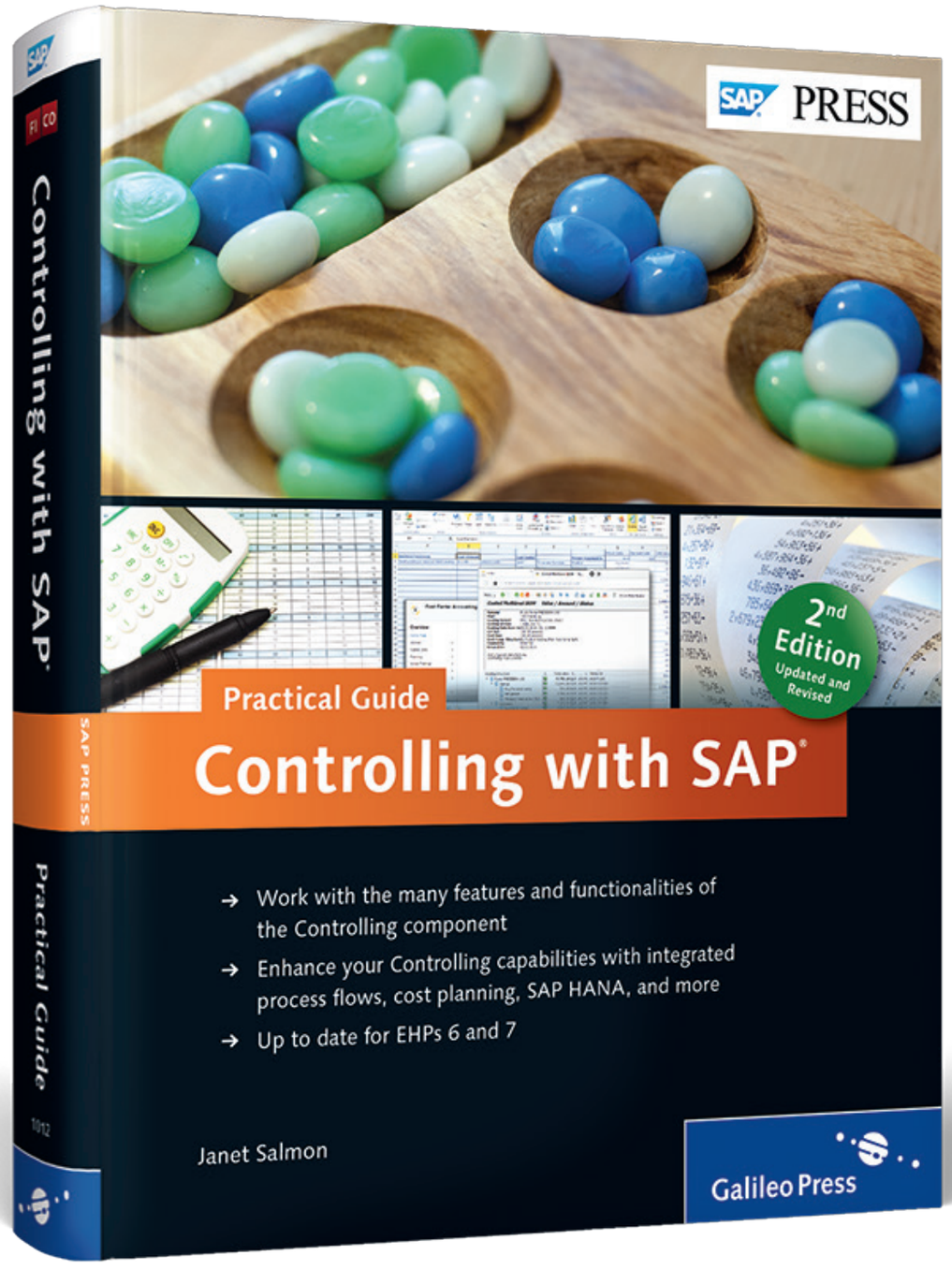

Reading Sample

This sample chapter explores some of the standard reports and reporting options in SAP ERP that controllers will use every day, with a focus on reports that allow you to search for the relevant line items in each application area.

"Reporting"

Contents

Index

The Author

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In this chapter, we'll discuss the basic reports that every organization needs to run its core business, including coverage of general Controlling, Product Cost Controlling, and Profitability Analysis reports.

2 Reporting

Almost all SAP documentation and training materials cover reporting in the final chapter as something of an afterthought, once the main topics surrounding the business processes and underlying master data have been explained. However, if you're a controller, the need to analyze business performance each month is at the heart of your job, the very reason for doing controlling in the first place, so it makes sense to start by looking at some of the standard reports that controllers use every day. This way, you'll get a sense of what information is available in each area of the Controlling component of SAP ERP Financials (CO) and what you can expect from the chapters to follow.

The other reason to start with reporting is that it means we'll have covered the basic functions, such as changing the column structure or downloading the report contents to a spreadsheet, when we walk through how to post expenses to a cost center or production order later.

In this chapter, we'll focus on the line item that records expense postings, allocations, and so on, looking at reports that allow you to search for the relevant line items in each application area. Controllers also like to bring these line items into *context* to understand whether cost center spending is going according to plan, whether project spending is about to exceed a budget limit, or whether production lines are executing to target. While we're looking at the line items for each area, we'll try to bring these line items into their Controlling context.

This chapter will look at your reporting options in SAP ERP. If your organization is already using a data warehouse for reporting, you'll find a discussion on when to use SAP Business Warehouse (BW) in Chapter 8. However, even controllers whose organizations have implemented SAP BW still tend to use the line item reports in SAP ERP for detailed cost tracking and analysis. In the final chapter,

we'll look at the newer options available with SAP HANA. Because these build directly on the line items, it's more important than ever to understand what information is being captured at source.

Note

Wherever possible in this book, we'll use the new-look user interfaces that are available from EHPs 5 and 6 for SAP ERP 6.0. For readers not yet using this version of the software, we'll also provide the menu path and transaction to make sure you can follow the instructions no matter which version of SAP ERP you're running. You'll find information about how to install the SAP NetWeaver Business Client in SAP Note 1029940 and how to implement the new user interfaces in Appendix A, which you can download at *www.sap-press.com/3625*.

2.1 Cost Center Line Items

Let's start our journey in Cost Center Accounting. The cost center line item report that helps you monitor expense postings to a cost center and allocations from the cost center is one of the most widely used transactions in SAP ERP Financials. If you know how to use it properly, you'll already be well on the way to being an expert in CO with SAP ERP Financials.

2.1.1 Classic Cost Center Line Item Report

In the SAP Easy Access menu, all transactions and reports are grouped into folders for the main application areas, such as Cost Center Accounting, Internal Orders, Product Cost Controlling, Profitability Analysis, and so on. These *application areas* are delivered as *roles* in EHP 5 for SAP ERP 6.0. When you log on, you'll see all the roles assigned to your user. We'll start each section by looking at the relevant role structure. Figure 2.1 shows the entries in the role Cost Center Accounting. You'll find all the reports available for this role under Information System.

Before we explore the reports on offer, let's look at the Home page shown in Figure 2.2. This page is delivered as part of the Cost Center Accounting role (SAP_EP_RW_CO_KSMN) if you're on EHP 6 for SAP ERP 6.0. As a controller, it can be good to start the day with a quick overview of the plan/actual costs on your cost centers before you delve into the details. To make sure that this report can run

without you entering any selection parameters, you need to set certain defaults for your user. To do this, select System • User Profile • Own Data, choose the Parameters tab, and enter the parameter CAC for the controlling area. You'll notice an area called My Default Settings in the lower left of the screen. As you enter a cost center and/or cost center group, you'll be updating your user parameters with the parameter KOS for the cost center and your chosen cost center.

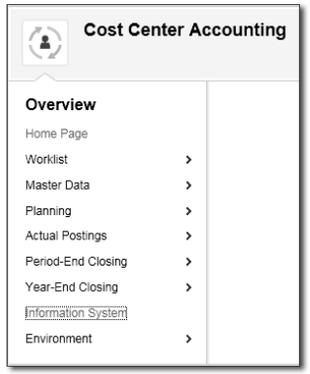


Figure 2.1 Cost Center Accounting within SAP NetWeaver Business Client

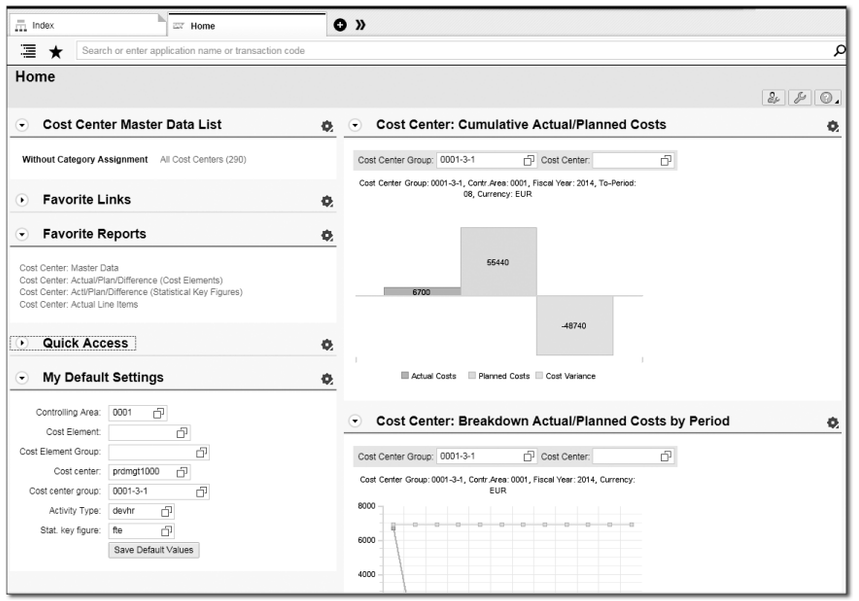


Figure 2.2 Home Page for Cost Center Accounting

The Information System link in Figure 2.1 will take you to a screen that shows the reports available for Cost Center Accounting. This is the equivalent of choosing the menu path Financials • Controlling • Cost Center Accounting • Information System • Reports for Cost Center Accounting in earlier versions of the software. If you compare the links in Figure 2.3 with the entries in the classic menu, you'll find that more reports are shown here. This is because we've included newer reports in the list that were delivered in EHPs 3 and 5 for SAP ERP 6.0. All reports with the word List in the title can be run directly in your SAP ERP environment.

Activating New Reports via the Enhancement Packages

To find out how to make the new reports work in your organization, refer to Appendix B, which you can download at *www.sap-press.com/3625*.

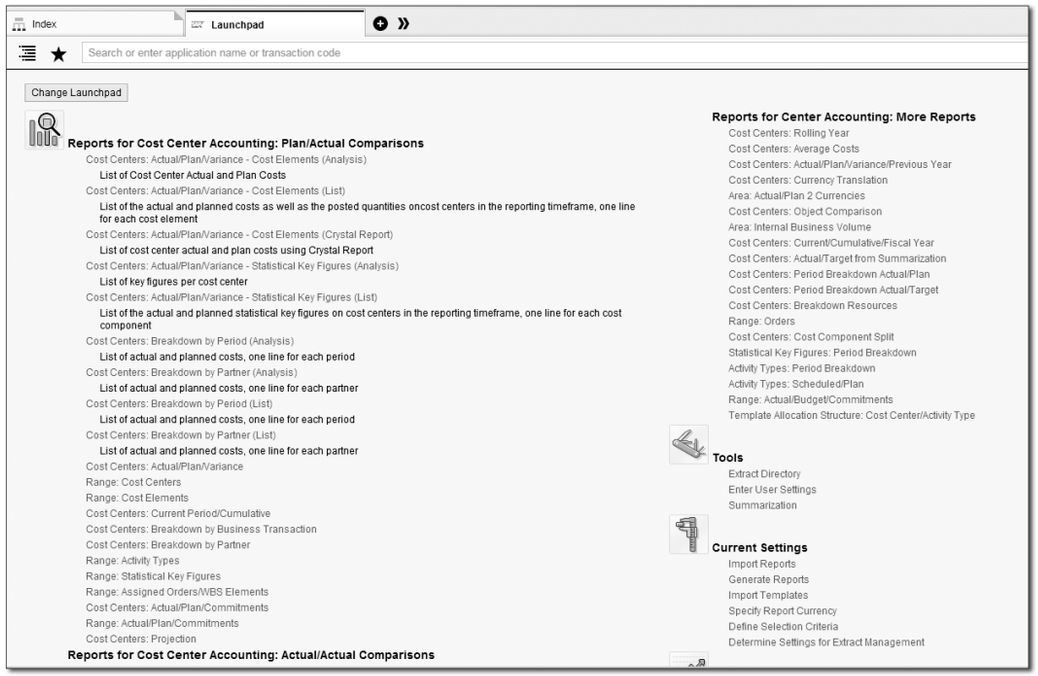


Figure 2.3 Reports for Cost Center Accounting

In the Line Items folder, select the link Cost Centers: Actual Line Items. The *actual line items* document every posting taking place to CO (such as the expense

posting we looked at in Chapter 1) and in CO (such as the allocations we'll look at in Chapter 7).

The selection screen for the cost center line item report now appears (see Figure 2.4). Experienced controllers will recognize this as Transaction KSB1. From this point onward, all functions will be the same as in the classic transaction. The new user interface simply changes the way the transaction is accessed, replacing a menu or transaction call with a role-based approach.

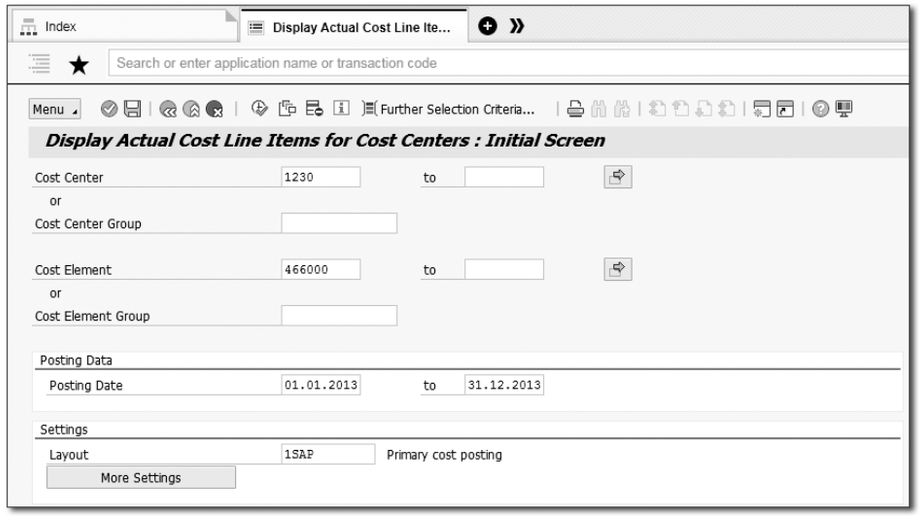


Figure 2.4 Cost Center Line Items—Selection Screen

To select the relevant line items for analysis, enter cost center 1230 (Power), cost element 466000 (Insurance Expenses), and posting dates between 01.01.2013 and 31.12.2013 in the selection screen, and then click on the Execute button. The result is a list of all postings for insurance expenses to the cost center in 2013, as shown in Figure 2.5. This is the CO view of the expense posting we used as our example in Chapter 1. Of course, if you know the document number, you can access the line items of the relevant documents directly using Transaction KSB5 (Display Actual Cost Documents), but it's generally more efficient to search via the cost center or cost center group. We'll see how to access the CO document when we look at the integrated process flows for buying, making, and selling goods in Chapter 6.

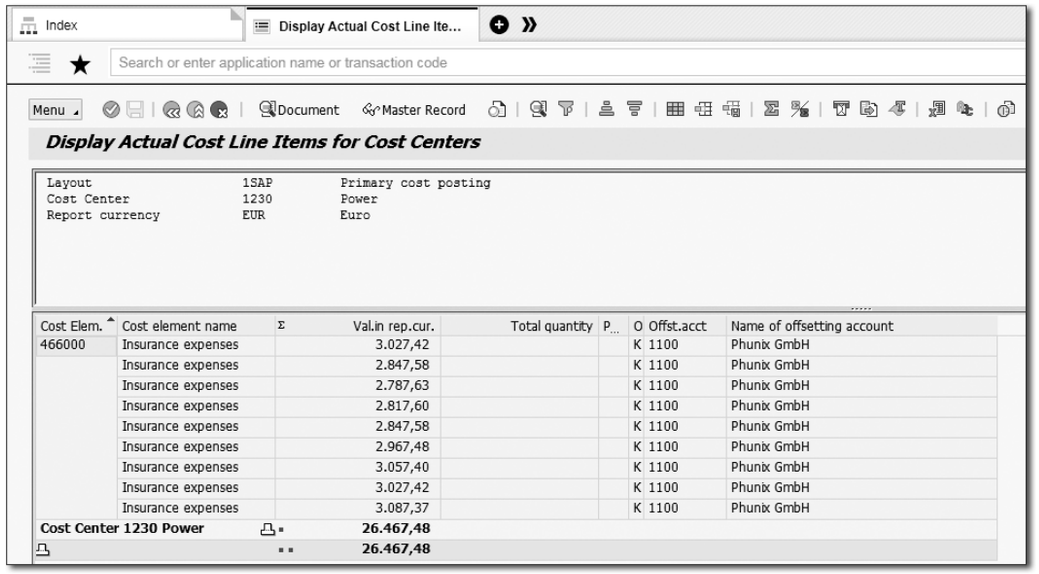


Figure 2.5 Result List

This type of *list report* is available throughout CO and in other areas of SAP ERP, so it's worth taking time to get familiar with the standard report functions. You'll recognize reports built with this technology throughout the book by the standard toolbar. The technical term for this kind of report is *SAP List Viewer*. To explore this type of result list, some controllers immediately reach for the Export to Excel button and start exploring their data in a spreadsheet.

You should know, however, that SAP List Viewer has its own spreadsheet-like functions. You can sort columns, include totals and subtotals, and so on in any list. To remove unnecessary columns, position the cursor on the column, right-click, and select Hide.

In general, you are more likely to add fields to such reports than remove them, because the line item includes far more fields than can reasonably be displayed on a single screen. The group of fields displayed in SAP List Viewer at any point is called the *layout*. SAP delivers several layouts for use with cost centers. You can change these with the Change Layout dialog, which you can reach by clicking on the Choose Layout button; the Choose Layout screen is shown in Figure 2.6.

