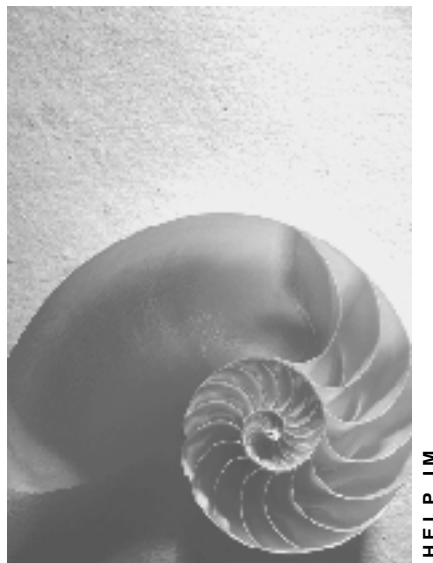


Investment Management (IM)



Release 4.6C



Investment Management (Overview)

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Icons

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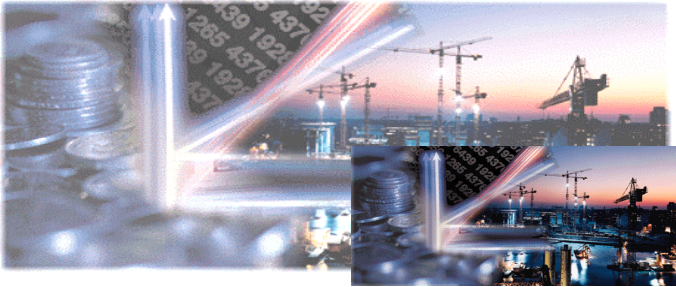
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Investment Management (IM)



Investment Management (Overview)

Purpose

The *Investment Management* (IM) component provides functions to support the planning, investment, and financing processes for:

- Capital investments, such as the acquisition of fixed assets as the result of-house production or purchase
- Investments in research and development
- Projects that fall primarily under overhead, such as continuing education of employees or establishing new markets
- Maintenance programs

The term investment, therefore, is not limited only to investments you capitalize for bookkeeping or tax purposes. An investment in this context can be any measure that initially causes costs, and that may only generate revenue or provide other benefits after a certain time period has elapsed (for example, plant maintenance projects).



The IM component contains functions for managing investments in the area of fixed assets. Financial assets are managed in the *Treasury* component.

Implementation considerations

For information on implementing the IM component, refer to the Implementation Guide (IMG) for Investment Management. Choose *R/3 Customizing Implementation Guide → Investment Management*.

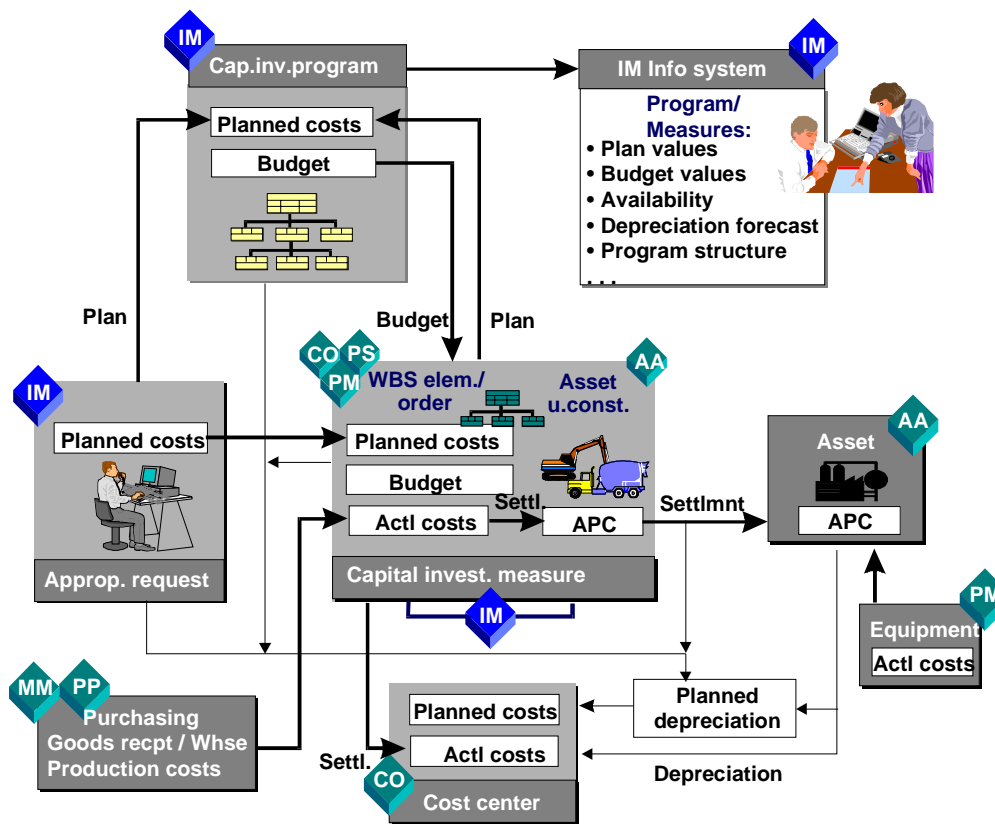
Integration

The investment program and the appropriation request are objects that originate in the IM component. In order to represent the measure, the IM component uses internal orders from Overhead Cost Controlling - Overhead Orders (CO-OM-OPA) and Plant Maintenance (PM), as well as work breakdown structure (WBS) elements from the Project System (PS).

The integration with Asset Accounting (FI-AA) enables you to easily capitalize the costs of internal orders and WBS elements that require capitalization to a fixed asset. Costs that do not require capitalization can be settled to cost accounting.

You can post acquisitions to a measure in the Logistics components of the R/3 System.

Investment Management (Overview)



Sub-Components of Investment Management and their Integration

The integrated planning process allows you to roll up planned values from appropriation requests and measures on the investment program to which they are assigned. You carry out budgeting of measures, on the other hand, from the top down within the investment program.

You can transfer expected depreciation on all planned investments to management accounting in the form of planned costs.

Features

Investment Management consists of the following components:

Component	Used for...
Investment Program [Page 12]	... cyclical planning and management of investment budgets for a number of measures, throughout your whole enterprise
Appropriation Requests [Page 100]	... management of the planning and approval phase of investments and other types of measures
Investment Measures [Page 188]	... parallel handling of cost accounting and financial accounting needs for individual investments. Measures take the form of internal orders, projects and maintenance orders.

Investment Management (Overview)

Information System [Page 277]	<p>... monitoring of the investment, based on plan/actual comparisons, monitoring of costs over several periods, and reporting from the area level down to the line item level.</p>
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Investment Programs

Purpose

The investment program can be used to augment planning and budgeting at the level of the individual measure by offering planning, budgeting and monitoring of a comprehensive budget. Investment programs are helpful to enterprises that create an investment plan and a budget annually, and wish to monitor the budget as a whole, rather than just at the level of individual measures. Using investment programs, you can obtain an overview of planning and budgeting processes in complex enterprise structures for all investments and large projects of the group, while at the same time maintaining strict budgetary control.

Features

The *Investment Programs* component provides functions for planning and monitoring of investment budgets encompassing many different measures, on a cyclical basis, of an entire corporate group. You can benefit from the integration of this component with the *Investment Measures* and *Appropriation Requests* components. Measures and appropriation requests can be assigned to investment program positions. By rolling up their plan values in the investment program, these measures and appropriation requests are integrated in the comprehensive investment planning process. At the same time, you can budget and oversee the measures using the investment program.

Comprehensive investment programs in the SAP R/3 System offer the advantage of their direct integration with the individual measures (orders or WBS elements), in contrast to non-integrated planning systems. By means of this integration, you are quickly made aware if your comprehensive budget is overrun. You can also monitor expenses for both external acquisitions as well as internal costs (activity allocation, overhead).

The *Investment Programs* component includes the following processes and functions:

Process/Function	Used for...
Structure of the Investment Program [Page 16]	... representing investments in a hierarchical form
Planning and Budgeting of Investment Programs [Page 50]	... planning in an investment program from the bottom up, and distributing the budget from the top down
Fiscal Year Change [Page 77]	... carrying forward a current investment program into a new approval year

The Investment Program

Definition

An investment program represents the planned or budgeted costs for the capital investments (or other projects) of an enterprise or corporate group in the form of a hierarchical structure. You can define the hierarchical structure in any form that suits your needs. It is not dependent on organizational units in the SAP R/3 System (such as, business areas, plants, and so on). You could structure the hierarchy to agree with the organizational plan of your enterprise, for example. Or you could base the structure on the size of the investment measures assigned to it.

Use

In one investment program, you can manage all measures (orders or WBS elements), to which both of the following apply:

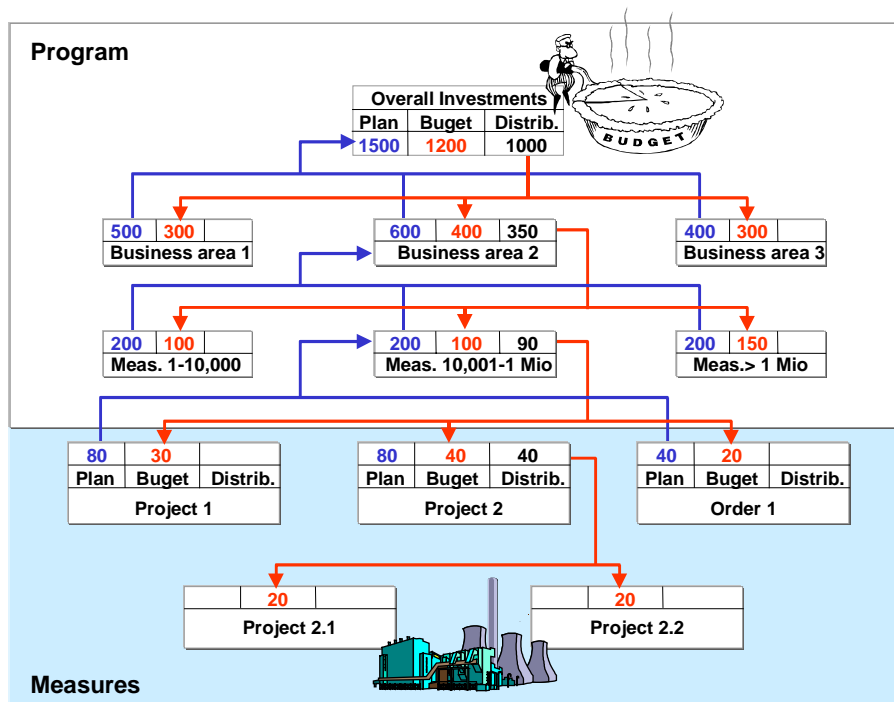
- They belong to one controlling area.
- Their currency and fiscal year variant are the same as the currency and fiscal year variant in the program definition.

When these conditions are met, you are also able to define investment programs that are valid in more than one company code.

Planning and Budgeting

Within the hierarchy of the investment program, it is possible to plan the costs for capital investments from the bottom up, and to budget from the top down. You can assign individual investment measures only to the lowest positions in the hierarchy (also called end nodes). The measures that are allowed at this time are internal orders, WBS elements, and maintenance orders.

The Investment Program



Structure of an Investment Program with Planning and Budgeting of Program Positions and Measures

Approval Year

You always have to enter a specific fiscal year as the approval year for a program. *Approval year* means that the program has values that were approved **in** this year (but not necessarily **for this year** only).

When approved budgets or measures are not used or carried out, for instance, because they have been put off until sometime in the future, then you have two options:

- You can return the budget to the investment program (refer to [Supplements and Returns \[Page 73\]](#)). You then have to budget the measure again in a later approval year.
- You keep the budget distributed to the measure on the measure, and change only the distribution to the years within the measure.



The key and the approval year **together** uniquely identify an investment program. During the [fiscal year change \[Page 80\]](#), you can copy an investment program to a new approval year while still keeping the investment program key. Therefore it is best **not** to make the approval year part of the key (for example, IPRG97).

Programs That Apply Across Controlling Areas

You can centrally define a program that applies across controlling areas for a corporate group. When you define such a program, all the controlling areas assigned to it have to use the same fiscal year variant and controlling area currency.

Structure of the Investment Program

Structure of the Investment Program

Use

The system displays the program structure in maintenance transactions in the form of a horizontal tree diagram. You can assign investment measures and appropriation requests to the investment program positions.

Features

Creating the Program Structure and Program Positions

When you create or change the tree diagram, you can also directly define the corresponding program positions and assign them to the desired position in the hierarchy using fast entry.

The system uniquely identifies each program position using

- The investment program name and approval year
- A position ID that has a maximum of 24 characters



The maximum number of hierarchy levels is 99.

There are limitations on how complex the investment program can be, due to performance considerations. Since performance is strongly dependent on your system configuration, we can only offer figures as a point of orientation. If your investment program has more than 2000 positions, you should contact your SAP consultant.

You can make organizational assignments for each program position (such as, assignment to a company code, business area, plant, or cost center). When you create new program positions below existing positions in the hierarchy, the system automatically copies the assignments and the general data from the higher-level position to the new lower-level position you are creating.

However, if you later change the organizational assignment of a program position that has subordinate positions in the hierarchy, the system does not automatically copy the changes to these subordinate program positions.

There is a report you can use to check the consistency of the organizational units in investment programs (refer to [Inheritance of Organizational Units \[Page 48\]](#)).

Top Positions and Controlling Area

You have to assign the top positions of a program to a controlling area. The system then automatically copies this controlling area to all subordinate positions. In this way, it is guaranteed that a sub-tree of an investment program always belongs to a given controlling area.

In a future release, it will be possible to group several controlling areas under the same sub-tree of an investment program.

Measures

The program positions that do not have any subordinate positions assigned to them in the hierarchy are called end nodes. The individual measures of the investment program can be assigned to these positions. At the present time, you can assign internal orders, maintenance

Structure of the Investment Program

orders and WBS elements to investment programs as measures (refer to [Connection between Programs and Measures \[Page 25\]](#)).

You can also make **one** of the following specifications for an end node position:

- The individual measures assigned to the end node can be budgeted separately, and the totals of these budgets are compared with the budget for the program position only on a periodic basis in reports.
- The individual measures assigned to the end node receive their budget directly from the program position (the *Budget distribution* indicator is set). A consistency check then guarantees that only the amount of budget available on the program position can be distributed to the measures (refer to [Distributing the Budget from the Program Position to the Measures \[Page 64\]](#)).

Deletion and Reassignment of Sub-Trees

Sub-trees can be deleted only if their program positions do not have any budget or plan values.

When you reassign a sub-tree, the system automatically transfers its budget and plan values along with it.

Activities

There are three possible situations when you are defining and structuring an investment program:

- You carry forward an existing investment program from the prior year. The system copies the structure of the old investment program, and it can also carry forward its values.
- You create a new program definition and create the structure for the investment program by creating its program positions.
- You copy an existing investment program and thereby adopt its structure.

The program definition contains general specifications for the investment program, for example, the program type, approval year and fiscal year variant.

See also:

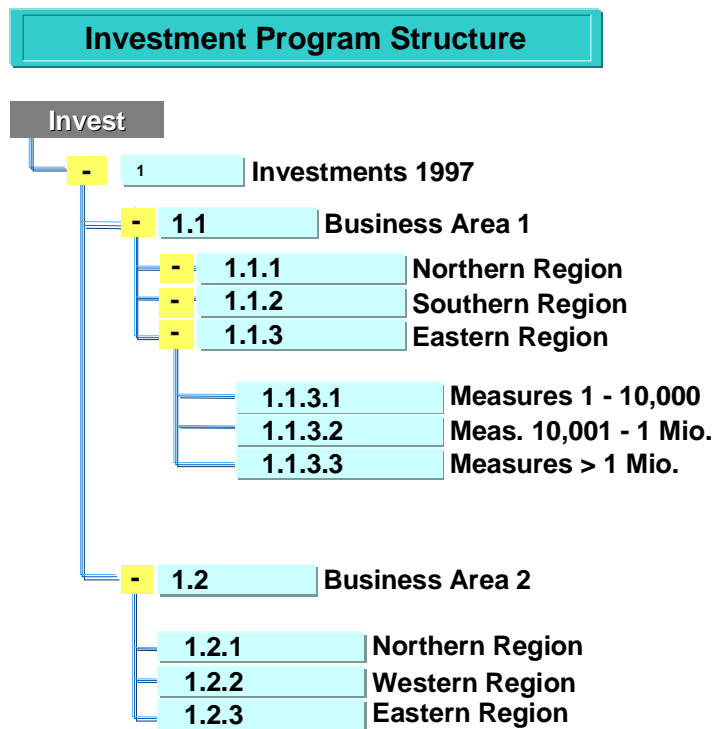
[Creating the Program Definition \[Ext.\]](#)

[Creating the Program Positions and Structures \[Page 24\]](#)

[Fiscal Year Change \[Page 80\]](#)

Structure of the Investment Program

Example



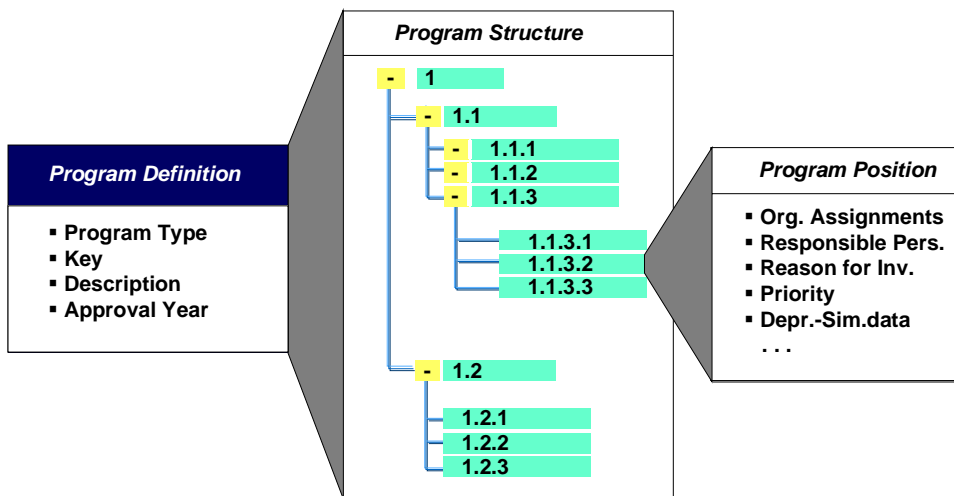
Investment Program with Its Positions

Master Data Maintenance

Use

An investment program consists of the following master data:

- Program definition with general specifications for entire investment program (for example, program type, key, approval year)
- The hierarchical structure of the investment program (refer to [Creating the Program Positions and Structures \[Page 24\]](#)).
- Specifications for the individual program positions (refer to [Creating the Program Positions and Structures \[Page 24\]](#)).



Master Data for Investment Program

Features

When you create the investment program definition, you first have to enter the program type. You can define any number of program types in Customizing for *Investment Management (Investment Programs → Master Data → Define Program Types)*

The program type classifies the investment program. Along with various control features for the planning and budgeting of the investment program, the program type also contains the CO object class (such as investment, overhead, production). Using this object class, you can manage different investment programs for the different CO object classes in parallel.

Program Positions

You can make the following entries for program positions on the different tab pages:

Tab Pages

Tab Pages	Comments
-----------	----------

Master Data Maintenance

General	Specifications such as the reason for investment, priority, and so on, can be used as summarization criteria in reports.
Organizational units	Organizational units can also be used as summarization criteria in reports.
Depreciation simulation data	The parameters you enter here can be used later, together with the plan values from the program, for the simulation of expected future depreciation.
User fields	You define the allowed values for your user fields in Customizing for <i>Investment Management</i> . Choose <i>Investment Programs</i> → <i>Master Data</i> → <i>User Fields</i> .

Specifications Made Using Application Toolbar

Pushbutton	Function
Allowed measures	You can specify whether orders, WBS elements, and appropriation requests are allowed to be assigned to the program position (only possible for end node positions). The system always proposes the measures allowed by the program type.
Assignments	You can assign measures or appropriation requests to the positions of the investment program. You can also make this assignment in master data maintenance for the measure or appropriation request.
System/user status	In addition to the system status, you can also set a user status, if this is allowed in the program type of the investment program.

Coding Mask for the Program Position Key

The system assists in the creation of program positions by offering freely definable coding masks.

For more information, see [Coding Mask for the Appropriation Request Number \[Page 119\]](#), as well as the Implementation Guide (IMG) for Investment Management under *Investment Programs* → *Master Data* → *Coding Mask for the Position Key*.

Classification System In addition to the master data for the program position as provided by SAP, you also have access to the SAP classification system. This interface makes it possible to expand the master record of the program position almost indefinitely. Choose *Extras* → *Classification* in master data maintenance of the program position to add an almost unlimited number of additional fields to the master record of the program position. This function also allows you to search for a specific program position later using a matchcode, based on the contents of such classification fields. However, you cannot currently obtain reports based on these additional fields.

Language-Dependent Short and Long Texts

Since investment programs are valid for your entire corporate group, they are often processed by users in different countries and languages. Therefore, you can specify language-specific texts for the following:

- The investment program definition
- The program structure

Master Data Maintenance

- The program positions

You can set the language for your texts in the display or maintenance transactions for these objects. Choose *Settings* → *Select language*. The language you select using this function is valid until you logoff. You can also specify the language for an individual user, using the set/get parameter IMS (*System* → *User profile* → *Own data*).

Creating the Program Definition

Creating the Program Definition


Prerequisites

You have to have already created a program type in Customizing for *Investment Management* (*Investment Programs* → *Master Data* → *Define Program Types*).


Procedure

1. Choose *Master data* → *Inv. program definition* → *Create*.
 2. Specify the name and approval year of the investment program, and assign a program type to the program. You can use an existing investment program as a reference. Press *Enter*.
 3. Create the investment program and its general master data:
 - A long text for the program definition
 - Responsible person

You define the individuals allowed as person responsible in Customizing by entering their names and personnel numbers (*Master Data* → *Allowed Values for Certain Master Data Fields* → *Define Person Responsible*). In addition, you can limit the authorizations for master data maintenance of program definitions to certain responsible persons.
 - Currency

All plan and budget values for the program are entered in the currency you specify here.
 - Fiscal year variant
 - Budget distribution of annual values (refer to [Distributing the Budget from the Program Position to the Measures \[Page 64\]](#))
 - [Budget categories \[Page 70\]](#)

At the present time, it is not possible to plan directly at the measure level using different budget categories. Therefore, when you set the *Budg. catg.* indicator, it is also not possible to distribute budgets from program positions to measures.

 - 4. You can enter your own long text about the program definition under *Extras*.
- 
- We do **not** recommend including the approval year in the name of the investment program.
- Refer to [Characteristics of Investment Programs \[Page 13\]](#)
5. Save.



Creating the Program Definition


To copy the structure of an investment program, in Customizing for *Investment Management* choose *Master Data → Copy Programs*. When you copy the structure, the plan and budget values and the assignment of investment measures are **not** copied.

For information on the transfer of plan and budget values, refer to [Fiscal Year Change \[Page 80\]](#).

Creating the Program Positions and Structure

Creating the Program Positions and Structure

Procedure

1. Define the program structure (*Master data* → *Edit structure*). If no positions have been created yet for the program, the program structure initially consists of the program definition only. You create new positions as follows:
 - Position the cursor on a program element (position or program definition). Choose whether the new position should be at the same level or lower than this element.
 - Choose the *Create*  function.
 - Create the position ID for the new position, as well as a short text. When you create a new **top** position, you have to enter the controlling area also. The controlling area is then automatically passed on to all program positions in the sub-tree below the top position in the hierarchy.
 - The new position then “inherits” all of the fields in the *Assignments* and *General* blocks (except the indicator for budget distribution) from the position above it in the hierarchy. You can still change the data in all of these fields, except the controlling area.

You can also assign the keys of the program positions with the help of coding masks that you specify in Customizing for *Investment Management*. For more information, see the Implementation Guide (IMG). Choose *Investment Programs* → *Master Data* → *Coding Mask for Position Key*.
2. If you want to move an investment program position, or a complete branch of the program hierarchy, then mark the position or the branch, set the cursor at the desired new position, and choose *Reassign*.
3. Maintain the master data for the individual program positions. You reach the master data by placing the cursor on a program position and choosing *Details*. First, you come to the program position you selected with the cursor. From there, you can scroll to all program positions that are below this one in the hierarchy (functions *Position+*, *Position—*).

There are also two other options:

- Double click on the program position you want.
- Select one or more sub-trees by positioning the cursor on the top position(s), and choose *Select*. Then choose *Details*.



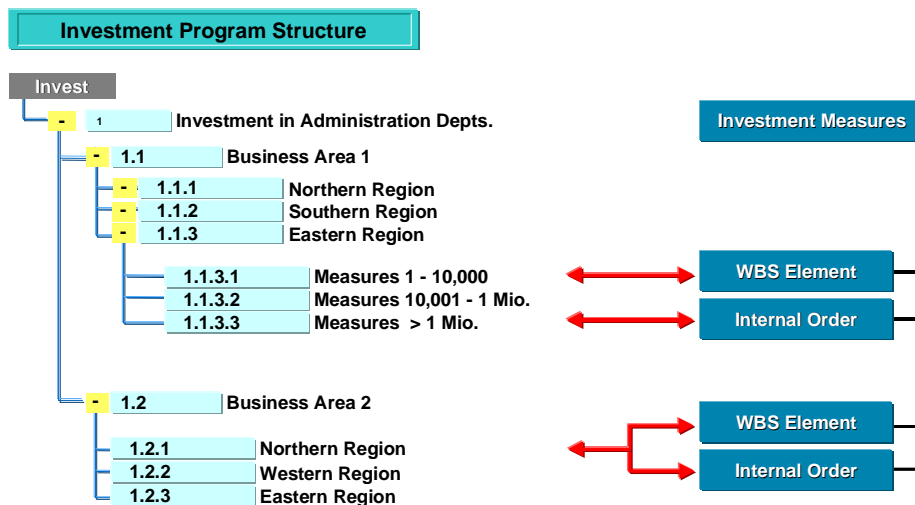
There are two specifications which can only be made on end nodes of the investment program (that is, on program positions that do not have any positions below them in the hierarchy). These are: the specification of which types of measures can be assigned to the program position, and the assignment of the measures themselves.

Connection between Programs and Measures

Use

The following measures can be assigned to the end nodes (the program positions with no positions below them in the hierarchy) of the investment program:

- Appropriation requests
- Internal orders
- Work breakdown structure (WBS) elements (refer to [Assignment of WBS Elements \[Page 31\]](#))
- Maintenance orders (refer to [Automatic Assignment of Maintenance Orders \[Page 33\]](#))



Assignment of Measures to Program Positions

Prerequisites

In Customizing for *Investment Management*, you have to enter the object types (orders, WBS elements, appropriation requests) that you want to allow as assignable objects for the given program type (*Investment Programs* → *Master Data* → *Define Program Types*). You can change these allowed assignments in existing program positions.

Features

You can assign measures or appropriation requests to program positions of an investment program in two places: either in master data maintenance of the measure (on the *Investments* or *Control* tab page), or from master data maintenance of the program position (*Assignments* pushbutton). You can assign any number of measures or appropriation requests to a program position.

With projects, you can assign WBS elements from any level in the work breakdown structure to an investment program position. It is also possible to assign subordinate WBS elements to differing investment program positions.

Connection between Programs and Measures

It is **not** possible to directly assign assets from the Asset Accounting (FI-AA) component to a program position, since it is not possible to plan and budget assets directly. However, you can make an indirect assignment using a statistical project (refer to [Blanket Asset Budgets \[Page 66\]](#)).

Mandatory Assignment of Measures and Appropriation Requests to Programs

Use

When you use investment programs, you normally want to guarantee that all newly created measures and appropriation requests are assigned to investment programs. Therefore, you can make this assignment mandatory in newly created measures and appropriation requests.

Features

Assignment by Means of Screen Layout Control

Normally you assign an appropriation request to an investment program position in the appropriation request master data (on the *Control data* tab page). The *program position* field appears in the screen layout control of the appropriation request, and can be designated as a required entry field there. If you make this a required entry field in Customizing for *Investment Management*, you guarantee that the appropriation request is always assigned to a program position (Choose *Appropriation Requests* → *Master Data* → *Control Data* → *Define Screen Layout for Appropriation Requests*). This option is currently limited to appropriation requests only.

