, because the posting amounts from production confirmations are generally high, and analysis of the line items is only worthwhile in exceptional circumstances.

You can limit the line items to be displayed through the cost element or cost element group and via the period.

Line item reports are available for the following account assignment objects:

### **Manufacturing orders (production orders and process orders):**

- Line items actual
- Line items for WIP calculation
- Line items variance
- Line items commitment

### **Product cost collectors**

- Line items actual
- Line items WIP calculation (if the corresponding settings in the results analysis version were made, see also *Prerequisites*)
- Line items variance

### **Cost Object ID (Cost Object Nodes in Cost Object Hierarchies and General Cost Objects)**

- Line items actual (for cost object nodes of cost object hierarchies and for general cost objects)
- Line item variance (only for cost object nodes of a cost object hierarchy)

### Sales document item: normally a sales order item:

- Line items actual
- Line items for results analysis
- Line items commitment

The line item reports are supplied with a predefined layout. You can also create your own custom layouts so that you can see other fields of the CO line item in the line item report. You can usually display all the fields of the Controlling document in the line item report. These fields were grouped for clarity into:

- Account assignment
- Time characteristics
- References
- Value key figures
- Technical fields
- Organizational units
- Partner account assignment
- Object
- Other objects
- Quantity key figures
- Investment management
- Not assigned

### Prerequisites

#### Manufacturing orders (production orders and process orders):

- Line items for WIP calculation

The line items for the WIP calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Order* under *Period-End Closing* → *Work in Process* → *Define Results Analysis Version*. Go into *Extended Control*.

- Line items variance

The line items for the variance calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Order* under *Period-End Closing* → *Variance Calculation* → *Define Variance Key*.

### More Reports: Line Items

- Commitment line items in orders are only updated if you have activated commitments management for the controlling area and for the order type.

### Product cost collectors

- Line items variance

The line items for the variance calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Period* under *Period-End Closing* → *Variance Calculation* → *Variance Calculation for Product Cost Collectors* → *Define Variance Key*.

### Cost Object ID (Cost Object Nodes in Cost Object Hierarchies and General Cost Objects)

- Line item variance (only for cost object nodes of a cost object hierarchy)

The line items for the variance calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Period* under *Period-End Closing* → *Variance Calculation* → *Variance Calculation for Cost Object Hierarchies* → *Define Variance Key*.

### Sales document item: normally a sales order item

- Line items for results analysis

The line items for the results analysis are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Sales Order* under *Period-End Closing* → *Results Analysis* → *Define Results Analysis Versions*. Go into *Extended Control*.

## Integration

Only actual line items are always updated in the standard system. Line items in WIP calculation, results analysis and variance calculation, and for commitments must be explicitly allowed in Customizing for the application.

If you want to write the commitment values to the sales order items that carry costs and revenues, you must set the *with commitments management* indicator in the fiscal-year-dependent control parameters of the controlling area.

Line items for results analysis data of the WIP calculation and results analysis are only saved if you have set the appropriate indicator in Customizing for the results analysis version.

Line items for variances are updated if you switch on the update of line items in the variance key.

Check the following settings in Customizing:

- Results analysis version for the lines items of the WIP calculation and the results analysis
- Variance key for the line items of the variance calculation

**More Reports: Line Items**

- Order type – commitments management for line item commitments
- Control parameters of the controlling area

**Notes on Performance**

In most cases, it is not necessary to update the line items for WIP calculation, results analysis, or variance calculation in your live system. For this reason, it is best to make sure that the relevant indicator in Customizing is **not** set. If you decide not to update the line items, the runtime in WIP calculation, results analysis, and variance calculation is significantly improved. Of course, in these cases, it is not possible to display a corresponding line item report.

**See also:**

A detailed description of line item reports can be found in the documentation *Overhead Cost Controlling*.

See the following sections for information on commitments:

[Commitments \[Ext.\]](#)

See the following sections for information on actual costs:

[Actual Costs in Cost Object Controlling \[Ext.\]](#)

See the following sections for basic information on WIP calculation and results analysis:

[Work in Process in Product Cost by Period \[Ext.\]](#)

[Work in Process in Product Cost by Order \[Ext.\]](#)

[Results Analysis \[Ext.\]](#)

See the following section for basic information on variance calculation:

[Variance Calculation \[Ext.\]](#)

See the following for general information on performance improvement:

[Performance in Product Cost Controlling \[Ext.\]](#)

## Information System for Costs for Intangible Goods and Services

### Use

In the information system for *Costs for Intangible Goods and Services*, you analyze the data updated to internal orders with revenue.

**See also:**

[Product Cost Controlling Information System \[Page 10\]](#)

## Key Figures in Costs for Intangible Goods and Services

### Use

In *Costs for Intangible Goods and Services*, general cost objects and internal orders with revenue can be used as cost objects. A large number of key figures are available in *Costs for Intangible Goods and Services*. You can display key figures:

- Using [cost analysis \[Page 77\]](#):
  - For the detailed reports for general cost objects and for internal orders with revenue
  - For [summarization hierarchies \[Page 314\]](#) for the internal orders with revenue

In the report categories [object lists \[Page 329\]](#) and [object comparisons \[Page 344\]](#)

For general information on the key figures in *Cost Object Controlling*, see the following:

[Key Figures in Cost Object Controlling \[Page 70\]](#)

### Functions of Cost Analysis

In cost analysis, you determine which key figures you analyze in *Costs for Intangible Goods and Services*. Reports of [cost analysis \[Page 77\]](#) use the functionality of the ABAP List Viewer while offering additional functions in cost analysis. You can define layouts in cost analysis containing the key figures that you want to analyze. The column selection for the layouts contains different field groups (column lists) that separate the key figures into logical groups.

#### See also:

- General information on [cost analysis \[Page 77\]](#)
- General information on the [ABAP List Viewer \[Ext.\]](#)
- For general information on working with layouts, see the following:
  - [Creating, Changing, and Managing Layouts \[Ext.\]](#)
  - [Defining Current Layouts \[Ext.\]](#)
  - [Saving Layouts \[Ext.\]](#)
  - [Managing Layouts \[Ext.\]](#)
- For general information on grouping in layouts, see [Creating and Deleting Subtotals \[Ext.\]](#).

### Key Figures in Costs for Intangible Goods and Services

You can use the key figures defined in this field list to define a layout for analyzing the results analysis data in detail. You decide yourself which key figures you want to use for analysis.

#### You can display the following key figures for general cost objects:

- Planned values (such as total planned costs, planned fixed costs, and planned variable costs)
- Key figures resulting from actual postings (such as total actual costs, actual fixed costs, and actual variable costs)
- Variances between planned and actual values

## Key Figures in Costs for Intangible Goods and Services

### You can display the following key figures for internal orders with revenue:

- Planned values (such as total planned costs, planned fixed costs, planned variable costs, and planned revenues)
- Key figures that result from actual postings (such as total actual costs, actual fixed costs, actual variable costs, and actual revenues)
- Variances between planned and actual values
- Results analysis data

**See also:**

[Results Analysis \[Ext.\]](#)

[Results Analysis Methods \[Ext.\]](#)

See the following section for information on cost planning for general cost objects in *Costs for Intangible Goods and Services*:

[Cost Planning for General Cost Objects \[Ext.\]](#)

See the document *CO Internal Orders* for information on cost planning for internal orders in *Costs for Intangible Goods and Services*.



### Note on Analyzing the Order Profit for Sales Orders and Internal Orders with Revenue

If you want to analyze results analysis data for the following objects, make sure that results analysis for the sales document items with costs and revenues, or for the internal orders with revenue, was performed in the relevant reporting time frame for the results analysis version to be analyzed:

- Sales document items that carry costs and revenues (in *Product Cost by Sales Order*)
- Internal orders with revenue (for example, in *Costs for Intangible Goods and Services*)

You can analyze the results analysis data for a sales document item (usually a sales order item) or for an internal order with revenue. You can also analyze the results analysis data that was summarized across multiple sales document items or multiple internal orders.

The results analysis data displayed depends on the results analysis version used.

Results analysis updates the results analysis data under results analysis cost elements that are defined and assigned in Customizing for results analysis. These results analysis cost elements are used for all reports.

In individual processing for results analysis, detailed information (for example, an explanation of how the values of the individual categories are calculated) is available as a list.

**See also:**

[Sales Order Item That Carries Costs and Revenues \[Ext.\]](#)

[Product Cost by Sales Order \[Ext.\]](#)

[Costs for Intangible Goods and Services \[Ext.\]](#)

[Results Analysis \[Ext.\]](#)

[Product Cost by Sales Order \[Ext.\]](#)



### Note on Reserves for Unrealized Costs

Reserves for unrealized costs can be calculated in results analysis for internal orders with different results analysis approaches.

Results analysis data (reserves for unrealized costs) can be displayed separately according to creation and consumption if the indicator *Split creation/usage* is selected in Customizing for the results analysis version. If this indicator is not selected, the system displays the balance.

Check this Customizing setting in the implementation guide of the respective application component of *Product Cost Controlling* under *Period-End Closing* → *Results Analysis* → *Define Results Analysis Versions*. The screen *Change View Results Analysis Versions: Overview* appears. Select the line to display the screen: *Display Results Analysis Versions: Detail*.

Reserves for unrealized costs are only created if the credit of the order exceeds the debits. In a particular period the object has either *WIP* or *reserves for unrealized costs*. This does **not** apply to summarization objects. With summarization objects, both work in process (at actual costs) and reserves for unrealized costs can exist within a period.

You must have performed results analysis in period-end closing in the respective results analysis version.

The key figures can be displayed and analyzed in detailed reports for individual objects as well as summarized.

### See the following sections for information on object lists:

- [Object List \[Page 329\]](#)
- [Order Selection \[Page 330\]](#)
- [Selection Parameters for Order Selection \[Page 333\]](#)
- [Display Fields of the Results List \[Page 336\]](#)
- [Using Extracts \[Page 371\]](#)
- [Order Hierarchy and Order Selection with Classification \[Page 231\]](#)
- [Summarization Hierarchy Overview \[Page 338\]](#)
- [Cost Object Hierarchy Overview \[Page 151\]](#)
- [Finding/Displaying Cost Object Hierarchies \[Page 153\]](#)

### Information on Object Comparisons:

- [Object Comparisons \[Page 344\]](#)
- [Order vs. Order Plan/Actual Comparison \[Page 345\]](#)
- [Summarization Hierarchy vs. Summarization Hierarchy - Plan/Actual Comparison \[Page 347\]](#)

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**Summarized Analysis**

## Summarized Analysis

### In Cost Object Controlling

#### Use

The report category *Summarized Analysis* contains reports that show aggregated data. For example, you can do target/actual comparisons at the product group level. The following summarization methods can be used in *Cost Object Controlling* depending on the application component and the objects:

- In *Product Cost by Period*:
  - Summarization hierarchy
    - With a summarization hierarchy, you are free to define the structures used to save the data as you wish.
  - Product drilldown
    - With a product drilldown, the structures used to aggregate the data are predetermined.
  - Order hierarchy with classification

In summarized analysis in *Product Cost by Period*, the data updated on product cost collectors is summarized at higher levels. If you want to display the summarized data for a cost object hierarchy, use the report category *detailed reports*.

- In *Product Cost by Order*:
  - Summarization hierarchy
  - Product drilldown
  - Order hierarchy with classification
    - With an order hierarchy with classification, you are free to define the summarized structures as you wish. However, you must use classification. This reduces performance as compared to a summarization hierarchy. Therefore, you should only use classification when you need to work with user-defined characteristics.