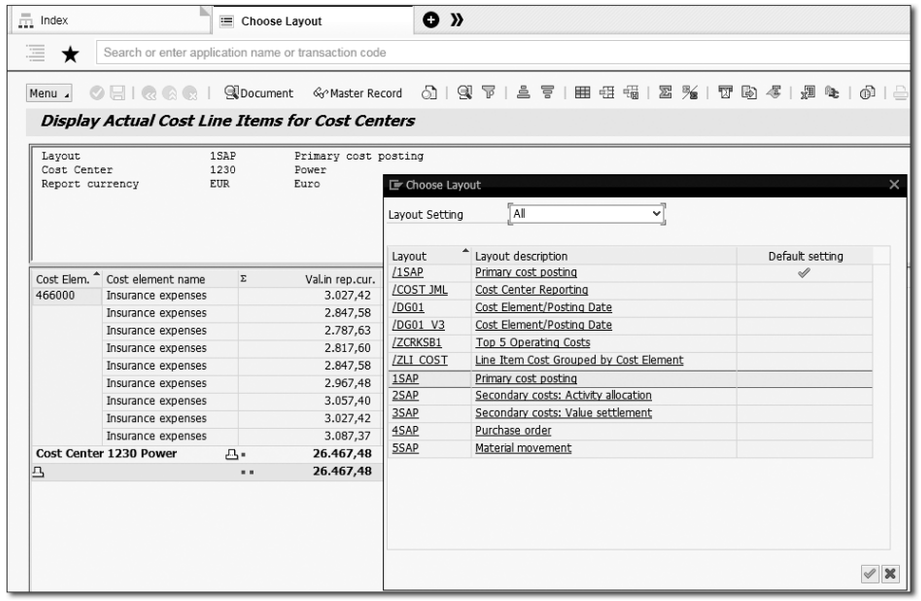


Figure 2.6 Change Layout in SAP List Viewer

The cost center line item includes layouts for the following:

- Primary cost posting
  Use this layout to analyze expense postings from the general ledger.
- Secondary costs: Activity allocation
  Use this layout to analyze direct activity allocations charged from another cost center (see Chapter 6).
- Secondary costs: Value settlement
  Use this layout to analyze order values that have been settled to the cost center (see Chapter 7).
- Purchase order
  Use this layout to analyze purchase orders whose account assignment is the cost center (see Chapter 6).
- Material movement
  Use this layout to analyze goods movements charged to the cost center (see Chapter 6).

These layouts will get you started, but you'll almost certainly want to create more layouts to organize the data in the list the way you want to see it (you'll notice that additional layouts have also been created in this demo system). To change a layout or to create a new one, click on the Change Layout button, which takes you to the Change Layout dialog shown in Figure 2.7.

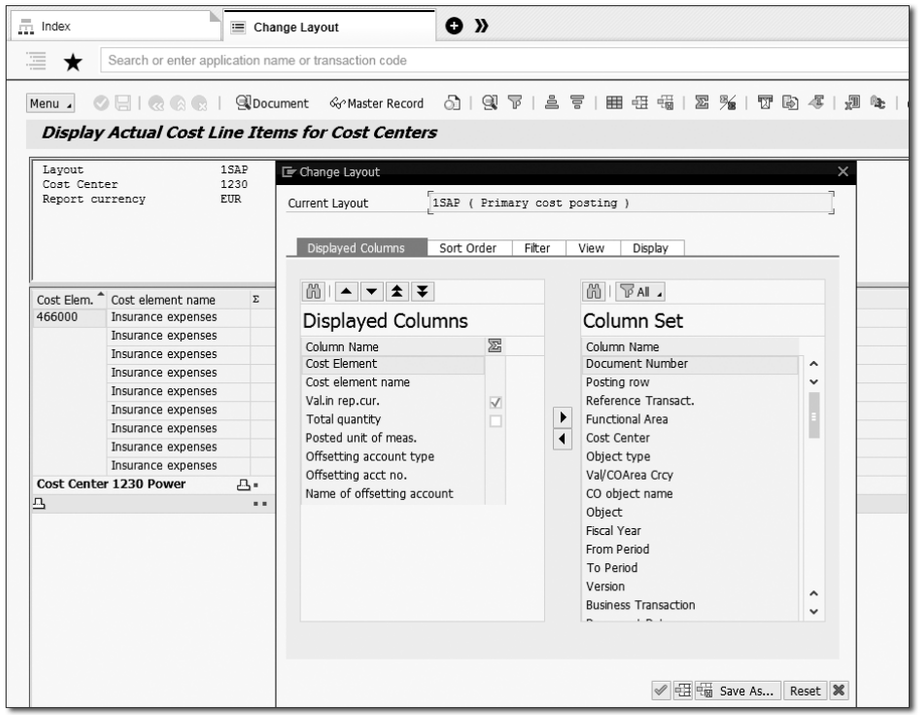


Figure 2.7 Adding Fields Using SAP ABAP List Viewer

To add fields, move them to the left by marking the relevant field in the right-hand column (Column Set) and selecting the left-facing arrow button in the center. To hide columns, move them to the right by marking the relevant fields in the left-hand column (Displayed Columns) and selecting the right-facing arrow button in the center. If the result is a layout that you want to use regularly, it's worth saving the layout under a meaningful name by clicking on the Save button. The new layout is assigned to your user, so nobody else will see your layout. To help you explore the potential of this list, let's consider the data available in the line item report.

Primary Cost Postings

The layout shown in Figure 2.6 and Figure 2.7 is for primary cost postings. It explains expense postings that originated in the General Ledger and shows the cost element in CO that mirrors the profit and loss account in the General Ledger and the offsetting reconciliation account for the vendor in Accounts Payable. We'll look at cost elements and accounts in more detail in Chapter 3 and Chapter 4. The layout also includes details of the offsetting account type—the insurance company whose services have been purchased—so the layout includes account type K for vendors and the offset account for the vendor invoice in our example.

If you want to reconcile your cost center documents against the data in the General Ledger, you can extend this layout to include the following fields, all of which are defaulted from the cost center master record:

- Company Code
  If you're looking at cross-company postings, you may want to know in which company code each posting was made.
- Business Area
  This is the main way of segmenting your business activities in the general ledger.
- Functional Area
  This is used to segment activities for cost-of-goods-sold (COGS) reporting and in Public Sector Accounting.
- Segment
  This is used for segment reporting according to International Financial Reporting Standards (IFRS). The segment is derived from the profit center in the cost center.

One field you won't find in the layout is the controlling area. Every posting in CO takes place in a controlling area. Depending on your configuration, the controlling area may cover one or more company codes. In recent years, there has been a trend in global organizations toward a global controlling area. Whatever your settings, the golden rule is that all postings in CO and all reporting activities take place in a single controlling area. The only way to show data in multiple controlling areas is to report in SAP BW.

Secondary Postings or Allocations

If we assume that the cost center allocates the insurance expenses to several other cost centers, you might want to explain these postings by creating a new layout to show the *partners* participating in the allocation. This layout still includes the cost element and the cost center as the sender of the allocation, but you can extend it to include the following fields for the *sender*:

- Object Type
  The type of object against which the posting was made. In our example, the cost center is CTR. For the order line item that we'll look at later, the object type is ORD, and so on.
- Object
  The object against which the posting was made. In our example, this is cost center number 1230.
- Debit/Credit Indicator
  Whether the posting was a debit (D) or a credit (C).

To explain the other side of the *partner relationship,* include the following fields:

- Partner Type
  The type of object to which you made the allocation. This might be CTR if you are using assessment cycles or distribution cycles or ORD (order) if you are charging a department's costs to an order using time recording.
- Partner Object
  The key of the other cost center or the order that received the allocation.
- Partner Object Name
  The name of the other cost center or the order that received the allocation.
- Business Transaction
  This enables us to distinguish between different types of postings and allocations for auditing purposes. We'll see examples of the different codes for the business transactions when we look at sample expense postings in Chapter 6 and the various forms of allocations that take place at period close in Chapter 7.

Multiple Currencies

If you work with several currencies, it's is also a good idea to create a separate version of your chosen layouts for each of the relevant currencies and another layout that shows relevant combinations:

- CO Area Currency
  This is usually the group reporting currency and is set for the controlling area. Generally this is the same as the group currency in the General Ledger.
- Object Currency
  This is the currency of the object (in our case, the cost center) and is set in the cost center master record. For example, a cost center based in the United States would have US dollars as the object currency. Generally this is the same as the company code currency in the General Ledger.
- Transaction Currency
  This is the local currency in which the transaction was performed. For example, if the US cost center purchases goods in Canada, the Canadian supplier would invoice in Canadian dollars (transaction currency).
- Report Currency
  This is set centrally for reporting purposes.

The other fields in the line item report are of two types. Some are specific to the business process (such as supplier, material or employee) and make sense in that context but will not be filled by other transactions. Others are fairly technical and tend to be used for troubleshooting or when extracting data to another system, such as SAP BW.

2.1.2 Simplified Cost Center Line Item Report

In EHP 3 for SAP ERP 6.0, SAP modernized the user interface for the cost center line item report so that the whole user interface is on the Web. From EHP 5 for SAP ERP 6.0, you'll find the new reports in the list we showed in Figure 2.3. In earlier enhancement packages, you'll find them in a separate list that you'll have to copy into your existing roles. All reports labeled List behave exactly the same way as the cost center line item report. There are also reports labeled Analysis and Crystal Report. We'll come back to these reports when we look at alternative reporting options using SAP BW (for the analysis reports) and SAP BusinessObjects (for Crystal Reports) in Chapter 8.

Clicking on Cost Centers: Actual Line Item (List) takes you to the new report. Enter the same search criteria as before. Figure 2.8 shows the resulting layout. Without getting too technical, notice that the screen rendering of an application built specifically for the Web looks "cleaner" than a transaction that was built in pre-Web days and has simply been called via the role. However, the costs

displayed are identical, because both reports read the same underlying data from SAP ERP. You might also consider making this report available to cost center managers and keeping the classic line item report for use in Controlling.

This report looks slightly different, in that the selection screen can be toggled on and off with the Search Criteria button rather than being left behind once the report is executed. The basic principles for list reporting that we just discussed are the same. To create layouts and change the fields displayed, click on the Settings button. Beware, however, that this time the hidden columns are on the left and the displayed columns on the right (see Figure 2.8).

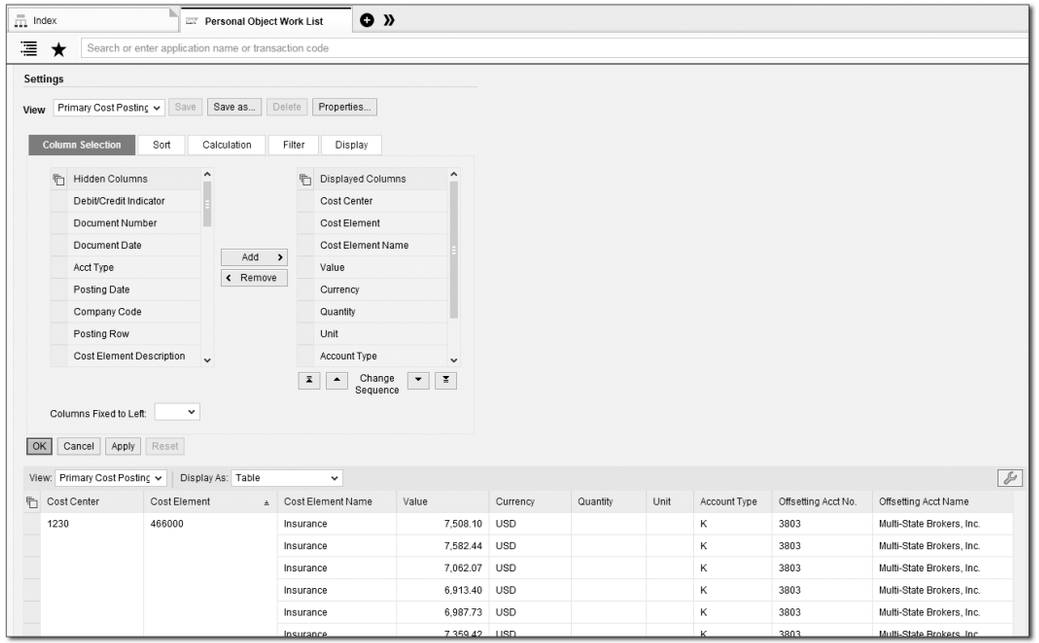


Figure 2.8 Simplified Cost Center Line Item Report

Simplified Reporting and the SAP Easy Access Menu

Although the first enhancements for Simplified Reporting were introduced in EHP 3 for SAP ERP 6.0, activating the business function `FIN_REP_SIMPL_1` does not activate new transaction codes or bring these reports into your SAP Easy Access menu. The way to work with the list reports delivered for Simplified Reporting is to make them part of a report launchpad that is included in the user's role. To find out how to configure a

report launchpad like the one shown in Figure 2.3, refer to Appendix B (found at *www.sap-press.com/3625*).

2.1.3 Totals Records for Cost Centers

The line item is by far the most commonly used data record for reporting. Similar data records exist to document what happened during the planning process (Transaction KSBP) and how commitments are created and used (Transaction KSB2). However, to put the entries in the line items into context, most controllers will want to look at how the costs compare with their plan. The plan data is generally at a higher level of aggregation than the line item (it's rare to plan by supplier, employee, and so on). Every line item has its sister *totals record* that stores a subset of the data available in the line item. Most of the period-close reports that we will look at in Chapter 7 read the totals records rather than the line items, because performance is better if you select from a handful of fields organized in period blocks rather than from all eighty fields in the line item table. You'll find that most of the other reports in Cost Center Accounting, including the plan/actual comparison, target/actual comparison, and so on (see Figure 2.3), also work with totals records. In essence, the reports are bringing the detailed line item data up to the level at which you planned (cost center/account/period) so that you can make a line-by-line comparison. We'll look at planning in more detail in Chapter 5.

In general, you can display the line items from these reports by selecting the line you're interested in and double-clicking. The selection parameters (cost center, cost element, time frame, and so on) are passed to the line item report through the *Report to Report Interface*. As an example, select Plan/Actual Comparison Report (in Figure 2.3) and enter the cost center 1230 and the periods January to December 2013 in the selection list. The result is a formatted report (see Figure 2.9) designed to show the cost center manager the state of spending on his cost center in that time frame. To display the line item, double-click on the line for insurance expenses, and select Cost Center: Actual Line Items from the pop-up. This passes the parameters from your selection, and you then see the line item report we used as our initial example.

It's unlikely that you'll work with cost centers alone, so let's now look at the reports for internal orders.

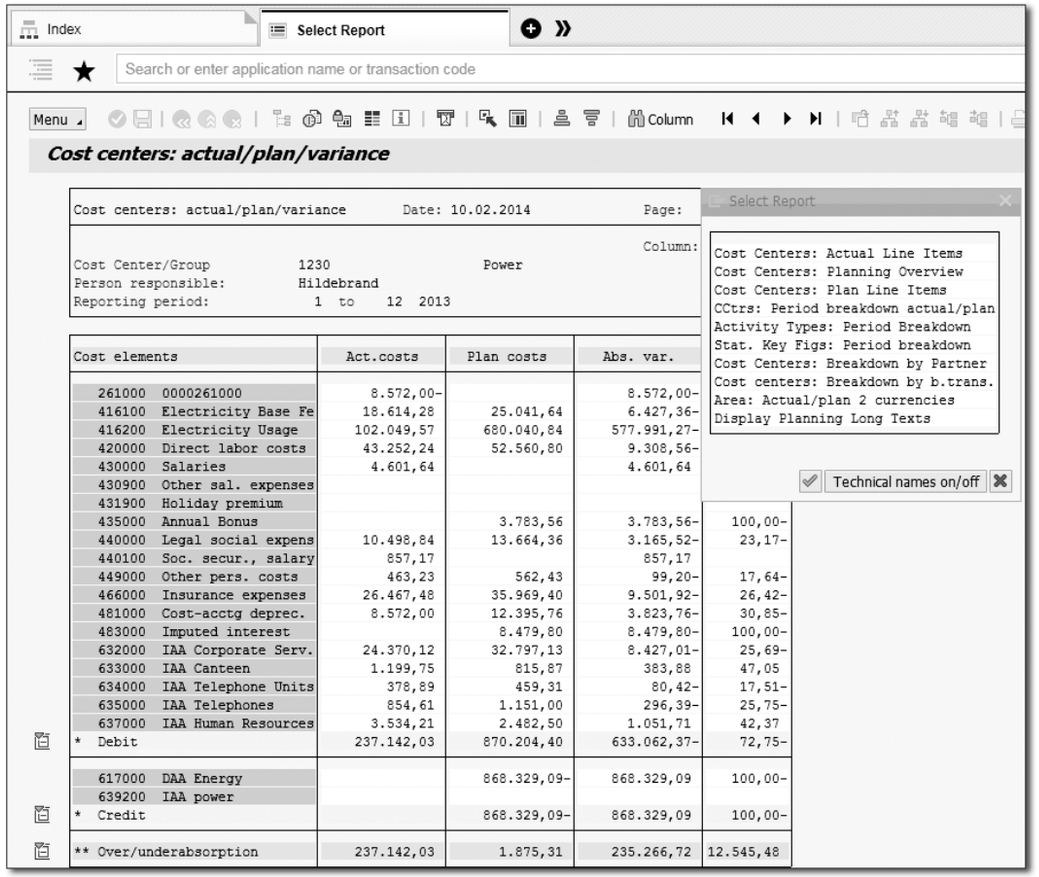


Figure 2.9 Cost Center Plan/Actual Variance and Link to Line Item Report

2.2 Order Line Items

Let's continue our journey by looking at internal orders. Orders have many uses in SAP ERP, either detailing the activities on a cost center or representing activities going on completely separate from the cost center, such as capital investments. Others are purely statistical and are entered as an additional account assignment alongside the real cost center or order. There are also many orders

that don't originate in CO but are created in Logistics (production orders, process orders, maintenance orders, QM orders, networks, and so on).

The costs for these orders can be analyzed using the same report, which probably explains why the order line item report is one of the most widely used transactions in SAP ERP Financials.

Order line item reports follow the same basic principles as cost center line item reports. In Figure 2.10, we've selected the role Internal Orders (SAP_EP_RW_CO_KAMN). You'll find all the reports available for this role under Information System. This corresponds to the menu path Financials • Controlling • Internal Orders • Information System • Reports for Internal Orders in earlier versions of the software.

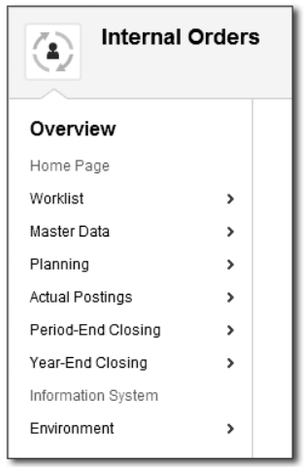


Figure 2.10 Internal Order Accounting within SAP NetWeaver Business Client

Again let's take a look at the Home page (see Figure 2.11) before looking at the reports in detail. This time, consider setting defaults for the order type AAT and the order number ANR to ensure that the report can start with a default setting.