Assignment by Means of Budget Profile

There is another option for ensuring that both measures and appropriation requests are assigned to program positions. You can enter a program type for investment programs in the budget profile of the measure or appropriation request. The results of making this entry are as follows:

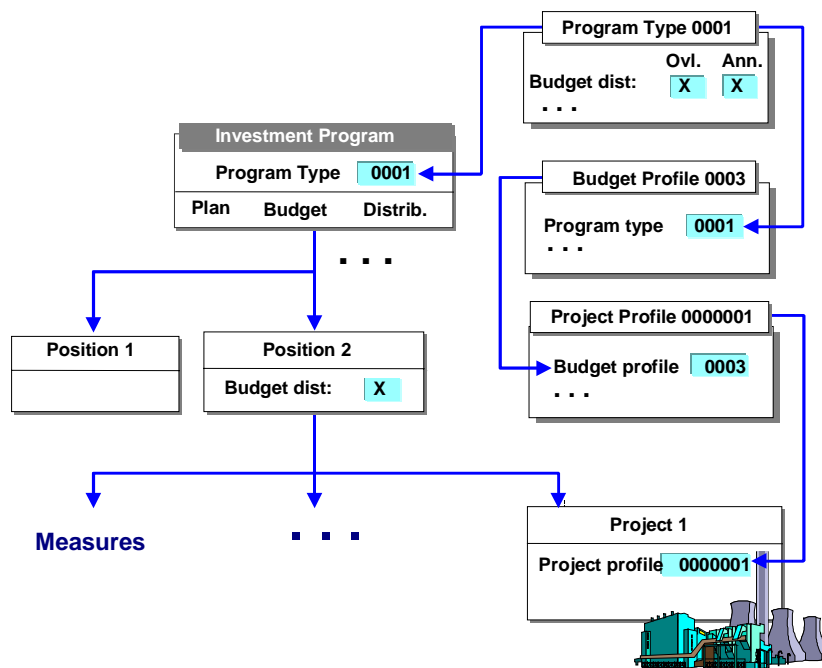
- You cannot enter the overall budget for the measure until it is assigned to an investment program position. This restriction applies, even if you specified a specific budget distribution in the program position (by means of the budget distribution indicator in the program position). It also applies if you specified that the measure should be budgeted separately (refer to [Distributing the Budget from the Program Position to the Measures \[Page 64\]](#)).
- The measure has to be assigned to an investment program of the program type entered in the budget profile.

You assign a budget profile to an investment measure either in the project profile or in the order type.

Example

The following graphic shows the function of the budget profile in controlling the assignment of measures to program positions. You cannot budget Project 1 unless it is assigned to an investment program that has program type 0001. In addition, you can only budget it using program position 2 (overall budget).

Mandatory Assignment of Measures and Appropriation Requests to Programs



Control Parameters for the Assignment to an Investment Program

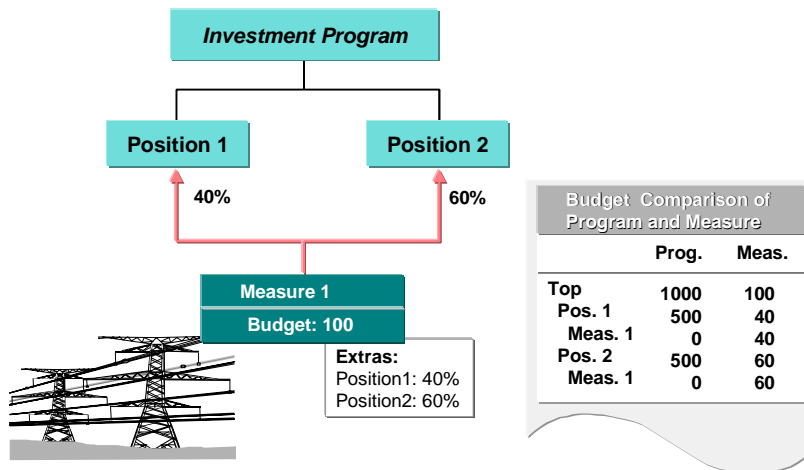
Multiple Assignment of Investment Measures

Use

Sometimes it is not possible to assign an investment measure or an appropriation request clearly to a single program position. Therefore, the system allows you to assign one investment measure or appropriation request to multiple program positions. You use percentages to determine how the distribution is made. You enter these distribution percentage rates in the master record of the object (for measures choose *Investments*, for appropriation requests choose *Organizational units*). Make sure these percentage rates always total to 100%.

Features

In standard reports, an investment measure that is assigned to multiple program positions appears under each of the positions to which it is assigned. The system displays the budget, plan and actual values for the investment measure broken down according to the percentage rates used to assign it.



Display of Multiple Assignment in Reporting

Assignment to Several Programs

Multiple assignment is not limited just to different program positions in one investment program. You can assign an investment measure to program positions in several different investment programs. However, these investment programs must all be in the same approval year. For example, you cannot assign an investment measure to a program position in investment program INVEST/1998 and to investment program INVEST/1999 at the same time.



Assignment to multiple program positions cannot be used at the same time as budget distribution, and vice versa (refer to [Distributing the Budget from the Program Position to the Measures \[Page 64\]](#)). Make sure that the *budget distribution* indicator is not set in any of the positions assigned to a measure that has multiple assignment. Otherwise, the hierarchy cannot clearly identify amounts for budget distribution.

Multiple Assignment of Investment Measures

In the master data transaction for program positions, you are limited to making 100% assignments. Multiple assignment of investment measures is not possible here. You can only make multiple assignments in the master data transactions of investment measures or appropriation requests.

Assignment of WBS Elements

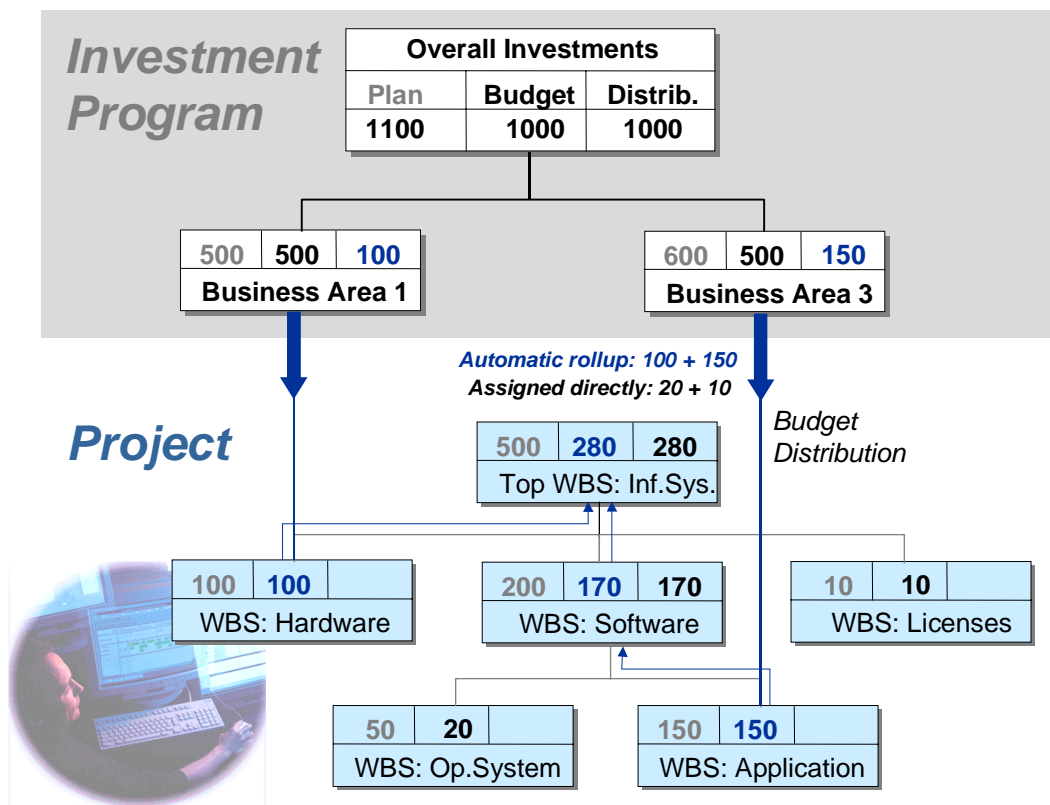
Use

In most cases, an entire project is clearly assigned to one investment program position. In this case, the assignment to an investment program is made at the level of the top WBS element. Some projects, however, have a much broader scope within an enterprise. The WBS elements belonging to such a project receive their budgets from various sources. Therefore it is also possible to assign non-top WBS elements to different investment program positions.

Features

You can make assignments to the investment program from all levels of the work breakdown structure. The individual WBS elements in a work breakdown structure can be assigned to different investment program positions.

The following graphic shows an example of possible assignments. The WBS elements for *Hardware* and *Application* are each assigned to one investment program position, respectively. None of the other WBS elements are assigned to an investment program position.



Assignment to Different Program Positions

WBS elements that are assigned to program positions **do not** have to be at the same level in the work breakdown structure. It is also permissible for sub-trees of the work breakdown structure

Assignment of WBS Elements

not to have any assignment at all to an investment program position (in the graphic, the *Licenses* sub-tree has no assignment).

The system guarantees the consistency of budget values within a work breakdown structure as follows:

- You can assign a WBS element to a program position only if the WBS elements directly above and below it in the hierarchy **are not** assigned to a program position.
- If the WBS element receives its budget from budget distribution from a program position, then the system automatically rolls up the budget received to the superior WBS elements in the work breakdown structure. If there are already budget values on the superior WBS elements, the system adds the rolled up budget to the existing budget.

Automatic Assignment of Maintenance Orders

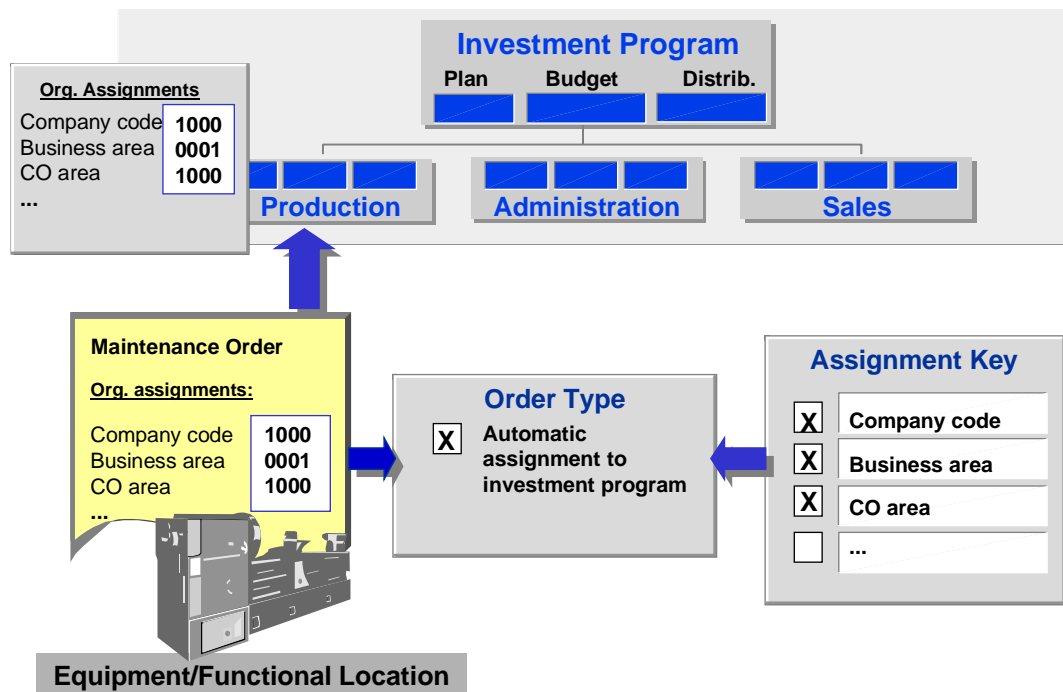
Use

You can assign maintenance orders to investment programs in the same way as you do other measures (WBS elements and internal orders) and appropriation requests. In this way, you can budget and plan for maintenance orders using the investment program. In comparison with other measures, maintenance orders are usually created much more frequently. Therefore, the system provides functions for automatically assigning a maintenance order to an investment program position.

Features

You control the assignment of maintenance orders to program positions by means of the organizational units in the master data of the program positions and the maintenance orders. You define the necessary assignment keys and assign them to order types in IM Customizing: *Capital Investment Programs* → *Master Data* → *Assignment of Maintenance Orders*.

In the assignment key, you specify the fields the system should use when automatically determining the investment program position. The possible fields are the organizational units of the maintenance order, or the organizational units from the maintenance data of the reference object (functional location or equipment) to which the order is assigned.



Automatic Assignment of Maintenance Orders

When you create a maintenance order, the system automatically establishes the assignment to a program position, but only if the organizational units specified in the assignment key in the maintenance order agree with those in the program position. The system issues a message when a clear assignment is not possible.

Automatic Assignment of Maintenance Orders

Reassignment of Subordinate Objects

Use

You can use this function to reassign a number of objects (measures or appropriation requests) that are assigned to an investment program in one step.

Prerequisites

The objects cannot be assigned to more than one program position.

Features

The measures and appropriation requests that are to be reassigned all have to belong to the same investment program. They can be moved only within that investment program.

You do not have to reassign all objects that are assigned to a given program position. You can select some of the measures and appropriation requests and reassign only those you have selected.

The reassigned measures retain all of their plan, budget, and actual values. The system automatically makes the necessary adjustments to the plan and budget values on the investment program. However, you do have to do one thing first. You have to make sure that the overall plan value or overall budget value on the sending program position is at least as high as the total of the plan or budget values on the measures and appropriation requests being reassigned.

Activities

[Reassigning Measures and Appropriation Requests \[Page 36\]](#)

Reassigning Measures and Appropriation Requests

Reassigning Measures and Appropriation Requests

Procedure

1. Choose *Programs* → *Master data* → *Additional functions* → *Reassign meas./app. req.*
You see the initial screen of the transaction.
2. Enter an investment program. Enter the program position from which you want to reassign objects. This is the sending program position. Also enter the new program position for the objects. This is the receiving program position.
3. There is a group box for *Consistent transfer of plan/budget*. Here you specify whether the system should automatically modify the plan and budget values on the sending and receiving program positions, as well as the next position above them in the hierarchy.
4. If you do not want to reassign all the objects belonging to a program position, then select the objects you do want to reassign in the *Selection of measures/approp. requests* group box. You can use a status selection profile for this purpose.
5. Start a test run, or execute the function immediately.
The system reassigns all measures and appropriation requests (or those that you selected) belonging to the program position.

See also:

[Reassignment of Subordinate Objects \[Page 35\]](#)

Investment Programs in the Enterprise Organization

Purpose

Using this process, you can construct investment programs that have the same hierarchy as the [Enterprise Organization \[Ext.\]](#). In this way, you can structure investment programs in parallel to the cost center or profit center hierarchy, for example. When changes are made to the enterprise organization, the system modifies the investment programs. The organizational units on the program positions are kept consistent.

Prerequisites

The enterprise organization has to be created in Customizing of Controlling. The assigned CO organizational units (such as cost center) have to be consistent on the nodes of the enterprise organization (eo-nodes). The enterprise organization also has to be assigned to a controlling area.

Process Flow

1. If you do not yet have an investment program, first create a program definition.
2. Create program positions in the enterprise organization, assign the nodes of the enterprise organization to already existing program positions, reassign assigned program positions, delete program positions, and delete assignments of program positions to nodes of the enterprise organization.
3. The system initially treats all program positions created in the enterprise organization as top positions (program positions without any program positions above them in the hierarchy). Therefore, you can also specify budget distribution and allowed assignments for these program positions.
4. If you want to further subdivide the investment program, but do not want to create new nodes in the enterprise organization, go to structure maintenance for investment programs. There you can create new program positions.
5. Start a generation run.
6. The system generates the hierarchical structure of the investment program. During the generation, the system ignores nodes of the enterprise organization that do not have a program positions assigned to them. It also ignores program positions that are not assigned to any nodes of the enterprise organization, and which do not represent a further subdivision of the program (see step 4).
7. The system checks and updates the organizational units on the program positions. For former top positions, which have now received parent positions, the system suppresses budget distribution and allowed assignments, and ignores any settings that were made.

At this point the data is only in the buffer.

8. When you save, the system makes the changes.

Result

The investment program is structured according to the structure of the enterprise organization and the links between the nodes of the enterprise organization and the program positions. The

Investment Programs in the Enterprise Organization

investment program is fully rounded out by the program positions that you added in structure maintenance.

See also:

For detailed information on creating and editing the enterprise organization, see the SAP Library. Choose *Controlling (CO)* → *Controlling*. The information here and in the next objects describe what is important from the point of view of Investment Management.

Relationship Program Positions and Enterprise Organization

Use

Maintaining investment programs in the enterprise organization hierarchy offers the following advantages over maintaining the investment program structure:

- When you create new investment program positions, they inherit their organizational units (for example, company code, cost center) from the nodes of the enterprise organization.
- A restructuring of the enterprise organization does not result in duplicate maintenance in the investment program. Changes in the hierarchy of the enterprise organization are reflected automatically in the structure of the investment program. Changes on the nodes of the enterprise organization are passed on to the investment program positions.
- You can make assignments to the enterprise organization time-dependent. This means that positions of an investment program can be assigned to different nodes of the enterprise organization at different times, and thereby also have a time dependent assignment to cost centers, for example.

Integration

SAP recommends that you always use this function together with a *Controlling* (CO) hierarchy (cost center hierarchy or profit center hierarchy). In this way, you ensure that the structure of your investment program corresponds to that CO hierarchy. You maintain the enterprise organization in *Controlling*, not in *Investment Management*.

Features

Creating and Assigning Program Positions

You assign investment program positions to nodes of the enterprise organization. You can

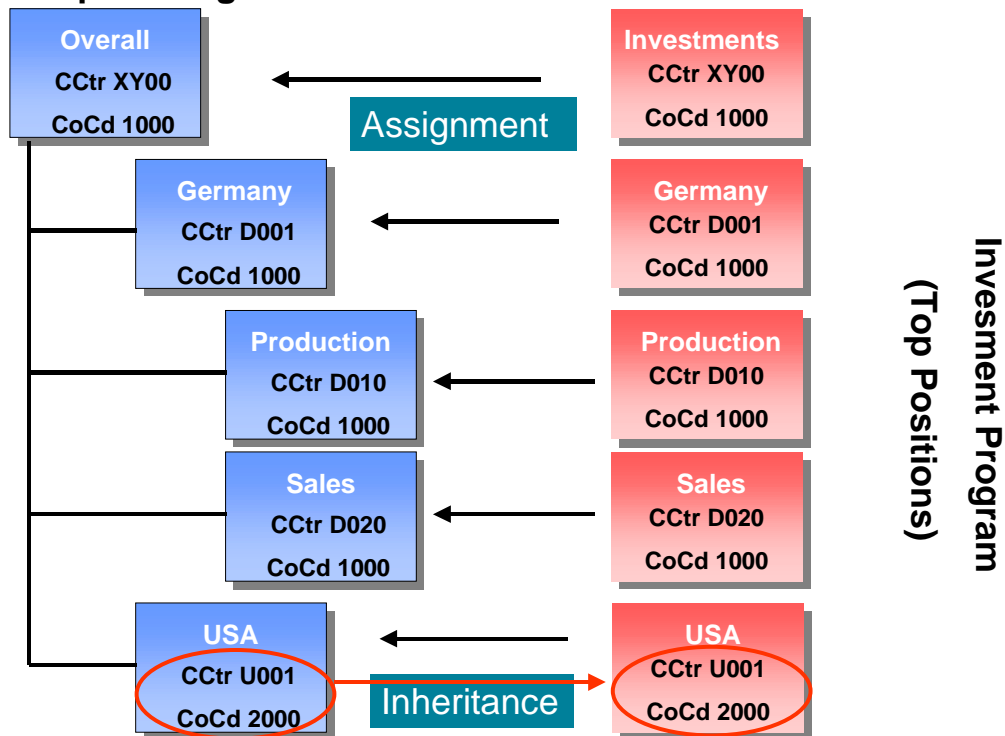
- Create a new program position on a node of the enterprise organization
- Assign existing, unassigned program positions to a node of the enterprise organization

For any given point in time, only one position of a given investment program can be assigned to each node of the enterprise organization. However, another program position of a different investment program can be assigned to the node of the enterprise organization at the same time. In a detail screen, you can display all enterprise organization nodes that are valid in a given time period.

When you create new program positions, the system initially treats them as top positions (that is, program positions without any program positions above them in the hierarchy). They are also displayed as such in structure maintenance. The system does not generate a new program structure, in which the newly created program positions are also displayed, until after the next generation run and subsequent saving. The same also applies to all other changes in the assignments between program positions and enterprise organization nodes.

Relationship Program Positions and Enterprise Organization

Enterprise Organization



Assignment of Program Positions to Enterprise Organization Nodes and Inheritance of Organizational Units



You are only allowed to use transactions for the enterprise organization and structure maintenance for editing the program hierarchy. Other transactions, such as those of the *Personnel Management* component are not allowed.

Deletion of Program Positions and Assignments

You can delete both the assignments of program positions to enterprise organization nodes (that is, make time limits on the assignment) as well as the program positions themselves. You can only delete program positions that have neither subordinate objects (measures, appropriation requests or other program positions) nor any budget.

Organizational Units and Master Data

During each generation run, the system automatically copies the organizational units from the enterprise organization nodes to the program positions assigned to them. The organizational units then cannot be changed on the program positions. The system adopts any changes that you make in structure maintenance during the next generation run. The master data that is copied from parent positions (superior program positions) serves as default values that can be changed.



Relationship Program Positions and Enterprise Organization

Changes in Controlling (CO) (for example, assignment of company code to enterprise organization nodes) are not adopted immediately by the program positions. The system does not update the organizational units on the program positions until the next generation run.

Fiscal Year Change

First carry out the *Open a New Approval Year from the Enterprise Organization* function. If there is no program definition yet, the system creates one. Then choose the *Carryforward of Measures, Approp. Requests and Values* function. During the fiscal year change, the system uses the same logic for the inheritance as it does during the generation run in the enterprise organization. The difference is that the system creates a new investment program for the new fiscal year (target investment program) and assigns the program positions to the enterprise organization nodes.

Key date for the inheritance of organizational units:

- When the generation date is in the approval year of the new program, the system uses the generation date.
- When the generation date is **not** in the approval year of the new investment program, the system uses the first day in the approval year of the new program.

Constraints

- You cannot process more than one investment program in the enterprise organization at one time.
- You cannot edit investment programs in parallel in the enterprise organization and in structure maintenance. The system allows you to change the investment program in structure maintenance, but changes to all program positions that are assigned to enterprise organization nodes are overwritten by the next generation run.
- At the present time, you can only generate an investment program after you have created program positions and assigned them to enterprise organization nodes. There is currently no function for automatically creating the program structure and program positions to correspond to an enterprise organization. However, you can [Generate Investment Programs from Organizational Units \[Page 46\]](#).
- Existing investment programs cannot be automatically transferred to the enterprise organization.

Time-Dependence of Assignment

Time-Dependence of Assignment

The assignment of program positions to nodes of the enterprise organization is time-dependent. You specify a validity period for each assignment. When you create a program position, the start date of this validity period always has to be in the approval year of the investment program. In this way, the system can guarantee that all organizational units (such as cost center) are valid at least when the program position is created.

The standard system sets the time period for the assignment starting on the key date for the assignment, and without an end date. Or you can set the assignment time period yourself using a dialog box. The possible dates are limited by the validity periods of other, higher objects in the hierarchy (controlling area, nodes of the enterprise organization):

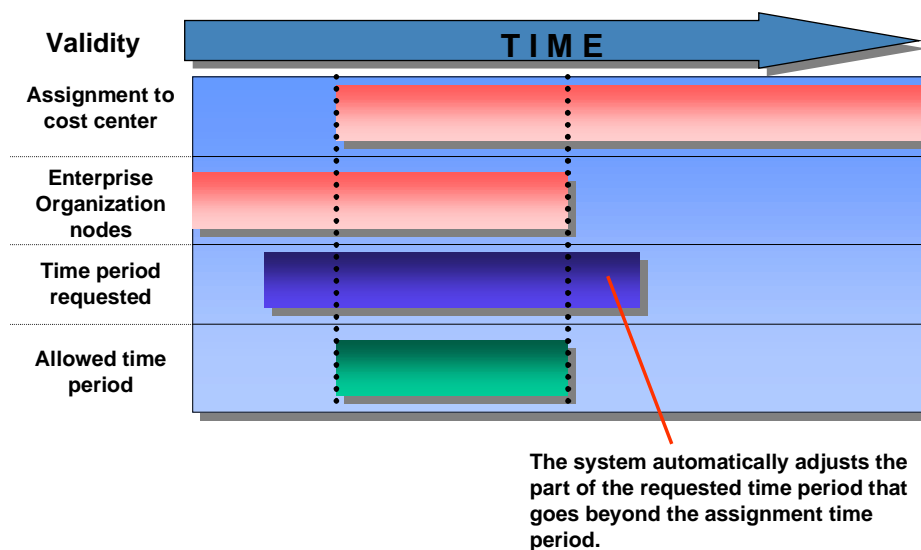
- A start date can only be set if the enterprise organization node existed at that time, and it is assigned to a controlling area in the enterprise organization.
- The end date results automatically if the controlling area assignment or enterprise organization nodes are no longer valid.

A program position can be assigned to different enterprise organization nodes at different times. Therefore it is possible for a program position to

- Be displayed more than once in the overview, although it can only be assigned to one enterprise organization node at a time
- Belong to different positions in the hierarchy at different times

If you reassign a program position to a different enterprise organization node, then the assignment to the old enterprise organization node remains valid through the day before the start of the new assignment time period. After that, the old assignment is deleted and the new validity period begins.

Validity of Assignment to Program Position



Valid Assignment Time Period

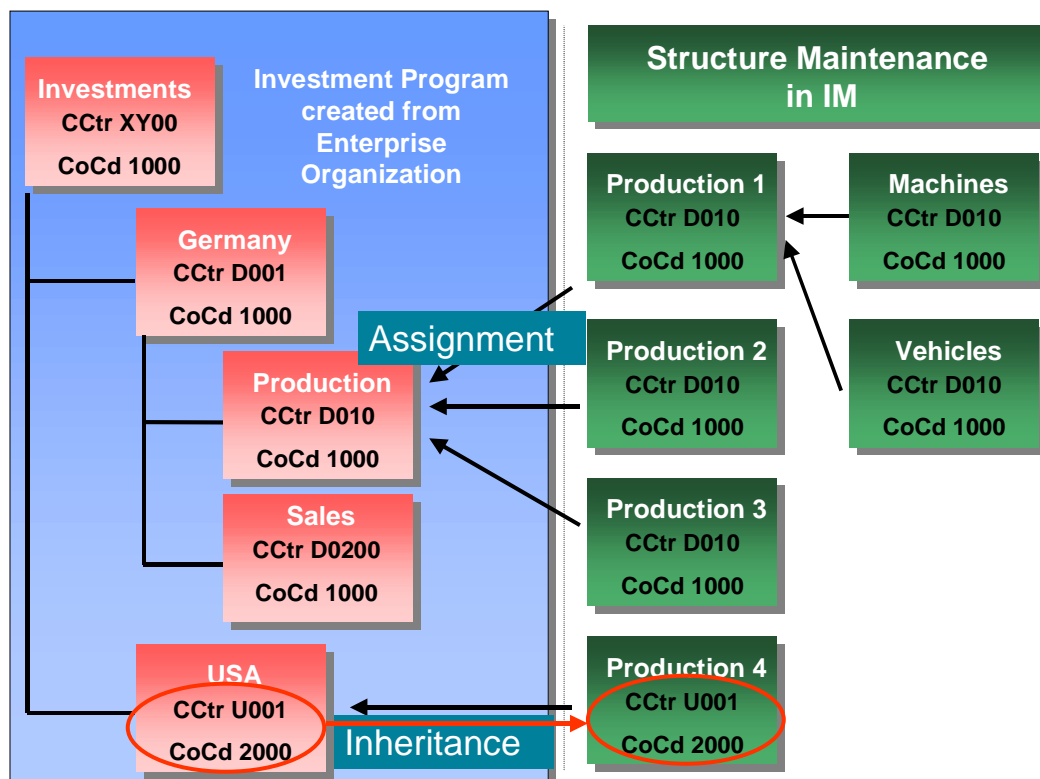
Processing of Unassigned Program Positions

Processing of Unassigned Program Positions

If you do not want the hierarchy of an investment program to go beyond the enterprise organization, you can structure the investment program completely within the framework of the enterprise organization. This is the case, for example, if you generated your enterprise organization from the cost center hierarchy, and each cost center is assigned to one program position.

If you want the hierarchy of the investment program to be sub-divided further than the enterprise structure, then it is **not** necessary to create new nodes in the enterprise organization (eo-nodes) just for this purpose.

Instead, you can sub-divide the investment program further in structure maintenance by creating additional program positions below the program positions that are assigned to eo-nodes.



Structure of Investment Program beyond the Enterprise Organization

You should keep in mind the following properties of program positions that are assigned to enterprise organization nodes:

- When you generate the enterprise hierarchy again, the system retains the connection between parent positions and their subordinate positions that were created in structure maintenance, as long as the subordinate positions are not assigned to an enterprise organization node.
- If you reassign a program position in structure maintenance only, the reassignment is cancelled the next time the generation run takes place for the enterprise organization.

Processing of Unassigned Program Positions

- If you have organizational units, which were inherited by the program positions from enterprise organization nodes, and you change them in structure maintenance, these changes are automatically overwritten the next time the generation run takes place for the enterprise organization.
- If you delete parent positions or enterprise organization nodes, the assigned program positions become top positions. The connection to the subordinate program positions still remains.

Generation of Investment Programs from Organizational Units

Generation of Investment Programs from Organizational Units

Use

This function lets you create the structure of investment programs based on the organizational structure of your enterprise using organizational units. The organizational units you use can either be organizational units you define yourself in the system, or the standard ones provided by SAP, such as company codes.

Prerequisites

You have to have already entered the program definition manually.

You have to have defined your own user organizational units in Customizing (*Investment Programs* → *Master Data* → *Generate Inv. Program from Organizational Units*).