In summarized analysis in *Product Cost by Order*, the data updated on production orders and product cost collectors is summarized at higher levels.

Note: Whenever possible, you should use a summarization hierarchy instead of an order hierarchy with classification.

- In *Product Cost by Sales Order*:
  - Summarization hierarchy
    - In summarized analysis in *Product Cost by Sales Order*, the data updated on the sales document items (normally the sales order items) is summarized at higher levels (such as the sold-to party).
- In *Costs for Intangible Goods and Services*:
  - Summarization hierarchy

In summarized analysis in *Costs for Intangible Goods and Services*, the data updated on internal orders with revenue is summarized at higher levels. Summarization for general cost objects is not supported.

For information on how the different methods of data summarization function, see:

**See also:**

**For information on interpreting the report data, see the following section:**

[Background Information on Summarized Analysis \[Page 174\]](#)

For information on the different summarization methods, refer to the following sections:

[Product Drilldown \[Page 197\]](#)

[Summarization Hierarchies \[Page 314\]](#)

[Cost Object Hierarchies \[Ext.\]](#)

[Order Hierarchy and Order Selection with Classification \[Page 231\]](#)

See the following section for information on how these methods of summarization differ:

[Differences in the Summarization Methods \[Page 180\]](#)

## Summarization Hierarchies

# Summarization Hierarchies

## Use

Summarization hierarchies are analysis tools with which you can summarize values upwards in hierarchical structures that you define. This makes it possible to analyze values and quantities on higher levels such as at plant level. You use a summarization hierarchy in *Cost Object Controlling* to analyze costs and quantities that arose in the production process, summarized for a particular analysis period, at a higher level.



For example, suppose you specified that your order data is to be summarized by the following:

- Plant
- Order type

You can then display all data for a particular plant and analyze the data for that plant for the different order types.

You can use a summarization hierarchy to summarize the values of the following objects:

- Maintenance and service orders
- Internal orders
- Projects
- Sales orders and their items
- Manufacturing orders, QM orders and product cost collectors

Depending on your needs, you can summarize only objects of a certain object type (production orders, for example) or you can summarize multiple object types together. When summarizing objects of certain object types (projects, for example), dependent objects of another object type will be summarized as well (such as, internal orders assigned to that project). When summarizing sales orders, you can choose whether or not to have manufacturing orders which were assigned to that sales order summarized with that sales order.

You can define exception rules to specify that specific nodes of the hierarchy that fit certain requirements are indicated with colored traffic lights (red, yellow, green). This way, you can highlight areas that must be analyzed further. You can expand the hierarchy overview in cost element reports into the individual nodes and then analyze the nodes more closely.

## Prerequisites

The summarization hierarchy has to be defined before summarizing objects. When defining a summarization hierarchy, you determine which fields are involved in the data summarization and which objects will be summarized. The values in the object currency are only summarized if the summarization hierarchy contains a *plant* or *company code* node.

You define a summarization hierarchy in Customizing for the Information System under *Controlling* → *Product Cost Controlling* → *Information System* → *Cost Object Controlling* → *Settings for Summarized Analysis/Order Selection* → *Maintain Summarization Hierarchy*.

## Summarization Hierarchies

If the master data fields in the step *Maintain Summarization Hierarchy* do not cover your requirements in defining hierarchy levels for the summarization of orders or projects, you can work with [classification \[Page 231\]](#). For this, you can use classifying attributes to make other fields cover your requirements. On the basis of the additional volume of data and **performance problems** in master data maintenance which result from this, you should consider your need for additional fields carefully. You do not work with the step *Maintain Summarization Hierarchy* to create additional fields; instead you define a so-called order hierarchy in Customizing for the Information System under *Controlling → Product Cost Controlling → Information System → Cost Object Controlling → Settings for Summarized Analysis/Order Selection → Order Hierarchy and Selection with Classification → Create Order Hierarchies*.

If you want to make the summarization dependent on the order status, you must have already created a status selection profile in Customizing and entered this in the definition of the summarization hierarchy. You can find this step in Customizing for the Information System under *Product Cost Controlling → Information System → Cost Object Controlling → Settings for Summarized Analysis/Order Selection → Define Status Selection Profiles [Ext.]*.

## Features

The individual levels of a summarization hierarchy contain master data fields or parts of master data fields. For each value in a field (such as plant 1000, plant 1100, plant 1200), the system creates totals by period and cost element and writes them to a summarization object. The values on the different summarization objects can be analyzed in the Information System.

Many reports are available for this purpose in the Information System of the SAP standard system under the report category *Summarized Analysis*. For example, you can call up a plan/actual comparison for a summarization object (sales office 1000).

Alternatively, you can display a hierarchy report for a specific summarization hierarchy. You receive a hierarchical overview of the summarization objects that were generated by the summarization. If you created an exception rule when executing a data collection run, you will see the colored traffic lights in the overview.

The following data, for example, is summarized with the help of a summarization hierarchy:

- Planned values (for example, total planned costs, fixed planned costs, variable planned costs, planned output quantity)
- Actual costs (for example, total actual costs, fixed actual costs, variable actual costs, actual output quantity)
- Actual costs (for example, total actual costs, fixed actual costs, variable actual costs, actual output quantity)
- Variances (percentage plan/actual variances, absolute plan/actual variances, percentage target/actual variances, variance categories)
- Input quantities (target input quantities, actual input quantities)
- Work in process
- Results analysis data from results analysis

The run time of the data base run is better when you summarize less data.

The master data fields, which you can use to summarize data, are pre-set and dependent on the type of object that is to be summarized. Accordingly, when summarizing sales orders, the master data fields that are available to you when defining a summarization hierarchy are different from

## Summarization Hierarchies

those available when you are summarizing an internal order. If these fields do not cover all of your requirements, you can use additional self-defined fields for summarizing orders or projects. You must, however, work with classification here.

You can limit the scope of the summarized data by making the summarization of order values dependent on the status of the order. You can, for example, just have the data summarized from orders that already have variances calculated for them.

The data summarized with a summarization hierarchy is collected in a data collection run. You have to execute this before you can use reports for summarization. This means that a report for summarization objects always shows the dataset that was current at the time of the last data collection run. You must therefore execute a new data collection run if you want to see current values in your reports.

## Integration

You can call up cost element reports for individual summarization objects from the hierarchy display. The reports that are available are displayed in a dialog box. When you select a report, this report is called up for the selected summarization object. You can, for example, display the summarized actual values, plan values, and variances for a particular plant.

It is also possible to call up the hierarchy overview from the selection screen of a report for the analysis of a summarization object.

## Notes on Calling up Reports for the Summarization Hierarchy

Reports for analyzing summarization objects are found in the Information Systems of the individual application components of the SAP standard system under the report category *Summarized Analysis*.

To call up a report for a summarization object, enter the technical name of the summarization hierarchy in the selection screen. You must also enter the hierarchy type. Usually the hierarchy type is *CO*. If, however, you ran a summarization for an order hierarchy using classification, you have to choose hierarchy type *OR*.

In the field *Subhierarchy*, specify the summarization object to be analyzed. Display the possible entries (F4) for this field and choose the summarization object that you want to analyze.

### See also:

For more information about collecting and updating data for summarization, see [Data Collection for Summarization Hierarchy \[Page 323\]](#)

[Joint Production in the Information System \[Ext.\]](#)

You use the cost analysis to analyze the data aggregated with the summarization hierarchy. You can find information on this under [Cost Analysis \[Page 77\]](#)

## Maintain Summarization Hierarchies

In this step in Customizing for the *Product Cost Controlling Information System*, you specify the structure of your summarization hierarchies. In the definition of a summarization hierarchy, you specify what criteria are used to summarize the costs and quantities of objects.

You can use a summarization hierarchy to summarize the values of the following objects:

- Internal orders (order category 01 and 02)
- Maintenance/service orders (order category 30)
- Manufacturing orders, QM orders, and product cost collectors
- This includes the following order categories:  
CO production orders (order category 04), product cost collectors (order category 05),  
QM orders (order category 06), PP production orders (order category 10), process orders  
(order category 40)
- Projects

When projects are summarized, the system also summarizes the dependent objects (such as assigned orders or WBS elements) automatically.

- Sales orders without dependent orders
- Sales orders with dependent orders

When you summarize sales orders, you can control whether the system summarizes the data of the manufacturing orders assigned to the sales order by selecting the corresponding object type.

You can later summarize the values of individual objects upwards in accordance with the defined hierarchy structure.

You use the master data fields of the account assignment objects as the summarization criteria. Each level of the summarization hierarchy corresponds to one master data field. Using the master data fields, the system selects the account assignment objects for summarization and sums the costs and quantities for each characteristic value of a master data field (such as plant 1000, plant 2000).

**Note:**

If you are using customer-specific fields to summarize internal orders, the case (upper/lowercase) must be the same as used in these fields.

The system saves the calculated sums to summarization objects that correspond to the nodes of the hierarchy generated during the summarization run. You can analyze the summarization objects in the information system.

You can use summarization hierarchies to summarize data such as the following:

- Planned costs
- Actual costs
- Target costs
- Variances
- Work in process

## Maintain Summarization Hierarchies

- Results analysis data
- Input quantities
- Output quantities
- Scrap

## Example

You can use a summarization hierarchy to summarize the costs incurred in each period by the orders to produce a particular material in a particular plant.

## Notes

The highest node in the hierarchy is always the controlling area.

If you specify a status selection profile when you create summarization hierarchies, the only objects selected for summarization are those whose status matches the selection criteria specified in the status selection profile at the time of summarization. If you want to summarize on the object type *sales orders*, the status selection profile specified in the hierarchy definition refers to the production orders assigned to the sales order.

Once the system has executed a summarization run for a hierarchy, you can no longer change the summarization hierarchy. If you want to change the summarization hierarchy, you must first execute a deletion run to delete all summarized data.

You can specify selection variants to preselect internal orders.

## Notes on Joint Production

To enable status-dependent selection of orders in joint production, you can enter separate status selection profiles for the order header and the order item, since in joint production the status of the order header can differ from the status of the order item.

In joint production, the system summarizes only the values of the order items. Values on the order header are not summarized. Therefore, you should execute the function *Distribution for Co-Products* before starting a summarization run.

## Prerequisites

If you want to use status selection profiles, you must first carry out the step [Define Status Selection Profiles \[Ext.\]](#).

If you want to use selection variants, you must first carry out the step [Define Selection Variants \[Ext.\]](#).

## Activities

To define a summarization hierarchy, proceed as follows:

1. Choose *New entries*.
2. Give the hierarchy a name and a description.

To summarize input quantities, select *Summarize input quantities*.

3. If you want to limit the data scope using form routines, enter the user exit pool that contains those form routines (see also step 6).

## Maintain Summarization Hierarchies

4. Save your entries and go back.

You return to the overview of all summarization hierarchies.

5. To specify which type of account assignment objects are included in the summarization run, choose *Data scope (object types)*.

- Select the object types to be summarized.

If you only summarize projects, the system also summarizes the data of assigned objects such as dependent orders. If you want to summarize sales orders, you can control whether the system summarizes the data of the manufacturing orders assigned to the sales order by selecting the corresponding object type.