Figure 2.12 shows the list of reports for the internal orders. Again this includes classic reports in all releases of SAP ERP and further reports that can be activated through the Simplified Reporting business functions.

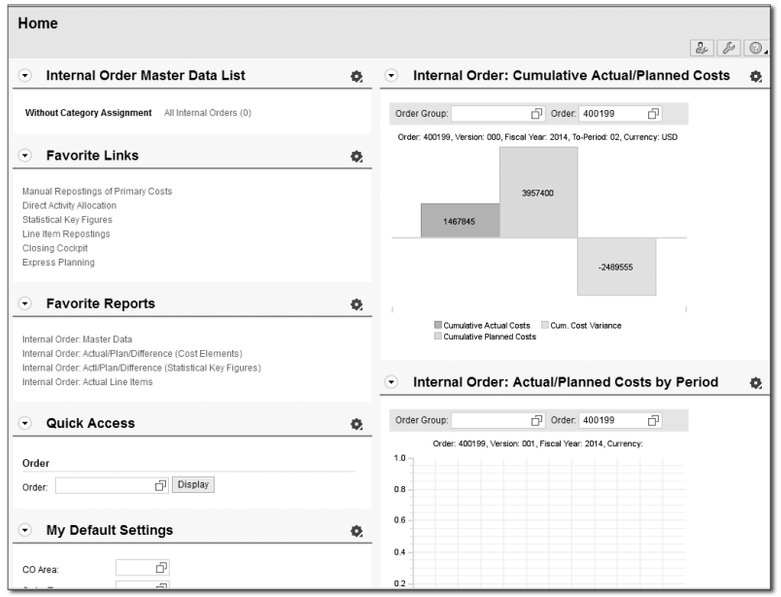


Figure 2.11 Home Page for Order Accounting

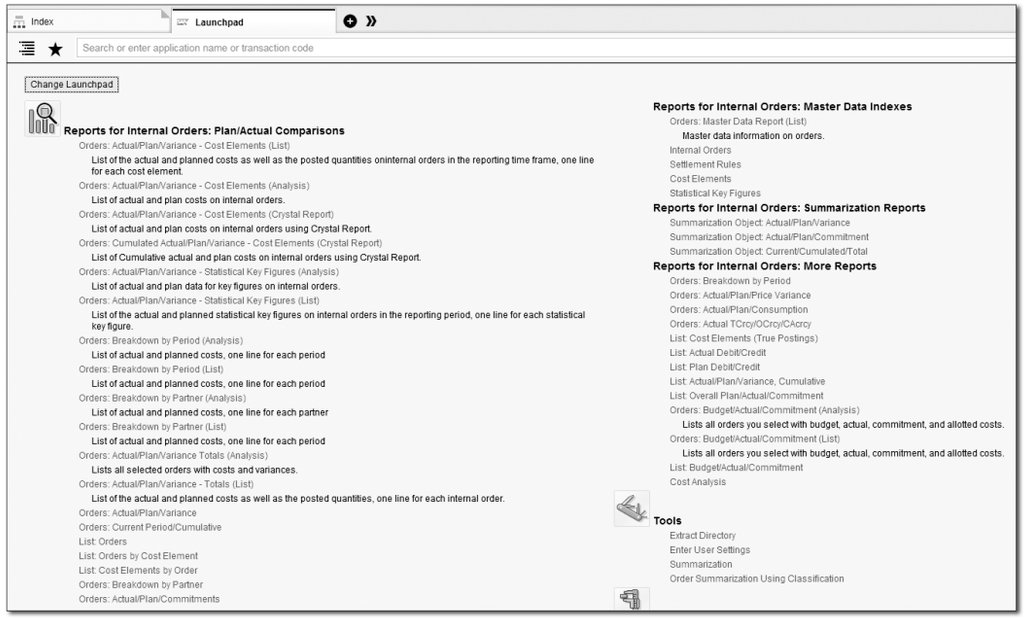


Figure 2.12 Reports for Order Accounting

Now select the Line Items folder and then Orders: Actual Line Items. Experienced controllers will recognize this as Transaction KOB1. To select the relevant line items for analysis, enter order 400199, leave the cost element group blank, and enter posting dates between 01.01.2013 and 31.12.2013 in the selection screen. Then click on the Execute button. The result is a list of all postings for order 400199 in 2013, as shown in Figure 2.13.

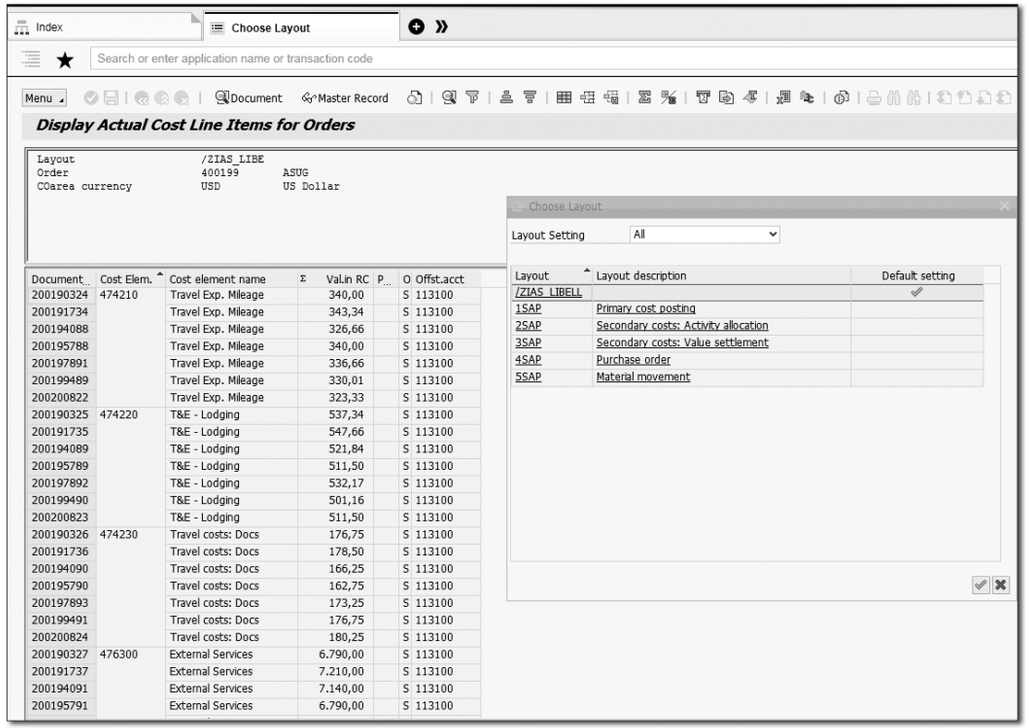


Figure 2.13 Order Line Item Results

The same layouts are available as for the cost center line item report except that this time the account assignment is the internal order. Additional line item reports document what happened during order planning (Transaction KABP) and how commitments are created and used (Transaction KAB2).

User-Specific Layouts

Once order managers have understood how to create their own layouts, you are likely to find that layouts for this transaction proliferate. These same managers will tend to set

their own layouts as default for all users. Encourage users to set the USER-SPECIFIC flag when they save their layouts, especially if they are creating a default. If you need to clean up your layouts at any point, choose SETTINGS • LAYOUT • MANAGE. You can then toggle between your personal layouts and those belonging to your organization, checking them and if necessary deleting ones that are no longer needed.

When it comes to putting order spending in context, you can, of course, compare planned costs against actual costs just as we did for the cost center, but it's also possible to set a budget for internal orders—in other words, a ceiling on spending for that order. You won't use this for all order types, but it's common to set budgets for investment orders and some maintenance orders. As an example, select LIST: BUDGET/ACTUAL/COMMITMENTS (in Figure 2.12) and enter the controlling area and a range of internal orders (we've used a range of marketing orders) in the selection list. The result is a formatted report (see Figure 2.14) designed to show the order manager the state of spending by comparison with the budget. We'll come back to planning and budgeting in Chapter 5, and explain how this ceiling is used to block spending on the order and how the COMMITMENT column gets filled in Chapter 6.

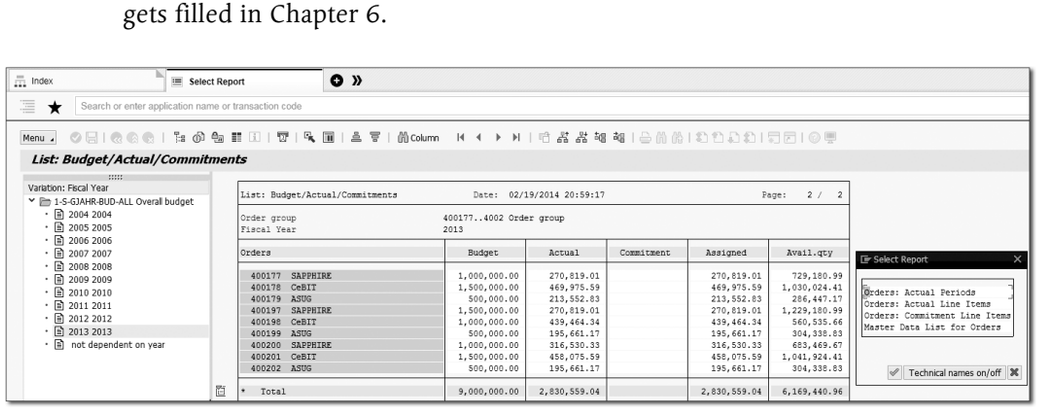


Figure 2.14 Budget/Actual Report for Marketing Orders

Although cost centers and internal orders are the simplest account assignments, if you work for a manufacturing company you'll also want to understand how to report on product costs, which we cover in the next section.

2.3 Product Costs: Itemization

The concept of cost center line items and order line items is easy for most accountants to grasp because of the affinity between a line item and a document in the General Ledger. When we come to product costing, the data structures change as the document takes something of a back seat and the focus moves to multilevel production structures, a familiar view for engineers but a new world for some accountants.

The *standard costs* for each manufactured product are calculated using a product cost estimate. The first step in costing is to read the bill of material (BOM) in Logistics to determine the materials to be used. The BOM is a multilevel structure that describes which raw materials are used to make a quantity of semifinished product and which semifinished products are used to make a quantity of finished product. The costs of converting the raw materials into semifinished products and then into finished products is described in *routings*. This focus on the production master data is also apparent in the reports, with the multilevel costed BOM being by far the most commonly used report, followed by the itemization that displays a line for each input to the production process (in other words, for each material and each internal activity from the routing).

If the product can be manufactured on different production lines or manufactured in-house and purchased, then you'll find each approach represented in the reports as a procurement alternative. If such alternatives have been defined for a product, the system creates a cost estimate for each alternative and then mixes them according to a percentage (such as 60% make, 40% buy). Depending on the implementation, you may also see items for purchasing info records, subcontracting, external activities, co-products, planned scrap, and so on in the product cost reports.

Every costing item is automatically assigned to a cost element that represents the account under which actual goods movements are posted. The cost elements are then assigned to *cost components* that represent the major cost blocks in production. There are several ways of looking at product costs:

- **Cost of goods manufactured**
  This method sees the product costs as material costs, internal activities, external activities, overhead, and so on. There can be up to 40 cost components, and

the assignment is based on the cost elements under which the actual postings are captured in the system.

- **Primary cost component split**
  This split looks at what is behind the internal activity. In other words, to provide an internal activity, a cost center uses energy, wages, depreciation, and so on.
- **Partner cost component split**
  This split looks at the value added by each plant, company code, or business area involved in the manufacturing process.

Classic Reports for Product Cost Reporting

We'll start as we did for the cost centers and internal orders, with the role for Product Cost Planning (SAP_EP_RW_CO_CK00).

To access the relevant reports, select Information System from Figure 2.15. Figure 2.16 shows a list of reports for product cost planning. In earlier versions of the software, follow the menu path Controlling • Product Cost Controlling • Product Cost Planning • Information System • Reports for Product Cost Planning. You may find that these reports are not just used by controllers but also by the engineers responsible for designing new products and the supply chain people responsible for cost assignment on the production line.

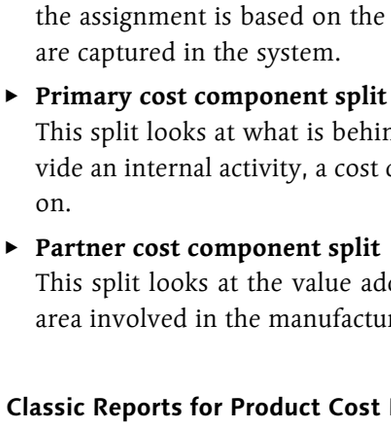


Figure 2.15 Product Cost Planning within SAP NetWeaver Business Client

Let's start with the Detail Reports folder and select Costed Multilevel BOM (see Figure 2.16). Enter the following and execute the report:

- **Material number and plant**
  This identifies the product you're interested in.
- **Costing variant**
  This provides the link to the configuration settings, telling you the purpose of the cost estimate (setting standard costs, determining the accuracy of current standard costs, balance sheet valuation for annual close, etc.), how the bill of material and routing should be selected, and what prices will be used in this calculation.
- **Costing version**
  Normally, this is 1, unless you're using mixed costing (for which multiple cost estimates are weighted) or group costing (for which the same BOM and routing are costed first using the local prices and again using the group costs).
- **Costing lot size**
  The reference quantity for the cost estimate against which all variable costs will be adjusted.

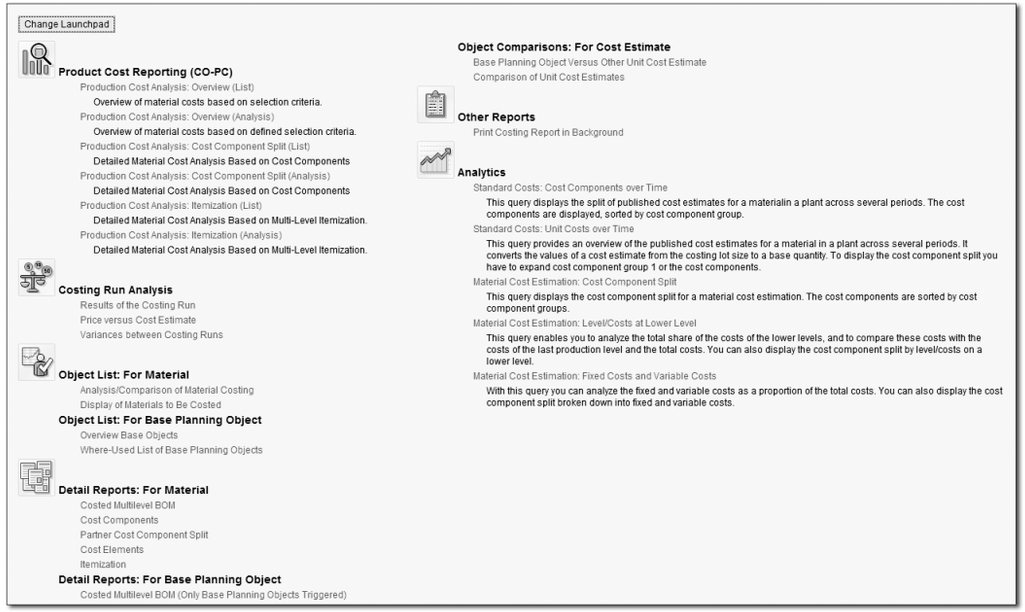


Figure 2.16 Reports for Product Cost Planning

Figure 2.17 shows the BOM together with the cost per item. You'll see the same report integrated in the cost estimate itself when we calculate the standard costs in Chapter 5.

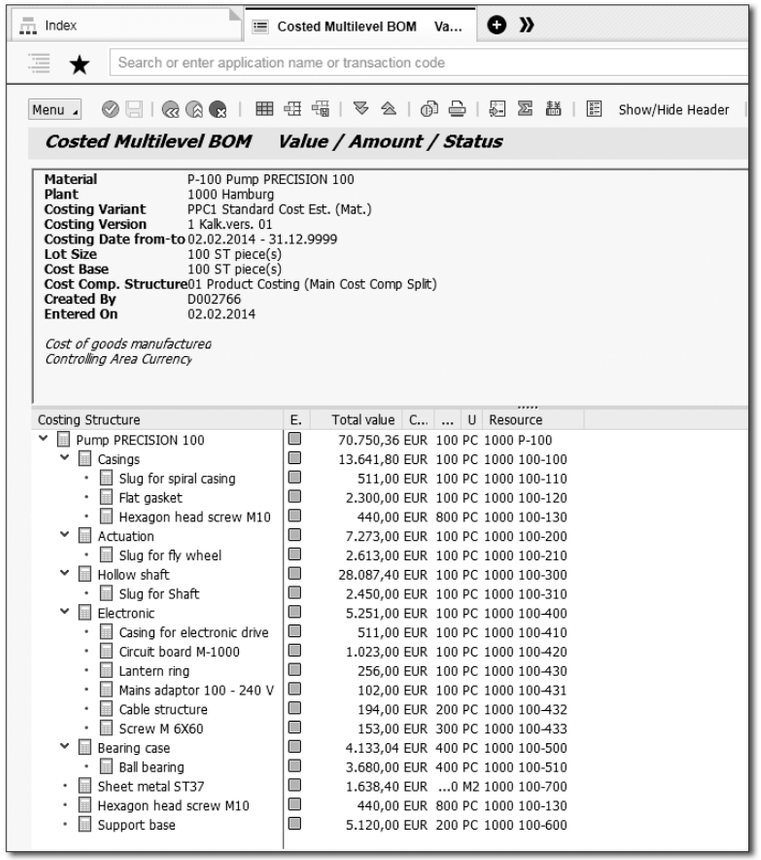


Figure 2.17 Costed Multilevel BOM

Notice that some of the icons in this report are familiar from the cost center line item report. This is because this report also uses SAP List Viewer, but it uses a tree structure to represent the quantity structure in production, with each level in the tree representing an assembly with its own bill of material.

To display the costs per operation in the routing, select the ITEMIZATION report in the DETAILED REPORTS folder. Because of the sheer number of ways of looking at data for a cost estimate (by item category, by operation, by cost element, by cost

component, and so on), SAP delivers many layouts. To view the operations in the routing, select the OPERATIONS layout before executing the report.