Features

You can generate investment programs on the basis of

- A hierarchy you define yourself (consisting of your own user organizational units, and/or standard organizational units supplied in the system)
- An already existing cost center hierarchy or profit center hierarchy

Generating Investment Programs from Organizational Units

In the initial screen, you enter an ID for the program, along with the program definition, approval year and controlling area. The position IDs are made up of this program ID and the key you defined in Customizing.

The program positions are formatted according to a coding mask, if you defined a coding mask for them.

Generating Programs from Cost Center or Profit Center Hierarchies

Hierarchy

In the initial screen, you enter the controlling area, from which the profit center hierarchy or cost center hierarchy originates, in addition to the program definition.

You also have to enter the cost center group or profit center group, the structure of which you are using as a reference.

The system then creates an investment program position for each hierarchy area of the group entered, and for each cost center that is subordinate to the group. The end nodes of an investment program that was created in this manner then correspond to these cost centers or profit centers.

Position ID

The system creates the position ID of a generated program position from the ID of the hierarchy area from which it originated, or from the cost center or profit center from which it originated.

Generation of Investment Programs from Organizational Units

You can also enter prefixes for the program position ID, on the one hand for hierarchy levels, and for cost centers/profit centers on the other. These prefixes are used at the beginning of the position ID to help distinguish between those positions that would otherwise have the same ID. You need prefixes if there are hierarchy areas that have the same name as a cost center or profit center, since it is mandatory for all of the positions of an investment program to have different position IDs.

If you have defined coding masks, you can use your choice of prefixes as a way of ensuring a certain formatting.

Fiscal Year Change

Enterprises that have a fixed organizational structure normally also generate the investment program for the next approval year by copying the current investment program with the help of the [opening a new approval year \[Page 80\]](#) function (fiscal year change function). Any changes to the structure then have to be made to the investment program manually in the new approval year.

If there are extensive changes to your organizational structure that need to be reflected in the investment program structure, proceed as outlined below:

- Do not create the new investment program using the *Opening a new approval year* function. Instead, generate it from the current organizational units or the current cost center or profit center hierarchy. The changes in these hierarchies are thereby taken into account.
- Then carry out the *Opening a new approval year* function, but without using the *Copy program structure* option. When you do this, the system copies the measures or appropriation requests belonging to the program, but not the hierarchy of the old investment program itself.

Activities

You generate an investment program from organizational units or an already existing cost center or profit center hierarchy in Customizing for *Investment Management*. Choose *Investment Programs* → *Master Data* → *Generate Inv. Program from Organizational Units*.

Inheritance of Organizational Units

Inheritance of Organizational Units

Use

This function checks whether or not the organizational units in an investment program hierarchy are consistent. It is especially useful when you create investment program positions at a later point in time, after the original program was created. The report checks if the measures or appropriation requests below these later investment program positions inherited their organizational units correctly.

Features

Selection

In the initial screen of the report, you select the organizational units for which the check should be carried out. You choose from: company code, business area, company, cost center, profit center, plant, plant section, functional location.

Standard Variants

There are two types of check available:

- Check of the inheritance of organizational units by lower-level program positions from higher-level program positions
- Check of the inheritance of organizational units by lower-level measures/appropriation requests from higher-level program positions

Report Results

The check report selects an object when **both** of these conditions are met:

- The organizational unit is entered (exists) in the higher-level position.
- The organizational unit in the higher-level position is different from the organizational unit in the object being checked, or the organizational unit is not entered in the object being checked.



The report does not issue a warning if the organizational unit is not entered in the higher-level position, but **is** entered in a lower level position.

Example

The report checks the inheritance of the *Company code* organizational unit from the program positions of investment program *P* by its measures/appropriation requests.

Investment Program P

Level	Position/Order	Company code
1	P-1	-
2	P-1,1	0001

Inheritance of Organizational Units

3	P-1.10,1	0003
4	Order1	0003
3	P-1.1.2	-
4	Order 2	0004
2	P-1,2	0002
3	Order 3	0004

The check report issues the following warnings:

- Company code 0003 of position P-1.1.1 is different from company code 0001 of higher-level position P-1.1
- Company code of position P-1.1.2 is not entered, therefore different from company code 0001 of higher-level position P-1.1
- Company code 0004 of order 3 is different from company code 0002 of higher-level position P-1.2

Activities

Execute the report. Choose *Programs* → *Environment* → *Tools* → *Check inheritance*.

By double clicking on a selected position, you go to change mode, where you can maintain the organizational units.

Planning and Budgeting of Investment Programs

Purpose

The most important task of an investment program is to manage planned costs and approved budget values for a given time period.

Budget values are different from plan values in regard to how binding they are. In the planning phase, you have to estimate the costs for a program position as exactly as possible. In the approval phase, the funds are supplied in the form of the budget, which is thereby more binding.

You can plan costs for an investment program either directly on the program positions, or by rolling up planned costs from the measures and appropriation requests assigned to the measures.

Prerequisites

You have to have defined planning profiles and budget profiles in Customizing. You assign a planning profile and a budget profile to each program type. This allows you to control planning and budgeting differently for each program type.

You have to have created a program definition and program positions, and also have assigned measures and appropriation requests to the program positions.

See also:

Implementation Guide (IMG): *Investment Programs* → *Planning in Program* → *Cost Planning* → *Maintain Planning Profiles* or *Budgeting in Program* → *Maintain Budget Profiles*

[Creating the Program Definition \[Page 22\]](#)

[Creating the Program Positions and Structures \[Page 24\]](#)

Process Flow

1. You enter plan values at the level of measures and appropriation requests.
2. You roll up the plan values from the bottom up to the investment program positions.
You can plan different values on different program versions.
3. You distribute budget top-down to the individual program positions and measures.
4. When availability control is active, the system can also ensure that the amount of budget distributed to the individual measures is never higher than the amount of budget on the program positions.
5. Using the supplement and return functions, you can make necessary updates to an existing original budget.
6. If you want your investment program to be valid for more than one approval year, you use the *Fiscal Year Change* function. It copies the program structure and carries the values forward into the next fiscal year.

The values for measures that were not closed in one year are forwarded at the end of the approval year to another investment program with the same name in the following approval year. This applies to those measures that have *Released* status and are not yet closed. The plan and budget values are then displayed in a separate value category on

Planning and Budgeting of Investment Programs

the new investment program. The budget, therefore, does not necessarily have to be entirely used by approved measures in the approval year. It can also be used in later years.

See also:

[Cost Planning on the Investment Program \[Page 54\]](#)

[Budgeting of Investment Programs \[Page 63\]](#)

[Versions for Planning \[Page 56\]](#)

[Supplements and Returns \[Page 73\]](#)

[Fiscal Year Change \[Page 77\]](#)

Result

You can get an overview of your planned and budgeted investments in the Information System of Investment Management.

Value Categories of Investment Programs

Use

Each investment program position can have several different value categories that can be managed in parallel. These value categories come about as a result of the various options that exist for the investment program, such as carryforward of values at fiscal year change, and estimated forecast of future values during planning and budgeting.

Features

Therefore, the system manages the following value categories for investment programs (planned values and budget values) in parallel, depending on the approval time frame:

- **Values in the approval year (current)**

These are the overall and annual values that were planned or budgeted for the individual measures in the current approval year. The annual value is the amount planned or budgeted for an investment program in a given year (either the current year or a future year). This year can be either the current year or a future year. The overall value is greater than or equal to the sum of the annual values.

- **Balances carried forward from previous years**

These are the unused budget amounts carried forward from measures that were adopted before the current approval year. For more information, see [Fiscal Year Change \[Page 80\]](#).

- **Forecast**

These are the estimated annual values for measures that will be adopted in future approval years. These values are a kind of noted item for measures that will be adopted in a future fiscal year, but are not relevant at the moment. These values are not carried forward at the fiscal year change.

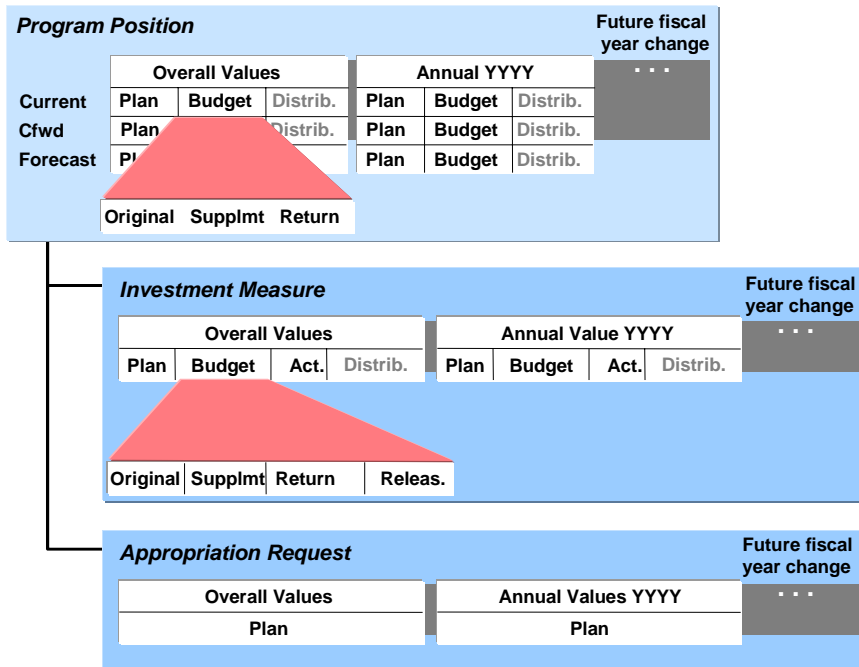
In the planning and budgeting transaction (under *Settings* → *Approval period*), you can specify the value categories you want to work with.

The system distinguishes among three types of budget values: original budget, supplements and returns. The original budget, plus supplements and minus returns, equals the current budget.

Value Categories at the Investment Measure Level

Corresponding to the value categories at the investment program level, the system manages overall and annual values at the investment measure level. Investment measures have plan values and budget values. Appropriation requests have only plan values. For the budget values of measures, the system also recognizes released budget, in addition to original budget, supplements and returns.

Value Categories of Investment Programs



Value Categories Managed by the System on an Investment Program Position and Its Measures and Appropriation Requests

The assigned values of an investment program position are the sum of the budget of the level below it. The same applies to WBS elements at the measure level.

Reporting

It is possible to obtain reports that include the values from past and future approval years, in addition to the current values for your investment program. This option exists if you always carry forward the values from previous approval periods during the fiscal year change, and if you always include future budgets in the form of forecasts. The advantage of using this method is that you can obtain an overview of all expected expenditures for capital investments, regardless of the approval year of the investment measures that belong to them.

Cost Planning on the Investment Program

Cost Planning on the Investment Program

Use

Before you can budget and approve your investment program, you have to collect the plan values from the existing investment measures and appropriation requests. You then use the plan values as the basis for the binding budget.

Features

Entering Values

You enter planned values for individual measures and appropriation requests independently of the investment program at the level of the individual measure or appropriation request. You use the functions of the Project System (PS) or Overhead Cost Controlling – Overhead Orders (CO-OM-OPA) components for structure planning, cost element planning, and unit costing.

Rolling Up Values on Program Positions

For planning the investment program as a whole, you have to roll up the plan values of the individual measures that belong to it. Once the measures and appropriation requests have been assigned to the program positions, you can automatically adopt the total of the planned values of the subordinate measures as default values for the end nodes of the investment program, using periodic processing.

During the rollup of values within an investment program, the plan or budget values belonging to a program position are adopted by all program positions that are above this position in the hierarchy. Later changes to these values can also be transferred to the higher-level program positions.

Rollup of Values

Rollup of...	Response of the system
...existing values (values have neither been newly added nor changed)	It rolls up plan (and budget) values. The end nodes of the investment program keep their values, and these form the basis for the rollup. The value of an investment program position that is not an end node is increased by the total of the values of the end nodes below it in the hierarchy. If the position below this non-end-node position is also not an end node, then the value of the lower level position is rolled up only if there is no position below it in the hierarchy that has a value to be rolled up. In other words, the system always rolls up the values of those program positions that are at the lowest level of the hierarchy.
...existing values of end nodes only	Same as above except only the values of end nodes are rolled up.

Cost Planning on the Investment Program

...changed values	Following changes, the logic of the rollup is similar to that for existing values. The only difference: Only changed values are used as the basis for the rollup. Each program position receives a new value, consisting of its existing value plus the changes in the values of all program positions below it in the hierarchy. (Changes may be in the form of supplements or other changes to the original budget.)
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If the overall budget or annual budget is less than the distributed budget, then you can make the budget consistent again by rolling up the values on the investment program. However, when you do so, any program position budget amounts that were not yet distributed are then lost.

Within the investment program, the system can roll up the default values from the end nodes. You can also correct the values, either across the board (using a percentage rate in order to increase or reduce the values), or on an individual basis.

You can make the rollup of plan values on the investment program dependent on versions (refer to [Versions for Planning \[Page 56\]](#)).

Status Selection Profile

You can use a status selection profile to select investment measures or appropriation requests that have a specific user status and system status, such as *Released*. For more information on the definition of status selection profiles, see the Implementation Guide (IMG) for *Investment Management*. Choose *Investment Programs* → *Information System*.

The system determines default plan values for investment program positions that have a status which does not allow planning, as follows:

- Plan values of the end nodes of the investment program are **not** overwritten by the default plan values of measures assigned to them.
- Plan values of all other positions of the investment program are overwritten by the rolling up of the values. The values are overwritten, even when the status does not allow *Planning* as an activity.

Similar logic applies within a project. WBS elements that have a status that does not allow planning cannot be overwritten manually. However, they can be modified by the roll up function.

Versions for Planning

Versions for Planning

Use

Planning for investments in an approval year is often not a one-step process. Instead it involves a series of steps or versions. These versions represent various stages in the development of planning, or various stages in the approval process.

Features

You can manage the plan values of an investment program in the system, therefore, in multiple plan versions. For each investment program position, you can enter alternative plan values in each plan version. You define the plan versions in Customizing for *Investment Management* (choose *Investment Programs* → *Planning in Program*). You have to link each version to an approval year.



The structure of the investment program remains the same when you create a new version. The new version simply enables you to enter new plan values.

Measures

You can also manage versions at the level of the measures (WBS elements or orders) assigned to your investment program. However, these versions are **not** year-dependent. This means that the plan values of version 001/1998 are overwritten by the plan values of version 001/1999, for example. Therefore, if you want to roll up the plan values from investment measures over the course of several years to the investment program, and you want the values to be dependent on the given version, then you have to use a unique key for the versions that is not year-dependent.

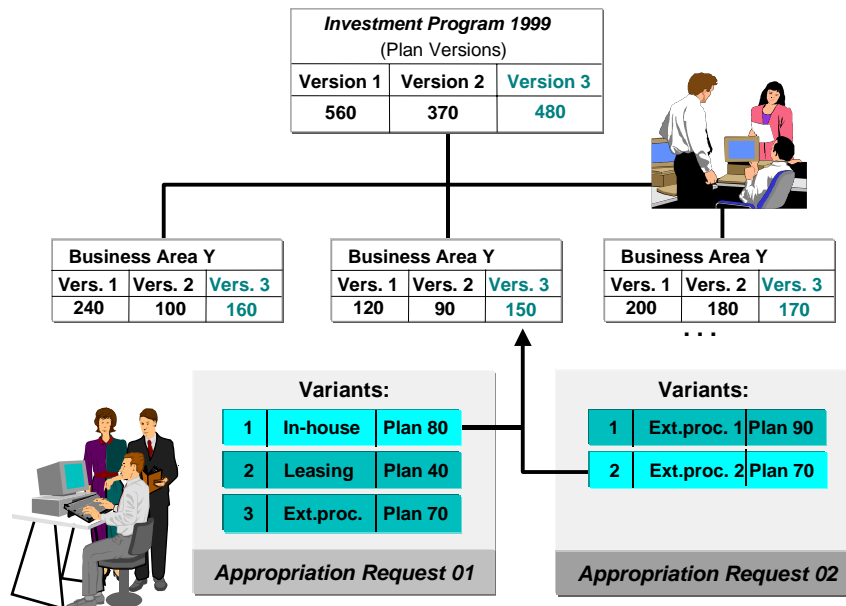


A version for the year 1999, for example, cannot have the same key as the version for the year 1998. One option is for you to include the year in the key for the version (971, 972, 981, 982, and so on).

Another option is to use the same versions each year (for example, 001, 002, 003). Then you have to make sure that you revise the plan values of the versions at investment measure level each year. Otherwise, the outdated values at investment measure level from version 001 will flow into the current version 001 of the investment program in the current year. If you want to prevent the plan values from the outdated version at investment measure level from being overwritten, you can create a summarization database (refer to [Summarization \[Page 330\]](#)).

Appropriation Requests

You cannot create versions for appropriation requests. Instead, you can create any number of appropriation request variants (refer to [Appropriation Request Variants \[Page 128\]](#)). You can assign one version to each appropriation request variant. Using this method, you can link each different variant for planning or implementing the appropriation request to a given version. You make this assignment individually for each appropriation request.



Versions and Appropriation Request Variants

Activities

When you create a new version for an investment program, you have to carry out another rollup of the plan values from the assigned measures and appropriation requests on the investment program. The procedure is outlined below:

- Generate a new version for the plan values of the assigned measures. Normally, not all the plan values of the assigned measures change in a new version. Therefore, you can copy the old version for orders or projects (Orders or Projects: *Planning* → *Utilities* → *Copy version*). The system then copies the plan values of the reference version of the order or project, and enters them in the new version.
- It also applies to appropriation requests that not all plan values change in a new appropriation request variant. Therefore, there is a function that carries out one of the following, per appropriation request, depending on your settings:
 - It copies the existing assignments in an existing appropriation request variant to a program position or version for the new version (the variant is then assigned to both versions).
 - It creates a new variant with the required assignment. In addition, the system copies the plan values from the variant, to which the reference version is assigned.

This function is found under *Periodic processing* → *Copy version assignment*.

- You can then process the plan values of the new investment measure versions and appropriation request variants, and roll them up on the investment program (refer to [Cost Planning on the Investment Program \[Page 54\]](#)).
- Rolling up the plan values supplies values only to the current plan values of the investment program (not balances carried forward). Therefore, you have to repeat the fiscal year change. When you carry out the fiscal year change, enter the new version as the target

Versions for Planning

version (refer to [Fiscal Year Change \[Page 80\]](#)). The system then fills the carryforward values of the new version with the values of the version from the previous fiscal year, which you specified in Customizing for *Investment Management (Planning in Program → Versions → Define Approval Level for Versions)*.

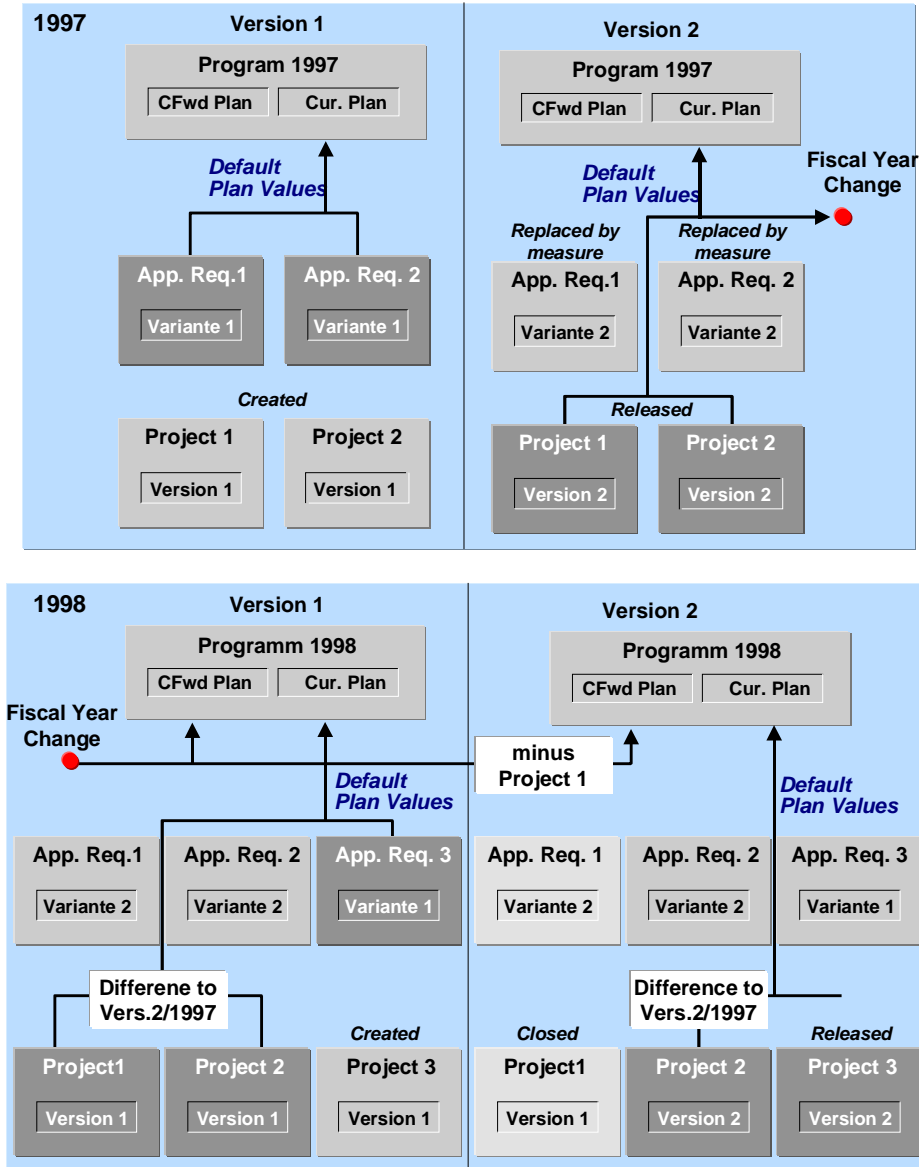
However, when you make changes to the carryforward version of the old year, this can result in different carryforward amounts in the versions in the current year.

Blocking a Version

In Customizing, you can block a version to changes. When you block a version, the system also blocks the assignment of variants to this version, as well as blocking any currently assigned variants themselves to changes.

Example

The following graphic shows the forwarding of plan values, dependent on versions, from fiscal year 1997 to 1998.



Versions and the Fiscal Year Change

In 1998, the system rolls up only the difference between 1997 and 1998 for projects 1 and 2 on the investment program. Using this difference is made necessary by the fact that the plan values from 1997/version 2 were already carried forward to the current investment program (1998). Now, at this point only the difference in the plan values is added to the current planning for these projects.

Authorization Levels for Versions

Authorization Levels for Versions

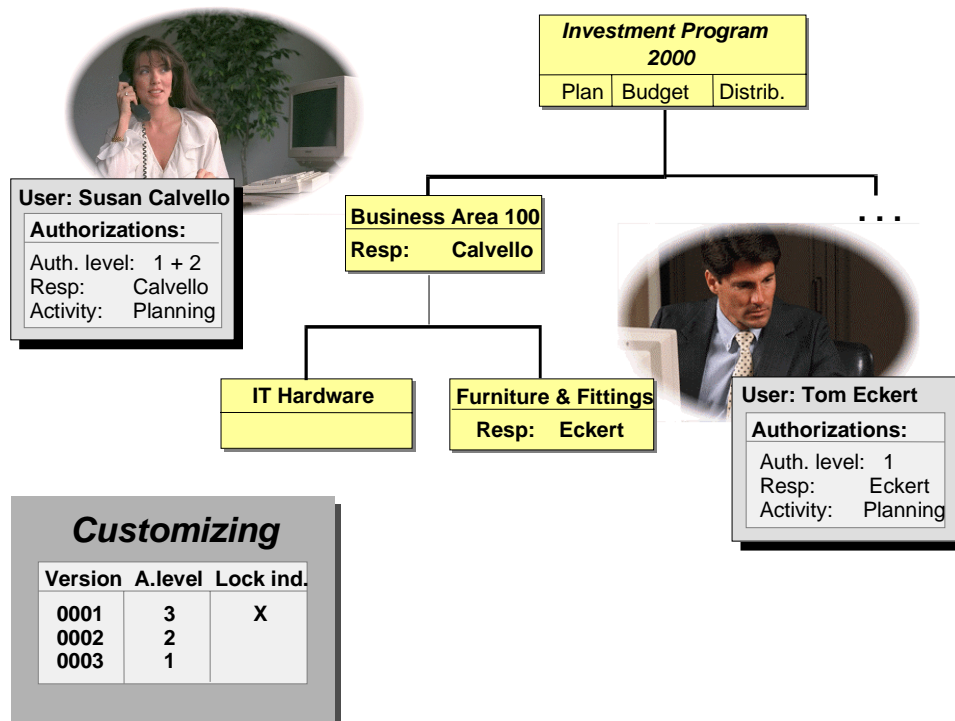
Use

The plan values of a version are usually subject to an approval process before becoming binding budget values. Often this approval process runs in parallel for several different plan versions at different levels of the investment program. For instance, a version at the highest level may be very close to being approved, whereas a new version is already being planned at a lower level.

Features

For this reason, you can assign an authorization level to your plan version. The authorization level limits the processing of plan values on the version to those users that have the authorization for this authorization level. You can increase the authorization level of a version by stages.

You can freely define the authorization levels in Customizing (for example, "0" to "9"). The authorization level is an authorization object for version-dependent activities (planning). In this way, you can assign certain system users the authorization for processing certain versions (*Planning in Program* → *Versions*). There is a locking indicator in the Customizing definition of the authorization level. You can use this indicator to lock versions with a certain approval level to further planning.



Approval Levels and Plan Versions

Authorization Levels for Versions

The graphic shows an investment program that is being planned with three versions. Version 1 is already locked. Only the user "Calvello" is allowed to work on version 2, since she has authorization for authorization level 2. The user "Eckert" does not have authorization for this authorization level. Therefore, he can only work on version 3 (the most current version).

Planning (Bottom Up)

Planning (Bottom Up)

Procedure

1. Assign all measures and appropriation requests to the appropriate program positions, and carry out cost planning for these measures.
2. Roll up all the planned values on the higher program positions, after you complete the planning phase at the level of the individual measure. These values are then totaled together up the branches of the hierarchy, until the sum of all the measures is contained in the top position (*Program planning* → *Default plan values*).
 - Enter the version for which you want to roll up plan values.
 - Enter a status selection profile (if desired) as a selection criterion for rolling up the plan values. Then the system rolls up only the values of those measures that have a given status.

You can repeat the rollup as often as needed. The system recognizes when plan values were already rolled up, and it then limits the rollup only to the difference between the new values and those previously rolled up.

3. If you want to process plan values directly at the program position level, you can carry out program planning directly using *Program planning* → *Edit*.

You can specify the value categories you want to work with in the transaction (in the initial screen of the transaction under *Settings* → *Approval time period*). For more information, see [Value Categories of Investment Programs \[Page 52\]](#).
4. Correct the automatically or manually transferred plan values, as needed (select the position, and choose *Edit* → *Adjust values*).

As an example, you might want to increase all planned values on program positions by 10% across the board for measures for which you don't yet have detailed information.

Budgeting of Investment Programs

Use

Once planning is finished, the next step is normally the budgeting process. During this process, the rolled up plan values are corrected, if necessary, and then distributed top-down in the form of the budget.

Features

You maintain budget values for investment program positions from the top down. The system makes sure that no more budget can be distributed to the lower positions than is available on the next higher position.

Increases/Reductions

It is possible to adopt the planned values of the investment program as the budget values. If needed, you can then correct these values, either individually or across the board. There is a function provided for this purpose (choose *Edit* → *Revalue*).

Distribution of the Budget to Measures

You can distribute the budget from investment program end nodes to the measures assigned to them. This kind of budget distribution, however, is only possible when the *Budget distribution* indicator is set in the program position (refer to [Distributing the Budget from the Program Position to the Measures \[Page 64\]](#)).

Otherwise, you have to budget the measures directly, using the appropriate budgeting transaction from either Project System (PS) or Overhead Cost Controlling - Overhead Orders (CO-OM-OPA). When you use these non-IM transactions, the system does not update the distributed values at the level of the program position to which the measure belongs.

Activities

[Investment Program Budgeting \(Top Down\) \[Page 68\]](#)

[Distributing Budget to Investment Measures \[Page 69\]](#)

Distribution of Budget from the Program Position to the Measures

Use

The IM component provides a number of ways of controlling the relationship of individual measures to the investment program as regards budgeting. The main purpose is to control how closely the budget at measure level is tied to the assignable budget at the investment program level.

Features

You can monitor the approved budget of an **investment measure** using an active availability control. This availability control prevents the budget from being exceeded at the moment of posting. When you enter certain transactions, the system checks if there is sufficient budget left. This budget could be the available project budget or order budget, or the available and released budget (release). When making the availability control, the system uses tolerance limits you entered in Customizing. If you want to use the active availability control at the investment measure level, you have to specify it in the budget profiles of the orders or WBS elements.

The system does not have an active availability control in this form for the budget of an **investment program position**, since the budget is normally not as binding at this level. However, there is another system function that approximates the availability control. You can set the budget distribution indicator in the master data of the investment program position. Then the investment measures assigned to this program position can receive their budget only through a direct distribution of the program position budget to the investment measures (top-down budgeting). It is then no longer possible to budget the measures independently. This procedure ensures that the total of the measure budgets cannot exceed the overall budget of the program position to which they are assigned. Basically, this corresponds to an availability control at the investment program level for the measures assigned to it.

You can also set the *Budget distribution* indicator in IM Customizing at the level of the program type. The result is that the *Budget distribution* indicator will be proposed as a default value in all program positions belonging to this program type that are created subsequently. However, you can still change this indicator in the program position.