If you select more than one object type (such as sales orders and production orders), you must specify a priority. This is necessary because the sales order for a master data field, for example, can have a value that differs from the value of the production order below it for the same field. If the system were to summarize on this master data field, the production order would be included both in summarization on the value of the master data field in the sales order and in summarization on the value of the master data field in the production order. To prevent this from happening, in the hierarchy definition specify priority 1 for the object type *sales order* and priority 2 for the object type *production order*.

6. To specify which costs and quantities should be summarized, choose *Data Scope (Totals Records Tables)*.

- To exclude individual totals records tables from summarization, select *Not summarized*.
- To improve performance, you can summarize the records of the totals records file without the origin. To do this, select *No origin*. Selecting this indicator is recommended when you are interested in pure cost element reports. However, it is then no longer possible to expand the values at cost element level down to the origins.

If you want to limit the data scope using a user exit, enter the name of the user exit form routine. To do this, you must have entered the name of the user exit pool when you created the summarization hierarchy.

7. To assign master data fields to the levels of your summarization hierarchy, choose *Hierarchy levels*.

You can define up to 9 hierarchy levels.

In the column *Hierarchy field*, specify the desired master data field for each hierarchy level. If you want to create a hierarchy level using part of a master data field, enter the *Offset* and the *Length*.

8. If you want to group account assignment objects for which a characteristic is not filled under the node *other*, select *Blank*.

## Further Notes

For more information on creating summarization hierarchies and on their use in *Product Cost Controlling*, refer to the SAP Library under [Summarization Hierarchy \[Page 314\]](#).

## Function Module Exits for Summarization

### Use

The SAP System provides a number of function module exits for additional summarization functions. These are explained briefly in the following. These exits are documented. For detailed documentation, refer to the enhancement transaction (CMOD). Look at all SAP enhancements of development class KKR. You can access the documentation on an exit by pressing the pushbutton *SAP documentation*.

### Exit for Selection of Data Collection

The function module exit EXIT\_SAPLKKRB\_001 enables you to reassign objects, delete objects, or add objects after the selection for a data collection run but before data collection actually begins.

### Exit for Text Generation for Summarization Objects

The function module EXIT\_SAPLKKRU\_001 of enhancement KKRU0001 enables self-programmed assignment of texts for summarization objects. These texts are generated during a data collection run.

## Maintaining Texts for Summarization Objects

### Use

The system can generate texts for each summarization object generated in a summarization run. You can also enter such texts manually. In the standard system, texts are automatically generated for the summarization objects during the data collection run. The texts are generated based on the designation of the field value.



You summarize on plant 1000 (plant 1000 = Walldorf) The generated summarization objects receive the designation *Walldorf*.

The texts for summarization objects can also be entered manually. When you execute the data collection run, you choose whether you want the manually entered texts to be retained, or overwritten by the designation of the field value.



If the system can't find a text for a summarization object, it uses the value of the field.

### Procedure

To enter manual texts for summarization objects:

19. Go to the appropriate application menu in *Cost Object Controlling*.
20. Choose *Information System* → *Tools* → *Data Collection* → *Summarization Hierarchy*.
21. Enter the summarization hierarchy in the field *Hierarchy*.
22. Choose *Edit* → *Hierarchy*.
23. Position the cursor on the summarization object and choose *Edit* → *Maintain text*.
24. Enter a text and save your entries.

To specify which text is updated for summarization objects during the data collection run:

- s. Go to the appropriate application menu in *Cost Object Controlling*.
- t. Choose *Information System* → *Tools* → *Data Collection* → *Summarization Hierarchy*.
- u. Enter the summarization hierarchy in the field *Hierarchy*.
- v. Choose *Extras* → *Standard texts*.
- w. Choose how you want the system to handle texts during the data collection run:
  - Do not generate texts
    - No texts are generated from the field values during the data collection run. Only previously existing texts – whether generated in an earlier data collection run or entered manually – are displayed.
  - Generate texts (do not overwrite)

---

**Maintaining Texts for Summarization Objects**

The system generates texts for the summarization objects using the designation of the field value. If any nodes already have texts – whether generated in an earlier data collection run or entered manually – the texts are not overwritten.

This is the standard setting. It is preferred over *Generate texts (overwrite)* for performance reasons.

- Generate texts (overwrite)

The system generates texts for the summarization objects using the designation of the field value. Any existing texts (including texts entered manually) are overwritten.

- x. Execute the data collection run for your summarization hierarchy. The system generates texts for the summarization objects in accordance with the option you chose.

## Data Collection for Summarization Hierarchy

### Use

The data summarized with a summarization hierarchy is collected in a data collection run. The data collection run is usually carried out for each summarization hierarchy after period-end closing in *Cost Object Controlling*.

The following occurs during a data collection run:

The system reads the quantities and values of the selected objects as defined by the summarization hierarchy for the period being closed. This data is summarized upwards according to the structure of the hierarchy and it is updated by period and cost element in the summarization objects. A summarization object is built for each field characteristic for all fields in a summarization hierarchy.



If your summarization hierarchy consists of the fields plant and order type, for example, the system creates the following summarization objects:

- Plant A
- Plant B
- Plant A, order type 1
- Plant B, order type 1

If a data collection run was already executed, the data selected for a new data collection run is updated as follows:

- Data on the summarization object for periods within the summarization time frame of the new data collection run is reset and recalculated.
- Data on the summarization object for periods outside the specified time frame of the new data collection run is retained. This prevents the data calculated in an earlier summarization run from being deleted by a new data collection run.

You can make the selection of objects for the summarization dependent on the status of the object. To do this, create a status selection profile when defining the summarization hierarchy. In the status selection profile you can specify which status the selected objects should have (released, or confirmed, for example). If you work with status selection, you should keep this in mind when you choose the summarization time frame.



If, for example you want to summarize only settled orders and limit the summarization time frame to the last two periods, even though one order runs over four periods, the values (such as actual costs) of the first two periods of the order will not be summarized and will therefore not be in the summarization hierarchy. Because the total target costs are only calculated and updated in the period in which the order was delivered or technically completed, the cumulated target costs are presented against partial actual costs in the summarization hierarchy.

If you are using status selection, specify a summarization time frame that is large enough to include the entire life of an order.

## Data Collection for Summarization Hierarchy

If you are not using status selection, it is sufficient to specify a summarization time frame that includes all open periods in *Financial Accounting*.

You can find more information under [Background Information on Summarized Analysis \[Page 174\]](#).

## Prerequisites

If you are using joint production, you must execute the function [Preliminary Settlement for Co-Products, Rework \[Ext.\]](#) before executing the data collection run. This is due to the fact that summarizations for joint production only summarize the values of the order items upwards, and not the values in the order header. You can find more information under [Special Processing with Joint Production \[Page 373\]](#).

## Features

You can carry out a data collection run for:

- the entire summarization hierarchy
  - If you carry out a data collection run for the entire hierarchy, you can display a report for each summarization object of the hierarchy.
- for a partial hierarchy

### Data Collection for Summarization Hierarchy

For example, if you want to calculate the costs for all orders for a particular material, you can carry out the data collection run for the appropriate subhierarchy. In addition, you can display reports for all summarization objects in this subhierarchy.

You can also perform a deletion run. This will delete the data for all summarization objects in the specified hierarchy. It is meaningless to enter a time frame when performing a deletion run. A deletion run is necessary, for example, if you want to make subsequent changes to the definition of a summarization hierarchy.

In addition, you can execute a data collection run in which the summarization hierarchy is built but no data is selected. If a summarization was already executed for this time frame, the summarization objects were updated in the data collection run without writing over existing data.

### Notes on Performance

**To reduce runtimes**, you can run the summarization run for summarization hierarchies on multiple servers simultaneously. You can improve the performance of simultaneous processing by defining the number of summarization nodes.

In addition, in the summarization hierarchy you can stipulate that individual totals records files should not be summarized, or that the records of totals records files without origin should be summarized. It is recommended that you set this indicator if you are interested in simple cost element reports without much detail.

For performance reasons it is also recommended that you do not choose the field *Order number* as a hierarchy level when defining the summarization hierarchy.

If you work with an order hierarchy with classification, you should execute the function *Characteristic Statistics* on a regular basis. You can change the sequence of the selected characteristics, which will speed up the selection of the classification characteristics. You can find this function in the application menu of the particular component in Cost Object Controlling under *Information System* → *Data Collection* → *Order Hierarchy (Classification)* → *Environment* → *Characteristic Statistics* → *Generate*.

Before executing the data collection run, set the indicator *Classification* in Customizing of *Cost Object Controlling* in *Product Cost by Period* or in *Product Cost by Order* under *Check Order Types* in the *Change Order Type* view and classify the orders with the report RKO CLASS. Then, deactivate the indicator.

#### See also:

[Special Requirements in Joint Production \[Ext.\]](#)

[Performance in Product Cost Controlling \[Ext.\]](#)

## Executing Data Collection for Summarization Hierarchy

# Executing Data Collection for Summarization Hierarchy

## Prerequisites

- You created a summarization hierarchy.
- If you want to use **parallel processing to shorten the runtime of a data collection run**, you should have your system administrator set up a server group and tell you the maximum number of tasks.

## Defining a Server Group (Only for System Administrators)

To specify which servers the summarization run should run on, choose *Tools* → *Administration* → *Administration* → *Network* → *RFC destinations* → *RFC* → *RFC groups*.

It is recommended that you execute the data collection run after each period-end closing, thus summarizing current data such as target costs, work in process and variances.

If you want to monitor actual costs, it can also be helpful to execute a data collection run during a period before period-end closing activities.

## Procedure

To perform a data collection run:

7. Choose *Accounting* → *Controlling* → *Product Cost Controlling* → *Cost Object Controlling* → *Product Cost by Period / Product Cost by Order / Product Cost by Sales Order / Costs for Intangible Goods and Services* → *Information System* → *Tools* → *Data Collection* → *Summarization Hierarchy*.

The screen *CO Summarization* appears.

8. Enter the following data:

- Hierarchy

For a list of summarization hierarchies in the controlling area, press F4.

To see a list of hierarchies that have been summarized, choose *Extras* → *Summarized Hierarchies*.

- Subhierarchy

If you only want to summarize part of the hierarchy, choose the arrow symbol button *Set Subhierarchy*. All fields are listed for which summarization has been carried out (such as the plant or material). Enter the field attributes for which the summarization is to be carried out.



For example, if you enter plant 0001 and material PROD-1, the costs of all orders will be summarized that were created for material PROD-1 in plant 0001.

If you enter only plant 0001, only the costs for all orders in plant 0001 will be summarized.

- From Period/Fiscal Year and To Period/Fiscal Year

The values for these periods will be displayed for the objects selected according to

## Executing Data Collection for Summarization Hierarchy

the summarization hierarchy. If an object does not have any values in the periods specified, it is considered in principle during data retrieval, but with no values.

6. Turn on one of the following indicators:
  - Summarization run  
In the summarization run the data for the periods within the specified summarization time frame are reset and recalculated. Data on the summarization object for periods outside of the summarization time frame is retained.
  - Deletion run  
The deletion run deletes all summarization objects created by previous data collections. After that, the hierarchy definition is changeable again.
  - Hierarchy without data  
Set this indicator if you want just want the structure of a summarization object without data.
16. Choose *Extras* → *Exception* → *Set rule*. This allows colored traffic light symbols to be displayed at hierarchy nodes for which predefined threshold values have been exceeded. You first define the rules for exceptions in Customizing. Here you specify the basis for the threshold values and by how much the threshold value has to be exceeded before a traffic light is set.
17. In the standard system, the indicator *Background processing* is turned on. If you want to perform the summarization run online, you must turn off this indicator.
18. Select *Parallel Processing* if you want to use **parallel processing** for a data collection run.