Figure 2.18 shows the items by operation, together with the delivered layouts:

- ITEM CATEGORIES
  Groups the items of the cost estimate by the internal categories Material, Internal Activity, Overhead, and so on.
- COSTING ITEMS
  Lists the items of the cost estimate by their technical IDs.
- COST COMPONENTS
  Shows the assignment of each costing item to one of up to 40 cost components.
- ASSEMBLIES/RAW MATERIALS
  Shows the raw materials (materials without BOMs, i.e., purchased materials) and assemblies (materials with their own BOMS, i.e., manufactured materials) used in the final product.
- COST COMPONENTS/COST ELEMENTS
  Used to check the assignment of the items to cost elements and from there to cost components.
- OPERATIONS
  Shows the assignment of the costing items to the operations in the routing.
- CO-PRODUCTS
  In the case that multiple products are manufactured in a single process (joint production), each co-product is shown with item category A. We'll discuss co-products in more detail in Chapter 4 and Chapter 6.
- PLANNED SCRAP
  Normal spoilage is planned in the BOM, routing, and material master for the assembly. We'll discuss planned scrap in more detail in Chapter 4.
- COST ELEMENTS
  Shows the assignment of the costing items to the accounts/primary cost elements and the secondary cost elements.

The product cost reports we've looked at so far help us analyze the *standard costs* for the product and support us mainly during the planning process (see Chapter 5). We'll now look at the reports available during the manufacturing process to explain how the costs are captured for production orders and similar objects. These are later compared against the standard costs during variance analysis.

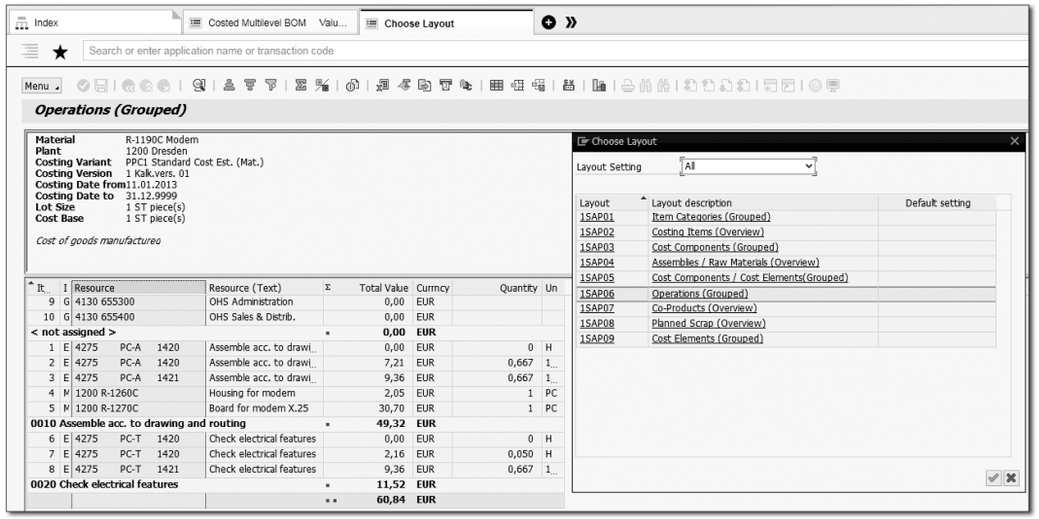


Figure 2.18 Itemization with Layouts

2.4 Product Costs: Cost Objects

Product Cost Planning almost never exists in isolation but exists as a preparation for Cost Object Controlling, where the costs of executing the individual work orders are monitored. The reporting for Product Cost Planning introduced many new concepts, but the reporting for Cost Object Controlling is similar to the reports for the internal order. The data structures for the line items and totals records are identical. The main difference between an internal order and a *production order* is that the production order includes a planned lot size (the planned output measure for the order; see Chapter 1). Therefore, although an internal order for a research project simply collects the costs associated with the research, a production order collects costs for the manufacture of a given *quantity* of the finished product. This is important, because all planned costs for this quantity will be adjusted later to calculate the *target costs* for the actual quantity of goods produced. This in turn provides the basis for variance analysis—a line-by-line comparison of the target costs against the actual costs in which the differences are explained as quantity variances, price variances, resource-usage variances, and so on. We'll look at the calculation of target costs and variances in more detail in Chapter 7.

Probably the biggest initial challenge is gaining an understanding of which cost objects your organization has chosen to work with, because a number of different approaches exist in Cost Object Controlling, depending on the nature of the chosen manufacturing process and your organization's approach to management accounting.

2.4.1 Product Cost by Order

The product cost by order approach is used when the individual production order or process order is the focus for cost management and the production costs for each individual lot are regularly monitored. The idea of the work order as the key element is an approach that has been around since the 1930s. The business goal is to monitor how each order gradually accumulates costs as goods are issued to the shop floor, operations confirmed, scrap reported, and so on. This approach makes sense when setup costs are significant and full cost traceability for each order is a business requirement and is widely used. It's also common where batch traceability is required in certain industries. However, practitioners of lean accounting argue that focusing on the work order in isolation encourages a "push" approach that potentially results in excessive inventory for which there is not necessarily a demand. Cost collection by order is also necessary in the case of *joint production*, in other words, cases in which multiple products are produced in the same manufacturing process and the order costs have to be split to the co-products. The Product Cost by Order menu offers a number of reports for tracking the costs of *production campaigns*, in which a series of production orders are manufactured in sequence because of the high costs of initial setup and cleanup on completion. This is particularly common in the chemical and pharmaceutical industries. More recently, developments for cost collection in outsourced manufacturing have brought the CO production order back into favor. We'll explore this in Chapter 6.

In controlling terms, this approach is characterized by the delivery of the finished product to stock, the calculation of variances on completion of the order, and the calculation of work in process if the production or process order happens to be open at the time of the period close. We'll look at this process in detail in Chapter 7.

Figure 2.19 shows the role for Order-Related Controlling (SAP_EP_RW_CO_KKSM). To see the reports, select the Information System link. This is the equivalent of following the menu path Financials • Controlling • Product Cost Controlling • Cost Object Controlling • Product Cost by Order • Information System • Reports for Product Cost by Order.

Figure 2.19 Order-Related Controlling in SAP NetWeaver Business Client

Figure 2.20 shows all reports for product cost by order. Because of the number of production orders being processed at any given time, the detailed reports we looked at for the internal orders are supplemented by various mass reports that select, for example, all materials in a given plant or for a given product group.

Figure 2.21 shows the various production orders we created for the manufacture of material ACT-DCD in plant 6000 in February 2014 (you'll see how we created these postings in Chapter 6). To view this report, choose Reports for Product Cost by Order • Object List • Order Selection or Transaction S_ALR_87013127. From here, you can select an order and navigate to the detailed reports that show the actual costs in context.

In Figure 2.22, we've selected one of these production orders for detailed analysis. The target costs have been adjusted in line with the delivered quantity (five pieces). You'll immediately notice some significant variances. This is because we posted additional inventory to the order after an inventory count and additional activity costs to demonstrate the distribution of variances.

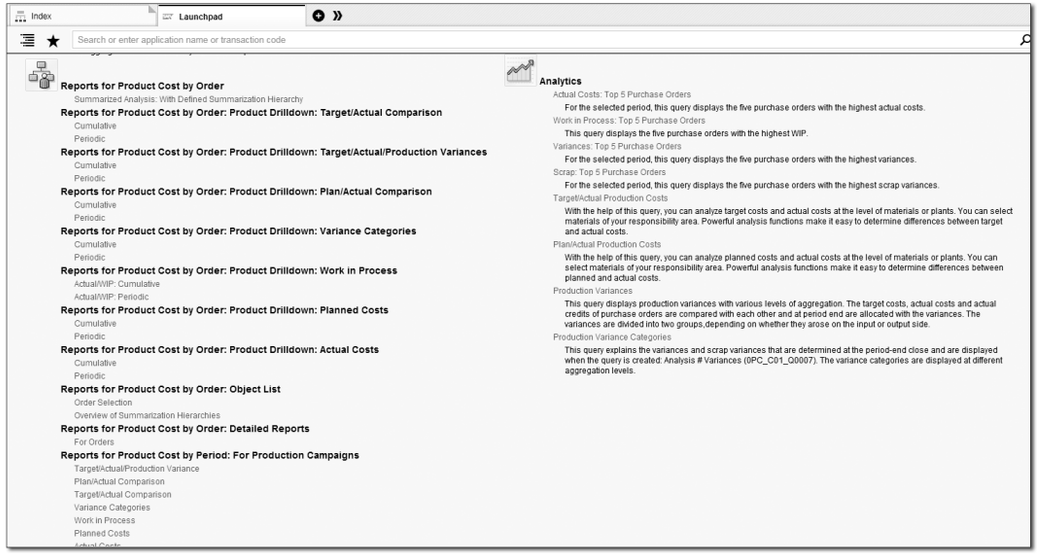
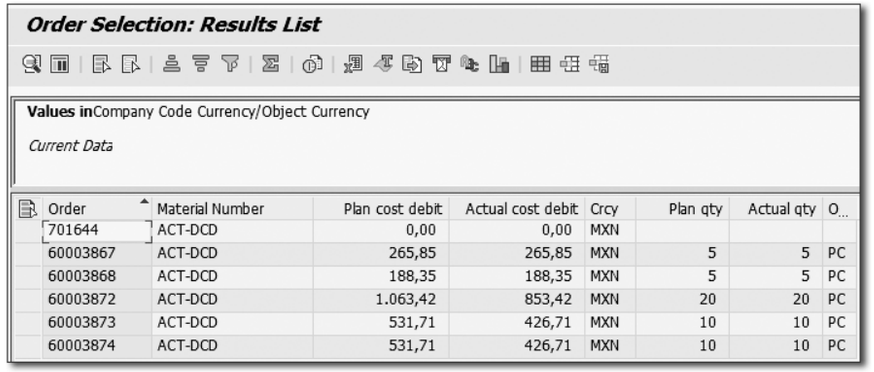


Figure 2.20 Reports for Production Order Reporting



Order	Material Number	Plan cost debit	Actual cost debit	Crcy	Plan qty	Actual qty	O...
701644	ACT-DCD	0,00	0,00	MXN			
60003867	ACT-DCD	265,85	265,85	MXN	5	5	PC
60003868	ACT-DCD	188,35	188,35	MXN	5	5	PC
60003872	ACT-DCD	1.063,42	853,42	MXN	20	20	PC
60003873	ACT-DCD	531,71	426,71	MXN	10	10	PC
60003874	ACT-DCD	531,71	426,71	MXN	10	10	PC

Figure 2.21 List of Production Orders

We'll look at the reports to aggregate production orders en masse when we look at mass reporting in Chapter 8. It's also common to move such orders to a data warehouse for reporting on account of the huge data volumes. Some organizations choose the Product Cost by Period option simply because they believe this is the only way they'll be able to handle the data volumes in question.

Target/Actual - Comparison

Order 60003867 ACT-DCD
Order Type PP01 Standard Production Order (int. number)
Plant 6000 Mexico City
Material ACT-DCD Demo CD

Planned Quantity 5 ST piece(s)
Actual Quantity 5 ST piece(s)

Target Cost Version 0 IDES Mexico

Period 002.2014 February

Legal Valuation
Company Code Currency/Object Currency

Cost Elem.	Cost Element (Text)	Origin	Σ Total target costs	Σ Total act.costs	Σ Target/actual var.	T/I var(%)	Currency
895000	Factory output production orders	6000/ACT-DCD	108,00-	108,00-	0,00		MXN
895000	Factory output production orders		0,00	157,85-	157,85-		MXN
Credit/Reporting			**108,00-**	**265,85-**	**157,85-**		**MXN**
400000	Consumption, raw material 1	6000/ACT-LCD	25,00	25,00	0,00		MXN
890000	Consumption of semifinished product	6000/ACT-BCD	0,00	50,00	50,00		MXN
890000	Consumption of semifinished product	6000/ACT-BCD	50,00	0,00	50,00-	100,00-	MXN
Material Components			**75,00**	**75,00**	**0,00**		**MXN**
655100	Overhead Surcharge - Raw Material	1000	0,00	2,50	2,50		MXN
Material Overhead			**0,00**	**2,50**	**2,50**		**MXN**
619100	Machine	CC530-00/ATR-00	14,58	96,27	81,69	560,29	MXN
619200	Labor	CC530-00/ATL-00	6,25	92,08	85,83	1.373,28	MXN
Other Costs			**20,83**	**188,35**	**167,52**		**MXN**
			12,17-	**0,00**	**12,17**		**MXN**

Figure 2.22 Actual Costs, Target Costs, and Variances for a Production Order

2.4.2 Product Cost by Period

At some sites, the volume of production orders is so high that it's nearly impossible for CO to monitor the costs successfully. This can be the case in the food industry, in which the production orders can be very short lived (less than a day). It can also be the case with continuous, repetitive production with minimal setup that there is simply no requirement for individual lot-oriented controlling and that storing each production order as a separate order in CO represents an unnecessary burden for reporting and at period close. In this case, costs can be assigned to product cost collectors that represent each production alternative, and you might report on each production version, where the production version represents a production line or a set of manufacturing cells, rather than on the individual work orders. We'll create a product cost collector for cost collection in Chapter 3. These provide a lean controlling by period, in which the goods movements and confirmations in Logistics are made by production or process order, but the costs are automatically routed to the product cost collector. The output

measure is then not the lot size on the individual order but the sum of all delivered quantities in the period. Variance calculation and work-in-process calculation take place for each product cost collector at the end of the period. This approach is mostly used in a make-to-stock environment, but is occasionally found in simple make-to-order scenarios.

Lean Accounting

Lean accounting encourages organizations to move away from the collection of costs by work order and toward a value stream-based view of the organization. The product cost collector fits nicely into this concept, capturing the costs for each production version by period. If the value stream involves multiple products, then such costs can be rolled up to the value stream level in reporting, where the value stream is typically represented by a product group or material group.

Figure 2.23 shows the role for Product Cost by Period (SAP_EP_RW_CO_KKPM). To see the reports, select the Information System link. This is the equivalent of following the menu path Financials • Controlling • Product Cost Controlling • Cost Object Controlling • Product Cost by Period • Information System • Reports for Product Cost by Period (see Figure 2.24).

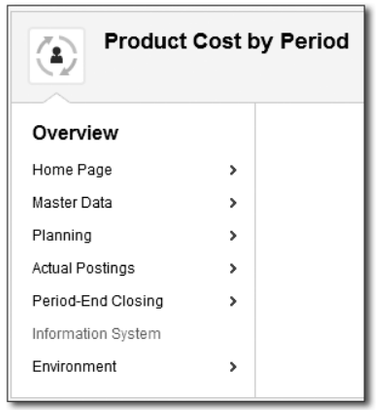


Figure 2.23 Product Cost by Period in SAP NetWeaver Business Client

The main difference between the product cost by period approach and product cost by order is that the status of the production order plays no role in the period close. At the end of every period, the confirmations to the product cost collector are analyzed to determine which operation quantities are work in process (in

other words, have been started but not completed), which operation quantities are complete and can be analyzed for variances, and for which operations scrap has been confirmed. Although most of the reports are similar to those for product cost by order, you'll also notice line items for a cost object. The cost object hierarchy is used to create a cost object for which the cost of internal activities can be captured when there is no routing or the routing does not capture all manufacturing activities. These costs can then be distributed to the assigned product cost collectors or production orders at period close. Alternatively, the costs on the production orders or product cost collectors can be summarized to the cost objects and then settled. We'll look at how to create cost object hierarchies in Chapter 3.

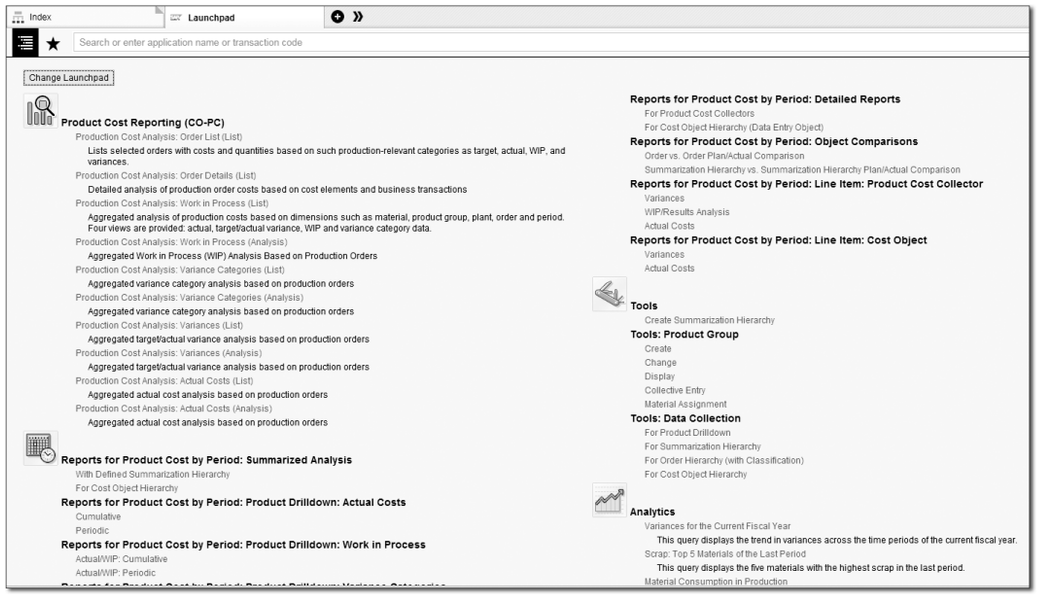


Figure 2.24 Reports for Product Cost by Period

2.4.3 Product Costs by Sales Order

The product cost by order and product cost by period approaches are mainly used in a make-to-stock environment. In this case, sales controlling takes place in Profitability Analysis, where the sales orders and associated invoices are captured. Product cost by sales order is used when the manufacturing process is linked to the sales order, generally because a customer-specific configuration has taken

place in the order, as might happen in the automotive, steel, or high-tech industries. It can also be used in service scenarios where a customer service order is associated with the sales order rather than a production order. In this case, there can be no standard costs for the product because the product is unique to that sales order. In general, a cost estimate is created for each such item in the sales order, and this cost estimate may be used to price the sales order. To ensure that the finished product cannot be taken from stock and shipped to a different customer, delivery from the production line is made to *sales order stock,* and the delivery to the customer can only be made from this stock. Because there are no standard costs, the sales order cost estimate is also used to value goods movements to and from sales order stock.

Lean Accounting

Lean accounting encourages the use of make-to-order, where the sales order initiates, or "pulls," the manufacturing process in its wake. This is the opposite of the classic work order approach, where work orders "push" their goods into inventory in the hope that sales will then be able to sell the product in stock.

Figure 2.25 shows the role for Sales Order Controlling (SAP_EP_RW_CO_KKAM). To view the reports, select Information System. Figure 2.26 shows the standard reports delivered for sales order reporting. You can find this by following the menu path Financials • Controlling • Product Cost Controlling • Cost Object Controlling • Product Cost by Sales Order • Information System • Reports for Product Cost by Sales Order.