When you use budget categories (refer to [Budget Categories \[Page 70\]](#)), you have to budget the measures yourself directly. It is not possible for the system to distribute the budget from the program positions to which the investment measures are assigned.



You can carry out an active availability control for funds allotted for orders as compared to the budget of an investment program position. However, you have to use a WBS element as an intermediate object. The WBS element has a one-to-one relationship to the investment program position. The WBS element carries out the budget monitoring function.

The assignment of the order to the investment program position is then indirect, by means of the WBS element. As a result of the assignment of the orders to the WBS

Distribution of Budget from the Program Position to the Measures

element, it is no longer possible to budget the orders independently. When the availability control is active on the WBS element, the system checks all assigned values from the orders against the budget of the WBS element.

Overall Values and Annual Values

There is an indicator in the program type for specifying whether the budget distribution from the investment program position applies only to the overall values of the investment measures, or also to the annual values of the investment measures. When the *Budget distribution* indicator is set, the result in combination with the overall/annual value indicator is as follows:

- If this indicator is set, a subordinate investment measure can receive its overall budget, as well as its annual budgets, only from the program position above it.
- If this indicator is **not** set, you can distribute annual budgets directly at the level of the investment measure. The overall budget can still be distributed only from the program position above the investment measure.

Separate Budgeting of the Individual Measures

If you do **not** set the *Budget distribution* indicator, you can budget the investment measures separately. This method can be useful when you want a periodic check of the total of the investment measure budgets against the budgets of the program positions using reports, but it is not possible or desired to specify the exact measures on which the costs will come due from this approved budget. When you use budget categories, this is the only method you can use (refer to [Budget Categories \[Page 70\]](#)).

However, when you use this method, it is not possible to update the distributed values at the investment program level. This limitation applies to budget supplements and returns, as well as to the budget distribution.

Blanket Asset Budgets

Blanket Asset Budgets

Use

For capital investments that do not have an asset under construction, there is often the need to capitalize acquisitions directly in asset accounting, while still managing plan values, budgets, actual values and commitments for cost accounting, in order to carry out target/actual comparisons. The plan or budget values for these direct capitalizations are normally in blanket form, since they are not related directly to the individual acquisitions. Instead they normally take the form of an overall estimate.

Features

Therefore, the R/3 Asset Accounting (FI-AA) component makes it possible to post asset transactions directly to assets, while it posts the transactions automatically as statistics to an internal order or WBS element (refer to [Statistical Budget Monitoring for Direct Capitalization \[Page 203\]](#)).

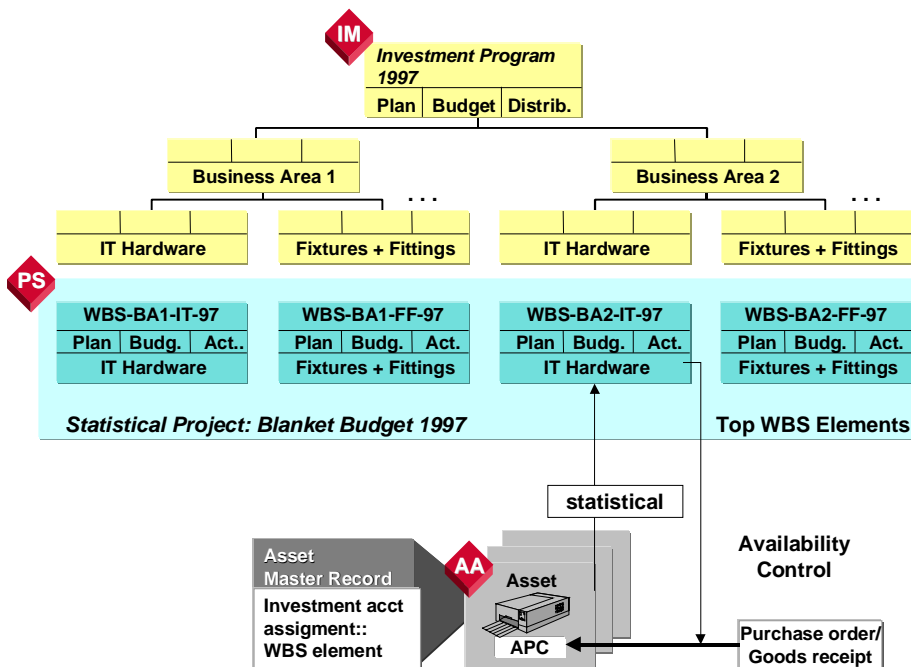
You can attach the blanket investment budget for a statistical order or WBS element to an investment program position, just as you do individual investment measures. The statistical order or WBS element then receives its budget from there.

Availability Control

At the level of the WBS element or order, you have the option of an active availability control in addition to the passive availability control using reporting. This active control enables you to prevent assignments that would cause the budget to be exceeded. The system checks the budget when certain transactions are entered. It determines if the available project budget or the available released budget is still sufficient. When making the availability control, the system uses tolerance limits you entered in Customizing.

In order to use the active availability control, you have to enter it in the budget profile of the statistical order or WBS element.

Blanket Asset Budgets



Investment Program with Blanket Budgets

In order to be able to manage blanket budgets as individual investment program positions, you have to make sure there is a 1 to 1 relationship between the investment program end nodes involved and the statistical WBS elements or orders.

Fiscal Year Change

Blanket budgets are usually valid for only one year. Therefore, you should create new statistical WBS elements or orders for your blanket budgets, and attach them to the investment program. WBS elements and orders allow you to manage plan values and budget values by year, but it is generally not desirable to accumulate overall plan, budget and actual values for the order or WBS element over the course of several years.

When you have a large number of blanket budgets, it makes sense to use a project for them rather than an order. You should define the structure of the project so that it consists only of top WBS elements. Each of these top WBS elements manages a blanket budget. At the fiscal year change, you can then copy the old project. You can rename the keys of the WBS elements belonging to the project using the search and replace function.


Investment Program Budgeting (Top Down)

Procedure

1. Choose *Budgeting* → *Edit original*. You can enter budget values for all program positions in this transaction.

You can specify the value categories you want to work with in the transaction (in the initial screen of the transaction under *Settings* → *Approval time period*).

2. Choose *Views* → *Planned total*.
3. Select all the program positions for editing (*Edit* → *Select* → *Select all*).
4. Choose *Edit* → *Copy view* to copy the *Planned total* view to the *Overall values* column of the budget.
5. Make any necessary increases or reductions to the budget values. For this purpose, you can use the *Revaluate* function (*Edit* → *Revaluate*), as you do for planned values. The system informs you of any errors in budgeting when you save your entries. You can call up an error log by choosing *Extras*.

In addition to the overall values, you can also create annual values in order to specify when the overall approved budget becomes available, according to year. In that case, you have to carry out steps 1 to 4 separately for each requested year ( *Year* pushbutton).

6. If you created and approved the program budget in this way, you now have two options for how to handle the program budget or measure budget:
 - You can choose that the budgets of all measures belonging to a program position always have to be directly distributed to the measures. For this option, set the *Budget distribution* indicator in the master record of the program position. (A default value for this indicator is specified in the program type.) Once this indicator is set, it is **no longer** possible to budget the investment measures with functions for budgeting orders and projects.
 - With the other option, you do not set the *Budget distribution* indicator in the program position. In this case, the system cannot transfer budget from the program position to the measures assigned to it. However, you can compare the total of the budget for the measures to the budget of the program position in reporting (the two budgets are shown side by side). This comparison takes place on a periodic basis. You carry out the budgeting of the investment measures separately, using the corresponding functions for orders or projects.

Distributing Budget to Measures

Procedure

1. Choose *Budgeting* → *Budget distribution* → *Edit*.
2. Enter the program position, to which the investment measure you want to work with is assigned. You could enter a program node instead. The system then selects all end nodes of the program that are below the node you selected, along with their measures.
3. Specify if you want either only current measures (approved in the current approval year) or also old measures.
4. Select the measure type you want to process (order or WBS element).
5. Specify the type of activity you want - either distribution of original budget, supplements or returns.
6. Choose *Execute*. The system displays all measures for the program position you entered.
7. Assign the supplements/returns for the overall budget or the annual budget of the assigned measures. These supplements/returns change the assigned value of the program positions they are assigned to.

Budget Categories

Budget Categories

Use

Under certain conditions, you may want to manage several parallel budgets for one capital investment program. The most common instance is managing separate budgets for costs to be capitalized and incidental costs that are not capitalized.

Prerequisites

You define your budget categories per program type in Customizing for *Investment Management* (choose *Investment Programs* → *Budgeting in Program* → *Budget Categories*). SAP provides the standard budget categories: 1 (costs to be capitalized) and 2 (incidental costs not eligible for capitalization).

You specify in the definition of the investment program if you want separation according to budget categories.

You assign a usage indicator to the budget categories. This indicator permits the system to separate the actual values that come due according to budget categories.

Features

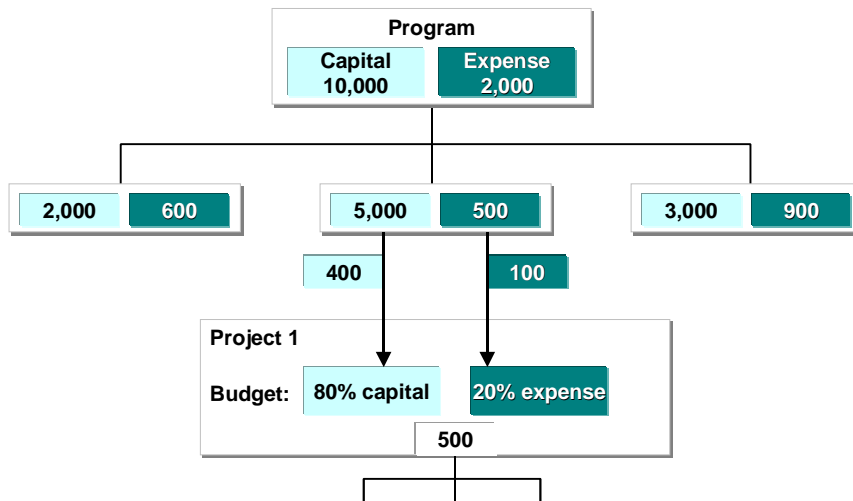
When you have stipulated the use of budget categories in the definition of the investment program, you have to enter the values separately for the budget categories when you budget the program. In the same way, you also have to enter plan values by budget category.

Budget Categories and Measures

You cannot enter values separately according to budget category at the level of the individual measure. On the individual measure, you enter plan and budget values without special categories, as usual.

However, it is still possible to establish the proportion of plan and budget values from an individual measure that can be attributed to defined budget categories (comparison in reporting). To do this, you can specify corresponding percentage rates per budget category. This is done when assigning the individual measure to the investment program position. The plan and budget values of the individual measure are then weighted with these percentage rates, and can be assigned to the appropriate budget categories.

Budget Categories



Budget Categories



When you use budget categories, you have to budget the measures yourself directly. Budget distribution is not possible from the positions higher in the hierarchy (refer to [Distributing the Budget from the Program Position to the Measures \[Page 64\]](#)). Availability control is therefore only possible using reports in the Information System.

Standard Assignment of Actual Values to Budget Categories

For actual values, the system can separate

- The debits settled to an asset
(= budget category 1, costs for capitalization) and
- The debits settled to costs
(= budget category 2, incidental costs not eligible for capitalization).

You assign actual values to budget categories by maintaining the usage indicator for the budget category (see above). However, this separation of the actual values is only possible once the periodic settlement has been carried out (refer to [Settlement of Investment Measures \[Page 234\]](#)).



Be careful if the capitalization keys of an investment measure specify that less should be capitalized in the book depreciation area than in the cost accounting depreciation area. (That is, a certain percentage of the amount to be settled is settled to nonoperating expense, rather than to assets - refer to [Periodic Settlement to an Asset under Construction \[Page 244\]](#)). If this is the case, the settlement amount is nonetheless calculated with the total percentage of the cost depreciation area (at the moment always 100%) of budget category 1 (= costs to be capitalized).

Budget Categories

User-Defined Assignment of Actual Values to Budget Categories

There is another option in addition to the standard assignment of the actual values to budget categories 1 and 2. You can use user exit AAIP0001 to create your own assignments to budget categories you have defined yourself (for example, by cost elements or cost element groups).

For more detailed information, see the R/3 online documentation for customer exit AAIP0001 (in transaction CMOD under *Help*).

Information System

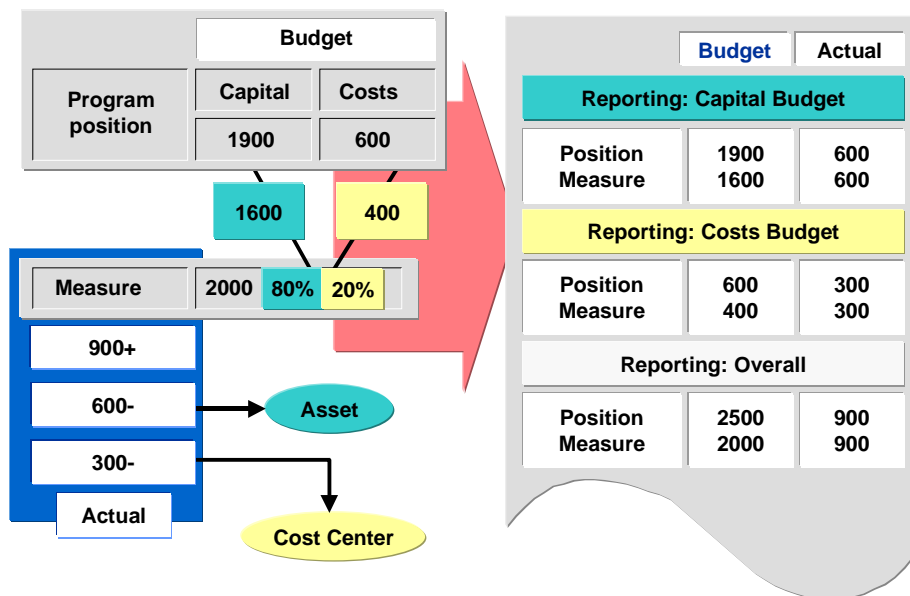
The individual budget categories are displayed separately at the level of the investment program, as well as at the level of the individual measure, in the Information System.



Standard drilldowns report on budget categories 1 and 2 that are provided by SAP. If you work with your own user-defined budget categories, then you have to enter them in the form so that the system can select the data records.

Example

The following graphic shows how the different budget categories are displayed in reporting:



The investment program has a capital budget of 1900, and a budget for costs that are not capitalized of 600. At the level of the assigned investment measure, it was specified that the budget for the measure (2000) should be made up of 80% capital budget and 20% costs budget. Of the posted actual debits of 900, 600 are settled to an asset and 300 are settled to a cost center.

Supplements and Returns

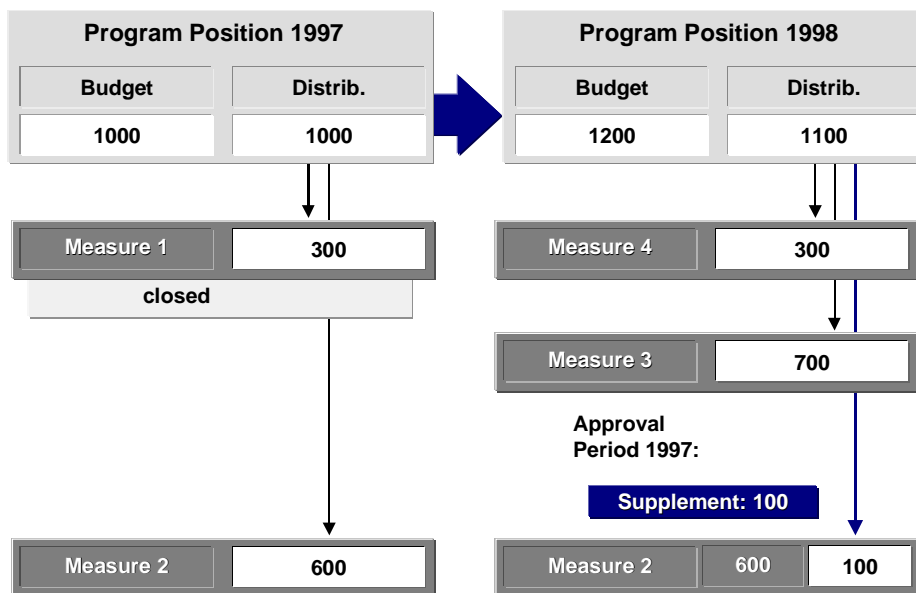
Purpose

Changes can be made to the original budget for both the investment program budget and for the measure budget at any time (*Supplements and Returns*). These changes are managed as line items in the system. You can display them as an explanation of the current budget (*Extras* → *Line items* in the budgeting functions). The system manages supplements and returns separately from the original budget. Therefore, the system displays them separately in reports (refer to [Budget Values \[Page 282\]](#)).

Process Flow

Supplements and returns to the measure budget also change the distributed values at the level of the investment program to which they are assigned. However, this applies only when the budget was distributed directly from the investment program position to the measures belonging to it. (The *Budget distribution* indicator has to be set in the master record of the investment program position.) Otherwise, you can post supplements and returns to investment measures, but they do not influence the distributed values in the investment program.

The graphic below shows a budget supplement for an investment measure (2), which was carried forward from the investment program of the previous year. Measure 2 receives a supplement of 100. This supplement comes from the new budget for 1998. When the supplement is entered, however, you have to enter 1997 as approval year.



Budget Supplement

Procedures

[Posting Budget Supplements or Returns to Investment Program Positions \[Page 75\]](#)

[Posting Budget Supplements or Returns to Measures \[Page 76\]](#)

Posting Budget Supplements or Returns to Investment Program Positions

Procedure

1. Choose *Programs* → *Budgeting* → *Edit supplements* or *Edit returns*.
2. Enter the program position you want. You could enter a program node instead. The system then selects all end nodes of the program that are below the node you selected, along with their measures.
3. Enter the supplement or the return for the investment program position, either for the overall budget or the annual budget. The supplements or returns change the distributed values of the investment program positions above this one in the investment program.

Posting Budget Supplements or Returns to Measures

Posting Budget Supplements or Returns to Measures

Procedure

1. Choose *Budgeting* → *Budget distribution* → *Edit*.
2. Enter the program position, to which the investment measure you want to work with is assigned. You could enter a program node instead. The system then selects all end nodes of the program that are below the node you selected, along with their measures.
3. Specify if you want either only current measures (approved in the current approval year) or also old measures.
4. Select the measure type you want to process (order or WBS element).
5. Specify the type of activity you want - either distribution of original budget, supplements or returns.
6. Choose *Execute*. The system displays all measures for the program position you entered.
7. Assign the supplements/returns for the overall budget or the annual budget of the assigned measures. These supplements/returns change the assigned value of the program positions they are assigned to.

Fiscal Year Change

Purpose

Investment planning in the R/3 System is intended to be cyclical, based on an annual planning process. You set up and budget separate investment programs for each fiscal year (refer to [Planning and Budgeting of Investment Programs \[Page 50\]](#)). To simplify this process, you can copy the program structure of the investment program from the fiscal year being closed. You also carry forward measures and appropriation requests, along with budget values and plan values. There are two ways of handling the values carried forward to the new fiscal year. You can either manage them separately from the new values, or treat them the same as the values in the new year. There is a function that corresponds to each of these options (choose *Periodic processing* → *Fiscal year change*):

- Opening a new approval year

You use this function to copy an existing investment program for the new approval year. It also carries forward the values of all old measures and appropriation requests that are not yet closed to the new investment program. The forwarded values are initially managed separately in the new investment program.

- Closing the old approval year

You use this function to carry forward the values of old measures and appropriation requests, which are not yet closed, to the new fiscal year and new investment program. In this case, the forwarded values are not managed separately in the new investment program. Instead, they become a part of the current plan values or budget values. The new investment program has to already exist before this carryforward takes place.

In both of these functions, you can enter a status selection profile. The system then limits the measures, appropriation requests, budget values and plan values that are included when the function is carried out. You thereby limit the selection to objects with a certain status.

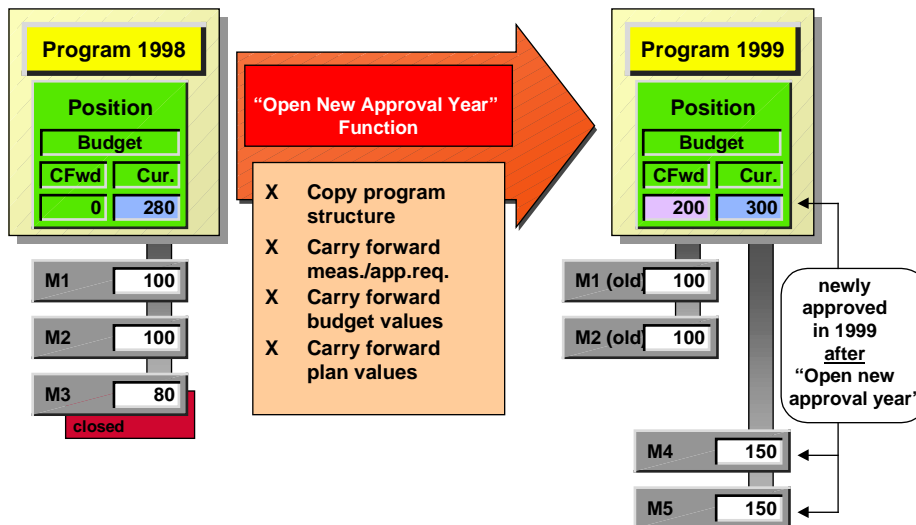


Carrying out the *close old approval year* function **is optional**. Do not carry out this function if you prefer to keep the values from the old approval year separate from the values of the new approval year.

Fiscal Year Change

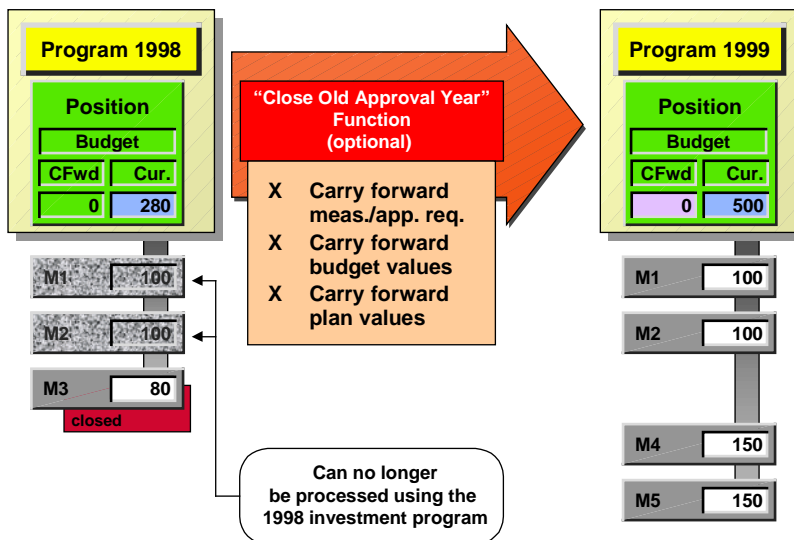
The following graphics show the differences between the *Open new approval year* function and the *Close old approval year* function.

Opening a New Approval Year



The system establishes a clear separation between the measures carried forward (M1 and M2), including their budgets, and the new measures (M4 and M5).

Closing Old Approval Year



Fiscal Year Change

The measures of the old approval year (M1 and M2) are managed together with the new measures (M4 and M5), and they are all treated the same.

Opening a New Approval Year

Opening a New Approval Year

Purpose

Generally, you create a new investment program for the new approval year at the time of the fiscal year change or fiscal year closing. The IM fiscal year change, therefore, enables you to create a new investment program in the new approval year that has the same structure as the existing investment program.

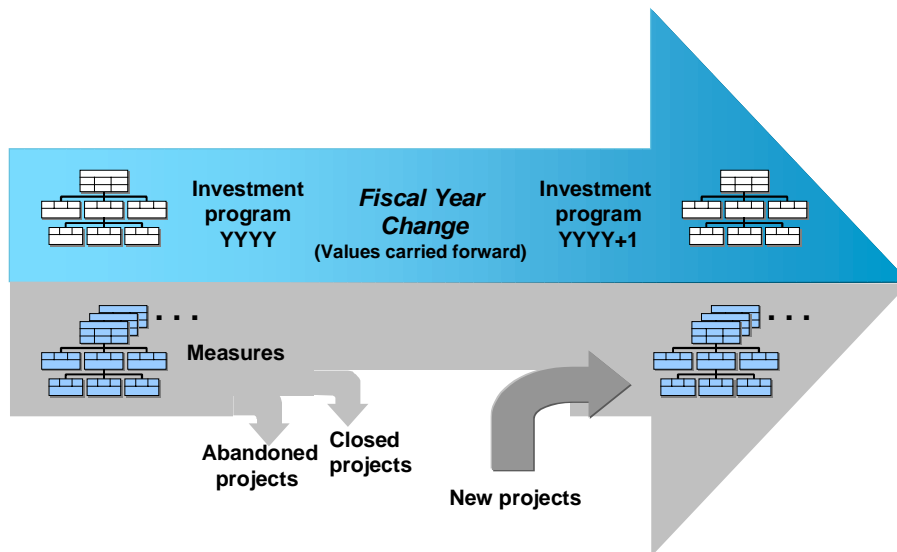
You choose how you want to report on the new investment program. Reports on the investment program can be based on one of the following:

- Just the measures and appropriation requests of the new approval year
- The measures and appropriation requests of the new approval year, **plus** the measures and appropriation requests of the old approval year that are still open

Therefore, thanks to its carryforward functions, the IM fiscal year change maintains the connection between the new investment program and the measures and requests, and their values, from the old approval year.

Process Flow

During the fiscal year change, you can transfer all measures that are not closed (according to their status) to the new investment program. The system removes any closed measures, as well as any that were not implemented. After the fiscal year change, you can use the investment program for budgeting new investment measures.



Fiscal Year Change

After the fiscal year change was carried out, you can modify the structure of the new investment program. You can create new positions and move existing positions (refer to [Creating the Program Positions and Structure \[Page 24\]](#)). Carry out the planning and budgeting of the new

positions as usual (refer to [Planning \(Bottom Up \[Page 62\]\)](#) and [Investment Program Budgeting \(Top Down\) \[Page 68\]](#)).

Parameters for the Fiscal Year Change

When you start the fiscal year change program, you have to enter certain parameters.

- **Copy program structure**

The system copies the structure of the old investment program and uses it to generate the new investment program. The approval year is automatically increased by one. The program structure and the program position IDs are not changed.

- **Carry forward measures/appropriation requests**

The system carries forward old measures and appropriation requests to the investment program in the new approval year. The objects not carried forward are:

- Measures with *Closed* status
- Appropriation requests with *Rejected* or *Replaced by measure* status

If you want to exclude other measures or appropriation requests in addition to the above, you can do so with the help of a status selection profile (selection according to a certain system status or user status). When this method is used, the system can always identify old measures and old appropriation requests as having been forwarded. It can also distinguish the old measures and requests from those directly assigned to the program in the new approval year. The results are as follows:

- You can run reports on the new investment program either with or without the old measures and appropriation requests. The standard drilldowns in the IM Information System are defined so that they report on both old and new measures and appropriation requests. The general value list in the IM-Information System (program RAIMINFO), on the other hand, reports as a default only on the new measures and appropriation requests. However, if you set the *old values/measures* indicator in the initial screen of the report, you can also report on old and new measures at the same time.
- When you use the budget distribution function (refer to [Distributing the Budget from the Program Position to the Measures \[Page 64\]](#)), you can either budget the new measures (standard), or you can also distribute budget amounts from the new investment program to the old measures. As a result, a measure could have budget amounts from both the new investment program and the old investment program.



You have the option of carrying forward unused budgets and commitments for investment measures (orders and WBS elements) into the new year. This corresponds to a carryforward within the annual values of an order or WBS element. In order to be able to do this, you need to carry forward these values **before** you carry forward the plan and budget values of the investment program.

- **Carry forward budget values**

You should always set this indicator, if you have set the *carry forward measures/appropriation requests* indicator. By setting this indicator, you ensure that the total of the measure budgets forwarded increases the program budget of the new investment program in a consistent manner.

Opening a New Approval Year

The system manages the budget carried forward separately from the current budget of the new investment program. After the fiscal year change has been carried out, the budget carryforward is included in reports only when you run reports on old and new measures/appropriation requests at the same time. In order to see the budget carryforward in the budgeting function for the original budget of the new investment program (rather than the current budget), you have to set the approval period to *Forward* under *Settings* → *Approval period* in the initial screen.

- **Carry forward plan values**

Setting this indicator has essentially the same effect as setting the *carry forward budget values* indicator, except it applies, of course, to plan values.

Versions for Plan Values

You can manage plan values for the investment program in several versions (refer to [Versions for Planning \[Page 56\]](#)). Therefore, you have to enter a target version at the time of the fiscal year change. The system then enters the forwarded plan values in this version. The system uses the last version from the previous year as the source version.

Opening a New Approval Year

Procedure

1. Decide if you want to carry forward unused budgets at the measure level. If you wish, carry forward values for orders or WBS elements (*Internal Orders* or *Investment Projects* → *Year-End Closing* → *Carry Forward Budget*).
2. Choose *Periodic Processing* → *Fiscal Year Change* → *Open New Approval Year* in the SAP Easy Access menu for investment programs.
3. Enter the old investment program and its approval year.