The dialog box *Parallel Processing* appears.

Set the indicator *Parallel processing online* and enter the following data:

- Maximum number of tasks (number of system sessions on the servers)
- Number of nodes (task)
- Server group

Choose *Confirm*.



System resources are utilized in accordance with the number of tasks. For this reason you should limit the number of tasks or only use parallel processing when there are sufficient system resources available.

19. Choose *Execute*.  
If you have turned off the indicator for *background processing*, a dialog box appears in which you must confirm the order summarization run.

## Result

An overview screen is now displayed that shows the processed nodes of the hierarchy.

You can use the following functions:

- Message log

### Executing Data Collection for Summarization Hierarchy

The message log lists any errors that occurred and any information messages that were issued during summarization.

- Table statistics

The table statistics specify how many totals records were written during summarization.

**See also:**

[Performance in Product Cost Controlling \[Ext.\]](#)

## Object Lists

### In Cost Object Controlling

#### Use

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

## Order Selection

# Order Selection

## Definition

Using order selection, you can generate a list of orders with the associated data and key figures.

## Use

Order selection allows you to select orders according to different criteria. The result of your selection is in the form of a list of orders containing specific master data and key figures on the orders.

You can create exceptions to specify that all orders that fulfill certain conditions are identified with colored traffic lights (red, yellow, green) in the results list. This way, you can filter out orders that should be analyzed further.

The results list has a number of navigation and formatting options and can be modified by the user. From the results list in detail reports, you can branch off to single orders or to a comparison of two orders, in order to examine these orders more closely. You can also go to the master data display for characteristics from the results list. You can, for example, display the master record of the manufactured material for an order to be analyzed.

Order selection is not a summarized analysis and is **not** based on classification. It mainly serves to answer ad-hoc questions that arise in *Cost Object Controlling*.

## Integration

From the order list in the order selection you can call up detail reports with the original cost elements for any order. The reports that are available are displayed in a dialog box. When you choose a report, the system calls up this report for the chosen order. For a more detailed analysis of an order, there are reports about planning data, actual data, and numerous reports about variances as well as a report about work in process.

Furthermore, there are additional reports available for the comparison of two orders.



If you want to add more reports to the dialogue box so that you can jump to the results list for these reports, you must first add these reports to your list of reports in Customizing.

The data is displayed with the [ABAP List Viewer \[Ext.\]](#).

## Prerequisites

If you want to display specific master data in the list of selected orders, make the proper adjustments in the IMG for the Information System under *Product Cost Controlling* → *Information System* → *Control Parameters* in the section [Display Fields Order Selection \[Ext.\]](#). Here you choose the fields of the order master as well as the order header and order item that you want displayed in the results list of the order selection. For performance reasons, try to limit the selections to only those fields that are really necessary.

If you want to use order status as one of the selection criteria, you must first create a status selection profile in Customizing. You can find this step in the IMG for the Information System under *Product Cost Controlling* → *Information System* → *Cost Object Controlling* → *Settings for*

*Summarized Analysis/Order Selection* → *Order Hierarchy and Selection with Classification* → [Define Selection Profiles for the Order List \[Ext.\]](#).

To save layouts for all users, set the *Shared* indicator in IMG for the Information System under *Product Cost Controlling* → *Information System* → [Control Parameters \[Ext.\]](#).

## Features

The list with the selected orders consists of master data and key figures. The structure of the list is determined by the layout entered in the selection screen. By creating a layout, you can determine yourself, which master data and key figures will be displayed in the results list. The key figures that you can choose from are listed here. You determine the master data to be shown in the results list in Customizing for the Information System. Exit the results list and go to an order's detail screen to see all the master data and key figures (independent of the layout chosen) for an order, insofar as values exist.

This way, you can edit the results list interactively. Use the functions or the ABAP List Viewer for this. You can, for example, set a filter to exclude all orders except orders whose plan/actual variance lies between two specific amounts. Additionally, you can perform an ABC analysis within a results list and calculate a total across individual key figures, among other things.

A number of different criteria are available to limit the selection of the orders. The fields of the general order master, the order header, and the order item for manufacturing orders can be used as selection criteria. In addition, you have the option of applying the order status in selection, or limiting the scope of the selection to a specific time frame. If you work with classification, you can also use classifying attributes as selection criteria. You can display the selection criteria used for the report call in the results list.

The setup of the selection screen is determined by a selection variant. You can adjust the selection screen to suit your particular requirements by creating a selection variant.

Order selection is supplied in three standard selection variants.

- Standard selection variants (can be displayed in *Product Cost by Order* and *Product Cost by Period* and *Costs for Intangible Goods and Services*)
- Selection variants for sales order production
- Selection variants for joint production

## Special Processing with Joint Production

The key figures for the selected orders are displayed at the order header level or additionally at the order items level. In joint production, the values are displayed at the order item level.

For more information, see *Special Requirements with Joint Production*.

## Notes on Performance

To avoid long **runtimes** during report calls, you can use extracts. An extract is a saved dataset containing the report data selected at the time the extract was generated. An extract is created from the selection parameters entered before the report call. In particular, an extract is dependent on whether the order selection happened for orders without items or for orders with items. Depending on the setting, the system will display only those orders with items or without when reading the extract later.

### See also:

[Display Fields of the Results List \[Page 336\]](#)

## Order Selection

For information on different navigation and formatting functions, see the documentation [ABAP List Viewer \[Ext.\]](#).

For more information about selection options, see: [Selection Parameters for Order Selection \[Page 333\]](#).

You can find detailed information on joint production in the following section:

[Special Requirements in Joint Production \[Ext.\]](#)

For information on working with extracts, see [Using Extracts \[Page 371\]](#).

See the following for additional information on performance improvements:

[Performance in Product Cost Controlling \[Ext.\]](#)

## Selection Parameters for Order Selection

### Use

The following criteria are available in the selection screen to limit the selection of the orders:

- You can limit the reporting time frame to be analyzed.



Limiting the reporting time frame specifies the periods from which key figures can be read; it does not affect the order selection. Orders are selected according to entries specified in the selection screen and, if necessary, the requirements of the status selection profile.

- The fields of the general order master, the order header, and the order item for manufacturing orders are available as selection criteria.
- You can select according to sales order and sales order item in sales order production.
- By defining a status selection profile, you can limit the selection range to orders with a certain status. You can, for example, specify that only orders for which variances have already been calculated should be selected.
- If you work with classification, you can also use classifying attributes as selection criteria.

### Prerequisites

If you want to use classifying attributes as selection criteria, you must have added these attributes to the selection screen of the classification or defined an additional selection screen containing the attributes. For more information about the procedure, see *Customizing for the Information System under Product Cost Controlling → Information System → Cost Object Controlling → Settings Summarized Analysis/Order Selection → Order Hierarchy and Selection → Define Selection Screens for the Order List*. The selection screens or additional selection screens created here are only needed to select orders according to classifying attributes, and must contain the attributes which you require for your selection. These are usually user-defined characteristics for order classification.

To make the selection of orders dependent on a certain status, you must have defined status selection profiles in *Customizing for the Information System*. You make this definition under *Product Cost Controlling → Information System → Cost Object Controlling → Settings Summarized Analysis/Order selection → Order Hierarchy and Selection → Define Status Selection Profiles*.

### Features

The fields of the general order master, the order header, and the order item for manufacturing orders are available as selection criteria. In the standard system, only a selection of the total fields available is in the selection screen of the reports. However, you can adapt the selection screens to your requirements and access other fields of the above tables by creating your own selection variants. By defining a selection variant, you determine the structure of the selection screen. You can define and set up your own selection variants in your personal work area (favorites).

## Selection Parameters for Order Selection

If you work with classification, you can also use classifying attributes as selection criteria. This is only of use with user-defined characteristics, because, for the most part, the existing object characteristics agree with the above-mentioned master data fields available for selection.

Classification provides several order selection options, as follows:

- You use the classifying attributes as selection criteria.
  - Go from the selection screen for the order selection to the *classification* screen and start the selection by entering the characteristic values. After selecting the orders that correspond to the characteristic values, go back to the selection screen for order selection. This screen displays only those orders selected by classification (in the *order* field). If required, you can limit the selection range by entering further selection criteria.
- You only use the existing master data fields as selection criteria for order selection. If orders are read during selection for which classification is active, you can extend the display to include the classifying attributes of these orders.

To do this, enter the desired selection criteria in the screen for the order selection. You must also turn on the indicator *W/ classification chars*. When the report is executed, the classifying attributes of the classified orders are read from the databank and output. You can display these attributes by defining a display variant in the results list.

You can limit selection to orders with a particular status by entering a **status selection profile** in the selection screen. You use status selection profiles to lay down conditions for the selection of orders according to user status or system status.



Suppose you want to select all partially delivered orders for a particular material. You use a status selection profile that allows only the status *partially delivered*.

You can also define **exceptions** in the selection screen of the report. Exceptions are used to display traffic light symbols (red/yellow/green) at orders whose values exceed a predefined threshold. You specify the reference for the threshold values by choosing a rule basis (such as *actual costs absolute*). The percentage and absolute threshold values that you specify tell the system by how much the reference value must be exceeded before it displays a traffic light symbol on the order.

## Special Processing with Joint Production

To enable the status-dependent selection of orders in joint production, you can enter separate status selection profiles for the order header and order item, since both statuses can be different in joint production.

You decide in the selection screen of the report whether the key figures for the selected orders should be displayed at the order header level or additionally at the order items level. In joint production, the values must be displayed at the order item level. In addition to the selected setting, you also specify which display variant should be used for the structure of the results list.

## Notes on Performance

To avoid long runtimes when you execute reports, you should limit the selection range as much as possible and use extracts, if necessary. Please note that the length of the runtime is also dependent on the selection of display fields for the results list that you defined in Customizing.

**See also:**

[Order Selection \[Page 330\]](#)

---

**Selection Parameters for Order Selection**

For information on creating your own selection variants, see [Creating Selection Variants \[Ext.\]](#).

If you are considering the use of classification, read the section [Classification \[Page 231\]](#) and pay particular attention to the comments on performance.

[Performance in Product Cost Controlling \[Ext.\]](#)

[Special Requirements in Joint Production \[Ext.\]](#)

## Display Fields in the Results List

# Display Fields in the Results List

## Structure

The results list of order selection can be used to analyze master data and key figures in a number of ways. You use the layout in the selection screen of the report to control which fields are displayed in the results list. The standard system contains layouts that use only some of the available fields. You can also create your own layouts according to your requirements. You can indicate these as initial variants that will be set as default values when you call up a report. You can save your layouts as user-specific or shared. If you don't create the layout as a user-specific layout, it is also available to other users. However, you can only save shared layouts if the *Shared* indicator was selected under *Control Parameters* in Customizing for the Information System.

## Key Figures

The key figures for the structure of the results list are predefined according to field groups. The following field groups are available:

- Order header (such as order quantity)
- Planning data (such as fixed / variable planned costs, planned quantity)
- Actual data (such as fixed / variable actual costs, actual quantity)
- Target data and variances (including the categories of variance calculation)
- Data to calculate work in process or results analysis (such as confirmations for missing costs)
- Comparison key figures (such as plan/actual variance)
- Units (such as units for production quantities)

You can display these key figures in controlling area currency, company code currency, and object currency.