Figure 2.25 Sales Order Controlling in SAP NetWeaver Business Client

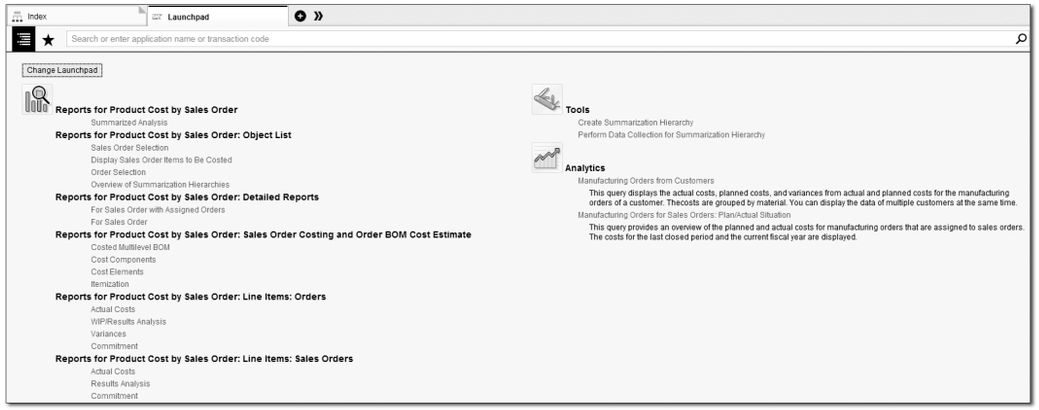
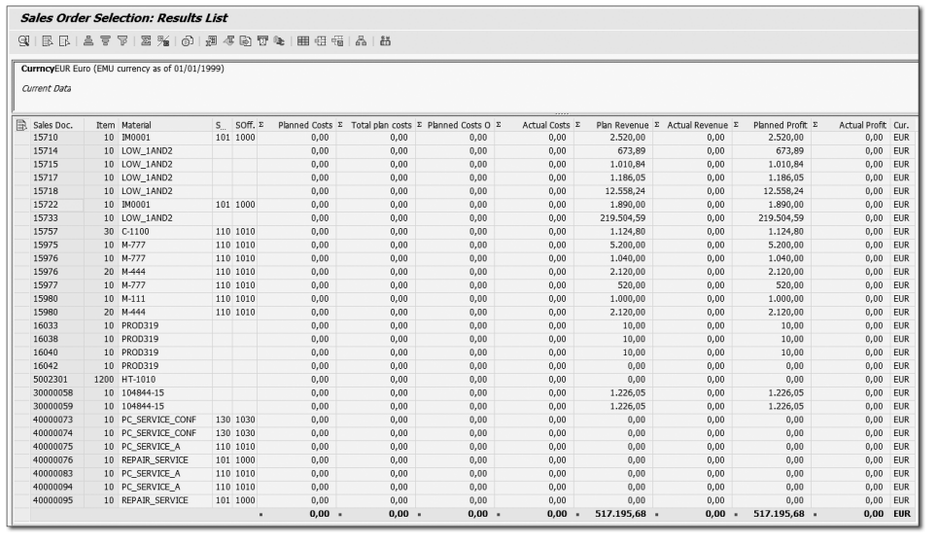


Figure 2.26 Reports for Sales Order Reporting

The line items and total records are similar to those you would see for any order, but you also have reports for sales order costing that are more like those we discussed for Product Cost Planning in that the quantity structure (BOM and routing) is very prominent. It's also important to be able to select sales orders the way we did production orders, as shown in Figure 2.27. Be aware here that these aren't all the sales order items in your organization, but only those that are make-to-order items.



Sales Doc.	Item	Material	S_	SOff.	Planned Costs	Total plan costs	Planned Costs O	Actual Costs	Plan Revenue	Actual Revenue	Planned Profit	Actual Profit	Cur.
15710	10	IM0001	101	1000	0,00	0,00	0,00	0,00	2.520,00	0,00	2.520,00	0,00	EUR
15714	10	LOW_1AND2			0,00	0,00	0,00	0,00	673,89	0,00	673,89	0,00	EUR
15715	10	LOW_1AND2			0,00	0,00	0,00	0,00	1.010,84	0,00	1.010,84	0,00	EUR
15717	10	LOW_1AND2			0,00	0,00	0,00	0,00	1.186,05	0,00	1.186,05	0,00	EUR
15718	10	LOW_1AND2			0,00	0,00	0,00	0,00	12.558,24	0,00	12.558,24	0,00	EUR
15722	10	IM0001	101	1000	0,00	0,00	0,00	0,00	1.890,00	0,00	1.890,00	0,00	EUR
15733	10	LOW_1AND2			0,00	0,00	0,00	0,00	219.504,59	0,00	219.504,59	0,00	EUR
15757	30	C-1100	110	1010	0,00	0,00	0,00	0,00	1.124,80	0,00	1.124,80	0,00	EUR
15975	10	M-777	110	1010	0,00	0,00	0,00	0,00	5.200,00	0,00	5.200,00	0,00	EUR
15976	10	M-777	110	1010	0,00	0,00	0,00	0,00	1.040,00	0,00	1.040,00	0,00	EUR
15976	20	M-444	110	1010	0,00	0,00	0,00	0,00	2.120,00	0,00	2.120,00	0,00	EUR
15977	10	M-777	110	1010	0,00	0,00	0,00	0,00	520,00	0,00	520,00	0,00	EUR
15980	10	M-111	110	1010	0,00	0,00	0,00	0,00	1.000,00	0,00	1.000,00	0,00	EUR
15980	20	M-444	110	1010	0,00	0,00	0,00	0,00	2.120,00	0,00	2.120,00	0,00	EUR
16033	10	PROD319			0,00	0,00	0,00	0,00	10,00	0,00	10,00	0,00	EUR
16038	10	PROD319			0,00	0,00	0,00	0,00	10,00	0,00	10,00	0,00	EUR
16040	10	PROD319			0,00	0,00	0,00	0,00	10,00	0,00	10,00	0,00	EUR
16042	10	PROD319			0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	EUR
5002301	1200	HT-1010			0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	EUR
30000058	10	104844-15			0,00	0,00	0,00	0,00	1.226,05	0,00	1.226,05	0,00	EUR
30000059	10	104844-15			0,00	0,00	0,00	0,00	1.226,05	0,00	1.226,05	0,00	EUR
40000073	10	PC_SERVICE_CONF	130	1030	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	EUR
40000074	10	PC_SERVICE_CONF	130	1030	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	EUR
40000075	10	PC_SERVICE_A	110	1010	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	EUR
40000076	10	REPAIR_SERVICE	101	1000	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	EUR
40000083	10	PC_SERVICE_A	110	1010	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	EUR
40000094	10	PC_SERVICE_A	110	1010	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	EUR
40000095	10	REPAIR_SERVICE	101	1000	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	EUR
					0,00	**0,00**	**0,00**	**0,00**	**517.195,68**	**0,00**	**517.195,68**	**0,00**	**EUR**

Figure 2.27 Sales Order Results List

If you don't have a requirement to revalue material inventory at actual costs, you can skip the next section and go straight to Profitability Analysis. If you work in a country with a legal requirement to report according to actual costs or an industry in which actual costing prevails (such as chemicals), then the next section will introduce the Material Ledger as a tool for collecting actual costs.

2.5 Material Ledger

Not all sites use the Material Ledger. Your organization may use it if you have a legal requirement to value inventory at actual costs (common in Asia and South America), if you have highly volatile raw material prices or unstable production structures that make standard costing with detailed variance analysis impractical, or if you use it to provide a second inventory valuation approach for legal reporting.

From a reporting point of view, the Material Ledger differs from cost center and order reporting in that the reports display the *inputs and outputs* in each procurement, production, and sales process. The Material Ledger has its own documents for every goods movement, every business transaction that affects material prices (invoices, order settlement, etc.), and its own calculations at period close. Call up a report for a raw material, and you'll see the goods receipt and invoice from the supplier in the Receipts line and the goods issue to production in the Consumption line along with details of any stock currently in inventory. Call up the same report for a finished material, and you'll see the goods receipt from raw material inventory in the Receipts line and the goods issue to sales and the invoice to the final customer in the Consumption line. Chapter 6 will walk you through a complete manufacturing process from procurement to sales, showing you the Material Ledger postings for each goods movement.

Figure 2.28 shows the role for Actual Costing/Material Ledger (SAP_EP_RW_CO_CKML). To access the list shown in Figure 2.29, select Information System. You can find this by following the menu path Financials • Controlling • Product Cost Controlling • Material Ledger/Actual Costing • Information System. Two reports are used frequently: Material Price Analysis (Transaction CKM3N) and the Valuated Material Quantity Structure (Transaction CKMLQS). Note that the standard reports focus on the reporting of a single material. SAP recently introduced new drill-down reports for reporting on multiple materials. We'll

show how to work with these in Chapter 13, because they were originally introduced in the context of SAP HANA.

Figure 2.28 Material Ledger in SAP NetWeaver Business Client

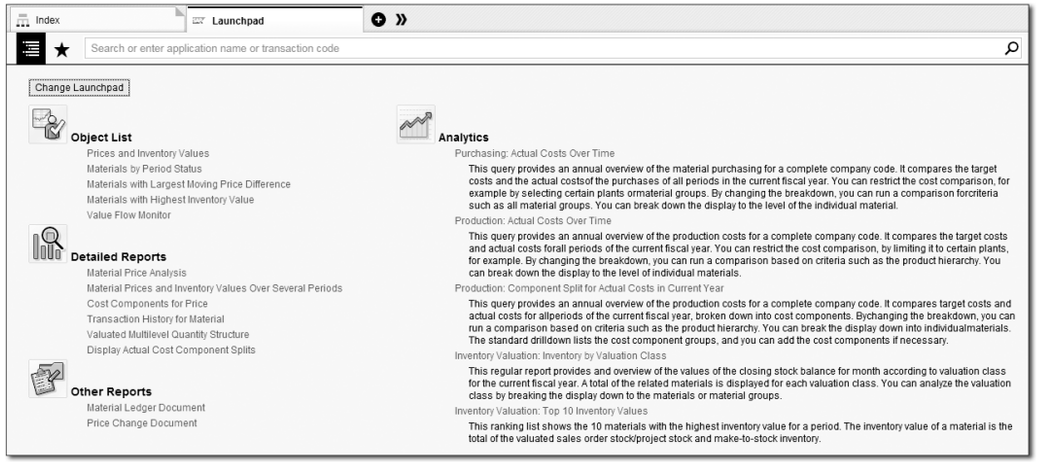


Figure 2.29 Reports for Material Ledger Reporting

Figure 2.30 shows the Material Ledger postings for a raw material that has been purchased from an external supplier and then issued to an internal production process for conversion into a finished product. Technically, this is a list viewer tree report like the one we saw for the multilevel costed BOM in Product Cost Planning.

Figure 2.31 shows the quantity structure for a finished product (PCG-FERT-01) that has required three semifinished products (PCG Barrel Head, PCG Construction Kit, and PCG Motor Housing) in its manufacture. Manufacturing activities were performed to convert the three semifinished products into PCG-FERT-01. This report first became available in Release 4.7 of SAP R/3 (see Appendix C at *www.sap-press.com/3625*).

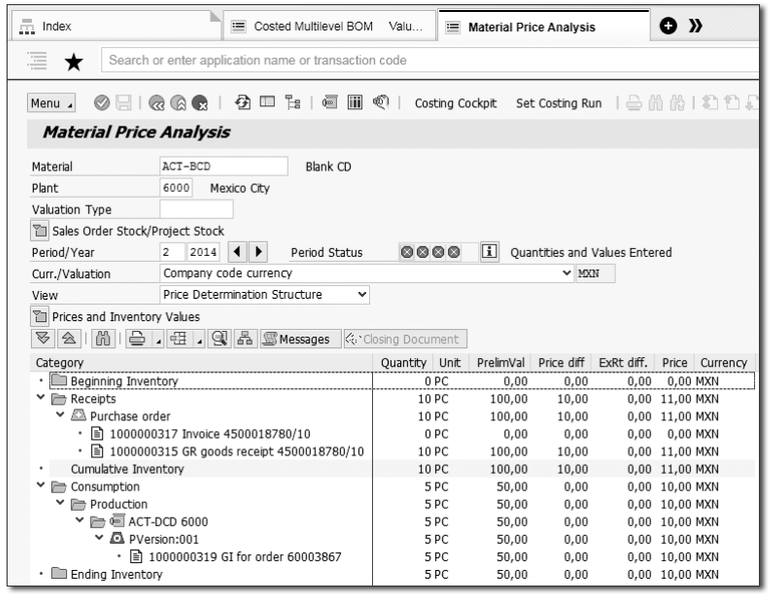


Figure 2.30 Material Price Analysis for a Raw Material

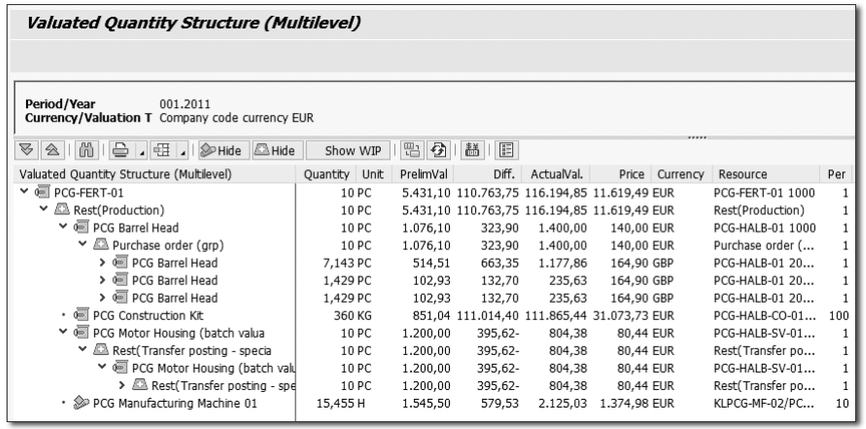


Figure 2.31 Valuated Quantity Structure

In addition to these two detailed reports for the material and the quantity structure, much reporting in the Material Ledger is performed in the context of the period close (see Chapter 7), in which each step in the periodic costing run (used to calculate the weighted average costs per material at the end of each period) and each step in the alternative valuation run (used to provide actual costs in a wider time frame or according to a second accounting approach) has its own supporting report that allows you to check the values calculated in that step.

The Material Ledger collects all costs from the first purchase of the raw material through all conversion steps to the final delivery of the finished product to the customer. We'll walk through all the steps in this process when we look at actual postings in Chapter 6. However, as the name implies, the Material Ledger gathers costs by material. It keeps track of the cost of goods sold for these materials, but it does not capture revenue, and it provides no information about the customer who bought the finished product, the sales organization that performed the sale, and so on. For such information, we must move to Profitability Analysis (or CO-PA).

2.6 Profitability Analysis Reports

The Profitability Analysis reports differ from the other reports we've looked at so far in that there are virtually no standard reports, because the structure of the operating concern is determined during implementation. Figure 2.32 shows the Profitability Analysis role (SAP_EP_RW_CO_KEMN). Choose Information System to access the reports.

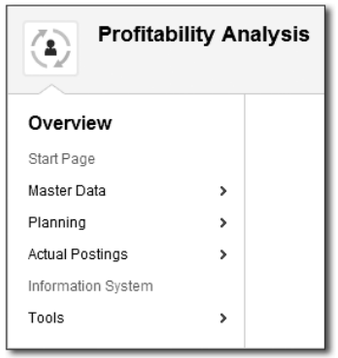


Figure 2.32 Profitability Analysis within SAP NetWeaver Business Client

The only commonality in Profitability Analysis reports is that certain standard events write data into the Profitability Analysis application. In costing-based Profitability Analysis, these are distinguished by the *record type*. The following transactions transfer data to Profitability Analysis:

- Incoming sales orders (record type A)
- Direct postings from Financial Accounting (record type B)
- Order and project settlement (record type C)
- Cost center allocations (record type D)
- Single transaction costing (record type E)—industry specific, so you might not use it
- Billing documents from Sales and Distribution (record type F)
- Customer agreements (record type G)—used in some industries
- Statistical key figures (record type H)
- Transfer of sales orders from projects (record type I)—used for commercial projects that are linked with sales orders for billing

If this list sounds fairly technical, consider instead the different levels of detail captured for the main record types in Profitability Analysis:

- Let's start with an *incoming sales order* (record type A). We'll see in Chapter 6 that an incoming sales order includes the name of the customer, the product or products purchased, the sales organization making the sale, the distribution channel, the division, the sales office, the sales group, and so on. This is the lowest level of granularity available in Profitability Analysis.
- Usually, the same characteristics are captured when the customer is *billed* for his purchase (record type F). Again, this is extremely detailed information.
- A *direct posting* from Financial Accounting (record type B) may be made at this level of detail if the person making the posting has all the listed information. However, as we'll see in Chapter 6, it may be possible to know only the affected material at the time of the posting and not the customer who will ultimately purchase the finished product. In this case, the record includes the product as a characteristic but not the customer.
- *Production variances* (carried in the settlement document—record type C) always apply to the product produced, but only apply to the customer if it's a

make-to-order scenario and the production process is triggered by the sales order.

- *Cost center allocations* (record type D) offer the most options. In Chapter 7, we'll learn how to set up assessment cycles that can be very granular, breaking all expenses down to individual customers or products. We'll also see that it's possible to do an allocation to a much higher-level characteristic, such as a region or a country. This might be the case for marketing expenses (for example, if it's clear that a trade fair took place in the northwestern region of the United States but unclear which customers participated).

We'll look at some of these different record types, by selecting the line item report (Transaction KE24). Figure 2.33 shows the selection screen for the CO-PA line items. We've selected all documents created by this user in company code currency.