You can limit the fiscal year change to a given program position in the target investment program. Limiting the fiscal year change in this way makes sense only if you are carrying out a repeat run, or if you are using the *Carry forward measures/app. req.* and *Carry forward values* functions (see below). By using this function, you can directly reflect changes that are made at the investment measure level (such as, an investment measure being closed) in the investment program.

4. Specify the fiscal year change functions you wish to carry out:
 - Copy program structure
 - Carry forward measures/appropriation requests
 - Carry forward budget values
 - Carry forward plan values
5. Enter a target version, in which the system should enter the forwarded plan values.
6. Enter a status selection profile, if you wish. The system then transfers only those investment measures that have the specified status.



You can carry out the fiscal year change as often as you like, and you can carry out the functions described here separately. This means that you can copy the investment program at a relatively early point in time, and copy the annual plan values. But you can still wait to transfer the measures and carry forward their resulting balances, until you have decided which measures are going to be closed in the old approval year.

Closing the Old Approval Year

Closing the Old Approval Year

Purpose

Using this program, you can transfer all values that were carried forward when the new approval year was opened (or a portion thereof). The values are transferred to the current approved values of the new investment program in the new approval year. Using this procedure is helpful when you do not want to manage your measures and appropriation requests from the old approval year separately from those in the new approval year.

Prerequisites

Closing the old approval year is only possible if the new investment program already exists in the new approval year. This means that you have to run the program for opening a new approval year at least once before closing the old approval year.

Process Flow

The process is essentially the same as for [Opening a New Approval Year \[Page 80\]](#). The following can be carried forward:

- Measures and appropriation requests; after the close of the old fiscal year, the system no longer distinguishes between these measures and appropriation requests and those that are approved in the new fiscal year. In the selection screen for this program, you can specify the old measures and appropriation requests that are to be transferred to the current approved values of the new investment program.
 - Non-released measures or appropriation requests. The system treats these old, non-released measures and appropriation requests as if they were being included in the investment planning for the first time.
 - All measures/appropriation requests
- Budget values; the budget values carried forward for the forwarded measures and appropriation requests are not managed separately from the current budget values. The system adds them to the current original budget of the new investment program.
- Plan values; the plan values carried forward for the forwarded measures and appropriation requests are not managed separately from the current plan values. The system adds them to the current plan of the new investment program.

During the carryforward to current approved values, the system does not separate the forwarded measures and appropriation requests from the new measures and appropriation requests. The system treats them as if they had always belonged to the new investment program. Measures and appropriation requests that are forwarded in this way become “invisible” to the old investment program. This means that they still appear in reporting for the old investment program, but it is no longer possible to process them there. Budget distribution to these measures is no longer possible, for example.

The system adds the budget carried forward to the current original budget of the new investment program. After the fiscal year change has been carried out, the budget carryforward is always included in reporting for the new investment program.



Important: the year-end closing cannot be repeated.

Repeat Run of Fiscal Year Change

Repeat Run of Fiscal Year Change

Under certain circumstances, it may be necessary to carry out the fiscal year change (opening a new approval year) more than once. One reason might be that it is not completely clear at the time of the first fiscal year change which measures are completed, and therefore do not need to be carried forward. The following explains the parameters of the fiscal year program in a repeat run.

Copy Program Structure

You are not allowed to set the *copy program structure* parameter during a repeat run of the IM fiscal year change (open new approval year). If a change to the investment program structure becomes necessary after the fiscal year change, you have to make this change manually. You use the structure maintenance function to make the change to the new and/or old investment program. A different option is to completely delete the new investment program (transaction IMR3). Then make the structure changes to the old program, and repeat the *Open a new approval year* function.

However, it can be useful to carry out one or more repeat runs of the fiscal year change in relation to carrying forward plan and budget values (*carry forward plan values* and *carry forward budget values* parameters).

Carry Forward Plan Values and Budget Values

The effects of the *carry forward plan values* and *carry forward budget values* parameters are described below:

- The system carries forward the measures and appropriation requests that were added to the old investment program since the last fiscal year change.
- Measures that were carried forward in the last fiscal year change, but which have since been completed or rejected, are removed from the forwarded values of the new investment program.
- If you enter additional selections for measures or appropriation requests, the system excludes from this carryforward those measures/appropriation requests that were carried forward in the last fiscal year change, but which are not included in the selection criteria of the repeat run.

The carryforward is thereby created fresh for each repeat run, based on the status and any additional selection criteria you have entered for measures and appropriation requests.

Budget Carryforward

Use

You use the budget carryforward in investment program function to transfer unused budget to the next fiscal year (annual values) within an investment program. Unused budget is the remaining distributable budget on a program position and all subordinate program positions.

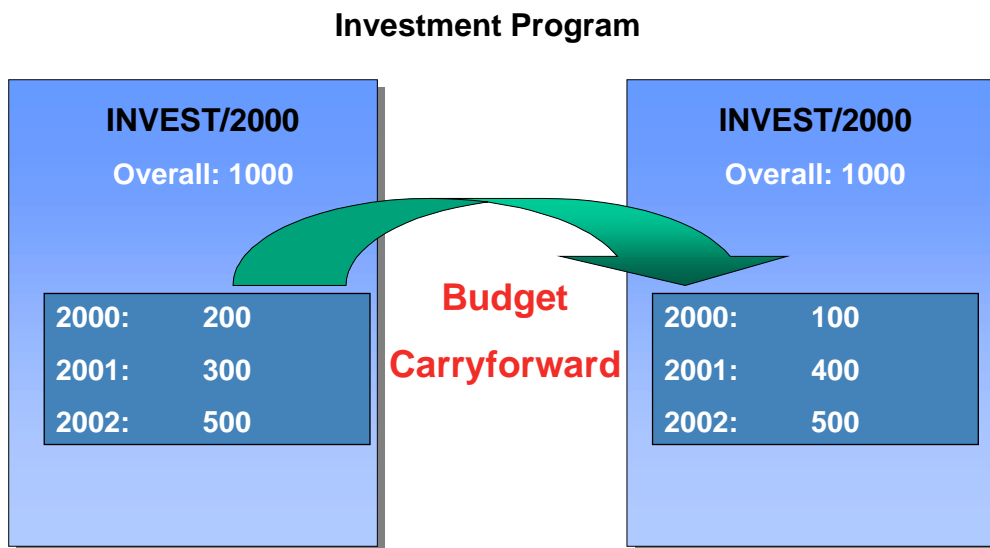
Budget carryforward is an optional step related to the [Fiscal Year Change \[Page 77\]](#).

Prerequisites

- You performed the commitment carryforward for measures belonging to the investment program.
- You performed the budget carryforward for measures belonging to the investment program.

Features

This budget carryforward takes place only within one investment program. In other words, this function is not used for transferring unused budget from an investment program in the current approval year to the following approval year (that is, a new investment program). Instead it deals only with annual values within one approval year.



Still distributable (unused) in year 2000: 100

Whether or not you are required to perform this budget carryforward in the investment program depends on whether or not you carried out budget carryforward for the measures assigned to your investment program. Performing budget carryforward from one fiscal year to the next for measures can lead to inconsistencies between the budget on the investment program and the budgets on the measures (see [Example: Performing Budget Carryforward \[Page 89\]](#)). By using

Budget Carryforward

the budget carryforward for investment measures function, you ensure that the budgets on the investment program and the measures remain consistent.

Integration with the *Year-End Closing* Function

The year-end closing can only be performed once. It is not possible to carry it out a second time on the same investment program. Therefore, you should perform a budget carryforward in the investment program in the new approval year, if you carried forward commitments or budget for measures for the old approval year.

You do **not** have to perform the budget carryforward in the investment program if the following applies: Following the fiscal year change, you plan to carry out a year-end closing for the investment program of the old approval year, and you already carry forward commitments and budget for measures before the year-end closing.

See also:

[Closing the Old Approval Year \[Page 84\]](#)

Integration with the *Fiscal Year Change* Function

Perform a budget carryforward for the investment program of the old approval year, if you want to continue to run reports on the investment program of the old approval year.

If you do **not** want to continue to run reports on the investment program of the old approval year, you do not need to perform a budget carryforward for the investment program of the old approval year, even if you only carry out a fiscal year change but not a year-end closing. All measures of the old approval year that are not closed are transferred by the fiscal year change to the investment program of the new approval year, and therefore you can run reports on them in the Information System as part of the investment program in the new approval year.

See also:

[Opening a New Approval Year \[Page 80\]](#)

Further Settings

The system adopts the unused budget from the sender fiscal year to the approval year. The approval year does not have to be the next chronological fiscal year. You can transfer the unused budget to a different, later fiscal year.

You are not required to carry out the budget carryforward in the investment program for the entire investment program. You can limit the budget carryforward to a subtree of the investment program.

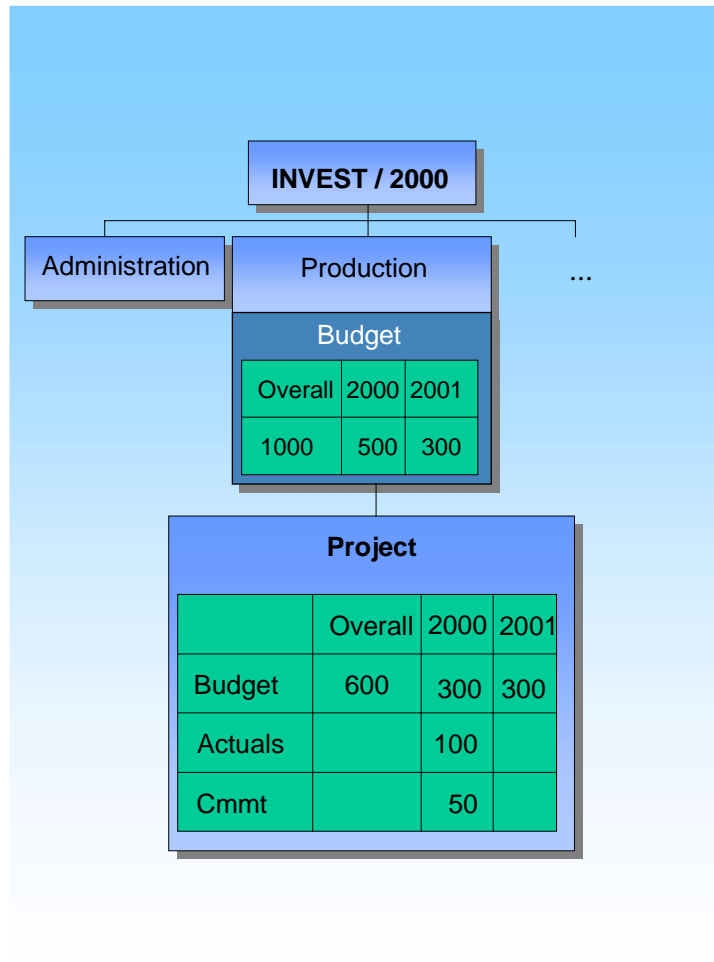
Activities

To use the function, choose *Periodic Processing* → *Budget Carryforward*.

Example: Performing Budget Carryforward

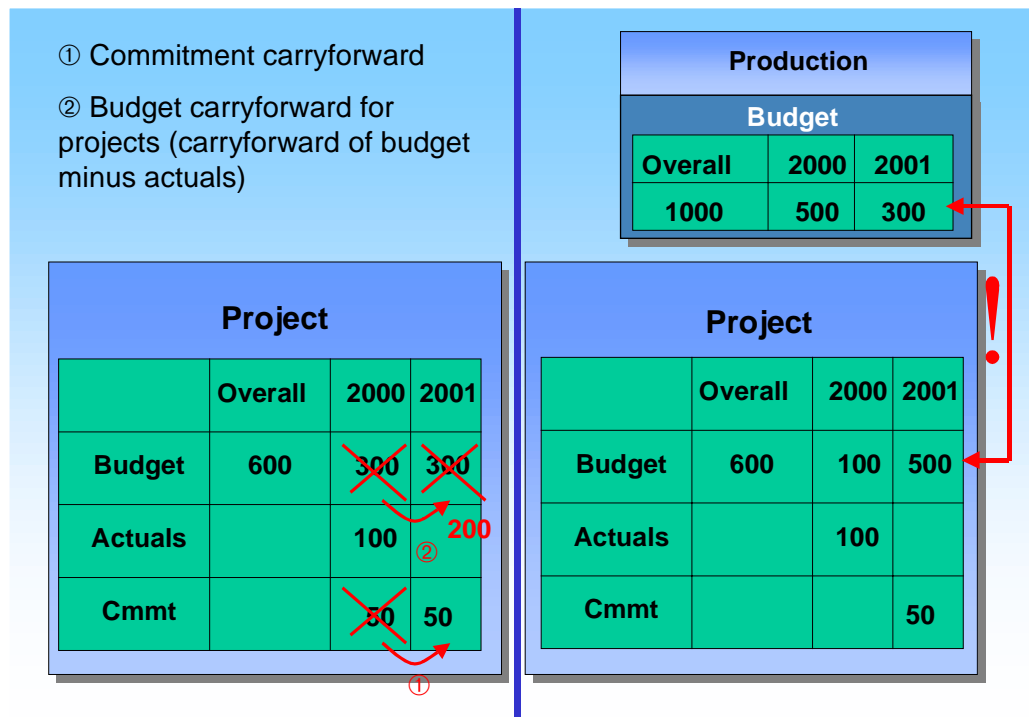
Example: Performing Budget Carryforward

1. The *Production* program position of investment program INVEST/2000 is assigned to a project that has actual values and a commitment.

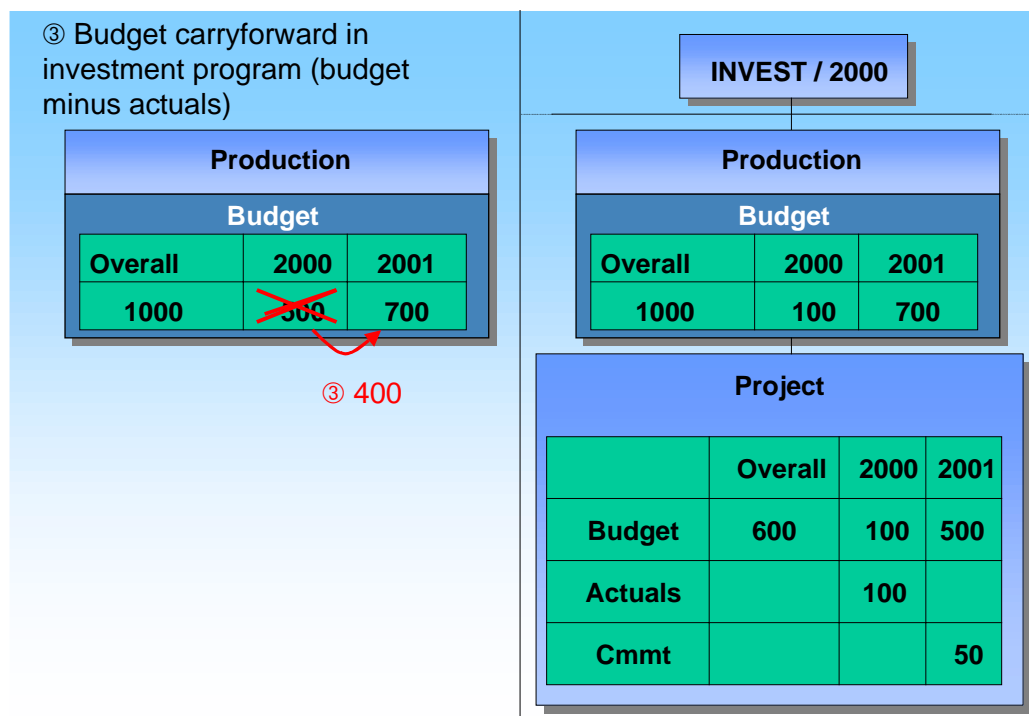


2. You carry the commitment forward to the new fiscal year. In the next step, you carry forward the unused budget of the project (that is, the budget minus the actuals that were posted). As a result, the investment measure has a higher budget in fiscal year 2001 than was originally approved for fiscal year 2001 in the investment program.

Example: Performing Budget Carryforward



3. By means of the budget carryforward in investment program function, the unused budget is transferred to the next fiscal year (that is, the budget minus the actuals that were posted). Now the budget on the measure does not exceed the budget on the investment program position to which it belongs.



Example: Performing Budget Carryforward

Authorizations

Authorizations

Use

You can restrict the processing of investment programs, including reporting, using authorization objects.

See also:

For general information on maintenance of authorizations, and information on individual authorization objects and the activities that can be limited, refer to:

- Implementation Guide (IMG) of *Investment Management*. Choose *Investment Programs* → *Preparing for Production Startup* → *Maintain Authorizations*
- Directly in role maintenance (transaction: PFCG). Choose *Environment* → *Authorization objects* → *Display* → *Investment Management*. To view the long texts for the authorization objects, choose the information icon next to the object.

Status Management

The system provides status management for processing investment measures (WBS elements and orders). Using status management, you can define your own status settings, in addition to those that are predefined in the system (such as, created, released, and so on).

Features

Usually you need status management in order to control the organizational aspects of planning and budgeting investment programs. Therefore, the program positions of the investment program can use the functions of general R/3 status management. By defining the appropriate user statuses, you make sure that certain actions (such as budgeting) can only be carried out when the program position has a given status. You can also link the changing of statuses to an authorization. You thereby guarantee that status changes can be made only by specific decision-makers in your organization.

Status Selection Profile

You can also define status selection profiles in Customizing for *Investment Management*. A status selection profile describes a given system and/or user state. You can enter a status selection profile in the following functions:

- Fiscal year change
- Rollup of plan values from investment measures
- In standard reports in the Information System

The system then selects only those program positions or investment measures that have the status described in the status selection profile. For example, you can choose to report only on investment measures that have already been released.

See also:

For more information on user statuses, see the Implementation Guide (IMG) for Investment Management. Choose

- *Investment Programs* → *Master Data* → *User Status*
- *Investment Programs* → *Information System* → *Information System Without Summarization (Current Data)*

Upload/Download of Investment Programs

Upload/Download of Investment Programs

Use

The system provides an upload/download function for investment programs. You can automatically generate the structure of an SAP R/3 investment program from a sequential file (upload), or create a sequential file from an existing R/3 investment program (download). The ABAP programs for this purpose are

- RAIM_UPLOAD (upload)
- RAIM_DOWNLOAD (download)

Integration

The upload and download of investment programs or investment program sub-trees is handled by the methods of the *ExpenditureProgTree* business object (*Create* for uploads and *GetDetail* for downloads).

Features

Upload and download provide the following functions:

- If you have an existing investment program in a non-R/3 system, you can create a sequential file from it, which you can use to generate an investment program in the R/3 system using upload (corresponds to a legacy data transfer).
- You can create an investment program in a non-SAP application (such as Microsoft[®] Excel) and store it as a sequential file. Then you use the upload function to generate an investment program from this file.
- You can use the download to convert an existing investment program in one R/3 System to a sequential file, and then upload it into a different R/3 System (corresponds to the transport between R/3 systems or different clients).
- You can use RAIM_UPLOAD to attach a program sub-tree at any point within an existing program tree. The point in the existing program at which this takes place is controlled by the two parameters, *Position ID of parent* and *Position ID of predecessor*.

When one of these two parameters is set, the system automatically sets the controlling area of the parent or predecessor position in the program sub-tree.

For more information, see the system documentation for the *Create* method of the *ExpenditureProgTree* business object, and its *Parent* and *Predecessor* parameters (transaction: BAPI).



This upload/download function applies only to the **structure** of an investment program. You **cannot** transfer plan and budget values using upload/download.

Structure of the Sequential File

The upload function requires the records in the sequential file to have a particular format. This required format is specified by the BAPIPROGSTRUC dictionary structure.

Upload/Download of Investment Programs

For more information on the individual fields, see the system documentation for the *Create* method of the *ExpenditureProgTree* business object, and its *ProgTree* parameter (transaction: BAPI).

Files for uploading must be ASCII files with tab formatting. Each line of the ASCII file represents a record in the BAPIPROGSTRUC dictionary structure, where each tab is interpreted as a field or column change.

The hierarchy of the investment program being created is clearly determined by both

- The hierarchy level (LEVEL field)
- The sequence of the records in the sequential file

During this process, similar logic applies as for creating a work breakdown structure using the list option.



The investment program you are creating should have as its highest position the position TOP. Position TOP has two positions, A and B, below it. Position A also has two positions below it, A1 and A2. The sequential file for the upload must contain 5 records, with the following structure:

Record 1: Hierarchy level = 01, remaining fields for TOP

Record 2: Hierarchy level = 02, remaining fields for A

Record 3: Hierarchy level = 03, remaining fields for A.1

Record 4: Hierarchy level = 03, remaining fields for A.2

Record 5: Hierarchy level = 02, remaining fields for B



The download function of the R/3 System creates a sequential file that has records in the correct format. SAP recommends, therefore, that you first generate a download file with test program positions from the SAP R/3 System, before you upload a complete investment program from a non-SAP system. You can use the download file as a reference for the upload structure.

Considerations When Using Microsoft® Excel

If you want to create an upload file in Microsoft® Excel, structure the columns in Microsoft® Excel according to the structure of BAPIPROGSTRUC. Make sure you use leading zeroes (such as company code 0001). Set *Text* formatting for the cells. In order to generate the actual upload file, you have to save the Microsoft® Excel worksheet in text format separated by tabs (.TXT). To simplify the process, it is recommended that you also save the file in Microsoft® Excel format in parallel.

On the other hand, you may need to work with an investment program in Microsoft® Excel that was downloaded as an ASCII file. The important thing to note is that when you open the ASCII file in Microsoft® Excel, all the columns are transferred in *Text* format and not in *Standard* Microsoft® Excel format. The reason is that those purely numerical fields with leading zeroes (such as company code 0001) would otherwise be lost in the transfer.

Upload/Download of Investment Programs

Server

The sequential file can be on the application server or on a presentation server.

- On the application server, the file has the exact BAPIPROGSTRUC structure. The fields have the length specified by BAPIPROGSTRUC and follow the sequence specified by BAPIPROGSTRUC.
- On the presentation server, the file also contains the fields in the sequence specified by BAPIPROGSTRUC. However, the field lengths are not necessarily those specified by BAPIPROGSTRUC. Therefore, the individual fields in a record have to be separated by tabs.

Download Procedure

Simply enter the source investment program and the file name.

Upload Procedure

The upload creates only the program positions in the R/3 System. You need to create the program definition before the upload and enter it when carrying out the upload. In addition, you have to enter the

- Controlling area
- File name

During the upload, the system creates investment program positions and links them together in a hierarchy. The system is not able to automatically enter

- Assignments to investment measures
- Long texts
- Classification data
- Depreciation simulation data

The default values in the program type (which is entered in the program definition) determine the investment measures allowed for the new investment program positions.

The new investment program positions have *Created* system status. If the program type also requires a user status, the system sets the initial user status.

Special Problem: More than One Top Position

The sequential file for the upload is only allowed to contain one record with LEVEL = 01 as the first record (top position). The upload, in particular, is not able to process more than one record with LEVEL = 01. If you have several top positions with LEVEL = 01, generate a separate sequential file for each of these positions along with all positions below them in the hierarchy. Then start the upload for each of these files one after the other. For a combined upload and download (transporting an investment program between SAP system or clients), create download files following the same pattern. This is done by entering one top position as the point of entry position for each download.

Activities

Start the RAIM_UPLOAD program (for uploading investment programs) and RAIM_DOWNLOAD program (for downloading investment programs) by choosing *System → Services → Reporting* (transaction SA38).

BAPIs for Investment Programs

BAPIs for Investment Programs

Use

Various methods are supplied in the *ExpenditureProgDef* (BUS1157) and *ExpenditureProgTree* (BUS1158) business objects for accessing investment programs of the R/3 System from external systems.

Features

[Business Application Programming Interfaces \[Ext.\]](#) (BAPIs)

BAPIs for <i>ExpenditureProgDef</i>	Description
Change	Change program definition
Create	Create the program definition
ExistenceCheck	Check if the created program definition already exists
GetDetail	Call information about the program definition
GetList	Display all program definitions as per selection conditions
SaveReplica	(internal use only)

BAPIs for <i>ExpenditureProgTree</i>	Description
Change	Change master data of investment program positions
Change Values	Change budget values or plan values on the positions of a program sub-tree
Create	Create program sub-tree in the specified investment program
Delete	Delete program sub-tree with the specified point-of-entry position
DeleteValues	Delete budget or plan values of all positions of a program sub-tree
ExistenceCheck	Check if a program sub-tree with the specified point-of-entry position already exists in the system
GetDetail	Return master data of positions of a program sub-tree
GetDetailValues	Determine plan values, budget values, actual values and commitments for the positions of a program sub-tree
GetStatus	Return the active system status and user status of all positions of a program sub-tree

BAPIs for Investment Programs

Reassign	Reassign program sub-tree with the specified point-of-entry position
SetStatus	Change the system status and user status of positions of a program sub-tree
SaveReplica	(internal use only)
SaveReplicaValues	(internal use only)



For detailed documentation of the individual BAPIs and their parameters, refer to the *BAPI Explorer* (transaction: BAPI).

Appropriation Requests

Appropriation Requests

Purpose

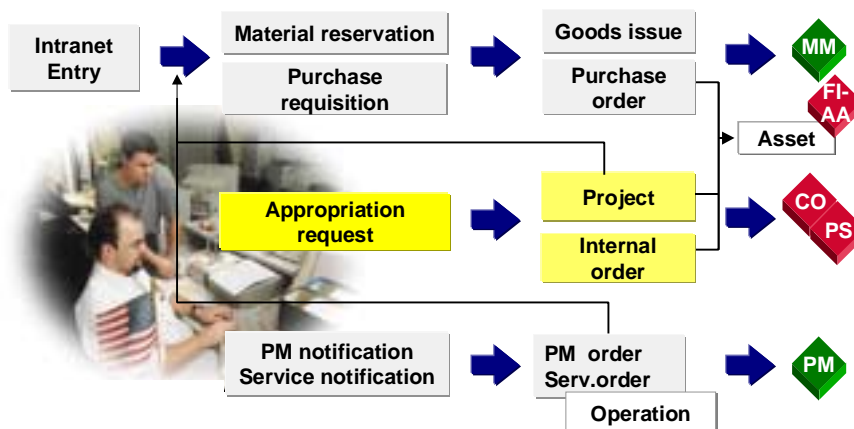
The *Appropriation Requests* component supports the investment process in the phase concerned with planning and making decisions about investments to be implemented.

Features

In a certain sense, appropriation requests serve a similar function as purchase requisitions and maintenance notifications. In the investment process, appropriation requests allow you to represent investment wishes or research and development ideas in the stages before they are actually implemented concretely.

You can plan appropriation requests and carry out preinvestment analysis for them. In the context of capital investment planning, appropriation requests make it possible to include planned investments in cyclical (annual) investment planning using an investment program.

Once the appropriation request has been approved, the information can be transferred to the measure (order or project) that will be used for actually carrying it out.



Appropriation Requests

The term "investment" in this context does not refer only to investments you are required to capitalize. You can use appropriation requests and measures for many different kinds of activities your enterprise plans, but primarily if the following conditions apply:

- You want both separate management accounting, and approval for the activity on an individual basis, due to its scope.
- The activity initially causes costs and may only generate revenue or provide other benefits after a certain time period has elapsed.

The *Appropriation Requests* component is comprised of the following functions:

Function	Used for...
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Appropriation Requests

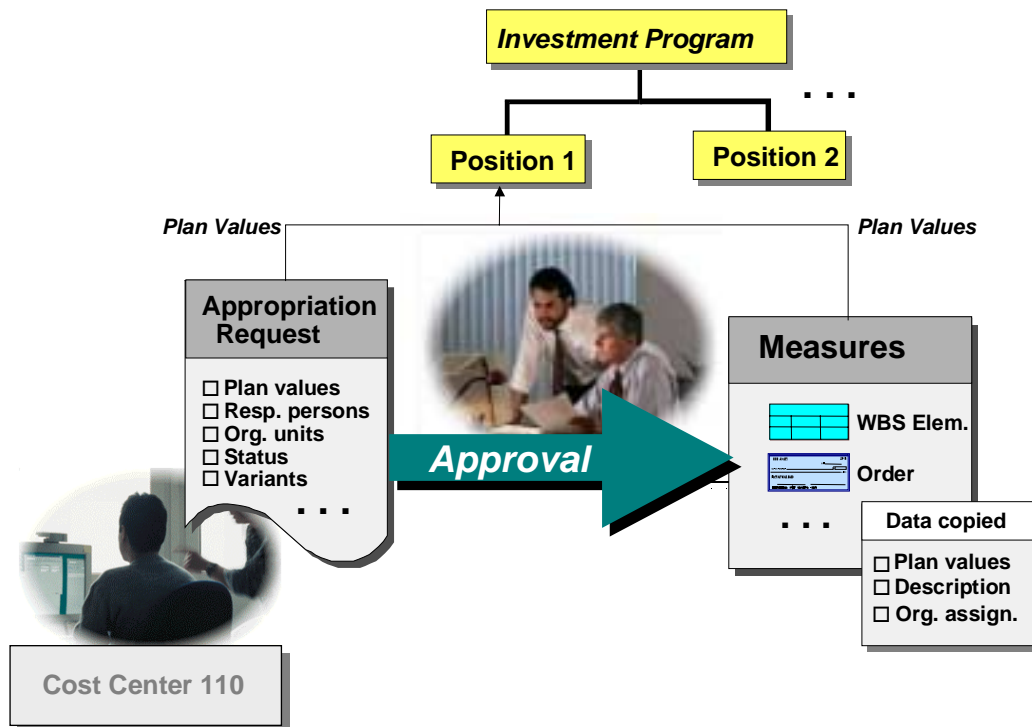
Processing of Appropriation Requests [Page 104]	... creating and changing master data and appropriation request variants
Status Management [Page 137]	... representing different phases in the life of an appropriation request
Cost and Revenue Planning for Appropriation Requests [Page 142]	... planning of costs and revenues as the basis for later approval
Approval of Appropriation Requests [Page 170]	... representing a multi-level approval process
Replacement by a Measure for Implementation [Page 179]	... generating measures based on appropriation requests that have been approved

Appropriation Request

Appropriation Request

Definition

An appropriation request is an idea or wish for carrying out a measure (such as, an investment or research and development), which has to be individually assessed and approved by one or more positions within an enterprise, primarily because of the high costs involved. Just like measures, appropriation requests represent concrete plans that are to be implemented in an enterprise.