## Master Data

You determine the master data to be shown in the results list in Customizing for the Information System. The following fields are available to you for this selection:

- Fields in the order master
- Fields in the order header and in the order item for manufacturing orders



However, you should select the fields in Customizing that you want to use later as display fields in your results list, since all the selected fields must be read when executing a report from the database.

If you select *With classification chars.* in the report selection screen, the classifying characteristics will be extended for every order for which classification is active when you execute a report. You also have user-defined characteristics available for the classification as display fields for the results list.

## Display Fields in the Results List



Do not transport or import layouts in which user-defined characteristics are used as display fields. If you want to use corresponding layouts, you must create them again in the productive system.

**See also:**

You can find information on the procedure during the creation of layouts under [Creating, Changing, and Managing Layouts \[Ext.\]](#).

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**Overview of Summarization Hierarchies**

## Overview of Summarization Hierarchies

### Use

This report shows a list of defined summarization hierarchies in the following areas:

- *Product Cost by Order*
- *Product Cost by Period*
- *Costs for Intangible Goods and Services*

From this list of the summarization hierarchy you go to the hierarchy graphics for summarization. This report belongs to the report category *Object list*.

The object list for summarization hierarchies offers you all summarization hierarchies in the current controlling area. Choose a hierarchy and go to the hierarchy graphic.

The hierarchy graphic offers you predefined views with the associated figures. You can adapt the standard figures to your own particular requirements. Create a layout with the figures you are most interested in. For information on the procedure, see [Creating, Changing, and Managing Layouts \[Ext.\]](#).

### Features

#### List of Summarization Hierarchies

The following values are displayed in the list of the summarization hierarchies:

- Hierarchy name
- Hierarchy designation
- Status
  - Summarized
  - Partially summarized
  - Not summarized

#### Hierarchy Graphic

The standard hierarchy graphic offers you the following views and figures:

- Plan/actual costs:
  - Planned costs
  - Actual costs
  - Currency
- Plan/actual quantities:
  - Planned quantity
  - Confirmed quantity
  - Unit of measure
- Target/actual costs:

## Overview of Summarization Hierarchies

- Target costs
- Actual costs
- Currency
- Planned costs fixed/variable:
  - Planned costs
  - Planned fixed costs
  - Planned variable costs
  - Currency
- Actual costs fixed/variable:
  - Actual costs
  - Actual fixed costs
  - Actual variable costs
  - Currency

You can access the following field groups when you define your custom layout:

- Costs
- Revenues / profits
- Quantities
- Results analysis data
- Variances
- Other

The report can be displayed in the following currencies:

- Controlling area currency
- Company code currency (only in sub-hierarchies that are assigned to exclusively one company code)

You can also choose the reporting time frame in the report.

## Integration

From the hierarchy graphic you can go to reports with the original cost elements. The data is displayed with the [ABAP List Viewer \[Ext.\]](#).

## Detailed Reports

## Detailed Reports in Cost Object Controlling

### Use

The report category *Detailed Reports* contains reports that provide special data for individual objects. The objects (cost objects) to be analyzed in reporting differ depending on the application component in *Cost Object Controlling*. If you are using *Product Cost by Sales Order*, for example, it may be useful to analyze costs at the level of a sales order item that carries costs and revenues. In *Product Cost by Period*, the product cost collector is the cost object. Accordingly, the sales order item with costs and revenues is used as the report object in *Product Cost by Sales Order*, and the product cost collector is used as the report object in *Product Cost by Period*.

The Information System for *Product Cost by Period* provides detailed reports for the following objects:

- [Product Cost Collectors \[Ext.\]](#)
- [Cost Object Hierarchies \[Page 132\]](#)

The Information System for *Product Cost by Order* provides detailed reports for the following objects:

- [Production Orders \[Ext.\]](#)
- [Production Orders without Quantity Structure \[Ext.\]](#)
- [Process Orders \[Ext.\]](#)

The Information System for *Product Cost by Sales Order* provides detailed reports for the following objects:

- Sales document items that carry costs and revenues  
Usually, these are [sales order items that carry costs and revenues \[Ext.\]](#).
- [Sales order cost estimates \[Ext.\]](#)
- Sales orders with assigned orders

The Information System for *Costs for Intangible Goods and Services* provides detailed reports for the following objects:

- [General cost objects \[Ext.\]](#)
- Internal orders with revenue

**See also:**

[Cost Objects in the R/3 System \[Ext.\]](#)

[Product Cost by Period \[Ext.\]](#)

[Product Cost by Order: Scenario \[Ext.\]](#)

[Product Cost by Sales Order \[Ext.\]](#)

[Costs for Intangible Goods and Services \[Ext.\]](#)



## Detailed Reports for Orders

# Detailed Reports for Orders

## Use

These reports are used for the detailed analysis of individual orders. You can use the detailed reports for orders to analyze the following objects:

- In Controlling of Product Cost by Order:
  - Production orders of production planning
  - CO production orders
  - Process orders of production planning for the process industries
- In Controlling of Costs for Intangible Goods and Services:
  - Internal orders

For information on the analysis on individual product cost collectors, read the section: [Detailed Reports for Product Cost Collectors \[Page 157\]](#)

## Features

The data is displayed using the cost analysis. The cost analysis is based on the functionality of the ABAP List Viewer and offers additional functions. Using the layout technology in the report, you can show the key figures that you want to analyze.

### See also:

- General information on [cost analysis \[Page 77\]](#)
- General information on the [ABAP List Viewer \[Ext.\]](#)
- See the following for general information on working with layouts:
  - [Creating, Changing and Managing Layouts \[Ext.\]](#)
  - [Defining Current Layouts \[Ext.\]](#)
  - [Saving Layouts \[Ext.\]](#)
  - [Managing Layouts \[Ext.\]](#)
  - See [Creating and Deleting Subtotals \[Ext.\]](#) for general information on grouping in layouts.

You can find general information on the key figures that you can analyze for orders under the following:

[Key Figures in Product Cost by Order \[Page 169\]](#)

### See also:

Special considerations should be taken into account when using the Information System for some processes in *Product Cost Controlling*. For this reason, you should read (according to the functions you are using) the following sections of documentation in the *Product Cost Controlling Information System*.

[Special Processing with Joint Production \[Page 373\] \(regarding the Information System\)](#)

[Special Processing with Collective Orders \[Page 377\] \(regarding the Information System\)](#)

From these reports, you can branch to extended information on the respective topics.

See the following sections of the *Cost Object Controlling* documentation for information on the individual order types and their role in *Cost Object Controlling*.

[Product Cost Collectors \[Ext.\]](#)

[Production Orders in Cost Object Controlling \[Ext.\]](#)

[Process Orders in Cost Object Controlling \[Ext.\]](#)

[Production Orders without Quantity Structure \[Ext.\]](#)

See the document *CO Internal Orders* for detailed information on internal orders with revenue.

See the following sections for information on the above-mentioned application components:

[Product Cost by Order \[Ext.\]](#)

[Costs for Intangible Goods and Services \[Ext.\]](#)

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**Object Comparisons**

## **Object Comparisons in Cost Object Controlling**

### **Use**

The report category *Object Comparisons* in *Cost Object Controlling* contains reports that compare two objects, such as two orders:

#### **Product Cost by Period:**

- Order versus Order Plan/Actual Comparison
- Summarization Hierarchy versus Summarization Hierarchy –Plan/Actual Comparison

#### **Product Cost by Order:**

- Material Cost Estimate versus Preliminary Order Cost Estimate
- Order versus Order Plan/Actual Comparison
- Summarization Hierarchy versus Summarization Hierarchy –Plan/Actual Comparison

#### **Costs for Intangible Goods and Services:**

- Order versus Order Plan/Actual Comparison
- Summarization Hierarchy versus Summarization Hierarchy –Plan/Actual Comparison

## Order vs. Order Plan/Actual Comparison

### Use

Report that compares two manufacturing orders (product cost collectors or manufacturing orders).

The reporting time frame can be cumulative or limited. This report belongs to the report category *Object Comparisons*.

Two orders are compared with each other on the basis of cost elements.

Planned and actual costs can be compared with each other in *Product Cost by Order*.

In *Product Cost by Period*, only the actual costs of two product cost collectors can be compared, because no planned costs are updated on product cost collectors.



This report does not show planned costs for manufacturing orders that are assigned to a product cost collector. Although a preliminary costing can be carried out for these manufacturing orders, the planned costs are not updated to the manufacturing order.

### Data Displayed

- Plan value object 1 (only for manufacturing orders)
- Actual values object 1
- Plan value object 2 (only for manufacturing orders)
- Actual values object 2
- Output quantity, planned, object 1 (only for manufacturing orders)
- Output quantity, actual, object 1
- Planned output quantity object 2 (only for manufacturing orders)
- Output quantity, actual, object 2

### Header Information:

The header shows you the following for each comparison object:

- Object information
- Currency

The report can be displayed in the following currencies:

- Controlling area currency
- Company code currency / object currency

### Integration

You should normally choose cumulative values. Note that there is no conversion of values to the planned or confirmed quantity.

## Order vs. Order Plan/Actual Comparison

### See also:

[Product Cost by Order \[Ext.\]](#)

[Production Orders in Cost Object Controlling \[Ext.\]](#)

[Production Orders without Quantity Structure \[Ext.\]](#)

[Process Orders in Cost Object Controlling \[Ext.\]](#)

[Preliminary Cost Estimate for Manufacturing Order \[Ext.\]](#)

[Preliminary Costing of CO Production Orders \[Ext.\]](#)

[Preliminary Costing of Product Cost Collectors \[Ext.\]](#)

[Actual Costs in Cost Object Controlling \[Ext.\]](#)

## Summarization Hierarchies: Plan / Actual Comparison

### Use

Report that compares two summarization hierarchies or two subhierarchies of summarization hierarchies. It is used in:

- *Product Cost by Period*
- *Product Cost by Order*
- *Costs for Intangible Goods and Services*

The reporting time frame can be cumulative or limited. This report belongs to the report category *Object Comparisons*.

The planned and actual data of two summarization hierarchies (or sections of them) are compared against each other on the basis of the original cost elements.

### Data Displayed

- Planned values object 1
- Actual values object 1
- Planned values object 2
- Actual values object 2

### Header Information:

The header shows you the following for each comparison object:

- Object information
- Currency

The report can be displayed in the following currencies:

- Controlling area currency
- Company code currency / object currency

### Integration

You can go to the hierarchy graphic of either hierarchy.



When the quantities are summarized, no units of measure are converted. It may be necessary to execute a data collection run again, depending on when the order hierarchies were last summarized.

**Summarization Hierarchies: Plan / Actual Comparison**

**See also:**

See the document *CO Internal Orders* for information on internal orders.

## More Reports: Line Items

### Use

Line item reports provide a detailed analysis of objects and their data. Line items are based on the lines of a document created by a posting in the R/3 System. The reports are available in the following areas:

- *Product Cost by Order*
- *Product Cost by Period*
- *Product Cost by Sales Order*
- *Costs for Intangible Goods and Services*

Line item reports enable you to make a detailed analysis of the values posted. You can access the original documents (such as the FI or MM document) from the individual lines in the line item report. (*Environment* → *Source document / Accounting document*)

Technical information is also available.

Line item reports are of limited importance in *Cost Object Controlling*, because the posting amounts from production confirmations are generally high, and analysis of the line items is only worthwhile in exceptional circumstances.