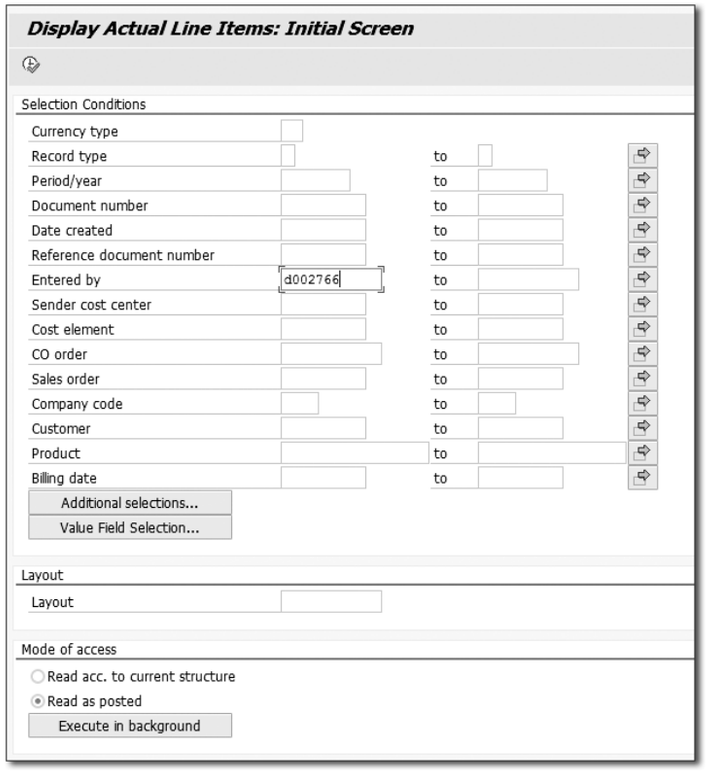


Figure 2.33 CO-PA Line Items Selection Screen

Figure 2.34 shows all line items that we posted while creating the examples in Chapter 6. You'll see that we created invoices (record type F), sales orders (record type A), direct postings to FI (record type B), and production variances (record type C). You'll also notice that although the lines for the invoices and sales orders contain most of the dimensions, there are blank entries for the direct postings from FI and production variances, because these could only be assigned to the material-related dimensions and not to the customer-related dimensions.

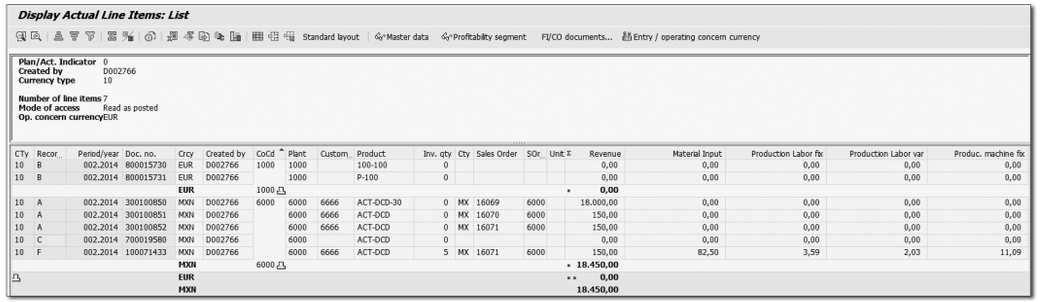


Figure 2.34 Line Item Report Showing CO-PA Documents

The structure of the operating concern and with it of the CO-PA tables is the business of the implementation team. Figure 2.35 gives one approach to designing the relationships between the entities for profitability reporting.

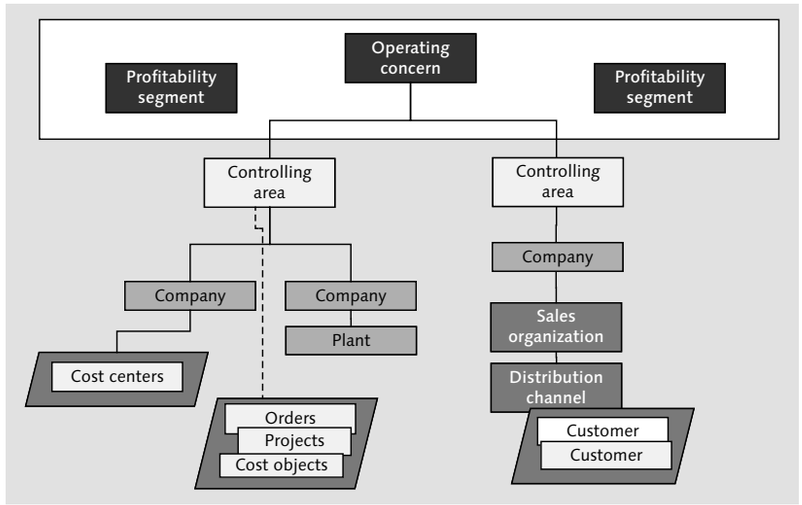


Figure 2.35 Organizational Structures in CO-PA

Note

The implementation team determines all other fields when they configure your system. Because the focus is on sales reporting, most organizations have the dimensions product, customer, and sales region and other dimensions that can be derived from these entities (product group, customer group, division, sales office, and so on). You'll find details of the recommended size of the operating concern (generally, the maximum number of characteristics is 50 and the maximum number of value fields is 120, but this can be extended) in SAP Note 1029391.

The combination of dimensions is known as the profitability segment. You can display the profitability segment for any of the line items in Figure 2.34 by selecting a line and clicking on the PROFITABILITY SEGMENT button; you'll see the report shown in Figure 2.36. We've picked a line item that refers to a sales order, so most of the dimensions (material based and customer based) are filled. You'll notice additional dimensions, such as those for WBS elements, that are not filled. We would see entries here if the costs for a WBS element had been settled.

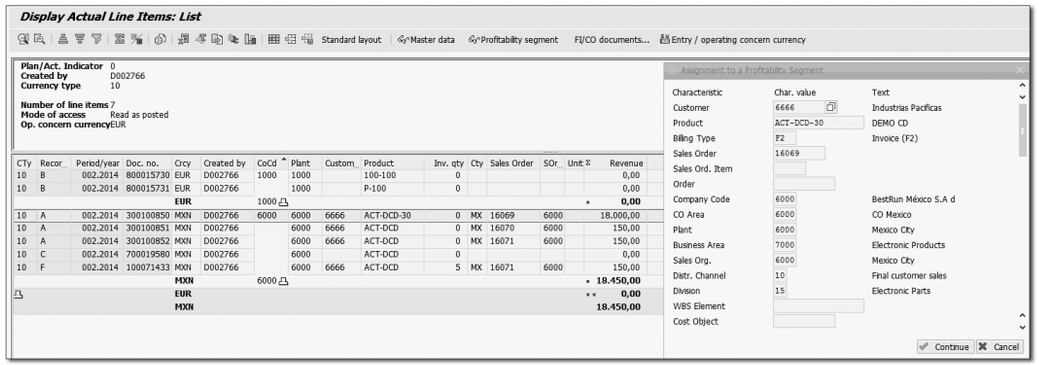


Figure 2.36 Line Item Report Showing Profitability Segment

This assignment of costs at the appropriate level of detail is essential to an understanding of CO-PA. We can fill customer-based and material-based dimensions when we capture the sales order or the invoice, we can fill material-based dimensions in purchasing and production, and for overhead we have to make our own decision as to whether to fully load the products and customers or to assign the costs at a higher level. We'll return to this process when we look at how to create *assessment cycles* in Chapter 7.

Because the assignments within this schema are fairly dynamic with the assignments to sales organizations, distribution channels, divisions, and so on changing on a regular basis, CO-PA reports allow you to report either on the dimensions as posted (see Figure 2.33) or according to the current structure (in other words, following a realignment).

There are two types of fact tables, depending on whether you use account-based CO-PA or costing-based CO-PA or both. You'll find a full description of the difference between the two approaches in SAP Note 69384.

- Costing-based CO-PA assigns all postings to *value fields* that capture the individual elements of a contribution margin (sales, cost of goods sold, general overhead, and so on). This approach provides the ability to break down account-level information into further detail, such as fixed and variable costs for the same cost element, and separate the components of the standard cost into different value fields.

  In costing-based CO-PA, the value fields are determined during implementation, so some teams break out the price conditions for the sales deductions into many separate value fields, whereas others lump them into one field. Most implementations distinguish between fixed and variable costs for their product cost estimate, but some implementations keep a lot of detail from their cost components, and others lump the cost components together. The same variability applies to allocations, order settlement, and the settlement of production variances and to the transfer of cost components from the Material Ledger.

- Account-based CO-PA records data to a cost element that represents the account used to post the data originally. This makes it much easier to reconcile the cost elements and the accounts by company code, business area, and so on. But you should be aware that low-level characteristics such as customers and products are not captured in the General Ledger, so they won't be available for reconciliation.

The characteristics apply to both costing-based and account-based CO-PA. However, different fact tables are used. The transaction or fact tables for costing-based CO-PA are delivered with a place holder for the operating concern (CE1XXXX) and generated on-site. The transaction tables for account-based CO-PA are exactly the same as those used for cost centers, orders, projects, and so on. If you use both approaches in the same operating concern, be careful to check which

approach you select when calling reports or running transactions, because the results can look dramatically different. Figure 2.37 shows a line item report for account-based CO-PA. Again, we've selected the profitability segment, but you can see that the columns are completely different. This is because instead of assigning costs to value fields we're looking at them by cost element.

If you are using only costing-based CO-PA and not account-based CO-PA, you may still discover records that appear to be posting to account-based CO-PA. These postings are made under a cost element but are assigned to what is known as a *reconciliation object* (object type `REO`) rather than genuine CO-PA characteristics. As the name implies, they are used for reconciliation purposes rather than for genuine profitability analysis.

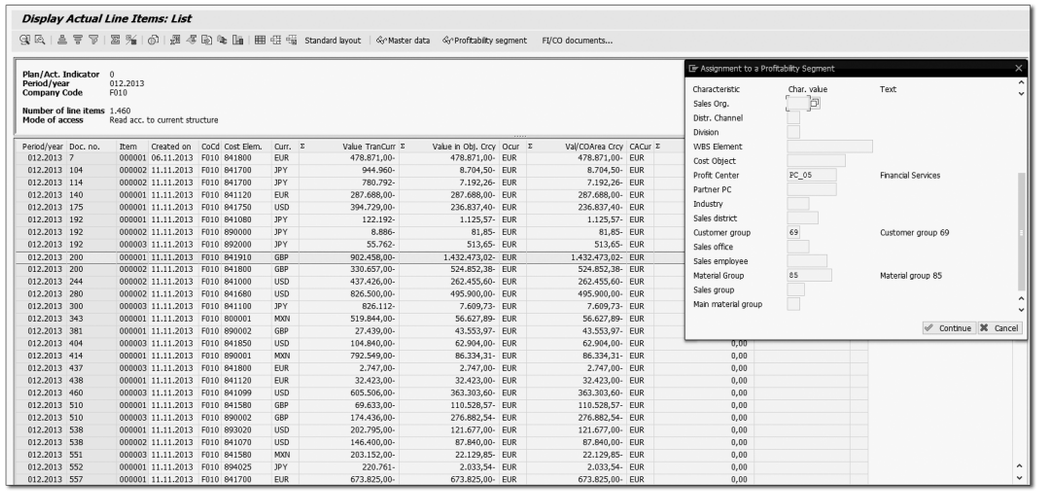


Figure 2.37 Line Item Report for Account-Based CO-PA

The only reports that are standard in CO-PA are the actual line items (Transaction KE24) and the plan line items (Transaction KE25). If the underlying tables are different at every site, so are the drill-down reports. Creating reports is part of the implementation effort for Profitability Analysis, because Transaction KE30 (Execute Report) only shows data if you've properly configured your operating concern and built the appropriate reports first. The drill-down potential of CO-PA is almost unlimited, with organizations slicing and dicing their data by customer, by product, by distribution channel, and so on to try to understand where and with whom they are making or losing money. Many also move the entire operating

concern to SAP BW for analysis. We'll return to this in Chapter 8. Others are starting to use SAP HANA (see Chapter 13) to explore their CO-PA data.

2.7 Summary

In this chapter, you learned about the line item reports for Cost Center Accounting, Internal Orders, Cost Object Controlling, and Profitability Analysis and looked at how to compare the actual costs captured in these line items with planned costs, budgets, and target costs as appropriate. We also looked at some tree reports for Product Cost Planning and Material Ledger/Actual Costing and saw how an operating concern is defined for Profitability Analysis.

As we work through the chapters that follow, we'll refer to any reports that support the process, so you'll find the master data reports in Chapter 3 and the line items for planning in Chapter 5. All reports shown in Chapter 1 through Chapter 7 are based on reporting capabilities inherent in the SAP ERP system and don't require an additional data warehouse.

We'll return to the subject of reporting in Chapter 8 to look at SAP BW and the case for moving data to a dedicated data warehouse. There we'll also discuss some of the newer options made possible using the SAP BusinessObjects tools and specifically how to use a generic function in SAP List Viewer to call SAP Crystal Reports. We'll make another visit in Chapter 13 when we look at how to work with reports in SAP HANA. But first, we'll look at the master data that needs to be in place before you can run any of these reports.

Contents

Preface 15

1 Introduction 25

1.1 Basic Controlling Functions 29
1.1.1 Goals of Controlling 29
1.1.2 Cost Accounting in the United States 31
1.1.3 Standard Costs and Actual Costs 32
1.1.4 Investment and Project Controlling 33
1.1.5 Lean Accounting 34
1.2 Essential Record-Keeping Functions 34
1.2.1 Record Keeping by Cost Center 36
1.2.2 Record Keeping by Order 39
1.2.3 Record Keeping by Project 40
1.3 Managing Close and Valuation Processes 41
1.3.1 Valuation of Goods Movements 42
1.3.2 Work in Process 42
1.3.3 Scrap 42
1.3.4 Work in Process for Projects 43
1.4 Preparing Budgets and Planning 44
1.4.1 Driver-Based Cost Planning 44
1.4.2 Driver-Based Cost Planning among Cost Centers 46
1.4.3 Budgeting 47
1.5 Process Analysis and Internal Controls 49
1.5.1 Master Data Controls 49
1.5.2 Workflow 49
1.5.3 Process Controls 50
1.6 Summary 50

2 Reporting 53

2.1 Cost Center Line Items 54
2.1.1 Classic Cost Center Line Item Report 54
2.1.2 Simplified Cost Center Line Item Report 63
2.1.3 Totals Records for Cost Centers 65
2.2 Order Line Items 66

2.3 Product Costs: Itemization 71
2.4 Product Costs: Cost Objects 76
2.4.1 Product Cost by Order 77
2.4.2 Product Cost by Period 80
2.4.3 Product Costs by Sales Order 82
2.5 Material Ledger 85
2.6 Profitability Analysis Reports 88
2.7 Summary 95

3 Master Data Owned by Controlling 97

3.1 How to Set Up Cost Centers 98
3.1.1 Responsibility for a Cost Center 100
3.1.2 Embedding the Cost Center Design in SAP ERP 104
3.1.3 Ensuring that Cost Center Expenses Are Handled Correctly 106
3.1.4 Cost Center Hierarchies 108
3.1.5 Enterprise Organization 115
3.1.6 Reporting of Cost Center Master Data 115
3.2 Internal Orders 117
3.2.1 Internal Orders and Cost Centers 121
3.2.2 Settlement Rules for Internal Orders 122
3.2.3 Statistical Internal Orders 124
3.2.4 Order Groups 124
3.2.5 Reporting Order Master Data 125
3.3 Statistical Key Figures 127
3.4 Activity Types 131
3.4.1 Direct and Indirect Activity Allocations 133
3.4.2 Settings for Activity Price Calculation 135
3.4.3 Activity Type Groups 136
3.4.4 Reporting Activity Type Master Data 136
3.5 Secondary Cost Elements 137
3.5.1 Cost Element Groups 140
3.5.2 Reporting on Cost Element Master Data 141
3.6 Product Cost Collectors 143
3.7 Cost Object Hierarchies 145
3.8 Maintenance Issues 147
3.8.1 Time-Dependent Fields 148

3.8.2 Creating Hierarchies for a Specific Time Frame 149
3.8.3 Status Management 151
3.9 Change Requests for a SOX-Compliant Master Data Process 152
3.10 Summary 156

4 Master Data for Which Controlling Is a Stakeholder 157

4.1 Material Masters 159
4.1.1 Basic View 161
4.1.2 Accounting View 162
4.1.3 Costing Views 166
4.1.4 MRP Views 169
4.1.5 Sales View 169
4.1.6 Batches 170
4.2 Customer Masters 171
4.3 Bills of Material 173
4.3.1 Quantity Definition 176
4.3.2 Co-Products and Byproducts 176
4.3.3 Recursive BOMs 179
4.3.4 Configurable BOMs 180
4.4 Routings 183
4.4.1 Types of Routing 183
4.4.2 Operation Values 185
4.4.3 Operation-Level Costing 187
4.5 Work Centers and Resources 188
4.6 Procurement Alternatives and Mixed Costing 190
4.6.1 Internal Processing 191
4.6.2 External Procurement 192
4.6.3 Plant-to-Plant Transfer 192
4.6.4 Subcontracting 193
4.6.5 Mixing Ratios 193
4.7 Projects 194
4.7.1 Work Breakdown Structure Elements 195
4.7.2 Networks and Network Activities 196
4.8 Investment Programs 198
4.9 Primary Cost Elements and Profit and Loss Accounts 201
4.9.1 Chart of Accounts 202
4.9.2 Controlling and the Financial Accounts 204

4.10 Setting Prices for Product Costing 207
4.10.1 Setting Standard Costs for Raw Materials 208
4.10.2 Balance Sheet Valuation 211
4.10.3 Calculating Actual Costs 212
4.10.4 Cross-Company Costing 213
4.11 Summary 214

5 Planning and Budgeting 217

5.1 Complete Sales Plan in a Manufacturing Environment 219
5.1.1 Sales and Operations Planning 221
5.1.2 Cost Center Planning 229
5.1.3 Calculating Standard Costs for Products to Be Manufactured 256
5.1.4 Profitability Planning 271
5.2 Planning and Budgeting for Investment Programs 273
5.2.1 Investment Program 273
5.2.2 Overall Plan 274
5.2.3 Cost Element Planning 276
5.2.4 Budgeting 279
5.2.5 Displaying and Changing a Budget 282
5.3 Summary 285

6 Actual Postings 287

6.1 Integrated Process Flows: Buy, Make, and Sell 287
6.1.1 Procure to Pay 288
6.1.2 Plan to Manufacture 297
6.1.3 Order to Cash 310
6.2 Distribution of Usage Variances 318
6.2.1 Capturing Physical Inventory Documents 319
6.2.2 Distribution of Usage Variances 320
6.2.3 Distribution of Activities 322
6.3 Integrated Process Flows: Other Logistics Scenarios 324
6.3.1 Product Cost by Order 324
6.3.2 Product Cost by Period 330
6.3.3 Product Cost by Sales Order 334
6.3.4 Project Controlling 339
6.3.5 Controlling for Maintenance and Service Orders 344

6.4 Corrections or Adjustment Postings 347
6.4.1 Reposting Line Items 348
6.4.2 Correcting an Activity Allocation 351
6.4.3 Reposting Values 352
6.5 Cross-Company Postings 353
6.6 Summary 358