Features of Appropriation Requests

Use

Appropriation requests are a kind of noted item for proposed investments. They have extensive master data, in which you can enter information relevant to the investment.

In addition, appropriation requests assist in investment planning. Usually, you create an appropriation request in the year prior to the planned implementation of the investment. You enter it in the requesting organizational unit (such as the cost center). In this way, you can include the appropriation request at an early phase of the creation of the annual investment program.

Using various types of financial mathematics, you can perform preinvestment analysis directly on the appropriation request.

Measures

Once it is approved, the appropriation request enters the implementation phase, in which it is actually carried out. You use a measure for the actual implementation of the appropriation request. Depending on the functions you need for managing the measure during the implementation phase, there are several R/3 system objects you can use as measures. The objects that can currently be used as measures for appropriation requests are:

- WBS elements
- Internal orders

For more information on the differing functions of these objects, see [Deciding between Orders and Projects \[Page 192\]](#).

Structure

An appropriation request consists of a master record with basic information about the type of investment being planned, the organizational assignments, and the measure that will be used to implement the appropriation. You can create variants for each appropriation request. You use the variants to represent different alternatives for how the appropriation request can best be realized. Each variant has its own master data information about the implementation of the measure, with plan values being particularly important. An appropriation request always has at least one appropriation request variant.

Processing of Appropriation Requests

Processing of Appropriation Requests

Purpose

The *Processing of appropriation requests* process is used for creating and changing appropriation requests.

Prerequisites

An appropriation request type has to be defined in Customizing of *Investment Management* (*Master Data* → *Control Data* → *Define Appropriation Request Types*).

Process Flow

1. First, decide which transaction you want to use to create an appropriation request.

There are three different transactions for creating appropriation requests: standard, simplified and Internet (refer to [Processing Options \[Page 109\]](#)).

2. When you create an appropriation request, you are first required to enter an appropriation request type.

Or you can enter a reference appropriation request. The system then copies all master data and all appropriation request variants from the reference appropriation request. The following information is also copied from the appropriation request variants:

- Plan values
- Cost estimates
- Depreciation simulation data
- Documents assigned to the variant (refer to [Document Management \[Page 121\]](#))

The system does not copy:

- Assignment to an investment program
- Measures assigned to the variant
- Assignment of the variants to plan versions (refer to [Assignment to an Investment Program \[Page 122\]](#))

If you enter both a reference appropriation request and an appropriation request type, the system uses the appropriation request type that you entered. It also copies as much of the master data information as possible from the reference appropriation request.

3. If you use external number assignment, you have to enter the number of the appropriation request yourself (refer to [Number Assignment \[Page 117\]](#)). Remember that you can also use a coding mask here (refer to [Coding Mask for the Appropriation Request Number \[Page 119\]](#)).
4. In the new appropriation request, you can enter descriptive and organizational information (refer to [Master Data at the Appropriation Request Level \[Page 106\]](#)).

You can also enter assets and equipment that will be replaced when the appropriation request is implemented. However, entering assets or equipment is currently only for your information.

Processing of Appropriation Requests

5. An appropriation request describes only the **fact** that a certain measure should be carried out, and the **persons**, who are organizationally part of this process. You specify **how** the measure should be carried out by using at least one appropriation request variant. At the level of the appropriation request variants, you can also plan costs and revenue (refer to [Processing Variants \[Page 127\]](#)).
6. You also can enter an assignment to an investment program position in the master data of the appropriation request. However, remember that the plan values of an appropriation request actually stem from its appropriation request variants. Therefore, in order to roll up plan values in the investment program, both of these requirements have to be fulfilled:
 - You have to create at least one appropriation request variant.
 - You have to assign this request variant to a plan version of the investment program.

Master Data at the Appropriation Request Level

Master Data at the Appropriation Request Level

Use

Each appropriation request has its own master record. You enter general and organizational information about the planned investment in this master record. You maintain the master data in the form of a tab.

Features

The master data that you can enter in an appropriation request is listed here. You can also enter additional master data at the level of the appropriation request variant.

Identification Key

You can set up the identification key either like the key of a WBS element (24 characters, with a coding mask), or like the key of an order (12 characters). In this way, the appropriation request can have the same number as the measure that is later used for carrying it out.

General data

You can enter the following general data in the appropriation request (*General data* tab page):

- Description
- Reason for investment (with percentage distribution, which has to equal 100%)
- Environmental indicator (with percentage distribution, which can be less than 100%)
- Scale
- Priority
- Approval year (for informational purposes only)
- Planned date for approval
- Planned date for the start of implementation (for informational purposes only)
- Country of the investment
- Trading partner (when the request is carried out within a corporate group)
- *Required by external authorities* Indicator
- Persons involved

You can also enter a long text for each appropriation request. You can use templates to ensure that the long texts are formatted uniformly.

Control Data

On the *Control data* tab page, you can specify the following:

- System status (refer to [Status Management \[Page 137\]](#))
- Assignment to an investment program (refer to [Assignment to an Investment Program \[Page 122\]](#))
- Assignment to an original request (refer to [Alternate Appropriation Requests \[Page 134\]](#))

Assignment to Organizational Units

The system distinguishes between two types of organizational units: the responsible organizational units (those that carry out the request) and the requesting organizational units (those that plan to use the request when it is implemented). Below is a list of the organizational units that you can assign to an appropriation request (on the *Organizational units* tab page):

- Controlling area
- Company code (responsible and requesting)
- Business area (responsible and requesting)
- Cost center (responsible and requesting)
- Profit center (responsible and requesting)
- Plant (responsible only)
- Location (for informational purposes only)
- Company (responsible and requesting)
- Functional location (responsible only)

You can assign percentages to the following organizational units:

- Business area
- Cost center
- Profit center
- Division (with percentage distribution, which has to equal 100%)
- Material group (with percentage distribution, which has to equal 100%)

Company code and company can be additional requesting organizational units.



Remember that a cost center is normally assigned to a profit center and a business area (if you are using these organizational units). Therefore, when you enter a cost center in the appropriation request master data, the system automatically enters the profit center and business area belonging to the cost center in the appropriate fields. As a result, maintaining the business area or profit center fields does not make sense when you have already assigned a cost center.

Measures and Assets

You can go directly to the orders or WBS elements that will be used to carry out the appropriation request. Choose the *Measures/assets* tab page (refer to [Conversion to a Measure for Implementation \[Page 179\]](#)).

You can use the same function to assign the assets or equipment that should replace the appropriation request. However, entering the asset or equipment is only for your information.

User Fields

User fields allow you to enter information on appropriation requests that is not contained in the master data fields supplied by SAP (on the *User fields* tab page).

Master Data at the Appropriation Request Level

In addition, customer enhancement AAIR0002 enables you to create your own user-defined fields. For more information, see the system documentation on customer enhancements (transaction SMOD).

Variants

It is mandatory that you enter at least one appropriation request variant (on the *Variants* tab page). For more information, see:

[Appropriation Request Variants \[Page 128\]](#)

[Processing Variants \[Page 127\]](#)

[Creating an Appropriation Request Variant \[Page 131\]](#)

Activities

You define the allowed values for master data fields and define templates for long texts in Customizing for Investment Management. Choose *Appropriation Requests* → *Master Data*.

Processing Options

Use

The *Appropriation Requests* component offers three different transactions for entering data for appropriation requests. The processing transaction that you use depends on your responsibilities. (For example, is a user responsible for master data maintenance or for planning?) This means that the system provides a special simplified transaction for casual users, who need less information and fewer functions, for example. In combination with the roles provided by SAP, this offers the advantage not only of a selection of transactions tailored to the user's needs, but also screen layouts in these transactions suited to individual requirements.

Prerequisites

The way the transaction is shown is dependent on the combination of the appropriation request type and the processing transaction. To make the screen layout dependent on the transaction, you make the following settings in Customizing for *Investment Management*. Choose *Appropriation Requests* → *Master Data* → *Control Data* → *Define Screen Layout for Appropriation Requests*:

- Select *Transaction* as an influencing field in the *Field Selection* screen.
- Define the allowed selection criteria for the initial screen per transaction, and specify the standard selection criteria.

If you did not enter tab layouts in the appropriation request type, then the system uses the standard system tab layouts.

The tab layout and screen layout that SAP provides for the processing transactions are to be considered as recommendations that you can modify to reflect the needs of various roles. You can modify the tab layout and screen layout to better reflect your requirements at any time.

Features

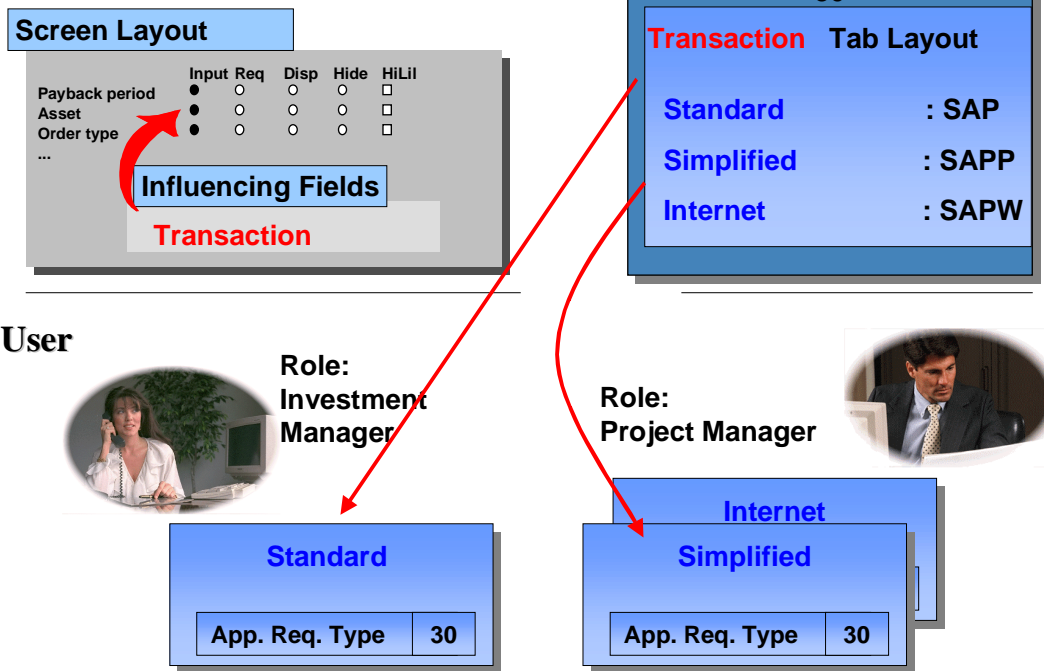
The processing transactions available are listed below:

- Standard appropriation request
- Simplified appropriation request
- Internet appropriation request

The transactions differ from each other in their initial screen, their screen layout, and their tab layout. They can be assigned to different roles.

Processing Options

Customizing



Processing

All of the processing transactions contain functions for creating, changing and displaying appropriation requests.

You can choose whether or not to display the worklist function in the processing transaction by choosing *Worklist on* or *Worklist off*. The worklist is a complex tool for targeted selection of existing appropriation requests. In the worklist you can

- Display the most recently processed appropriation requests (choose *History*)
- Display the appropriation requests that meet the last selection criteria entered (choose *Hit list*)
- Select appropriation requests using various, combinable search criteria (for example, appropriation request type, cost center) by choosing *New selection*

The bottom part of the worklist shows the hit list that results. You select an appropriation request from this list for further processing (*Display*, *Change*, *Delete*).

Transactions

For each of the three processing transactions, you can enter your own tab layout in the appropriation request type. In this way, users with different responsibilities can create and process the same appropriation requests, but each user sees different tab pages, on which different fields appear.

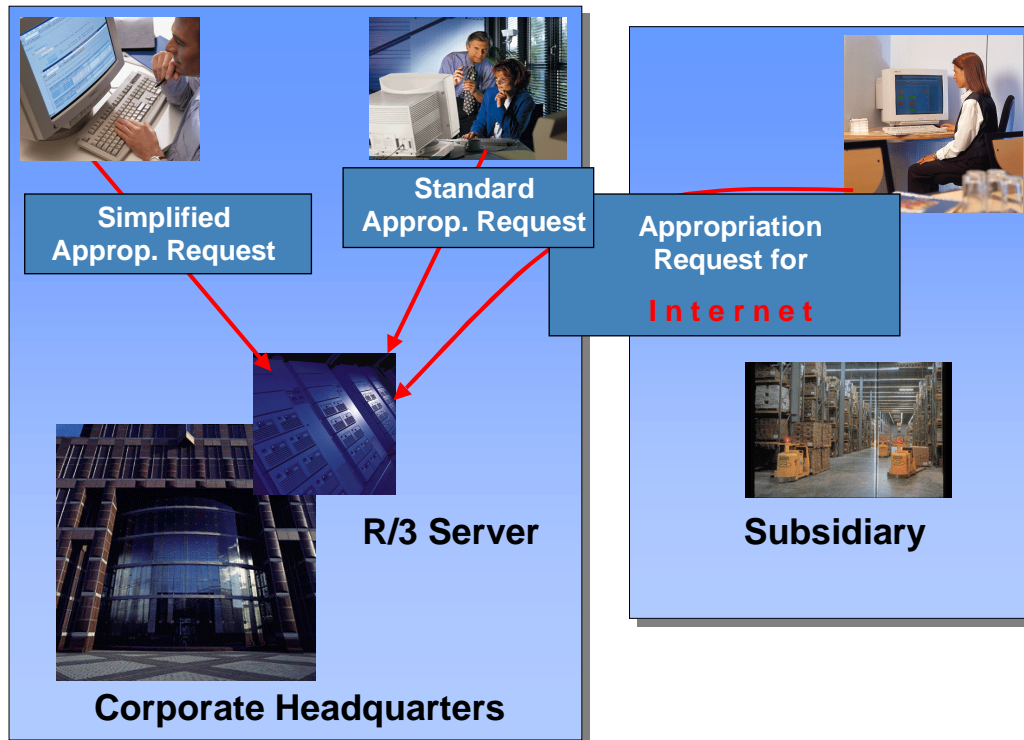
The standard appropriation request transaction is intended for users, who use the full functions of the *Appropriation request* object. The simplified appropriation request transaction is intended for

Processing Options

applicants and planners at the local level (for example, their tasks may include creating appropriation requests, or processing plan values). This transaction is especially suited for users who have limited authorization, or only need limited information.


The Internet appropriation request transaction, with its simple screen layout, is intended specifically for the Internet. Appropriation requests can be created and changed over the Internet using this transaction. One possible scenario: the R/3 System is located in corporate headquarters only, and users in subsidiaries do not have direct access to R/3. But, using the Internet, the subsidiaries could maintain appropriation requests.

When the transaction is called via Internet and Intranet in the Web Browser, the transaction is displayed without the menu bar and the application toolbar. It consists only of the initial screen and a data screen.




Editing Appropriation Requests

Procedure




1. Choose *Edit Appropriation Requests*.
2. Choose one of the transactions for individual processing. For information about the differences between these transactions, refer to [Processing Options \[Page 109\]](#).
The *Display Appropriation Request* screen appears.
3. To create a new appropriation request using an existing appropriation request as a reference, select the reference in the selection screen, and choose  *Create with template*.

Note: when the system creates an appropriation request using a reference, it also copies the request variants from the reference to the new request. If the reference appropriation request contains one or more variants, for which cost estimates were entered, then the system also copies these cost estimates.

To create an appropriation request without using a reference, choose  *Create*.

4. Enter an appropriation request type. Enter a project profile and a controlling area, if requested.
5. Enter the following data (along with other data) on the different tab pages:
 - General data (for example, description)
 - [Status \[Page 140\]](#)
 - [Partners \[Page 172\]](#)
 - Organizational units
 - Assignments: to investment program, orders or WBS elements for the [implementation of the appropriation request \[Page 179\]](#), to the assets or equipment affected (often those that will be replaced when the measure is implemented – this information is for your information only)
 - [Appropriation Request Variants \[Page 130\]](#)
5. Save.



To edit an existing appropriation request, select it in the worklist, and choose  *Change* or  *Delete*. You might have to generate a new worklist. You specify the search criteria by choosing  *New selection*.

Master Data Maintenance

Use

The following objects describe the system functions for master data maintenance of appropriation requests.

Screen Layout

Screen Layout

Use

Using the screen layout control, you can modify the field characteristics of appropriation requests and appropriation request variants to your individual requirements.

Features

Screen Layout of Master Data Fields

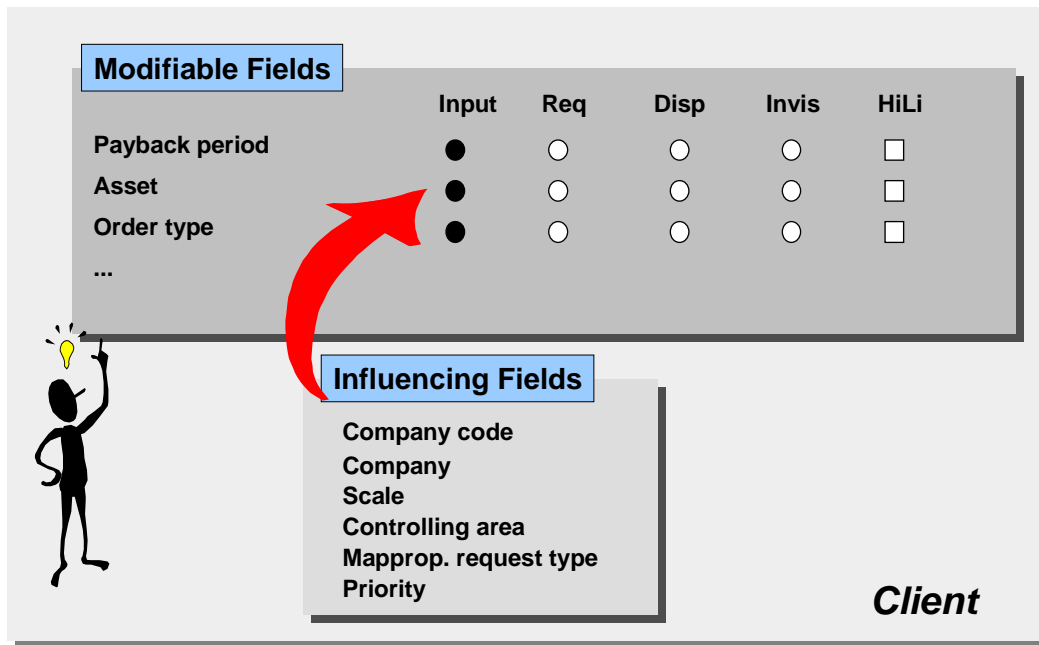
You can control the field characteristics of master data fields dependent on the entries in certain influencing fields (Customizing: *Master Data* → *Control Data*). The following the influencing fields can be used for appropriation requests:

- Controlling area
- Appropriation request type
- Company code
- Company
- Scale
- Priority

Depending on the contents of the influencing field, you can specify whether a field is

- Required entry or optional entry
- Suppressed
- Highlighted

You can use this function, for example, to specify that the cost center is a required entry for certain appropriation request types, and an optional entry for others. It is also possible to make the investment reason a required entry when the appropriation request has a certain scale.



Screen Selection for Appropriation Requests

In the initial screen of the transaction for creating an appropriation request, you can enter only the appropriation request type and the controlling area. As a consequence, influencing fields, such as *company code*, *company*, *scale* and *priority*, do not have any influence on the screen layout at first. You do not see the affects of the influencing fields until you save the appropriation request. The system then issues an error message if there is a disagreement.



You should be aware that it is possible for the specifications for influencing fields to contradict each other.

You have the option of defining the screen layout control without using influencing fields. The screen layout you define is then valid for all influencing fields in the client, regardless of their contents.

Tab Structure

The master data of appropriation requests is on tab pages. You can define the tab layout yourself, including the number of tab pages, their headings, the fields they contain, and the placement of these fields on the tab pages.

See also:

Implementation Guide (IMG), choose *Appropriation Requests* → *Master Data* → *Control Data* → *Specify Tab Layout for Appropriation Requests*.

Screen Layout**Activities**

You configure screen layouts in Customizing for *Investment Management*. Choose *Appropriation Requests* → *Master Data* → *Control Data* → *Define Screen Layout for Appropriation Requests*.

Number Assignment

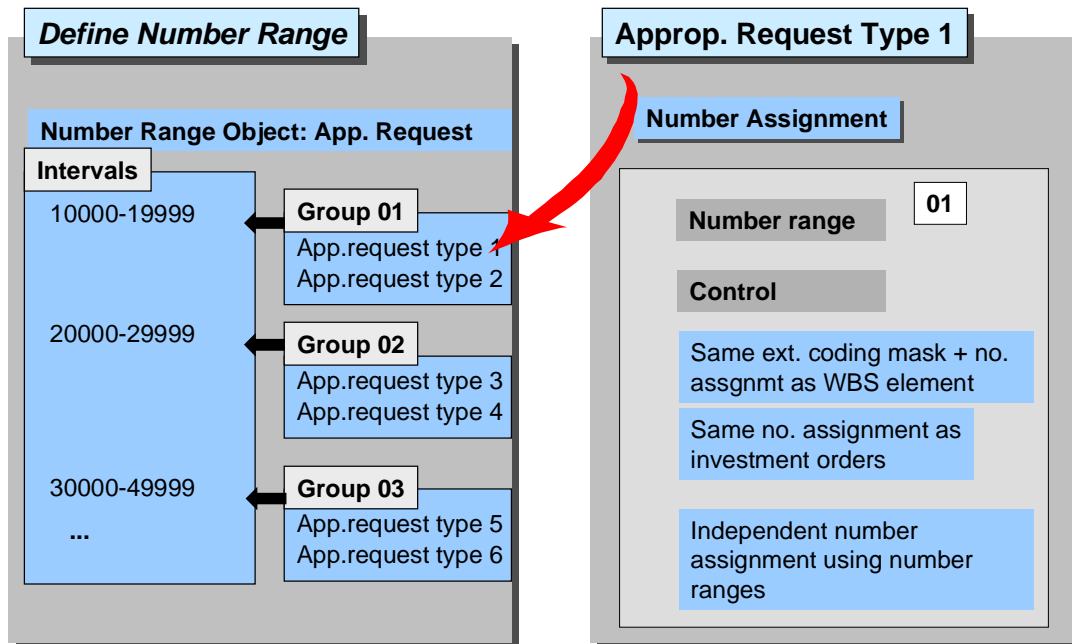
Use

You can control number assignment for appropriation requests using the appropriation request type. There are various ways of using the appropriation request type for this purpose. Each of these methods has its own organizational requirements.

Features

You need a number range for the assignment of the appropriation request number. It is not possible to create measures for an appropriation request type, unless you assign a number range group of the *appropriation request* number range object to the appropriation request type.

The system displays the assigned number range group in the definition of the appropriation request type. However, you cannot maintain the number range group there.



Number Assignment for Appropriation Requests

You specify the details for the number assignment in the definition of the appropriation request type. These specifications determine how the numbers are assigned for the appropriation request, and for the measure that will be created for it later. The following options exist:

- **Same external coding mask and number assignment as WBS element**

Use this option to specify that measures that are WBS elements have the same number as the appropriation request. If the number of the WBS element uses a coding mask, the system uses the same coding mask for the appropriation request. When you create the appropriation request, the system checks if there is already a project definition that has the same number, and if so, rejects your entry.

Number Assignment

With this option, you have to use a number range with internal number assignment for the appropriation request. The number from the internal number assignment, however, is only used internally by the system. You have to assign the actual number of the appropriation request and WBS element externally.

Even though you have defined number assignment that is the same as the WBS element, you can still create orders as measures for the appropriation request. You can also manually assign additional WBS elements to the appropriation request.

- **Same number assignment as investment orders**

Use this option to specify that measures that are internal orders have the same number assignment as the appropriation request. The appropriation request can use a number interval with internal or external number assignment. Number assignment has to be external.

You have to make sure (organizationally) that the appropriation request number is in a number interval that is also available for the order that is to be created.

- **Independent number assignment using number ranges**

You use this option when you want to create orders as measures from the master data transaction of appropriation requests. You then have to specify internal number assignment for orders, or make sure that the number of the appropriation request is available in the number range of the order.

Activities

You specify number assignment for appropriation requests in Customizing for Investment Management. Choose *Master Data* → *Control Data* → [Define Number Assignment \[Ext.\]](#).

Coding Mask for the Appropriation Request Number

Use

You can keep your appropriation request numbers more uniform by using coding masks. These coding masks assist in the formatting of character strings. The procedure **and** the coding masks are the same as those used for formatting WBS element keys in the Project System (PS) component.

In order to use coding masks, you have to set the indicator for *Same external coding mask and number assignment as WBS element* in the appropriation request type. Setting this indicator has the following results:

- The measure (WBS element) that is created subsequently for the appropriation request receives the same number as the request (refer to [Number Assignment \[Page 117\]](#)).
- The same coding mask is used for creating the WBS element and the appropriation request.

It is not possible to format the appropriation request number independently of the resulting WBS elements. Using coding masks is also not possible if the measures created later are internal orders.

Features

Coding Mask for the Appropriation Request Number

The system uses the coding mask ID and the leading characters of the appropriation request number to determine the coding mask to be used. If these two agree, the system tries to apply the coding mask to the appropriation request number entered. If this does not work, the system issues an error message. Using coding masks helps to ensure that the keys of your appropriation requests all have a certain structure.

Special Characters

1	<input type="checkbox"/>	/ .	<input checked="" type="checkbox"/>
Length of Edit ID	Generic Search	Special character	Edit active

Coding Mask

A	/XXX.0.0.00	<input type="checkbox"/>
Edit ID	3 alphanum. characters 4 numeric characters Coding Mask	Lock Indic.

Approp. Request Type

☒ Same external coding mask as WBS elements

Allowed app. request number, for example:

A/XYZ.1.2.34

Coding Mask for the Appropriation Request Number**Coding Mask for the Appropriation Request Number**

You also specify in Customizing which special symbols are allowed in the coding mask. The system sets the special symbols in the coding mask automatically, if the first characters of the character string you enter agree with the coding mask ID: The functions of other indicators for the coding mask include:

- Setting the number of leading characters in the appropriation request number that are needed to correctly identify the coding mask to be used (this is the coding mask ID)
- Setting the coding mask function in the client to active

Restricting the Coding Mask

You can assign coding masks to appropriation request types for the formatting of the appropriation request number. In addition, you can specify a slightly different coding mask, which the system should then use for the numbers of projects/WBS elements that are created from these appropriation requests.

Activities

You maintain all settings for coding masks in Customizing for *Investment Management*. Choose *Appropriation Requests* → *Master Data*.

For more information, see:

[Coding Mask for the Appropriation Request Number \[Ext.\]](#)

[Specify Special Symbols for Approp. Request Number \[Ext.\]](#)

[Define Coding Mask for the Appropriation Request Number \[Ext.\]](#)

Document Management

Use

Very often you have a large number of original documents, of both a technical and an accounting nature, for your planned investments. You want to manage these documents for appropriation requests and their variants as centrally as possible. Therefore, the documents can be stored digitally in a document management system.

Features

Appropriation request variants share an interface with the central document management function in the SAP R/3 System. You access it in the master data transaction for appropriation request variants on the *Variants* tab page. This interface allows you to link any number of documents, for example those listed below, to your appropriation request variants:

- Original documents
- Text files
 - Blueprints
 - Spreadsheets

The documents are stored (either locally or centrally) according to the specifications in central document management of the SAP R/3 System.

See also:

[Document management \[Ext.\]](#)

Assignment to an Investment Program

Assignment to an Investment Program

Use

In order to be able to determine plan values for an investment program with the highest degree of accuracy, you need to include the values from appropriation requests in the planning process. In this way, you guarantee that planned investments are considered in investment planning and budgeting from their inception onward.

Features

You can assign an appropriation request to an investment program in the master data transaction for the appropriation request (on the *Control data* tab page). It is also possible to assign appropriation requests to more than one investment program position (refer to [Multiple Assignment of Investment Measures \[Page 29\]](#)). Investment programs always relate to one specific approval year. Therefore, in addition to the assignment to a program position, you have to enter the approval year.