You can limit the line items to be displayed through the cost element or cost element group and via the period.

Line item reports are available for the following account assignment objects:

### Manufacturing orders (production orders and process orders):

- Line items actual
- Line items for WIP calculation
- Line items variance
- Line items commitment

### Product cost collectors

- Line items actual
- Line items WIP calculation (if the corresponding settings in the results analysis version were made, see also *Prerequisites*)
- Line items variance

### Cost Object ID (Cost Object Nodes in Cost Object Hierarchies and General Cost Objects)

- Line items actual (for cost object nodes of cost object hierarchies and for general cost objects)
- Line item variance (only for cost object nodes of a cost object hierarchy)

**More Reports: Line Items****Sales document item: normally a sales order item:**

- Line items actual
- Line items for results analysis
- Line items commitment

The line item reports are supplied with a predefined layout. You can also create your own custom layouts so that you can see other fields of the CO line item in the line item report. You can usually display all the fields of the Controlling document in the line item report. These fields were grouped for clarity into:

- Account assignment
- Time characteristics
- References
- Value key figures
- Technical fields
- Organizational units
- Partner account assignment
- Object
- Other objects
- Quantity key figures
- Investment management
- Not assigned

**Prerequisites****Manufacturing orders (production orders and process orders):**

- Line items for WIP calculation

The line items for the WIP calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Order* under *Period-End Closing* → *Work in Process* → *Define Results Analysis Version*. Go into *Extended Control*.

- Line items variance

The line items for the variance calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Order* under *Period-End Closing* → *Variance Calculation* → *Define Variance Key*.

**More Reports: Line Items**

- Commitment line items in orders are only updated if you have activated commitments management for the controlling area and for the order type.

**Product cost collectors**

- Line items variance

The line items for the variance calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Period* under *Period-End Closing* → *Variance Calculation* → *Variance Calculation for Product Cost Collectors* → *Define Variance Key*.

**Cost Object ID (Cost Object Nodes in Cost Object Hierarchies and General Cost Objects)**

- Line item variance (only for cost object nodes of a cost object hierarchy)

The line items for the variance calculation are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Period* under *Period-End Closing* → *Variance Calculation* → *Variance Calculation for Cost Object Hierarchies* → *Define Variance Key*.

**Sales document item: normally a sales order item**

- Line items for results analysis

The line items for the results analysis are only created when a corresponding setting has been made in Customizing.

You make this setting in Customizing of *Product Cost by Sales Order* under *Period-End Closing* → *Results Analysis* → *Define Results Analysis Versions*. Go into *Extended Control*.

**Integration**

Only actual line items are always updated in the standard system. Line items in WIP calculation, results analysis and variance calculation, and for commitments must be explicitly allowed in Customizing for the application.

If you want to write the commitment values to the sales order items that carry costs and revenues, you must set the *with commitments management* indicator in the fiscal-year-dependent control parameters of the controlling area.

Line items for results analysis data of the WIP calculation and results analysis are only saved if you have set the appropriate indicator in Customizing for the results analysis version.

Line items for variances are updated if you switch on the update of line items in the variance key.

Check the following settings in Customizing:

- Results analysis version for the lines items of the WIP calculation and the results analysis
- Variance key for the line items of the variance calculation

**More Reports: Line Items**

- Order type – commitments management for line item commitments
- Control parameters of the controlling area

**Notes on Performance**

In most cases, it is not necessary to update the line items for WIP calculation, results analysis, or variance calculation in your live system. For this reason, it is best to make sure that the relevant indicator in Customizing is **not** set. If you decide not to update the line items, the runtime in WIP calculation, results analysis, and variance calculation is significantly improved. Of course, in these cases, it is not possible to display a corresponding line item report.

**See also:**

A detailed description of line item reports can be found in the documentation *Overhead Cost Controlling*.

See the following sections for information on commitments:

[Commitments \[Ext.\]](#)

See the following sections for information on actual costs:

[Actual Costs in Cost Object Controlling \[Ext.\]](#)

See the following sections for basic information on WIP calculation and results analysis:

[Work in Process in Product Cost by Period \[Ext.\]](#)

[Work in Process in Product Cost by Order \[Ext.\]](#)

[Results Analysis \[Ext.\]](#)

See the following section for basic information on variance calculation:

[Variance Calculation \[Ext.\]](#)

See the following for general information on performance improvement:

[Performance in Product Cost Controlling \[Ext.\]](#)

## Actual Costing / Material Ledger Information System

### Definition

The following provides you with information about the contents of the reports in the information system of the application component *Actual Costing / Material Ledger*.

## Object Lists

# Object Lists

## Definition

Report category in the application component *Actual Costing/Material Ledger* that provides you with overview information for specific analysis purposes.

## Prices and Inventory Values

### Use

This report 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.

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).

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.

### Features

The characteristics and key figures of the report are divided into the following groups:

- Value update (such as inventory value, standard price, periodic unit price, percentage price variance)
- Single-level / multilevel differences (price and exchange rate differences of ending inventory)
- Quantity update
- Material attributes (such as material type, division, or valuation class)
- Sales order or project stock (sales order number, WBS element)
- Administration (period status)

### Integration

From the report *Prices and Inventory Values*, you can branch to *material price analysis* by selecting a material.

## Materials by Period Status

## Materials by Period Status

### Use

This report gives you an overview of the respective period status of the listed materials

You can display the period statuses of the selected materials in each plant for a particular period.

### Features

The following statuses can be selected:

Status	Description
Not defined	Period records do not exist. (technical status)
New objects	Material has been recently created.
Period opened	Period closing program was run.
Price change completed	Price change has taken place for a material.
Quantities and values entered	At least one of the following prerequisites has been met: <ul style="list-style-type: none"> <li>Valuation-relevant goods movements have taken place</li> <li>The closing entry has been made for the previous month</li> </ul> In both cases, a price change is no longer allowed.
Values entered	At least one of the following prerequisites has been met: <ul style="list-style-type: none"> <li>Invoices have been received</li> <li>An order has been settled</li> <li>Materials have been debited/credited.</li> </ul> In all cases, a price change is still allowed.
Price determined, single-level	Single-level material price determination was successful.
Price determined, multilevel	Multilevel material price determination was successful.
Closing entry reversed	The closing entry for a material was reversed.
Closing entry performed	The closing entry for a material has been performed.

### Integration

You can access *material price analysis* by selecting a material.

## Materials with Largest Moving Price Difference

### Use

This report displays the difference in the periodic unit price or moving average price between the current period and the previous period.

You generate an extract that can be displayed in a mini-application in the mySAP.com Workplace.

### Activities

The extract that you save here is displayed in the mini-application. The report SAPRCKAPP02 allows you to see the contents of the extract in the R/3 system.

Note the variant under which you generated the extract.

#### **Note for System Administration:**

To display the extract in the mini-application, you must carry out the steps described under [Setting Up Mini-Applications \[Ext.\]](#).

---

**Materials with Highest Inventory Value**

## Materials with Highest Inventory Value

### Use

This report displays the materials with the highest inventory value in each period.

You generate an extract that can be displayed in a mini-application in the mySAP.com Workplace.

### Activities

The extract that you save here is displayed in the mini-application. The report SAPRCKAPP02 allows you to see the contents of the extract in the R/3 system. Note the variant under which you generated the extract.

#### **Note for System Administration:**

To display the extract in the mini-application, you must carry out the steps described under [Setting Up Mini-Applications \[Ext.\]](#).

## Detailed Reports

### Definition

You can find reports for the analysis of material prices in the report category *Detail Reports*.

### Use

You can analyze the causes of price changes and the development of material prices through multiple periods.

---

**Material Price Analysis**

## Material Price Analysis

### Use

*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*. Data is displayed according to [process categories \[Ext.\]](#) and [procurement alternatives \[Ext.\]](#). The line items can be found under the procurement alternatives.

### Features

With *price determination control 3*, the material ledger data is divided into the following categories:

- Beginning inventory
- Receipts
- Cumulated inventory
- Consumption
- Ending inventory

The transactions controlled through the movement types in Customizing are displayed in the category *Other inward/outward movements*.

With *price determination control 2*, valuation-relevant transactions are listed in the *price history*. If these transactions are displayed in the price determination structure, then the category *Price changes* also appears in the display.

## Material Price Analysis

**Material**  
**Plant**  
**Period/Year**                      **Period status**

**Prices and Inventory Values:**  
**Inventory quantity**  
**Inventory value**  
**Indicator for material price determination**  
**Control of the valuation price**

### Categories:

Beginning inventory  
Receipts  
Other receipts/consumption  
Cumulative inventory  
Consumption  
Ending inventory

## Integration

From *material price analysis*, you can branch to a multilevel procurement or multilevel consumption in the *actual BOM*. From the *actual BOM*, you can branch to the *activity price display*. In the *activity price display*, you can compare the plan prices with the actual prices in the currencies carried by the material ledger. The actual price **before** multilevel price determination corresponds to the preliminary valuation. The actual activity prices are only displayed **after** multilevel price determination if the indicator *Activity update relevant to price determination* is set in Customizing for *Actual Costing/Material Ledger*.

## Cost Components

The *Cost Components* report shows the data of *material price analysis* broken down into cost components. The data is displayed in accordance with the period status in all set currencies and valuations.

### Prerequisites

The *actual cost component split* is active.

For more information, see [Actual Cost Component Split \[Ext.\]](#).

## Plan/Actual Comparison

### Plan/Actual Comparison

#### Use

This report analyzes variances of materials in mixed costing. In the pane *Variances of Alternatives*, you can analyze the price variances that arose at the level of procurement alternatives. In the *Mix Variances* pane, you analyze the mix variances caused by the changed mixing ratios.

The display shows cost components in accordance with the period status in all selected valuations.

#### Prerequisites

- You have activated the *material ledger* and the *actual cost component split*.
- The material costed in mixed costing has a released standard cost estimate.
- For the display to be meaningful, each procurement alternative in mixed costing must have been costed.

#### Features

You can call up the *Plan/Actual Comparison* view for the following purposes:

- As an explanation report for:
- The variances of procurement alternatives
- The mix variances
- To see the cost components of:
- The variances of procurement alternatives
- Mix variances

The report that explains the **variances of procurement alternatives** contains sufficient data to calculate these variances.

$\text{Variances} = \text{Actual value} - \text{Target value}$

The field *Diff.%* shows the variance as a percentage of the target value.

The report that explains the **mix variances** prepares the data for calculation. The mix variances for the procurement alternatives that were costed in mixed costing are calculated with the following formula:

$\text{Mix variance} = (\text{Actual quantity} - \text{Target quantity}) \times (\text{Planned price} - \text{Standard price})$

If one or more procurement alternatives were not costed in mixed costing, but the goods movements for the alternative were entered, the following formula is used for the mix variances:

$\text{Mix variance} = (\text{Actual quantity} - \text{Target quantity}) \times (\text{Actual price} - \text{Standard price})$

These formulas are valid only at the level of procurement alternatives. You cannot use these formulas for summarized data at the level of processes and categories. In the case of summarization, the variances are the sum of the variances per procurement alternative. Mean values are calculated for the prices.

The variances shown in the price determination structure are the sum of the mix variances and the variances for each procurement alternative.

The reports for the **split variances for each procurement alternative** and for **split mix variances** show the variances by cost components.

For more information, see [Actual Cost Component Split \[Ext.\]](#).