7 Period Close 359

7.1 Allocations 360
7.1.1 Before the Start of the Period Close 362
7.1.2 Depreciation of Fixed Assets 363
7.1.3 Allocations between Cost Centers 364
7.1.4 Allocations to Profitability Analysis 378
7.1.5 Target Costs and Variances on Cost Centers 382
7.2 Calculations and Settlement 389
7.2.1 Overhead Calculation 392
7.2.2 Work in Process 394
7.2.3 Target Costs and Variances in Production 397
7.2.4 Settlement 403
7.2.5 Product Cost by Sales Order 404
7.3 Multilevel Actual Costing in Material Ledger 407
7.3.1 Types of Costing Run 408
7.3.2 Periodic Costing Run 408
7.3.3 Alternative Valuation Run 413
7.4 CO-PA Processes 420
7.4.1 Revaluation 420
7.4.2 Top-Down Distribution 421
7.5 Summary 425

8 Reporting in SAP BW and SAP BusinessObjects 427

8.1 Reporting on Large Data Volumes in SAP ERP 428
8.1.1 Using Extracts to Accelerate Cost Center and Internal Order Reports 428
8.1.2 Using Summarization Levels to Accelerate CO-PA Reports 433
8.1.3 Using Summarization in Product Cost Reports 433
8.1.4 Using Summarization Hierarchies for CO-PC Reporting ... 434

8.2 How to Decide Whether You Need SAP BW for Reporting 436
8.2.1 Performance Concerns 437
8.2.2 Multidimensionality 443
8.2.3 Navigation Attributes 446
8.2.4 Inclusion of Non-SAP Data 450
8.2.5 Building Queries 451
8.3 Cost Center Reporting in SAP BW 455
8.3.1 Reporting Using Virtual and Physical InfoProviders 455
8.3.2 Transient InfoProviders and Operational DataProviders ... 458
8.4 Reporting with SAP BusinessObjects Tools 461
8.4.1 SAP BusinessObjects Analysis for Microsoft Excel 461
8.4.2 SAP Crystal Reports for Controlling 464
8.4.3 SAP BusinessObjects Dashboards for Controlling 467
8.4.4 SAP BusinessObjects Explorer for CO-PA Reporting 468
8.5 Summary 470

9 Master Data in a Multisystem/Shared Service Environment ... 471

9.1 Change Requests in SAP ERP 474
9.2 New Solutions for Handling Master Data in a Multisystem Environment 479
9.2.1 Data Modeling in SAP Master Data Governance for Financials 480
9.2.2 Roles for SAP Master Data Governance 484
9.2.3 Editions in SAP Master Data Governance for Financials ... 486
9.3 Governance Requirements for Master Data 492
9.3.1 Creating a Change Request for a Single Object 492
9.3.2 Workflow Steps for a Change Request 497
9.4 Creating Change Requests in a Shared Service Center 498
9.5 Summary 501

10 Planning Using SAP BW Technologies 503

10.1 Planning Applications in SAP ERP 505
10.2 Planning Applications in SAP BW 509
10.2.1 Multidimensional Database Layer in SAP BW 512
10.2.2 Virtual InfoProviders in SAP ERP 514
10.2.3 Aggregation Levels and Planning Functions 517
10.2.4 Data Entry Screens 520

10.3 Orchestrating the Planning Process 527
10.3.1 Using Express Planning to Orchestrate the Planning Process 527
10.3.2 Creating a Planning Round 527
10.3.3 Submitting Data 534
10.3.4 Monitoring, Reviewing, and Approving the Planning Process 539
10.3.5 Orchestrating the Planning Process Using the Process Monitor in SAP BPC 540
10.4 Summary 546

11 Allocations Using SAP Cost and Profitability Management ... 547

11.1 Template Allocations in SAP ERP 550
11.2 Allocations in SAP PCM 559
11.2.1 Mapping the Costing Model in SAP PCM with SAP ERP 561
11.2.2 Dimensions of the Costing Model 562
11.2.3 Assignments in the Costing Model 568
11.2.4 Loading Data to the Model 570
11.3 Customer Value Analysis Using SAP PCM 571
11.4 Summary 575

12 Period Close Using the SAP Financial Closing Cockpit 577

12.1 New Options for Accelerating the Period Close 578
12.1.1 Orchestrating Your Closing Tasks 581
12.1.2 Executing Your Close Tasks 584
12.1.3 Automating Closing Transactions 587
12.1.4 Creating Program Variants for Your Close Tasks 591
12.1.5 Scheduling Tasks 593
12.1.6 Using Workflows in the Close 597
12.1.7 Handling Costing Runs in Your Close 602
12.1.8 Handling Organizational Units in the Closing Cockpit 603
12.1.9 Closing Cockpit and SAP Financial Closing Cockpit 607
12.2 Closing Tasks in Multiple Systems 609
12.3 Transparency within the Close 613
12.4 Summary 615

13 SAP HANA and Its Impact on Controlling 617

13.1 Impact on Existing Controlling Applications 620
13.1.1 Changes to Profitability Analysis (CO-PA) 620
13.1.2 Changes to Product Cost Controlling (CO-PC) 627
13.1.3 Changes to Overhead Management (CO-OM) 635
13.1.4 Changes to Investment Management (IM) 640
13.1.5 SAP HANA Live 642
13.2 New Approaches to SAP Controlling 645
13.2.1 Line Item Merge for FI and CO Documents 646
13.2.2 Single Planning Model 651
13.2.3 Removing the Totals Tables 654
13.2.4 Changes to Profitability Analysis (CO-PA) 656
13.2.5 Data Selection Optimization during the Period Close 660
13.2.6 SQL Approach for WIP Calculation, Variance Calculation, and Results Analysis 661
13.3 New Applications in SAP Controlling 666
13.3.1 Search Models and Fact Sheets 667
13.3.2 My Spend and My Unusual Items 671
13.3.3 Net Margin Results and Profit Analysis 676
13.4 Summary 681
13.5 Postscript 681

The Author 683
Index 685

Index

A

Access method
  in queries, 456
Account
  link to cost element, 26
Account assignment
  in purchase order, 290
  purchase for project, 339
Account assignment elements
  for project, 196
Account-based CO-PA, 93
  timing of cost of goods sold, 657
  using SAP HANA, 649
Accounting document
  for goods receipt from purchasing, 292
  for incoming invoice, 295
Accounting principle
  in alternative valuation run, 415
Accounting view
  of material master, 162
Active availability control, 48
  for project, 339
  in SAP Fiori, 676
Active budgeting, 48
Activities
  as basis for price calculation, 135
  dimension in SAP PCM, 564
  in SAP PCM, 550
Activity allocation
  to project, 344
Activity price calculation, 253, 387
  analysis of, 388
  approaches, 135
  settings in activity type, 135
Activity quantity
  as basis for planning, 221
Activity type, 131
  activity unit, 133
  in Material Ledger, 411
  in work center/resource, 189
  SAP Fiori factsheet, 669
Activity type (Cont.)
  use in allocations, 361
Activity type groups, 136
  in planning, 232
Activity type plan
  as service in Express Planning, 529
Activity/output prices
  planning, 231, 232
Activity-Based Costing
  introduction, 28, 548
Activity-dependent planning, 241
Activity-independent cost planning, 237
Actual costs, 32
  business requirements, 85
  for production orders, 307
  material master, 212
Actual postings, 20, 287
Adobe Interactive Form
  change request, 477
Allocation, 360
  cross-company, 204
  real-time integration of CO and Financial Accounting, 366
  using SAP PCM, 547
Allocation cycles
  overview, 365
  performance of read interfaces, 624
Allocation template
  in business process, 556
Alternative cost center hierarchies, 111
Alternative valuation run, 408
  costing steps, 413
  link to Schedule Manager, 602
Annual budget, 219
Annual operating plan, 219
Apportionment structure
  for co-products, 178
  in process order, 325
Appropriation requests, 199
Approval
  for change requests, 497
  workflow, 49

Approval year
for investment program, 198
in investment planning, 282
Arm's length trading, 354
Assessment cost elements, 368
use of, 371
Assessment cycles, 109, 364, 367
accelerating data selection, 623
cyclical relationships, 373
using SAP HANA, 621
Asset Accounting, 105
link with Cost Center Accounting, 105
Assets
period close tasks, 363
Auditing
CO-PA reporting, 445
Authorization checks
during line item reporting, 637
Auxiliary cost component split, 264

B

Backflushing
distribution of usage variances, 318
for production orders, 302
Background processing
for period close activities, 586
Balance sheet valuation
price fields, 165
tax and commercial prices, 211
Basic view
of material master, 161
Batches, 170
BEx queries
for planning, 511
reporting, 457
Bill of material, 173
cyclical structures, 179
in production order, 298
long-term planning, 229
material usage, 71
recursive, 179
usage, 173
Billing
prior to period close, 362
Billing document
for sales order, 316
Billing elements
for project, 196
Bottom-up planning, 275
Budget change, 50
change request, 283, 475
Budget planning
for investment programs, 274
Budget transfer
change request, 283, 475
Budgeting, 19, 44
value flow, 47
Business area
in cost center, 107
Business function
CO_ALLOCATIONS, 344
FIN_ACC_LOCAL_CLOSE, 579
FIN_CO_COGM, 212, 364, 387, 417
FIN_GL_REORG_1, 105
FIN_MDM_ACC, 482
FIN_MDM_ORG, 482
FIN_MDM_SOA_CU, 491
FIN_MDM_SOA_ORG, 491
FIN_REP_SIMPL_1, 64
FIN_SSC_ISS_1, 499
LOG_EAM_OLC, 188
LOG_MM_SIT, 354
LOG_PP_PROD_ORDER_SPLIT, 327
Business process, 547
in allocations, 556
master data, 551
Business process flows
in SAP BPC, 541
Byproducts in BOM, 176

C

Calculation views
in SAP HANA Live, 643
Capacity
as basis for price calculation, 135
in cost center planning, 231
of cost center, 190
of work center, 190

Capital investment projects
planning of, 273
Change documents for master data, 147
Change request, 152
action box, 477
approval of, 497
configuration, 474
for budget, 283
for cost center, 535
form settings, 477
master data governance, 492
notification type, 476
SAP Shared Service Framework, 498
scenarios, 474
Characteristics for profitability analysis, 312
Chart of accounts, 202
data model for SAP MDGF, 482
link with primary cost elements, 201
master data governance, 473, 479
Closing Cockpit
in period close, 578
scheduling extracts for reporting, 431
Closing hierarchy
in Closing Cockpit, 603
Collective processing
during period close, 577
Column store
database structure, 618
Commitment, 44
for project, 341
Company code
in cost center, 106
Completed contract
valuation, 406
Conditions
for purchasing, 289
Configurable BOM, 180
classification, 181
Configurable material, 180
manufacture of, 335
Confirmation
for production orders, 305
Control key
for operation, 185
Controlling, 18
Controlling document
for production order, 304
CO-PA Accelerator
SAP HANA, 620
Co-products, 167
in BOM, 176
in process orders, 324
settlement rules, 178
Corporate Investment Management
planning, 512
Cost and activity input planning
planning layouts, 507
Cost center, 29
approval processes, 35
as account assignment, 34
change request, 474, 535
difference from order, 98
finding cost centers in allocation cycles, 365
groups, 112
hierarchies, 108
link to work center, 188
master data, 98
master data governance, 482
operational, 100
output measure, 30
outputs, 37
planning, 229
purchasing costs, 34
responsibility for, 29
responsible managers, 100
SAP Fiori fact sheet, 668
supporting, 100
typical expenses, 37
validity period, 149
Cost Center Accounting, 26
actual postings, 347
creating cost centers, 98
line items, 54
period close activities, 361
planning, 229
Cost center group
in Express Planning, 531
Cost center hierarchy
preparing for change, 149
Cost center line item, 307
layouts for reporting, 59

Cost center line item (Cont.)
simplified reporting, 63
Cost component split
in Product Cost Planning, 264
manual change to, 412
Cost components
for activity prices, 255
introduction, 71
Cost Element Accounting, 26
master data, 138
Cost element category
for primary cost element, 203
Cost element group, 140
in planning, 236
Cost element master data
reports, 141
Cost elements, 26, 137
examples, 26
for goods issues and receipts, 304
for recording WIP, 395
in activity types, 133
in primary cost component split, 255
in product costing, 71
in Profitability Analysis, 93
link to cost components, 264
link to SAP PCM, 563
master data governance, 482
planning, 276
primary, 26
secondary, 26
totals table, 654
Cost Object Controlling
master data, 143
MRP class, 169
period close activities, 388
production orders, 300
Cost object hierarchy, 82, 145
options at period close, 146
Cost objects
dimension in SAP PCM, 565
in SAP PCM, 550
Cost of goods manufactured, 71
Cost of goods sold
split by cost component, 657
Cost planning, 217
Costed multilevel BOM
report, 73
Costing lot size, 166, 262
impact of scrap, 169
in material master, 167
Costing run, 256
in Material Ledger, 407
Costing sheet
in production order, 391
Costing variant
in Product Cost Planning, 259
Costing version
in Product Cost Planning, 260
Costing view
of material master, 166
Costing-based CO-PA, 93
Country chart of accounts, 202
Cross-company costing, 213
Cross-company postings, 353
allocations, 106, 204
Cumulation
in Material Ledger, 413
Currencies
for reporting, 62
Customer
master data governance, 482
Customer account
assignment in Customer master, 172
Customer invoice, 316
Customer master, 171
reconciliation account, 314
Customer value analysis
using SAP PCM, 571
Cycle run groups
for allocations, 373

D

Dashboard reports, 467
Data modeling
master data governance, 480
Data provisioning
in SAP BW, 454
Data warehousing, 436
DataSources, 21
for controlling, 438

Dependencies
in period close, 583
Depreciation, 363
Depreciation expenses
cost center assignment, 37
Derivation
in profitability analysis, 311
Determine delta postings
in alternative valuation run, 414
Direct access
using SAP BW, 439
Direct activity allocation, 131
category of activity type, 134
correction of, 351
Distribution cycles, 365, 373
Distribution of activities, 322
Distribution rules
settlement rules, 122
Division
in material master, 163
Drill-down reporting
in Cost Object Controlling, 434
in Material Ledger, 630
in Product Cost Controlling, 627
in Profitability Analysis, 433
unassigned data, 456
Driver-based planning, 44
Drivers
for cost centers, 30
for products, 30
Dynamic selections
using SAP HANA, 618

E

Edition
how to create, 489
master data governance, 483
overview of, 490
Enterprise extension
EA_FIN, 319, 409, 412
Entity types
use in MDGF, 482
Environment
use in templates, 557
Equipment
link with Cost Center Accounting, 105
Equivalence numbers
for co-products, 179, 325
Executable programs
for period close transactions, 587
Expenses
to be capitalized, 39
Express Planning, 527
Extracts, 428

F

Fact sheet
in SAP Fiori, 668
Factory calendar
in Closing Cockpit, 606
FIFO (first-in, first-out), 165
Financial planning
using SAP HANA, 651
Financials Add-On
SAP HANA, 646
Fixed assets depreciation, 363
Fixed costs
variances on cost centers, 30, 386
Flow definition
for period close activities, 598
Formatted reports
using SAP Crystal Reports, 465
Form-based planning, 237
Formula key
in work center/resource, 188
Free planning, 238
Functional area in cost center, 107
Future standard price
in material master, 268
marking/releasing, 268

G

General Ledger
Cost Center Accounting, 106
link to Cost Center Accounting, 106
link with internal orders, 122
SAP Accounting powered by SAP HANA, 648

Goods movements
real-time valuation, 42
Goods receipt
for purchasing, 290
Grenzplankostenrechnung (GPK), 29
Group chart of accounts, 202
Group costing
use of costing versions, 260
Group valuation
for intercompany trade, 356
in material master, 213

H

Hans-Georg Plaut, 29
Hierarchy area
for cost centers, 108

I

Income statement by market segments, 649
Incoming invoice
from vendor, 293
Indirect activity allocation, 131
category of activity type, 134
cycles, 365, 376
for energy, 133
in planning, 247
InfoArea in SAP BW, 439
InfoObjects in SAP BW, 447
InfoPackages for data extraction, 437
InfoProviders, 21
for corporate Investment Management, 512
for planning, 510
in SAP BPC, 541
in SAP BW, 439
Information system
product cost by order, 78, 81, 83
product cost planning, 72
InfoSet queries, 459
Input price variances
for production orders, 399
on cost centers, 386
Input quantity variances
for production orders, 399
on cost centers, 386
Intercompany trading, 354
Internal controller, 527
Internal order line items, 66
delivered layouts, 69
Internal orders, 26
change request, 474
master data, 117
planning, 249
settlement rules, 122
statistical, 124
status management, 151
Internal service request, 21
International Financial Reporting Standards (IFRS), 17
Inventory, 38
Inventory counts
handling of variances, 318
recording of, 319
Inventory valuation, 42
scrap, 42
work in process, 42
Investment Management, 33
orders, 33
planning, 273
projects, 33
using SAP HANA, 640
Investment program, 34, 198, 273
planning, 273, 279
Item category
in BOM, 174
Itemization
delivered layouts, 75
reporting options, 74

J

Job log
for period close activities, 594
in Web application for Closing Cockpit, 609
Joint production, 167
product cost by order, 324

L

Layouts
how to change, 60

Lean accounting, 27, 34
value streams, 105
Legal valuation
in material master, 213
intercompany goods movement, 355
LIFO (last-in, first-out), 165
Line item reporting
using SAP HANA, 635
Line items in SAP PCM, 562
List report, 58
Long-term planning, 228
Lot size
for costing, 262
for production order, 298
Lot size variances
for production orders, 400

M

Main cost component split, 264
Maintenance orders
operation level costing, 344
Make-to-order production, 334
Manager Self-Service
internal orders for cost centers, 121
user responsible for cost center, 101
Marking cost estimates, 268
Master data, 19
controls, 49
Master data reporting
cost centers, 115
Master recipe, 184
Material account
use of valuation class, 162
Material group
for sales order item, 312
in material master, 161
Material Ledger, 85, 410
activation of, 163
cross-company trading, 213
drill-down reporting, 627
in material master, 163
performance, 292, 411
period close activities, 407
Material master, 159
master data governance, 482
Material master (Cont.)
selection list for costing, 261
views, 159
Material origin, 166
Material price analysis
using SAP HANA, 630
Material types
in material master, 159
Material usage
for production orders, 301
Mixed costing, 190
Mixed price variances
for production orders, 400
Mixing ratios
for product costing, 193
use of, 266
Model builder
in SAP PCM, 561
Moving average price, 163
in combination with Material Ledger, 164
MRP variances
source of, 298
Multidimensional reporting
in Cost Center Accounting, 445
in SAP BW, 443
Multilevel price determination, 409
My Real Spend, 44
My Spend, 44
Active Budget Control, 44
SAP Fiori, 672
My Unusual Items
SAP Fiori, 675