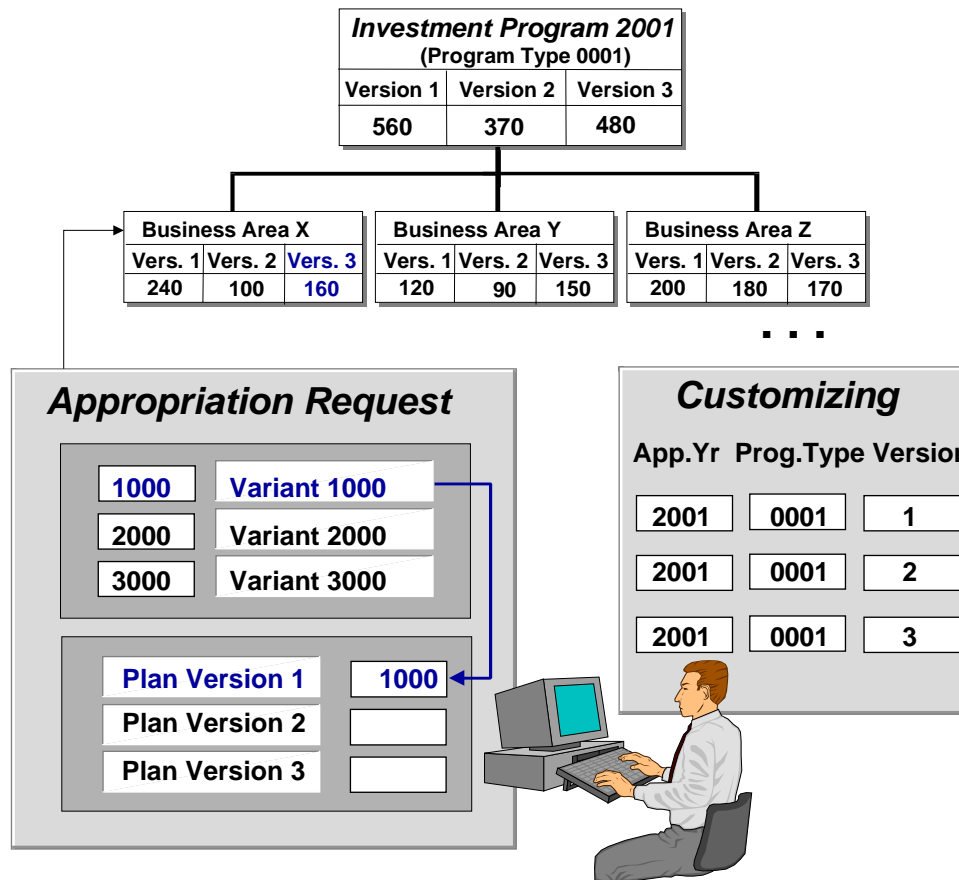
You can make the assignment to a program position a required entry field for the creation of appropriation requests. You use the [screen layout control \[Page 114\]](#) of the appropriation request to designate this field as required.

Versions

You can manage plan values for the investment program in several versions (refer to [Versions for Planning \[Page 56\]](#)). For this reason, when you assign an appropriation request to an investment program position, you also have to assign the request to a version. In the master data transaction for appropriation request variants, therefore, the system displays the versions and their approval years that were defined in Customizing, so you can make a variant-related assignment.

Once the assignment has been made, you can roll up the plan values of the appropriation request variants on the investment program (refer to [Cost Planning on the Investment Program \[Page 54\]](#)).

Assignment to an Investment Program



Assignment of Variants to Plan Versions



You can only assign versions (with their approval years) to appropriation request variants if these versions have been defined in Customizing, and have been assigned to the given approval year/program type (Customizing: *Investment Programs* → *Planning in Program*).

New Versions (Copying Version Assignment)

Once you have created a version for an investment program, you can copy all the assignments of appropriation requests from an existing reference version (*Periodic processing*). For a new version of the investment program, you might need new variants for most of your appropriation requests. In this case, you can choose to create new variants automatically. The system then copies the plan values from the variant to which the reference version is assigned.

Mass Maintenance

Mass Maintenance

Use

The mass maintenance tool for appropriation requests is a general R/3 tool also used in other R/3 components, such as mass maintenance of the material master record. For general information on mass maintenance and the procedures involved, see the R/3 library [CA Cross Application Mass Maintenance \[Ext.\]](#).

Features

Changeable Fields

The following data can be changed using mass maintenance:

- All master data fields of the appropriation request
- All master data fields of appropriation request variants
- Assignment (percentage distribution) to an investment program
- Assignment (percentage distribution) to organizational units, environmental investment reasons and reasons for investment
- The status of appropriation requests

Selection Criteria

Using different selection criteria, you can limit mass maintenance to certain appropriation requests:

- General data
- Status
- Texts
- Assets/equipment to be replaced
- Investment program positions



To select appropriation requests that are not assigned to an investment program position, enter 0001 in the *Approval year* field.

- Organizational units (with percentage distribution)
- Reason for investment (with percentage distribution)
- Environmental investment reason (with percentage distribution)
- Division (with percentage distribution)
- Material group (with percentage distribution)
- Variants
- Texts for variants

- Assignment of variant to plan version

Special Considerations When Changing Status

You can use the mass maintenance tool to change the status of appropriation requests. However, there are certain special situations you should be aware of:

- Changing system status

In the mass maintenance transaction, the system displays the fields *Old system status* and *New system status*. These are display fields only, since the system status is set by a business transaction. Therefore, it is **not** possible to change these fields directly. The system status can only be changed by changing the *Business transaction* field. The current content of the *Business transaction* field shows the transaction that triggered the current system status. In order to change the system status, you have to enter the corresponding business transaction for the system status you want to have (refer to [System Status Management \[Page 138\]](#)).

- Changing user status

You can change the user status (refer to [User Status Management \[Page 140\]](#)) by means of the *Status* field. The *Old system status* and *New system status* fields are in this case also for display only. You also have to take the value of the *Status inactive* field into account. This indicator also refers to the user status.

If you want to set *Submit for approval* status using mass maintenance, you first have to manually set the appropriation request variants for each appropriation request to *Submit for approval* status. However, you do not have to do so if each of your appropriation requests has only one variant.

Changing Fields with Percentage Distribution

The contents of certain master data fields in the appropriation request (such as the reason for investment field) can be distributed by percentages (refer to [Master Data at the Appropriation Request Level \[Page 106\]](#)). In this way, you can assign an appropriation request to more than one entry for these fields. For example, you can assign it to several investment reasons, such as 40% for modernization and 60% new investment. It is also possible to make a percentage assignment of an appropriation request to an investment program position.

You can process these percentage distributions using mass maintenance. However, you cannot use mass maintenance to make a further distribution. For example, you cannot change from a distribution to two reasons for investment to a new distribution to three reasons for investment.

Triggering Functions using Mass Maintenance

In the master data maintenance transaction for appropriation requests there are a number of functions that trigger system activities. One of the most important is the function for triggering the creation of a measure that is used to implement the appropriation request. In this context, you can trigger the following functions using mass maintenance:

- Activate project definition (for the measure to be implemented)
- Create WBS element (for the measure to be implemented)
- Create order (for the measure to be implemented)

Mass Maintenance

- Transfer plan values from the appropriation request to the measure

You use the *Function* field in mass maintenance for triggering these functions.

Processing Variants

Purpose

The *Processing variants* process is used for creating variants for appropriation requests.

You have to create at least one variant for each appropriation request. The variant describes how the measure should be implemented, and also serves as the planning object for cost and revenue planning (refer to [Appropriation Request Variants \[Page 128\]](#)).

Process Flow

You create an appropriation request variant using the function in master data maintenance of the appropriation request. An appropriation request variant does not have its own master data. In the master data of the variant, you can enter its descriptive and planning information (refer to [Master Data at the Variant Level \[Page 130\]](#)).

You can assign each variant of an appropriation request to a given plan version of the investment program (refer to [Assignment to an Investment Program \[Page 122\]](#)). This makes investment planning possible. You can plan costs and revenue separately for each variant (refer to [Cost and Revenue Planning for Appropriation Requests \[Page 142\]](#)).

You can also enter depreciation terms for each variant for depreciation simulation. Choose *Extras* in the master data of the variant (refer to [Depreciation Simulation \[Page 292\]](#).)

Appropriation Request Variants

Appropriation Request Variants

Use

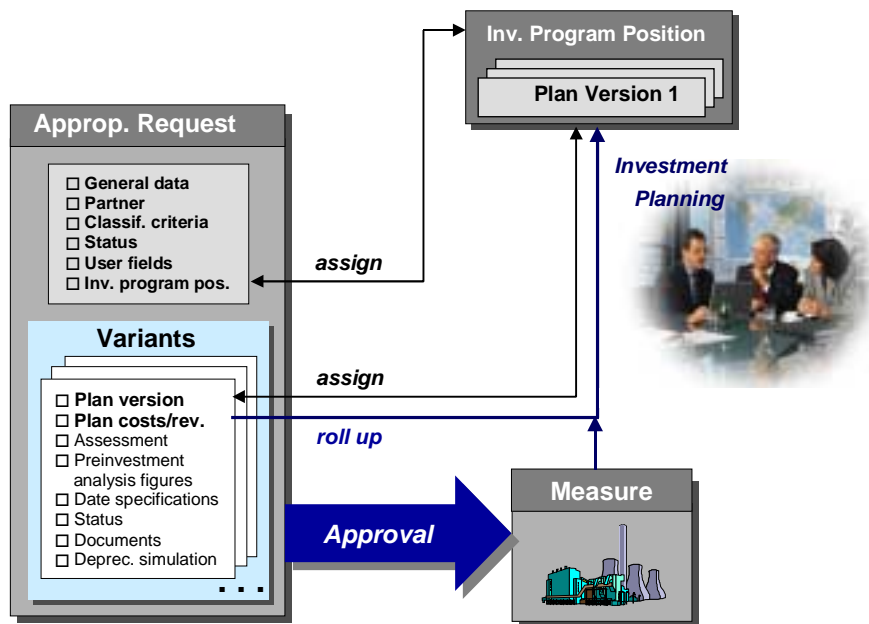
In many cases, there are a number of alternatives for fulfilling an appropriation request. These can be of a technical or fiscal nature. Technical alternatives result from the various technical limitations on different methods of implementation. Fiscal alternatives could be different methods of procurement (purchase, leasing or in-house production).

You can also use variants to represent differing factors that affect the future implementation of the appropriation request, and thereby result in differing plan values.

Features

Therefore, appropriation request variants exist for every appropriation request. In the master data of the appropriation request, you describe **what** is to be done, and who in the organization is involved (refer to [Partner Management \[Page 172\]](#)). In the variant, you describe **how** the appropriation request is to be carried out. Each appropriation request has to have **at least one** appropriation request variant.

Each variant for an appropriation request has its own master data. The system manages planned costs and revenue at the level of the appropriation request variant. After the appropriation request is approved, you implement one of the variants.



Appropriation Request Variants

You can roll up different plan values of appropriation request variants using different plan versions of the investment program (refer to [Assignment to an Investment Program \[Page 122\]](#)).




Master Data at the Variant Level

Use

Each appropriation request has at least one appropriation request variant. The variant has its own master record, in which you can enter information for carrying out the planned investment.

Features

In addition to the general master data at the appropriation request level, you can enter the following information in the appropriation request variant:

- Variant ID (4 character key)
 - Short text
 -  Long text
 -  [Document management \[Page 121\]](#)
 -  Administrative data
- You can enter an assessment as free text and/or in the form of a score (or rating).
- Planned deadlines
 - Completion date
 - Start-up date
- Indicator showing if the appropriation request needs to be approved by external governmental authorities
- Depreciation simulation data
 - With percentage distribution, as in investment measures and investment program positions (refer to [IM Information System \[Page 277\]](#)).
- Entries for the [preinvestment analysis \[Page 165\]](#)

The system also manages plan values at the level of the appropriation request variant. For more information, see [Functions for Planning Appropriation Requests \[Page 142\]](#).

Features

You define the possible scores in Customizing for *Investment Management* (Choose *Appropriation Requests* → *Master Data* → *Allowed Values for Certain Master Data Fields* → *Define Scores*).

Processing Appropriation Request Variants

Procedure

1. On the master data maintenance screen for appropriation requests, choose the *Variants* tab page.

Since each appropriation request requires at least one variant, the system creates one variant automatically.

2. To create an additional variant, choose the *Create new variant* function. Maintain the master data information for the variant.

To copy an existing variant, choose the *Copy as new variant* function. The plan values are copied automatically into the new variant. If the existing variant also has a cost estimate, a message appears asking if you want to copy it also. If you say yes, the new variant is created with the cost estimate.

To remove an existing variant, choose the *Delete variant* function. Any plan values or cost estimate that it has are also deleted.



There is an icon allowing you to switch back and forth between two different views of the variants. Choose *Change view: versions* to see the various program versions with the variants assigned to them. Or, in the other direction, choose *Change view: variants* to see just the appropriation request variants.

3. Enter a name for the variant on the *General data* tab page. You can also enter other information here, such as a verbal assessment or the planned start-up date.
4. On the *Plan versions* tab page, assign the appropriation request variant to a version for cost planning on the investment program (refer to [Assignment to an Investment Program \[Page 122\]](#)). To assist you in making this assignment, the system displays all plan versions that were entered in Customizing.
5. Enter your cost and revenue planning on the *Plan values* tab page.
6. Maintain the key figures for the preinvestment analysis for the appropriation request.

The system automatically determines the two key figures *net present value* and *discounted cash flow rate* when you choose the *Calculate preinvestment analysis figures* function. The system bases its calculation on the planned costs and revenue, and the yield curve that was entered in Customizing (refer to [Revenue Planning for the Preinvestment Analysis \[Page 165\]](#)). If you have not yet maintained planned costs and revenue, and entered a yield curve, the system cannot calculate these values. You have to calculate the other preinvestment figures yourself. You can then enter them as information in the master record.

7. Maintain the depreciation simulation data for the appropriation request variant.

Processing Appropriation Request Variants

Functions of the Appropriation Request Type

Use

The appropriation request type classifies the appropriation request. It also contains control parameters for managing appropriation requests. When you create an appropriation request, you are required to enter an appropriation request type. You define these appropriation request types in Customizing for *Investment Management*. The number of appropriation request types is not limited.

Features

The appropriation request type contains control parameters for master data and for appropriation request variants. It also establishes the links between the appropriation request and investment planning.

Master Data

You specify the following in the master data of appropriation requests:

- [Number assignment \[Page 117\]](#): you specify whether the system should assign appropriation requests with a certain appropriation request type the same number as the measure that is created from them later.
- [Preinvestment analysis \[Page 165\]](#): You can enter profiles for planning costs and revenue in the appropriation request type. You can also enter the value date for preinvestment analysis figures.
- [User status profile \[Page 140\]](#), that is used to control the business transactions that are allowed when the status is set. It is also possible to define how business transactions influence the status.
- [Partner determination \[Page 172\]](#) is used to manage data for those people involved with the appropriation request, such as applicant or approver.
- Tab layout (refer to [Screen Layout \[Page 114\]](#)).

Integration with Investment Programs

You make the following specifications to link the appropriation request type with investment planning:

- The program type of the investment program, to which the appropriation request can be assigned
- The measures that are allowed for the implementation of the appropriation request, and the order type or project profile for these measures
- Whether the appropriation request, at its release, is replaced by the measure belonging to it (this affects the assignment to an investment program, planning, and display in the Info System)

For more information, see [Assignment to an Investment Program \[Page 122\]](#).

Appropriation Request Variants

For the appropriation request variants that will be created later for the appropriation request, you can specify the following:

Processing Appropriation Request Variants

- User status profile for the appropriation request variants
- Investment profile for depreciation simulation
- Increments for assigning variant numbers

For more information, see [Master Data at the Variant Level \[Page 130\]](#).

Activities

You define appropriation request types in Customizing for *Investment Management*. Choose *Appropriation Requests* → *Master Data* → *Control Data* → [Define Appropriation Request Types \[Ext.\]](#).

Alternate Appropriation Requests

Use

You can represent different ways of implementing an appropriation request by using [appropriation request variants \[Page 128\]](#). However, if the different investment alternatives are of a completely different nature, it is possible that the functions for variants may not be sufficient for depicting their differences.



You are trying to decide whether to build a plant in Spain or in Mexico. The basic conditions for each scenario are extremely different.

One of the reasons for this is that certain master data can only be maintained for the appropriation request as a whole, rather than separately for each variant. Master data that is particularly important in this respect includes:

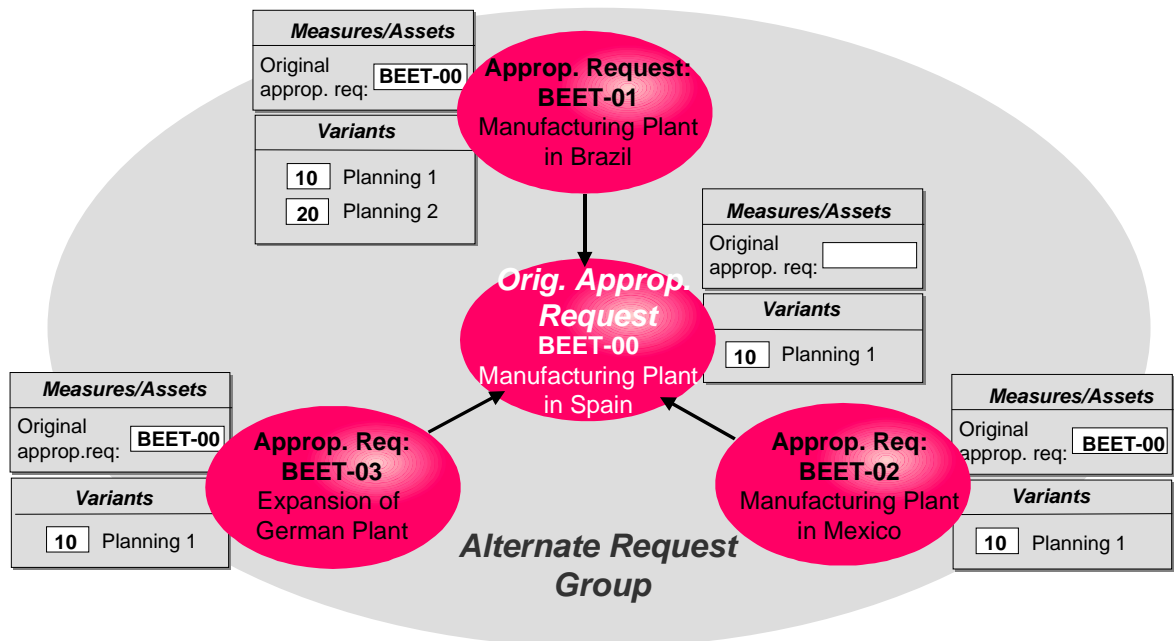
- Organizational assignments in the appropriation request master record (such as the responsible cost center)
- The assignment to an investment program position

If these assignments are different for each alternate mode of implementing the investment, then it is no longer possible to represent them in the system using a **single** appropriation request. Therefore, the system provides functions for representing several related appropriation requests in the form of a group of alternate appropriation requests.

Features

You use an original request to link several alternate appropriation requests together. This original request is one of the alternate appropriation requests, which the system uses as the means to link all of the alternate requests into a group. At the same time, the original request in a sense also places brackets around a set of alternate appropriation requests.

The original request is not a new system object with special features. It is just an ordinary appropriation request. As seen in relation to the other alternate appropriation requests, it is completely equal to them, and can be viewed as one of the alternates. The original request does not have a superior position in any way. However, it is usually the first that was created, among a group of several alternate requests.



Group of Alternate Requests

Maintaining Assignment

You establish the relationship of an appropriation request to an original request in the master data screen of the appropriation request. On the *Measures/assets* tab page you assign your appropriation request to the original request. You can enter only **one** original request in the master data of an appropriation request. This means that an appropriation request is permitted to belong to only one group of alternate appropriation requests. In the master record of the appropriation request, the system displays all appropriation requests that belong to its original request (that is, to its alternate group).

An appropriation request can only be assigned to an original request as long as it is not itself an original request. This means that you are not allowed to link two original requests in order to link their alternate groups together.

The individual appropriation requests in an alternate group are also required to belong to both:

- The same controlling area
- The same program type (refer to [Functions of the Appropriation Request Type \[Page 132\]](#))



C should be an alternate request of B, and B should be an alternate of A. This means that C is also an alternate of A. In order to show this type of relationship in the system, use this procedure:

Specify one of the appropriation requests as the original request → Use A as the original request for the example.

Alternate Appropriation Requests

Enter A as original request in the master data of B.

Also enter A as original request in the master data of C.

You cannot enter an original request in the master data of A, since A is itself an original request.

Planning Process

The individual appropriation requests in an alternate group each have at least one appropriation request variant. They could also have more than one. Using several variants can be helpful in order to represent various stages in the certainty of the planning, for example.

When you assign an appropriation request variant to a plan version of the investment program (refer to [Versions for Planning \[Page 56\]](#)), the system makes sure that **only one variant of an alternate group** can be assigned to a plan version. In this way, the system guarantees that the plan values of an alternate group are not included more than once in investment program planning.



Fisc.year	Version	Variant	Alternate
1998	1	20	BEET-02
1998	0	10	BEET-02
1997	2	10	BEET-03
1997	1	-	-
1997	0	10	BEET-03

Approval Process

During the [approval process \[Page 174\]](#), the system makes sure that only one alternate request from an alternate group can be approved. As soon as one of the alternate appropriation requests receives *for approval* status, the other alternates are prevented from receiving this status. When this appropriation request is approved and replaced by a measure, the other alternate requests in the alternate group are assigned *rejected* status.

Reporting

Reports can be run on the assignments of an alternate group using master data reporting for appropriation requests.

Status Management

Use

During the life of the appropriation request, its condition can change over time as viewed from an organizational, an accounting or a technical perspective. You can document these changes using system status settings.

Features

Appropriation requests have an interface with R/3 status management. This status management can be used to manage both system statuses and user statuses. The possible system statuses are pre-defined in the system. You define allowed entries for the user status in Customizing.

The appropriation request and the variants of an appropriation request each have their own system status and user status.

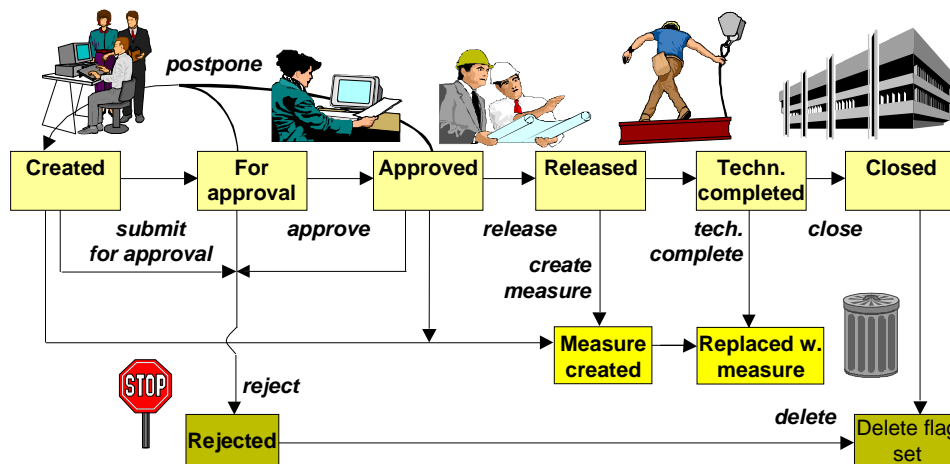
System Status Management

Use

The status settings for system status are predefined in the system. You cannot define system statuses in Customizing. A system status can be set in an appropriation request and in each request variant in one of two ways. Either you set the status in the master data of the appropriation request or variant, or the system sets it automatically when certain activities are carried out (for example, creation or approval of an appropriation request).

Features

The following graphic shows the system status settings for appropriation requests:



System Status for Appropriation Requests

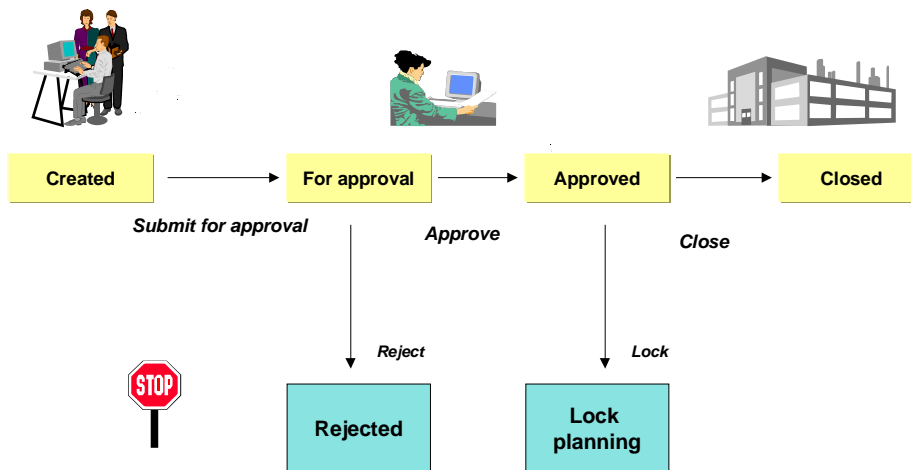
The system automatically sets *created* status for the appropriation request when you create it. You have to set *for approval* status manually. *Approved* or *rejected* status can be set either automatically or manually (refer to [Approval of Appropriation Requests \[Page 170\]](#)). You have to set *released*, *technically closed* and *closed* status manually. The system automatically sets *measure created* and *replaced with measure* status as soon as you create a measure (refer to [Conversion to a Measure for Implementation \[Page 179\]](#) and [Planning in the Implementation Phase \[Page 168\]](#)).

You should be aware that the status settings *released* and *replaced with measure* also have an effect on the measure that belongs to the appropriation request. The measure cannot be released until the appropriation request it belongs to has one of these two statuses.

System Status for Appropriation Request Variants

Appropriation request variants have their own system status. The actual status of the appropriation request is recorded in the appropriation request itself. The status of the appropriation request variant is secondary to this main status, but serves to document the progress of the variant.

The following graphic shows the system status settings for an appropriation request variant:



System Status for Appropriation Request Variants

The system automatically sets *created* status as soon as you create a variant. You have to set *for approval* status manually. When you set the appropriation request itself to *for approval* status, the system automatically requests that you enter the variant to be approved. The system uses the same logic when *approved* or *rejected* status is set. The system ensures that only one variant of an appropriation request has *for approval* or *approved* status.

The system automatically sets *closed* status in all variants of a given appropriation request as soon as one of the other variants of the same appropriation request is approved. If there are no other variants for the appropriation request, the variant keeps its *approved* status. You have to set *lock planning* status manually.

The activity planning is not allowed when either *lock planning* or *closed* status is set. Planning is allowed for all other status settings. Other than those regarding planning, the system status does not influence any other activities for appropriation request variants. However, you can set up limitations of certain activities using the user status, if you wish (refer to [User Status Management \[Page 140\]](#)).

User Status Management

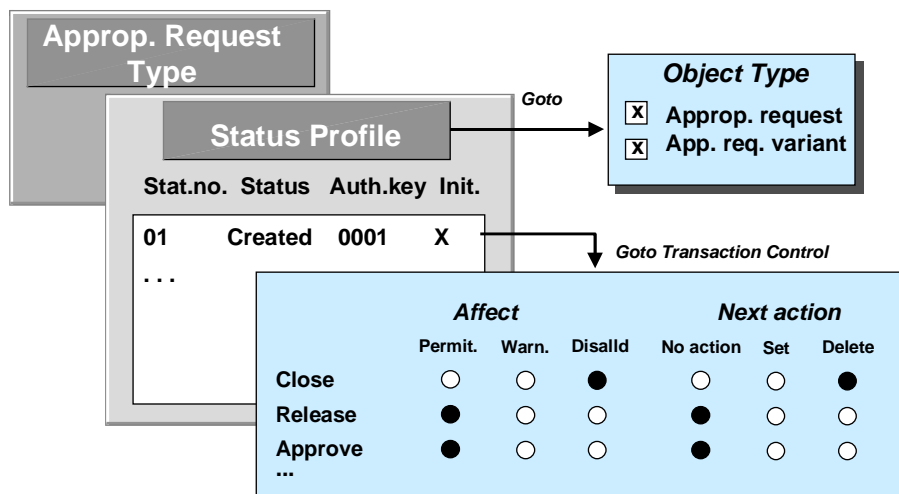
User Status Management

Use

Using the general user status management in the SAP R/3 System, you can define, along with the system status, a user status with any number of user status settings and the events that result in the status being assigned (IM Customizing: *Master Data*).

Features

You define the allowed user status settings in a status profile. The status profile is linked to the appropriation request type. In the appropriation request type you can enter a user status profile for appropriation requests and a user status profile for their variants.



Definition of a User Status Profile

You specify for each status setting of the status profile:

- Which activities (such as release) are allowed when the status is set
- How the activities affect the status (such as, status will be set)

You can link the status of an appropriation request to an authorization key. In general maintenance for authorizations, you can assign authorizations for this key, using the authorization object B_USERSTAT. When you **manually** set or delete a user status, the system checks if you are authorized to do so. If the system automatically sets a user status, **as the result of an accounting transaction**, there is no authorization check.

Cost and Revenue Planning for Appropriation Requests

Use

The plan values of the appropriation request form the basis for decision about approving it as an investment. The planned costs for appropriation requests are available for your investment planning for your entire enterprise. The planned costs assist you in the preinvestment analysis that is part of the approval process. In addition, the plan values are the basis for creating an investment program for an enterprise or an enterprise area.