## → Special Cases



You use transaction-based material price determination and change a price in the previous period. In *material price analysis*, the ending inventory is shown at the changed price. However, since the price had not yet been changed at the beginning of the current period, the initial inventory of the current period still shows the valuation at the original price. But the current period does show the price change of the previous period.



If, based on a stock coverage check, not all cumulated differences can be distributed to consumption or final inventory with *price determination control 3*, these are displayed in the category *Not distributed*.



Price differences are assigned to consumption through single-level material price determination. If these differences are not included in multilevel price determination, or if multilevel price determination has not yet taken place, they appear in the data display under *Not allocated*.

## Note



If you change the price control, such as from **2 to 3** or from **3 to 2 and back to 3**, this can cause the following inconsistencies in *material price analysis*:

- The beginning inventory of the current period differs from the ending inventory of the previous period.
- Quantities and values at higher levels of the hierarchy (such as *receipts*) do not correspond to the assigned documents at the lower levels.

From the subsequent period onward, the display structure of *material price analysis* again corresponds to the documents.



You should only change the price determination setting when it is absolutely necessary.

---

**Material Prices and Inventory Values Over Several Periods**

## Material Prices and Inventory Values Over Several Periods

### Use

This report displays material ledger data of multiple periods. It can be used only with the material ledger.

The report can be used to analyze the change in a material's price and inventory over a given time period.

### Features

The key figures and characteristics of the report are divided into the following groups:

- Value update
- Single-level / multilevel differences
- Quantity update
- Material attributes
- Administration

## Transaction History for Material

### Use

This report shows you the business transactions for a material over a period of time and can only be used with the material ledger.

The report gives a precise analysis of all business transactions that could be responsible for price changes within the Material Ledger. A history of all relevant transactions for a material is generated in the Material Ledger. Using this report, you can analyze the causes of the price changes and take the appropriate corrective measures.

### Features

The key figures and characteristics of the report are divided into the following groups:

- Transaction characteristics
- Prices
- Inventories
- Changes

### Integration

From the list of results, you can branch to the following documents for a selected transaction:

- Accounting document
- Original document

## Cost Components for Price

# Cost Components for Price

## Use

This report lists the cost component split for the price according to cost components across all levels of production.

You can display the actual cost component split in accordance with the period status in all set currencies and valuations. If you perform the actual cost component split **after single-level price determination**, you receive a display of the cost component split for the current periodic unit price. Before **single-level price determination**, the periodic unit price of the previous month is displayed.

## Prerequisites

The *actual cost component split* is active.

## Features

You can choose from the following cost component split types:

- Primary cost component split
- Auxiliary cost component split

You can display the following prices:

- Moving price (V):
- Standard price (S):
- Future valuation price
- Future planned price

You can choose the base quantity for which the cost component split is displayed:

- Price unit
- Costing lot size
- Current inventory
- User entry

### See also:

[Actual Cost Component Split \[Ext.\]](#)

## More Reports

### Definition

Under this report category of the *Product Cost Controlling* information system, you can find reports that were not assigned to another category, for example documents.

---

**Material Ledger Document**

## Material Ledger Document

### Definition

Document that displays the transactions relevant to material valuation in all preset currencies and valuations

### Use

For every valuated transaction (for example, goods movements, invoice receipts, credits and debits, account maintenance, material price determination, price changes or closing entries), the material ledger document records the changes that result from the posting in the system during the material valuation.

### Structure

You have the possibility of selecting or defining your own layouts for the document display.

### Integration

If the corresponding documents were generated, you can branch from the material ledger document to the following:

- The detail display
  - The detail display indicates how the data is entered in material price analysis.
- The material ledger data
- The accounting documents
- The source document

## Price Change Document

### Definition

Document created by the system with the following:

- Material debits and credits
- Price changes
- Price releases
  - of a future price
  - from a cost estimate

### Use

The price change document documents price changes as well as material debits and credits.

## Special Processes and Their Effects in the Information System

### Use

Certain processes in *Product Cost Controlling* have particular features as far as the information system is concerned. Please therefore read the documentation for each function as you use it.

**See also:**

[Mixed Costing in the Information System \[Page 375\]](#)

[Joint Production in the Information System \[Page 373\]](#)

[Collective Orders in the Information System \[Page 377\]](#)

[Reports for the Controlling of Production Campaigns \[Page 380\]](#)

## Using Extracts

### Use

To reduce runtimes, you can generate extracts when you access reports. An extract is a saved dataset containing the report data selected at the time the extract was generated.

When you display the report data in the extract, you have the same navigation and formatting functions as with a reselection of the report data.

### Features

You generate an extract when you execute a report with reference to the report selection parameters. You can generate multiple extracts if you execute the report with different selection criteria.

If you make changes in the data structure in Customizing for the Information System (especially the field selection for order selection / sales order selection or for the selection of classification characteristics), inconsistencies may arise between the current data structure and the structure in the extract. The data of the extract can then no longer be displayed.

You can delete extracts that you no longer need. To do this you must go to the extract management (display a list of the existing extracts with F4 and choose *Extract Management*).

If you want to check the selection criteria with which the extract was generated, use *Extract Management* as well. The detail screen of the extract shows the information on the selection criteria for report execution.



Note that an extract is only valid for the duration of a release. This means that after a release upgrade you usually cannot access extracts generated in a previous release. Therefore after a release upgrade you should generate new extracts with the desired selection criteria.

### Activities

Generate extracts for the desired report data. Proceed as follows:

1. On the selection screen of the report, specify the selection criteria.
2. Choose *Extracts*.
3. In the screen *Processing Control Extracts* choose *Save* and give the extract a name and a description. Then choose *Execute*.
4. Start the report. The report data is selected. The selected data is saved under the specified extract name.

To display the data saved in the extract:

1. Choose *Extracts* on the selection screen of the report.
2. The screen *Processing Control Extracts* appears.
3. Choose *Read* and enter the name of the extract.

**Using Extracts**

4. Choose *Execute*.
5. Choose a display variant and choose *Execute*.

## Joint Production in the Information System

### Use

The Information System provides a few special evaluation options for *joint production*.

### Features

#### Product Cost Planning

##### Itemization

Itemizations offer two different forms of display with joint production. You can switch between the process view and the product view in the report. While the product view shows only the costs of the co-product, the process view provides information about the costs of the co-products, as well as an overview of the total costs of the production process. The co-products are shown under item category A with negative quantities and values. This negative value is the amount of costs for the co-product that was calculated using the apportionment structure. By-products and fixed-price co-products that occur as a part of the manufacturing process are identified in the itemization (just like materials used) with *item category M*. The value and quantity for these items, however, are negative, just like for joint production.

##### Cost Object Controlling

Manufacturing orders used for the production of co-products carry co-products in order items.

##### Summarization using Summarization Hierarchies

For orders with items that carry costs and revenues, *summarization using summarization hierarchies* aggregates only those values that are found in the items. Values found in the order header are not summarized. Therefore, it is necessary to execute the function *Preliminary Settlement for Co-Products, Post-Processing* before starting a data collection run.

##### Order Selection

Within order selection, you have the option of choosing whether to select all orders, only orders with items, or only orders without items. If you want the selection to be dependent on the order status, you can create separate status selection profiles for the header or order items, respectively.

##### Detailed Reports

By using different detailed reports (such as the order item) with joint production, you can perform analysis at the level of the manufacturing order or alternatively, at the level of a single co-product. This way, you can analyze the costs of the whole joint production process or the manufacturing costs for a single co-product, depending on your needs.

To view the sales order values at the level of a single co-product, you need to show the field **Item** in the selection screen for the particular detailed report. **After entering an order number** in the report selection screen, choose *Settings* → *Order items* → *On/off*. Enter the number of the order item to call up the report. The report contains an overview of the costs of the co-products assigned to the order item selected.

Place an asterisk (\*) in the **Item** field or leave it empty to display the cumulative data from the order header and the order items in the report. This can be useful if you want to display the plan

## Joint Production in the Information System

credit and plan debit for the entire order (i.e. summarized across all co-products). The *Credit* displayed in the report corresponds to the credit to the order items resulting from the delivery of the co-product to stock.



If a cost report is called up from the master record of a manufacturing order, the report is displayed as if the **Item** field was displayed but left empty (as described above).



On the other hand, if you call up a detailed report for a manufacturing order with co-products **without** displaying the **Item** field in the selection screen, only data that is actually in the order header is displayed. Consequently, in a planning report you see the planned debits that resulted from the preliminary order cost estimate. Under *Planned credit*, you see the credit that resulted from distributing the costs to the order items. In this presentation, the balance of the order is always zero.

### Hierarchy Graphic

You can use the report *Hierarchy Graphic* to check which order item the co-product to be analyzed is assigned to. This report displays, in a hierarchical format, all items belonging to a manufacturing order as well as the name of the co-product. In addition, you can display the planned data, target data, and actual data, as well as planned and actual quantities either for the orders or cumulated for the entire campaign.

You can call up the hierarchy graphic from a detailed report's selection screen if you have already displayed the **Item** field according to the procedure described above. To branch out in the hierarchy graphic, select the symbol *Overview*.



Note that you have to execute the function *Preliminary Settlement for Co-Products, Rework* before performing period-end closing. This is necessary to ensure that all relevant actual costs from the order header are distributed to the order items and therefore are considered during period-end closing activities and the subsequent analysis.

### See also:

- [Special Requirements in Joint Production \[Ext.\] \(in Product Cost Planning and in Cost Object Controlling\)](#)
- [Preliminary Settlement for Co-Products, Rework \[Ext.\]](#)
- [Preliminary Settlement for Co-Products \[Ext.\]](#)
- [Performing Preliminary Settlement for Co-Products, Rework \[Ext.\]](#)
- [Summarization Hierarchies \[Page 314\]](#)
- [Order Selection \[Page 330\]](#)

## Mixed Costing in the Information System

### Use

Special considerations should be taken into account when using the Information System if you are using mixed costing.

### Features

#### Product Cost Planning

##### Itemization

When costing a material using mixed costing, a cost estimate is generated for each of the material's procurement alternatives.

If you display the itemization created with the cost estimate, you will see a special type of itemization. Each line in this itemization corresponds to exactly one procurement alternative that was created for the material costed. The individual procurement alternatives are identified under item category M (material). In addition to showing the procurement alternative, a flexible itemization can also show the equivalence numbers used to weight the procurement alternative in the mixed costing.

##### Detailed Reports for Procurement Alternatives

Using mixed costing you can analyze a specific procurement alternative more closely by using different detailed reports on material cost estimates. If you use the cost component report, for example, you can display the material's cost component split for a particular procurement alternative. When accessing the report, indicate which procurement alternative you would like to view, in addition to the usual selection entries. **After choosing the usual selection criteria** in the report selection screen, choose *Settings* → *Procurement alternative* → *Choose*. (In some reports, the menu path is *Extras* → *Procurement alternatives*) You get a list of all procurement alternatives for the material indicated. Choose the desired procurement alternative from this list. The cost estimate number of the chosen procurement alternative is displayed in the selection screen of the report. The cost estimate number refers to a technical name that is issued by the system.

To display the cost estimate data for a mixed costing that was formed from different procurement alternatives and weighted with equivalence numbers, do not choose a procurement alternative in the selection screen of the report. The data for the mixed cost estimate is displayed if a mixed cost estimate was created for the indicated costing version.