N

Navigation attributes
in SAP BW, 446
Networks, 196
for projects, 41

O

Object CPT2, 559
Offset
timing of period close, 586

OLAP engine
use in planning, 510
One-off costs
template allocation, 300
On-the-fly aggregation
using SAP HANA, 618
Operating concern, 88
dimensions used for planning, 223
in SAP BW, 441
link with cost objects in SAP PCM, 566
Operating rate
for cost center, 386
Operation account assignment, 345
Operation values, 185
Operational chart of accounts, 202
Operational cost centers, 99
Operation-level costing, 187, 345
Operations
BOM items for WIP calculation, 397
Order confirmation, 36
Order groups, 125
Order items
for co-products, 325
Order lot size, 298
Order master data
reporting options, 125
Order networks, 175
Order settlement, 40
Order split, 328
Order to cash, 310
Orders
typical expenses, 39
Organization types
in Closing Cockpit, 604
Origin group
material master, 166
Original budget
for projects, 280
Outbound delivery
for sales order, 313
Output
of planning, 220
Output measure
for cost centers, 30
for planning, 30
for products, 30
Output measure (Cont.)
for work center, 189
Output parameters
for extracts, 431
Output price variances
for production orders, 400
on cost centers, 386
Output side variances
on cost centers, 386
Outsourced manufacturing
with CO production order, 77, 328
Overall plan
investment planning, 274
Overhead calculation
for production orders, 392
using SAP HANA, 639
Overhead group
in material master, 166
Overhead key
in production order, 391

P

P&L accounts
link to CO, 202
Parameters
for closing activities, 591
Partners
cost component split, 72
in an allocation, 62
Passive budgeting, 48
Payroll costs
cost center assignment, 37
Percentage of completion, 43
valuation, 406
Period close, 20, 41
automation of, 587
process controls, 50
use of SAP Financial Closing cockpit, 577
Periodic costing run, 408
costing steps, 408
link to Schedule Manager, 602
underlying data, 291
Periodic unit price
goods receipts for purchases, 291
in costing run, 408

Periodic unit price (Cont.)
in Material Ledger, 165
Person responsible
for cost center, 100
Personalization dialog
in Express Planning, 530
Physical InfoProviders
in SAP BW, 456
Physical inventory
distribution of differences, 320
document, 319
handling of variances, 318
Plan integration
for internal orders, 249
Plan quantities
inclusion in template, 554
Plan reconciliation, 231
Plan to manufacture, 297
Plan version
how to look, 273
Planned scrap
in BOM, 176
settings in material master, 169
Planner profile in planning applications, 505
Planning, 44
driver-based, 44
options, 16
process controls, 50
steps involved, 45
supply and demand, 47
Planning area
for planning applications, 506
Planning elements
for project, 196
Planning instance
in Express Planning, 528
Planning layouts
for cost center planning, 237
Planning round, 527
creation of, 527
Planning scenario
for sales and operations plan, 228
in Express Planning, 528
Post closing
in material ledger, 409
Preliminary cost estimate
for production order, 300
Price conditions
for intercompany sales, 213
for purchasing, 289
Price control
in material master, 163
Pricing conditions
in purchasing info record, 210
Primary cost component split, 72
for product costs, 264
in planning, 255
use of, 190
Primary cost distribution, 373
Primary cost elements, 26, 137, 201
in distribution cycles, 374
Primary cost planning
as service in Express Planning, 529
Primary cost posting
link to profit and loss item, 648
reporting options, 61
Primary database
SAP HANA as the main DataStore, 620
Prior year rates, 344
Process controls
period close, 50
planning, 50
price calculation in Material Ledger, 411
Process costs
in product costing, 551
Process templates
in SAP BPC, 543
Procurement alternative
product cost collector, 332
Procurement alternatives, 190, 191
Material Ledger reports, 632
Procure-to-pay, 288
Product cost by order, 77, 324
period close activities, 389
Product cost by period, 80, 330, 397
Product cost by sales order, 82
period close activities, 404
Product cost collector, 80, 143
product cost by period, 330
variance calculation, 401
Product Cost Controlling, 27

Product Cost Planning, 256
procurement alternatives, 266
Product costing, 15
reporting options, 71
Product hierarchy
for sales order item, 312
in material master, 161
Product roll-up
via BOM, 174
Production alternatives, 143
Production campaigns
reporting options, 77
Production order, 298, 328
outsourced manufacturing, 77
reporting options, 76
settlement, 309
Production plan, 228
Production quantity
as basis for planning, 220
Production variances
calculation of, 398, 663
sources of, 306
split by variance category, 657
Production version
in material master, 167
product cost collector, 144, 331
reporting options, 80
Profit and loss planning
using SAP HANA, 651
Profit center
cost center, 107
in material master, 167
in purchase order, 290
Profitability Analysis, 88
allocations to, 378
billing document, 316
direct posting from FI, 296
period close activities, 420
planning, 221, 271
sales order entry, 311, 312, 338
SAP BW content, 441
settlement to, 403
Profitability planning, 271, 508
Program variant
generation of, 595
in period close, 590
Program variant (Cont.)
in workflows, 599
Project change request, 474
Project controlling, 339
Project definition, 194
Project line items, 342
Project size, 197
Project stock
account assignment, 162
Projects, 40, 194
Proportional costs, 30
Purchase order
purchase to stock, 288
Purchase price variances
in procure-to-pay process, 289
Purchasing info record, 209
in purchase order, 288
use of conditions in costing, 210

Q

Quantity structure
in Material Ledger, 86
link to BOM, 174
Queries
for planning, 520
for Profitability Analysis, 452
for SAP BusinessObjects tools, 461
in SAP BW, 439

R

Rate routing, 183
Receiver rule
allocations to Profitability Analysis, 380
assessment cycle, 368
Receivers
allocations, 62, 110
Reconciliation ledger, 106
Record types
in Profitability Analysis, 89
Recursive BOMs, 179
Reference order, 118
Release
of cost estimates, 268
production order, 301
Remote tasks
for period close activities, 611
Replicated data
in SAP BW, 439
Report Writer
use of extracts, 428
Report Writer Reports
using SAP HANA, 639
Reporting, 18, 53
Reposting cycles, 365, 375
Reposting line items, 348
Reposting values, 352
Requirements type
in sales order, 336
Resource drivers in SAP PCM, 568
Resources
in process industry, 188
in SAP PCM, 550
supply and demand, 31
Resource-usage variances
for production orders, 399
on cost centers, 386
Responsibility accounting, 26
Responsible centers in SAP PCM, 564
Responsible cost center internal order, 121
Responsible managers in Express Planning, 534
Results analysis, 43
revenue-based, 43
Results analysis cost elements, 395
Results analysis key
in production order, 392
Results analysis version
use of, 394
Revaluation
at actual prices, 388
in Profitability Analysis, 420
of consumption, 409
Revision phase
in Express Planning, 540
Rework
confirmation of, 305
for production order, 327
Routing, 183
in production order, 298
long-term planning, 229
Routing (Cont.)
manufacturing steps, 71
work in process calculation, 397
Row store
database structure, 618
Run schedule headers, 333
product cost collector, 143

S

Sales and operations planning, 221
transfer from CO-PA, 227
Sales order, 310
Sales order controlling
period close activities, 404
Sales order costing
reporting options, 84
Sales order stock, 83, 335
account assignment, 162
unvaluated, 406
valuated, 405
Sales planning, 223
Sales quantity
as basis for planning, 220
SAP Business Planning and Consolidation, 540
SAP BusinessObjects, 21
SAP BW, 21, 437
Material Ledger extractors, 634
SAP Catch Weight Management
equivalence numbers for co-products, 179
multiple units of measure, 161
SAP Central Processing by Redwood, 609
SAP Crystal Reports
in SAP List Viewer, 466
link to query, 464
SAP ERP, 17
SAP ERP Controlling
link with SAP General Ledger, 646
SAP Financial Closing cockpit, 22, 579
web application, 607
SAP Fiori, 619
basic principles, 666
SAP General Ledger
link with SAP ERP Controlling, 646
SAP HANA
impact on Controlling, 617

SAP HANA Live, 619
for operational reporting, 642
SAP List Viewer, 58
layouts, 58
SAP Crystal Reports, 466
tree report, 74
SAP Master Data Governance, 21
SAP Master Data Governance for Financials, 473, 479
SAP Profitability and Cost Management, 22
options for loading data, 560
SAP Real Spend, 671
SAP SEM, 21
SAP Shared Service Framework, 473
Sarbanes-Oxley Act (SOX), 49
master data compliance, 153
Schedule Manager
for planning, 222
in period close, 578
scheduling extracts for reporting, 431
Schedule Manager Monitor
use of, 595
Scheduled activity, 231
in long-term planning, 229
transfer from SOP/LTP, 234
Scheduling
for period close activities, 593
Scrap, 42
calculation of, 402
confirmation of, 305
Search models using SAP HANA, 667
Secondary cost element, 26, 137
use, 139
Secondary database
SAP HANA as a side car, 620
Secondary postings
reporting options, 62
Segments
within allocation cycles, 367
Selection list
for costing run, 261
Selection variants
internal orders, 120
Sender rule
for assessment cycle, 368
for indirect activity allocation cycles, 376
Senders
allocations, 62, 110
Sending emails in Express Planning, 533
Service orders
operation level costing, 344
Settlement, 403
Settlement rule
automatic generation, 123
for production order, 337
internal orders, 122
Shared service center, 498
Simplified Reporting
cost center line item, 63
cost centers, 115
order master data, 125
Single-/multilevel price determination, 409
in Material Ledger, 164, 165
Source structure
in joint production, 178
Special procurement key
in material master, 168
Split valuation
for batches, 171
Splitting
cost center costs, 246
production orders, 327
Spoilage, 43
in BOM, 176
Spool list
for period close activities, 595
in web application for Closing Cockpit, 609
Stakeholder, 19
Standard cost center hierarchies, 109
Standard cost estimate
in material master, 163
Standard costs, 31
for raw materials, 208
use of costing run, 257
variances, 31
Standard price, 163
marking/releasing, 268
Standard routing, 183
Standard settings
in planning, 217
Standard values
in operation, 185

Star schema
for multidimensional reporting, 443
Statistical internal orders, 124
Statistical key figure, 127
groups, 130
use in assessment cycles, 369
Statistical key figure planning
as service in Express Planning, 529
Status management
for an internal order, 152
for internal orders, 152
for orders and product cost collectors, 151
in Express Planning, 536
Stock
in transit, 354
transfer order, 354
unrestricted use, 290
Stock revaluation
release of standard costs, 266
Structure explosion
in Product Cost Planning, 262
Summarization hierarchy
on-the-fly aggregation, 436, 656
Summarization levels
changes with SAP HANA, 622
in Cost Object Controlling, 434
in Profitability Analysis, 433
Supplier
master data governance, 482
Supporting cost center
indirect activity allocation cycles, 376
use of, 373
Supporting cost centers, 99
cost center planning, 242

T

Table
CE1, 621
CE4, 621
CKMLPP, 633
COEP, 636
COSP, 654
COSS, 654
CPT1, 558
FCML_CCS_REP, 632
Table (Cont.)
FCML_MAT, 632
FCML_REP, 632
MLCD, 630
MLIT, 630
MLPP, 630
Target costs
for product cost collector, 331
for production orders, 397
on cost centers, 382
version, 398
Task list
for period close, 584
Template
as part of period close, 557
definition, 557
display in product costing, 553
for period close, 583
instead of overhead calculation, 393
Time buckets
in planning applications, 536
Time dependency
in BOM, 175
in cost center, 148
Time recording
by order, 35, 40
by project, 35
to project, 341
Time sheet
data entry, 342
Time-dependent data
Asset Accounting, 105
Time-dependent fields
for cost centers, 148
Top-down distribution
account-based CO-PA, 658
performance of data selection, 624
using SAP HANA, 624
Top-down planning
for investments, 274
Totals record
Cost Center Accounting, 65
Transaction-based price determination
in Material Ledger, 164
Transactions, 16
C203, 184

Transactions (Cont.)
CA03, 183
CA23, 183
CAT2, 342
CAT5, 342
CJ13, 342
CJ20N, 195
CJ30, 281
CJ40, 274
CJ8GH, 661
CJI3N, 635
CJR2, 276, 506
CK40N, 257
CK91N, 191
CK94, 193
CKM3N, 85
CKMATCON, 261
CKMATDUV, 320
CKMCCD, 411
CKMDUVACT, 322
CKMDUVREC, 322
CKMLCP, 408
CKMLCPAVR, 413
CKMLQS, 85, 305
CLOCOC, 581
CLOCOT, 584
CO01, 298
CO15, 302
CO88H, 661
CO8B, 327
CON2, 388
COR1, 324
CPT1, 558
CR03, 188
CRC3, 188
CS03, 174
EX_CUST, 529
FS00, 202
HDBC, 629
IM_AVCHANA, 640
IM32, 280
IM34, 198, 279
IM52, 280
KA01, 137
KA06, 137
KA23, 142
Transactions (Cont.)
KAH2, 141
KALC, 106
KB11N, 352
KB21N, 344
KB61, 348
KB65, 351
KE1P, 625
KE24, 312
KE27, 421
KE28, 422, 658
KE28L, 624
KEDZ, 624
KEG5, 624
KEHC, 620
KEPM, 221, 272, 508
KEU2, 379
KEU5, 381, 624
KGI2, 392
KK01, 128
KK87, 403
KKAOH, 662
KKAS, 396
KKAX, 395
KKBC_HOE_H, 656
KKBC_ORD, 395
KKF6N, 144
KKML0, 627, 630
KKO0, 628
KKPHIE, 146
KKS1H, 663
KKS2, 398
KKS6, 402
KL01, 132
KL13, 136
KLH1, 136
KO04, 118
KO8GH, 661
KOB1, 69
KOB1N, 635
KOB2N, 635
KOBPN, 635
KOH1, 125
KP04, 505
KP06, 236, 506
KP26, 231, 232, 506

Transactions (Cont.)
KPF6, 250, 506
KPSI, 235, 244
KS01, 99
KSB1, 57
KSB1N, 635
KSB5N, 635
KSBPN, 635
KSBT, 388
KSC2, 376
KSC5, 377
KSH1, 112
KSII, 387, 416
KSPI, 252
KSPP, 234
KSS1H, 665
KSS4, 246
KSU2, 110, 367
KSU5, 370
KSV2, 374
KSV5, 374
ME13, 209
ME21N, 289
MI01, 319
MI04, 319
MI07, 320
MIGO, 290
MIRO, 293
MM03, 160
MS01, 228
OKEON, 109
RKIL, 377
RKIU, 371
RKIV, 374
RKP1, 509
RKU3, 351
RSA3, 438
RSPLAN, 518
VA88H, 661
XD01, 172
XK01, 213
Transfer control
in Product Cost Planning, 260
Transient InfoProviders
for reporting, 458
Travel expenses
cost center assignment, 37

U

Unit of measure
for material master, 161
Profitability Analysis, 161
User exit
COOMKS01, 102
User responsible
for cost center, 101

V

Valuated Quantity Structure report, 305
Valuation
during planning, 227
Valuation class
for materials, 162
Valuation function
in Profitability Analysis, 420
Value fields
in Profitability Analysis, 93, 313
Value flows
in Controlling, 28
Value streams
cost center assignment, 105
Variable costs, 30
Variables
for organizational units, 605
Variance analysis
introduction, 360
Variance calculation
for cost centers, 382
for product cost collectors, 402
Variance key
in material master, 167
in production order, 392
Variances
settlement of, 309
Variation
in Report Writer reports, 431
Vendor master, 213
Version, 220
for sales and operations plan, 228

Version (Cont.)
purpose of, 220
use in period close, 364
Views
in SAP BW queries, 456
Virtual InfoProvider
for CO-PA, 625
for planning, 514
how to create, 625, 626
in SAP BW, 456
Material Ledger, 633

W

WBS element, 195
change request, 474
Web queries
for planning, 511
Weighted average price
in Material Ledger, 163, 165
Where-used lists
for cost centers, 115
Wolfgang Kilger, 15
Work breakdown structure (WBS), 20, 40, 194, 195
Work centers, 188
in production order, 299
link with Cost Center Accounting, 106
Work in process
account determination, 207
calculation of, 394
for product cost collectors, 396
introduction, 42
Work lists
for period close activities, 597, 598
Work orders
reporting options, 76
Workflow
approvals, 49
period close activities, 597
Working time
recording of, 341

Z

Zero-based planning, 223

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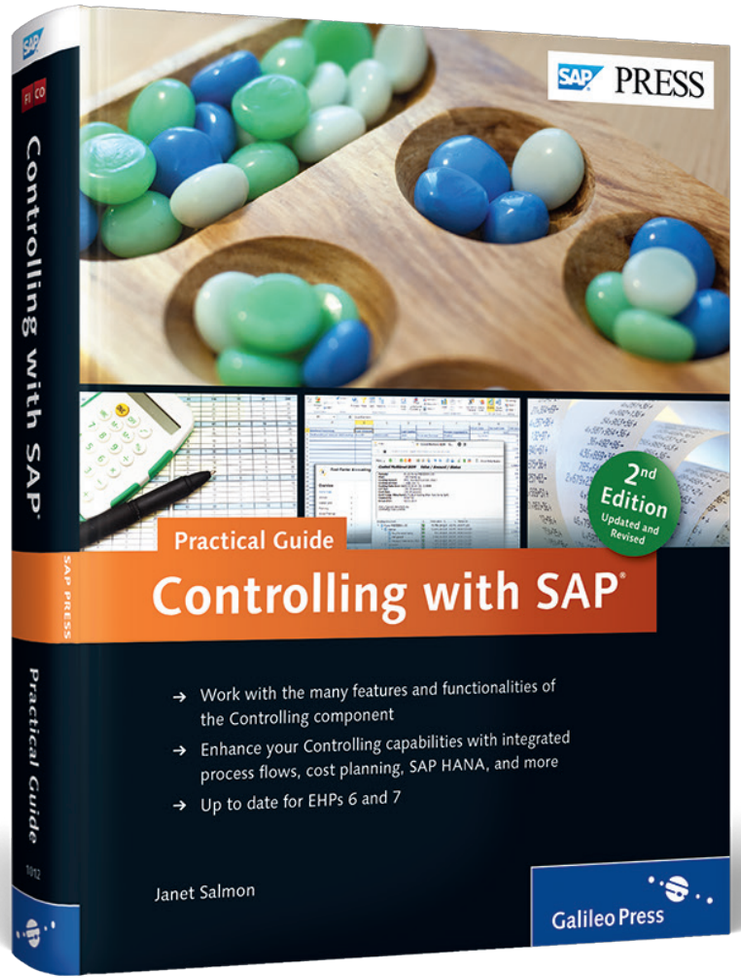

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