##### Existing cost estimates

If you use this report for materials that were used in a mixed cost estimate, a list is displayed containing the mixed cost estimate for the material as well as cost estimates for the individual procurement alternatives. There is an indicator showing that the cost estimate for the material is a mixed cost estimate. The name given to the alternative by the system is displayed along with the cost estimates for the procurement alternatives.

##### Costed Multilevel BOM

For a material costed with mixed costing, the material's individual procurement alternatives are displayed (including the indication that they are a costing item of type M - material) in the costed

## Mixed Costing in the Information System

multi-level BOM . A breakdown of one of these items displays the corresponding costing items and values for the particular procurement alternative.

### Analyze Costing Run

Materials that were costed with mixed costing are indicated as such in the list of costed materials. In the same way, cost estimates are identified as belonging to a particular procurement alternative and the name of that procurement alternative is shown.

## Cost Object Controlling

Goods receipts associated with a production order are valued with the standard price that was calculated via mixed costing. The *actual debit* to a manufacturing order displayed in a detailed report is calculated by multiplying the material's mixed price by the quantity (actual quantity) that was delivered to stock.

For the target cost version calculating the total variance (target cost version 0), the target costs from mixed costing are calculated based on the standard costs from the procurement alternative. Target credits are also calculated on this basis.

When using mixed costing, variance calculation determines the difference between the target credit (actual quantity \* standard cost in the procurement alternative) and the actual credit to the order (actual quantity \* mixed price) and then allocates this variance to a separate variance category, the *mixed-price variance*. Mixed-price variances deal with output side variances. These variances are only calculated when calculating the total variance. Therefore, you can only analyze mixed-price variances in variance reports for target cost version 0 (total variance).

Variance category mixed-price variance can be identified by using the report *Variance Categories*.

### See also:

For more information on *procurement alternatives*, see [Procurement Alternatives and Production Processes \[Ext.\]](#).

## Collective Orders in the Information System

### Use

If you use collective orders in logistics, you can analyze production costs from an order-related perspective for all collective orders or, alternatively, for a single production step in the *Information System of Product Cost Controlling*. The following text contains information to facilitate a correct interpretation of the displayed report data.

### Features

#### Detailed Reports

You can use the detailed reports of *Product Cost by Order* to analyze costs for:

- The entire collective order
- An individual manufacturing order assigned to the collective order
- A section of a collective order – that is, for a particular subsection of production

For detailed information on individual orders, use the detailed reports in the Information System of *Product Cost by Order*. These include reports on planned costs, target costs, actual costs, work in process and variances.

If you want to identify the costs of the entire manufacturing process for the production of a finished product, you can also use the above-mentioned detailed reports to give an account of a complete collective order. Proceed as follows:

After entering the order number of the **leading order** (highest order in the collective order) on the selection screen of a detailed report, choose **Settings → Collective order → On / off**. The selection screen of the report then shows the text *Including subordinate orders*. Carry out the report for the desired time frame.

The report shows the debits and credits of all manufacturing orders assigned to the collective order.



You have created a collective order that contains two production orders. You have specified in the order type that goods movements are to take place between the production levels. One production order was created for the finished product being manufactured (FERT). The other production order was created for a semifinished product used in the finished product (HALB). Both materials are valued at the standard price.

If you look at the planned costs for the entire collective order using the detailed report *Planned Costs*, the report shows the following:

#### Debit Side

Planned debit with the planned costs to manufacture the semifinished product

- Planned credit through delivery of the semifinished product to stock, valued with the standard price of the semifinished product

### Collective Orders in the Information System

- + Planned debit with withdrawal of the semifinished product to manufacture the finished product
- + Planned debit with other costs incurred in the manufacture of the finished product

-----  
-----  
= Total debits

#### Credit Side

Planned credit through delivery of the finished product to stock, valuated with the standard price of the finished product

= Total credits

The debit side of the report therefore shows the costs of *all* production levels. The total of these debits equals the costs of the entire production process.

If you only want to see the costs of a particular section of the collective order, choose *Settings* → *Collective order* → *On / off* on the selection screen of the detailed report. In the selection screen of the report, first enter the order number of a manufacturing order in the collective order. In addition to the costs of this order, the report also shows the costs of the orders that are below this order in the collective order.

### Hierarchy Graphic

You can use the hierarchy graphic to:

- Obtain an overview of all orders assigned to the collective order
- View the costs on the individual production levels

You access the hierarchy graphic from the selection screen of a detailed report in *Product Cost by Order* by entering the order number and choosing *Settings* → *Collective order* → *On / off*. The *Overview* button then appears on the selection screen of the report. Use this button to access the hierarchy graphic.

This report shows an overview of all orders assigned to the collective order, whereby the individual hierarchy levels correspond to the production levels in manufacture. You can add key figures such as planned costs, actual costs, or work in process to the hierarchy graphic. This allows you to analyze the cost of goods manufactured on the individual production levels. You can also view the costs of the individual production levels summarized upwards. The total costs of the production process are shown at the highest level of the collective order. To see the costs by production levels, choose *Settings* → *Aggregation values* → *Object-based* in the hierarchy display. To summarize the costs of the individual production levels upwards, choose *Settings* → *Aggregation values* → *Aggregate* in the hierarchy display. The difference between the credit and debit is summarized upwards.



Note that you can use the field catalog of the layouts to add key figures such as work in process or reserves for unrealized costs to the hierarchy graphic.

**Collective Orders in the Information System**

To analyze a single order in a collective order, you can go from the hierarchy display to a detailed report for the order.

You can also go from the hierarchy display to a detailed report for the entire collective order. This allows you to see the overall costs of the collective order broken down into cost elements, and to see the credit side of the collective order that results from the delivery of the leading order to stock.

**See also:**

[Collective Orders \[Ext.\]](#)

[Collective Orders with Automatic Goods Movement \[Ext.\]](#)

[Collective Orders with Automatic Goods Movement: Scenario \[Ext.\]](#)

[Collective Orders without Automatic Goods Movement \[Ext.\]](#)

[Collective Orders without Automatic Goods Movement: Scenario \[Ext.\]](#)



SAP recommends the use of collective orders with automatic goods movement.

## Reports for Cost Controlling of Production Campaigns

## Reports for Cost Controlling of Production Campaigns

### Use

If you use production campaigns in Logistics, you can use the *Product Cost Controlling Information System* to analyze the costs of those production campaigns. There are special reports available for this in *Product Cost by Order*.

### Features

#### Planned Costs of Production Campaigns

##### Itemization

With the display of the itemization of a production campaign, the itemization is dynamically structured in the same way as the preliminary cost estimate of a manufacturing order. This itemization is not saved by the system. It cannot be called up in the information system of *Product Cost by Order* or *Product Cost by Period*. If you want to display the itemization for the preliminary costing of a campaign, choose *Logistics* → *Production Process* → *Production Campaign* → *Environment* → *Cost Itemization*. The itemization is then built dynamically by the system.

The planned costs of a production campaign are calculated by using the summarization of the preliminary costings of all the manufacturing orders within the campaign. This produces a special kind of itemization. All of the orders assigned to the campaign are listed out in the lines of the itemization. Planned orders are also considered here. In the costing, they are dynamically converted by the system to production orders. Information, such as information concerning materials and order quantities is displayed for the orders. Costing items can be displayed by expanding a line.

How the itemization is displayed can be changed to suit your needs. There are various functions available for this. You can, for example, use a filter so that only costs for orders with material reference or costs from orders without material reference are displayed.



If you have assigned a *business process group* to a campaign process, process costs that result from business processes and are assigned to this business process group are eliminated in the cost display for the production campaign. This guarantees that costs allocated from campaign service orders to production orders by means of business processes within the campaign are not shown twice.

If a campaign is assigned to a business process group, an analysis of the preliminary cost estimate of an individual order of the campaign can lead to other results than the analysis for the campaign, because all costs are displayed on the level of the order.

In order to avoid eliminating process costs in the preliminary costing of the production campaign, allocate costs within the campaign using business processes and do not assign any business process groups to your production campaign. If you do this, debits to campaign service orders as well as debits to production orders that result from allocation of campaign service orders will be displayed in the itemization. Please take this into account when interpreting the report data. To avoid a double statement of costs, you can set a filter to leave out the allocation cost elements of the

## Reports for Cost Controlling of Production Campaigns

business process that is used to allocate the campaign service order costs within the campaign.

### Cost Object Controlling

#### Cost element reports for production campaigns

You can display all the costs of a production campaign using the Product Cost Controlling Information System.

You can access reporting for production campaigns using:

- the Information System for *Product Cost by Order*  
You can find these reports in the Information System of *Product Cost by Order* in the report category *Detailed Reports*.
- Production campaigns in *Production Planning-Process Industries*  
You see the Information System of *Product Cost by Order*.

With the production campaign reports, you can display the planned costs, target costs, actual costs, work in process, and variances summarized for all orders assigned to the campaign. The values are displayed by their original cost elements and can be further subdivided according to origin groups and origins.

To monitor the costs of a single order in a production campaign, you can use the *detailed reports* for orders.



If you have assigned a *business process group* to a campaign process, process costs that result from business processes and are assigned to this business process group are eliminated in the cost display for the production campaign. This guarantees that costs allocated from campaign service orders to production orders by means of business processes within the campaign are not shown twice.

If a campaign is assigned to a business process group, an analysis of the preliminary cost estimate of an individual order of the campaign can lead to other results than the analysis for the campaign, because all costs are displayed on the level of the order.

In order to avoid eliminating process costs in the cost element reports for the production campaign, allocate costs within the campaign using business processes and do not assign any business process groups to your production campaign. If you do this, debits to campaign service orders as well as debits to production orders that result from allocation of campaign service orders will be displayed in a report for the production campaign. Take this into account when interpreting the report data.

#### Hierarchy Graphic

You can use this report to display orders assigned to a production campaign. The report contains a hierarchical display of the campaign and the orders associated with it. In addition, you can display the planned costs, target costs, actual costs, as well as planned and actual quantities for a single order or cumulated for the entire campaign. It is possible to jump to detailed reports for orders in order to obtain a more detailed analysis.

## Reports for Cost Controlling of Production Campaigns

In the header of the hierarchy graphic, you can display such information as the name of the campaign as well as the beginning and end dates.

You access the hierarchy graphic from the selection screen of a detailed report by entering the campaign number and then choosing *Overview*.

The data is displayed with the ABAP List Viewer.

### See also:

You can find detailed information on how production campaigns are handled in cost accounting in the following section:

[Planning and Analysis of Campaign Costs \[Ext.\]](#)

For detailed information concerning itemization in Product Cost Planning, see [Itemizations \[Page 302\]](#)

You can find a thorough description of the figures displayed in the cost element report for production campaigns under:

[Work in process \[Page 218\]](#)

[Planned Costs \[Page 220\]](#)

[Actual Costs \[Page 221\]](#)

[Target / Actual / Production Variances \[Page 209\]](#)

[Target / Actual Comparison \[Page 212\]](#)

[Plan / Actual Comparison \[Page 214\]](#)

[Variance Categories \[Page 216\]](#)

You can find information about the different functions for defining and preparing report displays in the documentation for the [ABAP List Viewer \[Ext.\]](#).

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Template: C:\Users\templates\sapkeeh.dot  
Title: Product Cost Controlling Information System (CO-PC-IS)  
Subject:  
Author: SAP AG  
Keywords:  
Comments: Release 46C 16.07.2001  
Creation Date: 16.07.01 17:44  
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