Prerequisites

You can define planning profiles for controlling the planning of costs and revenue for appropriation requests (in Customizing for *Investment Management: Planning*). These profiles control

- The allowed timeframe for planning annual values
- The representation of the plan values in the planning or budgeting transaction

You can assign a planning profile for cost planning and a planning profile for revenue planning to each appropriation request type. In this way, you can control planning differently for each appropriation request type.

See also:

[Features of Appropriation Requests \[Page 102\]](#)

Features

You can plan costs and revenues for appropriation requests. There are several different transactions for planning:

- Master data of the appropriation request (planning and cost estimate)
- Overview planning (simultaneous cost planning for a number of variants)

Planning costs of an appropriation request takes place using structure planning (only annual or overall costs, not cost element planning). You do not plan on the appropriation request itself, but on its variants. You can manage separate plan values for each appropriation request variant.

Separation of Costs to be Capitalized

Often you already know when planning the appropriation request how much of the planned costs will be capitalized, and how much should be treated as expense (overhead). Therefore, the system lets you plan costs to be capitalized (investment costs) separately. In the drilldown reports for appropriation requests, you can report on investment costs separately.

The system calculates the combined costs as the sum of investment costs and overhead. The system determines cash flow as the difference between combined costs and revenue. It displays the cash flow in the planning function in the appropriation request master data, as well as in overview planning.

Overall Values and Annual Values

When entering plan values for an appropriation request variant, you can enter an overall value and annual values. An annual value is an amount planned for a specific year. This year can be

Cost and Revenue Planning for Appropriation Requests

either the current year or a future year. The overall value is the value that is expected for the appropriation request as a whole. The overall value can be greater than or equal to the total of the annual values.

You can only plan overall and annual values for appropriation requests. It is not possible to plan according to cost elements or revenue elements as you can on orders or WBS elements.

Plan Versions for Appropriation Request Variants

On the investment program, you can manage plan values in multiple versions. The versions can represent various stages in the certainty of the planning, for example. At the appropriation request level, there are no versions. Instead you can define any number of variants for each appropriation request. You enter plan values for each of these variants, and assign it to a specific version of the investment program. The appropriation request variant represents, as a result, the various planning scenarios in the context of an appropriation request.

See also:

[Appropriation Request Variants \[Page 128\]](#)

[Assignment to an Investment Program \[Page 122\]](#)

Approval of Plan Versions

You can link the plan versions of an investment program to an approval process. Note that you can use authorization levels for plan versions, even if you do not have an investment program. If you assign an authorization level to a plan version, you can limit the processing of this version to certain users. The plan values of the appropriation request variants, which are assigned to this version, can then only be processed by users that have the authorization for this authorization level.

See also:

[Approval of Versions \[Page 60\]](#)

Rolling Up Plan Costs in the Investment Program

You roll up the plan values of appropriation requests in the investment program to which they are assigned using a periodic processing function. With the help of a status selection profile, you can select only those appropriation requests that have been approved (released).

See also:

[Cost Planning on the Investment Program \[Page 54\]](#)

Cost Planning for Individual Appropriation Requests

Cost Planning for Individual Appropriation Requests

Use

This function is used for planning individual appropriation requests, that is, not as compared to other appropriation requests or in the context of plan versions. In contrast to using overview planning, this method allows you to plan appropriation request variants directly when you create a new master record.

Features

You can enter separate plan values for each appropriation request variant. Investment costs are planned separately from overhead. The system calculates the combined costs as the sum of the two.

Activities

[Carrying Out Planning \[Page 145\]](#)

Carrying Out Individual Planning

Procedure

1. Choose *Appropriation Requests* → *Edit Appropriation Requests* → *Change*.
The master data maintenance screen appears.
2. Choose the *Variants* tab page.
3. Select the appropriation request that you wish to plan.
4. On the bottom half of the screen, choose the *Plan values* tab page.
5. Maintain overall values and annual values for investment costs and overhead. Do the same for revenue.

Overview Planning

Overview Planning

Use

Using this function, you can plan appropriation requests by plan versions and fiscal year, and compare the appropriation requests of two plan versions. To this end, the system provides an overview table, in which you can simultaneously enter plan values for the variants of various appropriation requests. In contrast to editing master data, where you enter plan values for individual variants of single appropriation requests, here you can enter cost planning values for a number of appropriation request variants at the same time, regardless of their plan version.

Prerequisites


In Customizing for Investment Management (*Appropriation Requests* → *Master Data* → *Control Data* → *Process Selection Criteria*) specify, per transaction, which selection criteria the system offers in the initial screen for the selection of appropriation requests. In addition, you can enter selection criteria as default values.

Features

There are three different transactions for overview planning:


- Overview planning for standard appropriation requests
- Overview planning for simplified appropriation requests
- Overview planning for Internet appropriation requests

The transactions are optically different only in the selection criteria that are offered to the user for selection appropriation requests (see *Prerequisites*).

In order to make things easier to see in the transaction, you can enter the years for which you want to display and edit plan values (choose  *Planning interval*). The system determines the planning interval first from the planning profile. You can plan a maximum of ten years at the same time.





In the *Overview planning for Internet appropriation requests* transaction, you cannot change the planning interval.

Choose  *Master data* to reach the display mode of the master data transaction when you need more information about an object.


Screen Layout

The screen is divided into three parts:

- Selection criteria

Choose  *Fullscreen selection criteria* to select a number of selection criteria in one step. If you want to use certain combinations of selection criteria more than once, you can save them by choosing  *Selection variants*. The system stores both selection criteria and values. When you call the transaction again, the system displays the last selection screen.

- Overview planning

Choose  *Other view* to go between the annual view and the value type view.

In the annual view, the system displays the overall plan values and annual plan values of the selected appropriation request variants on the tab pages. The tab pages show all value types (for example, investment costs, combined costs), just as in master data maintenance. In the value type view, the tab pages organize the plan values of the selected appropriation request variants according to value types. As a result, you can maintain all annual values on one tab page.







The totals column always shows the total of all years, not only the total of the years currently displayed (for example, if the planning interval is limited to two years).

- Detail planning

Detail planning is the same as the planning table that already exists in master data maintenance.

Version 0 / 2000			
Appropriation Request Type: 1			
...			
Selection Screen		2000	2001
	Approp. Req. 1	1,700	1,400
	Approp. Req. 2	2,400	2,400
	Approp. Req. 3	1,200	1,300
Overview Table	Approp. Req. 1		
		Overhead	Investment Costs
Detail Table	2000	1,000	700
	2001	1,000	400
	2002

Screen Areas

Select an appropriation request and choose  *Open detail table* in order to jump to planning for a single appropriation request. You can expand and compress the different parts of the screen by choosing either  *Expand* or  *Compress*. The values in the detail table remain even after you choose *Compress*. A variant is selected for processing until you choose  *Exit detail view*.


Overview Planning

Overview planning and planning are interactive. This means that any changes that you make in the detail screen are automatically adopted in the overview, and vice versa.


Internet

The *Overview planning for Internet appropriation requests* transaction is Internet-capable. You can simultaneously plan variants of appropriation requests, even if you do not have an R/3-System available at your location (refer to [Processing Options \[Page 109\]](#)).

Version Comparison

Along with the ability to plan the appropriation request variants assigned to a plan version, you can compare two plan versions using the  *Version Comparison* function. The comparison version is for your information only.

Compare Totals

Using the  *Compare totals* function, you set the overall value to equal the total of the annual values in the overview table for all appropriation request variants. This also applies in the detail table for the selected variant.

Consistency Check

You can use a consistency check to find planning errors (for example, if the cumulative plan costs are greater than the combined costs, or if the investment costs are higher than the combined costs). In the standard system, the system carries out the check when you save, and issues a warning, if necessary.



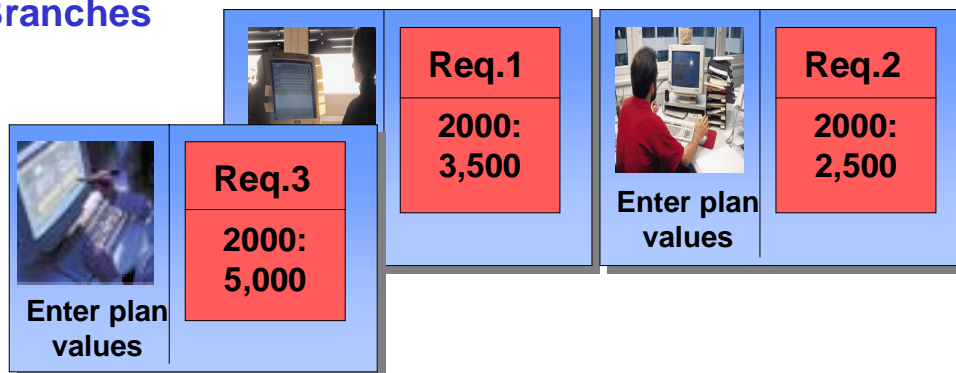
You can modify the message for the consistency check (AO 472) in Customizing. The message can then reflect your particular needs. You can also specify, for example, that plan values cannot be saved until all inconsistencies have been corrected.

The Use of Overview Planning

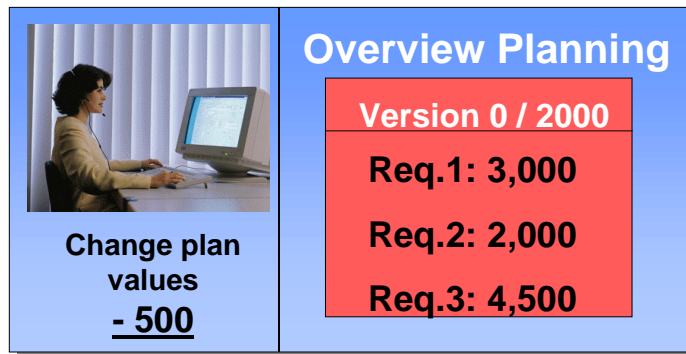
You use overview planning when you need to plan a number of appropriation requests, which all belong to the same plan version, at the same time.

This can be useful, for example when the appropriation requests of a corporate group are monitored in the central headquarters. An employee there is responsible for overseeing the different appropriation requests that were created by employees in different branches. This person can compare the various requests with each other, and is also able to change their plan values simultaneously. The manager in corporate headquarters can thereby obtain an overview of the costs entailed by the appropriation requests, and with this in mind, can correct the plan values of individual appropriation requests.

Branches



Corporate Headquarters



Scenario: Performing Overview Planning in Corporate Headquarters

Easy Cost Planning for Appropriation Requests

Use

Using this function, you can perform costing for your appropriation requests and thereby determine your overall and annual plan values. The plan values you enter are either estimated, or are based on calculations that are made outside of the R/3 System. If these methods of determining planned costs are not detailed enough for you, then you can use the functions of [Easy Cost Planning \[Ext.\]](#) for detailed cost planning directly on the appropriation request.

Prerequisites

- You have to enter a costing variant in the planning profile for cost planning of appropriation requests. This planning profile has to be entered in the appropriation request type (in the *Cost and revenue planning* group box).
- You can create a cost estimate for any appropriation request variant, which does not yet have a cost estimate and for which there are no plan values outside of the planning interval. Set up the planning interval in the planning profile for cost planning so that planning in the past is also possible.
- The appropriation request type has to allow either *only* projects or *only* orders as measures.
- If you want to copy the cost estimate to the measure later, then you have to set the *Copy cost estimate* indicator in the appropriation request type.

You edit planning profiles in Customizing for *Investment Management*. Choose *Appropriation Requests* → *Planning* → *Cost Planning* → *Maintain Planning Profile for Cost Planning*.

For appropriation request types, choose *Master Data* → *Control Data* → *Maintain Appropriation Request Types*.



If these preconditions for costing are not fulfilled, then you cannot jump from the appropriation request to Easy Cost Planning. The system suppresses the necessary pushbutton in that case.

Features

You can enter only one cost estimate for each appropriation request variant.

The overall value that results from the cost estimate can be divided into investment costs and overhead costs on the basis of the investment percentage rate. The system multiplies the combined costs from the cost estimate by the investment percentage. The result is the amount of investment costs.

Once you have entered a cost estimate for a variant, you can no longer change the overall plan values manually. Any changes have to be made in the cost estimate. Only by deleting the cost estimate can you make investment and overhead costs available again for manual processing.



Revenue planning is separate from the cost estimate. Therefore you can still process revenue amounts even if you created a cost estimate.

Easy Cost Planning for Appropriation Requests

See also:

For general information on the costing method, see [Easy Cost Planning \[Ext.\]](#).

For information on copying the cost estimate to a measure, see [Replacement by a Measure for Implementation \[Page 179\]](#).

Activities

[Perform Costing \[Page 152\]](#)

Processing a Cost Estimate for an Appropriation Request

Processing a Cost Estimate for an Appropriation Request


Prerequisites

You are in the [Processing Appropriation Requests \[Page 112\]](#) transaction.




The pushbutton for creating a cost estimate is only visible when certain conditions are fulfilled. For more information on these conditions, refer to [Easy Cost Planning for Appropriation Requests \[Page 150\]](#).

Procedure

1. On the *Variants* tab page, choose  *Create cost estimate*.

The screen for Easy Cost Planning appears.

2. Make the cost estimate for your appropriation request variant. For more information on this procedure, refer to [Using Easy Cost Planning \[Ext.\]](#).
3. If you want to enter annual plan costs for your appropriation request variant, enter different fiscal years in the *Valuation date* column.

4. Choose  *Back* to exit the cost estimate.

You return to maintenance of plan values. The plan value table now contains the combined costs from the cost estimate. The system interprets the combined costs 100% as investment costs, and enters the values in the column for investment costs in the plan value table.


5. If the planned costs also contain overhead, reduce the percentage for investment costs accordingly.



If you subsequently modify the cost estimate later, this percentage remains unchanged.

6. The system creates the cost estimate when you save the appropriation request.



Choose  *Delete cost estimate* to delete an existing cost estimate. Once a cost estimate is deleted, the system resets the plan values in the plan value table back to zero. Deletion is final when you save the appropriation request.

Editing Costing Models and Assigning Attributes

Use

In [Easy Cost Planning \[Ext.\]](#) the planner can use the costing model that you create with this function as a planning form. This enables the costs to be calculated from the planner's point of view. You can use the costing model for all similar planning processes.

By assigning attributes to the role of the planner, you decide which screen areas are displayed for the planner in the cost estimate and also to what extent they can be changed. This assignment applies across all models and hence is only required once for each role.

Prerequisites

To be able to define costing models, experience in using the SAP System is required, particularly in the following areas:

Application	Area
Classification System (CA-CL)	Characteristics
Activity-Based Costing (CO-OM-ABC)	Templates
Product Cost Controlling (CO-PC)	Costing tools, special unit costing and costing items
Overhead Cost Controlling (CO-OM)	Chart of accounts, cost centers, cost elements and activity types, internal orders, overhead
Materials Management (MM)	Purchasing, services, material valuation, inventory management

In order to carry out cost planning, a costing variant must have been defined in Customizing for every object to be planned. If you want to view the costs in groups, you must have already defined cost component groups in Customizing for the application component concerned under *Define Cost Component Structure*.

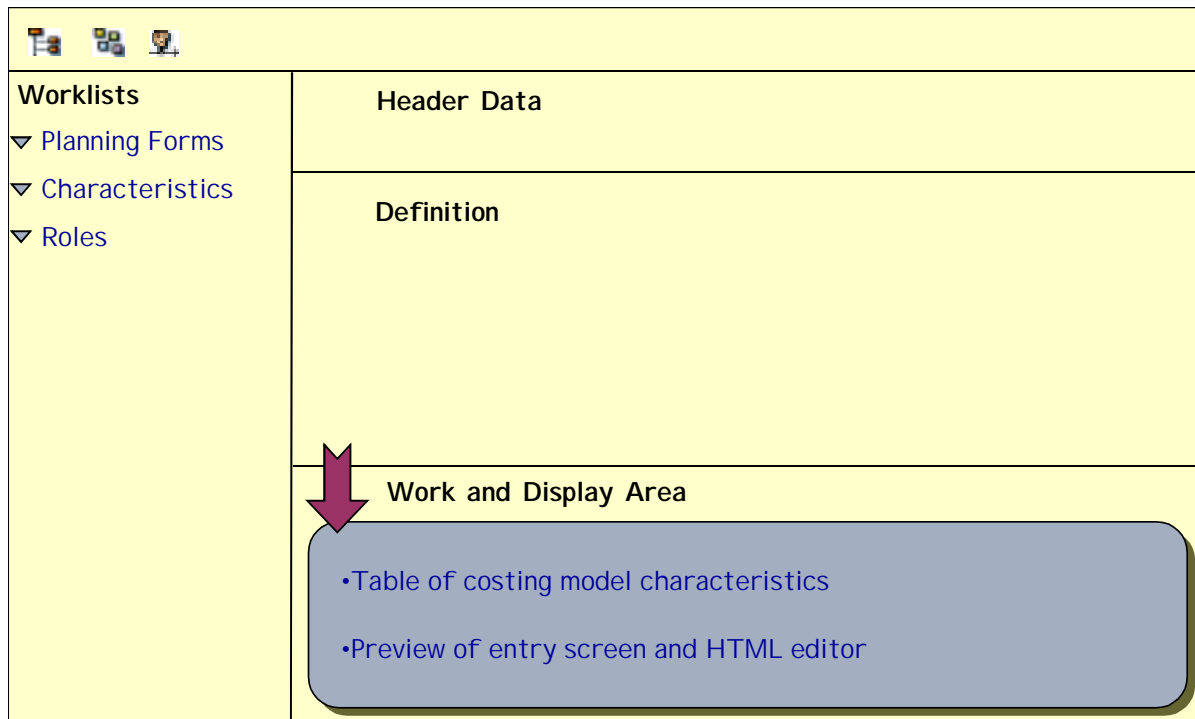
During the implementation phase, organizational limits must have been made for the namespaces of the characteristics, to control the use of characteristics that use the *Classification System* (CA-CL).


For the Execution Services, you must have made the required settings in Customizing for the respective application component under *Execution Services*.

Features

The following graphic gives you an overview of the costing run:









Editing Costing Models and Assigning Attributes



You can show or hide () the screen area *Worklists* and also change the size of the screen areas.

Worklists area

This area contains the *planning forms*, *characteristics* and *roles*. These are the predefined directories. The worklists provide an overview of the data present in the system and a user-friendly view of its structure. Once you have loaded the most frequently used planning forms, characteristics and roles into the worklists, they are always available for you to use. The directories can be made available to everyone, or limited to a specific role to which you must have been assigned, or defined in such a way that they are only available for your yourself to use.



To load available data in the worklists either choose  immediately next to the node, or . You can create, insert (), rename worklists and extend the display of worklists (from user-specific to role-specific or globally to all users), or restrict () them. You can copy planning forms, characteristics or roles to other worklists of the same category per drag & drop. Make sure that you select nodes supplied with a hyperlink together with the symbol in front of them. It is not possible to copy subdirectories. Using  you can call up any worklists that are in the system but have not yet been displayed. To delete worklists, choose . To remove subdirectories or loaded data from a worklist choose . To save worklists, choose  in the screen area *Worklists*.


You can call a costing model and role directly by clicking on the relevant node in the worklist.

You can assign a characteristic directly to a model. To do so, you must have chosen the model and called up the assignment of the characteristics in the work area. You can copy the characteristic into the table in the work area using drag and drop.

Definition area

Editing Costing Models and Assigning Attributes

Here you can edit a costing model or role. If you want to switch from editing the costing model to editing the roles either choose  or choose the role directly in the worklist. Choose  to return to editing the costing model, or choose it directly in the worklist.


Having selected a costing model or created a new one, you can carry out all changes or definitions (by clicking on the nodes) in this area. You can create a description for the model (). You can then use it to document the model. When the planner wants to create a cost estimate, this description is available for finding a planning form. For information on the editor, see [the PC editor \[Ext.\]](#) and [editing text \[Ext.\]](#).

If you have selected a **role**, you can select here the attributes which should be assigned to the role.



If you assign the attribute *Hide cost estimate item view* to the single role *Maintain internal orders* (SAP_CO_OM_JOB_INTORDER_MAINT) then the relevant button is hidden, meaning it is no longer possible to show the item view. This applies to all planners to whom this role has been assigned. If you want to make it impossible to show the item view for a planner to whom several roles have been assigned, then you have to assign this attribute to all of this planner's roles. The simplification of the screen achieved by this is particularly useful for occasional users, especially if they do not have extensive knowledge of Controlling in the SAP System. However, for the planner it also means that it is no longer possible to change the costing items manually.

Work and Display area

In this area, you can assign the characteristics. When you create new characteristics, you can define the characteristics directly from here. If the characteristics exist already, you can change them using  in the *Characteristics maintenance* column.


In addition to this, you can display a preview on the entry screen by clicking on the node *Structure model entry screen* You can then edit it here.




If you delete, change, edit or create new characteristics then these changes will only be displayed in the preview once you have saved the model.


Activities


- Select:
 - Choose *Logistics* → **Project System** → *Basic Data* → *Templates* → *Models for Easy Cost Planning*.
 - *Accounting* → **Investment Management** → *Appropriation Requests* → *Environment* → *Maintain Costing Model*
 - *Accounting* → *Controlling* → *Product Cost-Controlling* → **Product Cost Planning** → *Easy Cost Planning & Execution Services* → *Maintain Costing Model*
- Create costing model:

Choose . Enter a name for the costing model. The name must not begin with a number or contain any blanks. If you do not enter a description, the system copies the

Editing Costing Models and Assigning Attributes

name automatically into the *Description* field. You can change the description at any time by choosing .

If you are copying a model () , enter yes to the dialog box *Save template?* Otherwise the template will not be copied.


- [Creating and Assigning Characteristics \[Page 158\]](#)
- If you want to [structure the automatically-created entry screen \[Page 160\]](#) to suit your requirements, select this node in the definition area.
- [Defining Derivation Rules \[Page 162\]](#)
- If you want to display the screen areas in the cost estimate on a role-specific basis, select a role and assign the relevant attributes to it by setting the indicator. Save your settings in the screen area *Definition* using  (Save attribute assignment).
- Save your entries.

Multilingual capability

If the planner needs the costing model to be available in more than one language, you need to carry out the following activities, noting the special features:

Characteristics

When creating the characteristic, enter the description of the characteristic on the tab *Descriptions* in all the languages that you require.

If you want to set default Values, go to the Values tab, select a value and choose  Enter the description in all of the languages that you require.

If you choose *Extras* → *Change Language*, you can enter the characteristic description and the descriptions for all values for the language selected.


Entry screen

Do not change the characteristic descriptions on the entry screen. Additional text (for example notes or texts for hyperlinks) and changes can only be entered in one language, and consequently are only available in that language. The *Confirm* button and the heading *Comment* are automatically displayed in the correct language.

Derivation rules

You must ensure that descriptions are available in all of the languages that you require. Make sure when you use a costing model (item category **J**) that this also applies for the description of the model used. Do not enter any descriptions in the item lines. The descriptions are then automatically displayed in the correct language. Exception: you can only enter the description for item categories *comment line*, *calculation line (process and cost center/activity type)*, *text item* and *variable item* in one language, which in turn are only available in that particular language.

Costing Model Description

Once you have created the model, log on to the system in each language in turn which you need to be available. Call up the model for editing and choose . Enter the description for each model in the correct language and save your entries. To ensure the description of the model is available in the languages you require, enter it in each of the relevant languages.

Result

The costing model is available as a template on a permanent basis. For more information, see [Using Easy Cost Planning \[Ext.\]](#).

Example

[Example of the Easy Cost Planning of a Project \[Ext.\]](#)

Creating and Assigning Characteristics

Use

Characteristics represent the cost incurring functions of a planning process in the costing model. A characteristic can be assigned to more than one costing model.

Prerequisites

You have created a costing model.

Procedure

1. Define the characteristics by clicking on the node *Assign characteristics to the model*.
The system displays a table in the work/display area.
2. Under *Characteristic name*, enter the name of an existing characteristic, or create a new one. Then choose *Continue*.
 - a. If you are using an existing characteristic, the data is copied into the table.
 - b. If you are not using an existing characteristic, the system asks you if you are creating a new one. Choose *Yes*.

The *Create Characteristic* screen appears.

Enter the required data. SAP recommends that you select a characteristic group containing characteristics that you have created specifically for costing models. You should note the following:

- i. The system cannot interpret user-defined data formats or multiple value characteristics.
 - ii. If you enter values to be available in a dropdown box, you should not set the indicator *Additional values*. If you want to enable planners to define their own characteristics in addition to the values that you have entered, you must define a specific characteristic for this purpose. You do this when you define the derivation rules, for instance by creating a *variable item*.
 - iii. If you want a value to appear in the entry screen as a default setting, set the indicator *D* for this value.
3. Save your entries.



You should note that on the *Restrictions* tab page, the characteristics are always assigned to class type 051 (which is not displayed in the input help). This ensures that the characteristics are only available for Easy Cost Planning. If you want to use characteristics with a different class type, you have to enter class type 051 for these in addition.

You should also bear in mind that characteristics may be used in a variety of costing models, which means that if you change a characteristic this could affect more than one costing model. If you create new characteristics, you can identify them as yours by the name that you give them. Heed any naming conventions that may apply in this

Creating and Assigning Characteristics

regard. Characteristics to which further class types are assigned in addition to class type 051 may be used by other application components which similarly use the *Classification System* (CA-CL).

Result

The characteristic is assigned to the costing model and can be specified in the entry screen.

Structuring the Entry Screen




Structuring the Entry Screen

Prerequisites

You have created a costing model and assigned characteristics to it.

If you do not want to make the changes directly in HTML, you must have installed an HTML editor.


Procedure

1. Call a preview of the automatically-created entry screen by clicking on the node *Structure model entry screen*.
2. In the work/display area, choose .
3. If you want to make the changes using your own HTML editor, you can download the HTML code as a local file to your PC by choosing . To import the changed file back, choose .

If you want to change the HTML code directly, you should note the following points:




You must not delete the variables for the field values, because if you do the values of the characteristics cannot be interpreted correctly. The variables are generated in the form of ``<CHARACTERISTIC NAME>.value` or `< CHARACTERISTIC NAME >.name` . The system replaces the variables with the value entered. The entire expression for the variable must not exceed one line (there must not be a line break).`

If you insert a hyperlink, you should display the Internet page in a new window. To do this, you must enter the command `target="_blank"` in HTML code in the following position: `<Text of link in entry screen>`. If you display the Internet page directly in the same screen area as the entry screen, the planner can only go back to the entry screen by right-clicking on the mouse. However, this would mean that the data entered before the link sequence is lost.



4. To display the changed HTML code from the editor in the preview, choose .

You can generate the entry screen in SAP style (standard setting) or in Web style. When you save the costing model, the style generated last is saved.


Result

When the costing model is saved, the changed entry screen is stored as a file by means of the [Business Document Service \[Ext.\]](#). However, this only happens if you have made changes in the automatically-generated entry screen (with  or ). You can save multiple versions. The most recent version is always the active one. You can manage the files with the Business Document Navigator (): If, for example, you want to use an older version, you have to delete the newer ones.



If you subsequently change a characteristic and have altered the automatically-generated entry screen with  or , you must regenerate the entry screen in order to include the changes. If you have changed the HTML code, it will be overwritten by the regeneration. To prevent this from happening with multiple changes, proceed as follows: Download the previous HTML code to your PC. Regenerate and compare

Structuring the Entry Screen

the HTML codes. Using cut and paste, insert the position at which the change to the characteristic has affected the HTML code into the HTML code in the local file, and import this back into the SAP System. Confirm the changes with .

Defining Derivation Rules

Defining Derivation Rules

Use

Using the derivation rules the view and thinking of the planner is transferred to the costing items of the unit costing. This is where you enter the resources needed for the planning.



If the costing model is to offer a choice between several resources of the same sort, enter all of the resources and use *Activation* to regulate which resource in the planning case is entered in the cost estimate. You define the activation via the prompt for a particular specification of the related characteristic, for example if characteristic LENGTH = 10, the line with resource (material) A10 is used, and if LENGTH = 20 the line with resource A20 is used.

To determine the quantity of the respective resource you use a characteristic, for example, the characteristic NUMBER OF WORKING HOURS for an internal activity item.

Prerequisites

You have created a costing model.

Procedure



You can only define the derivation rules (of the template) for the costing model when you define the model.

1. Click on the node in the definition area of the costing model.

The screen *Create template <NAME OF COSTING MODEL>* appears. The template automatically receives the name of the costing model and is created in a specific environment, depending on the planning object.

2. Enter the costing items required for the planning object. For more information, see [Templates for Easy Cost Planning \[Page 163\]](#).
3. Go back and save the template.



Template for Easy Cost Planning

Definition



The template is a dynamic calculation tool that uses [functions \[Ext.\]](#) and [formulas \[Ext.\]](#) to calculate numerical values and determine the results of Boolean expressions (true or false). Templates for Easy Cost Planning are created in environments 200, 205-208, and 214-215. The environment is defined automatically by the system depending on the object to be planned (internal order, WBS element, and so on). With the exception of environment 214, you cannot create environments through Customizing. Instead, you can only do so by defining a [costing model \[Ext.\]](#).

Structure

The template contains a table in which you can make the following line entries:

Column	Possible Entry/Process
<p><i>Item category in template</i></p> <p></p> <p>The key of this item category is not always the same as that of the costing item.</p>	<p>Comment line, process, calculation row (process), cost center/activity type, calculation row (cost center/activity type), costing model, external activities, subcontracting, material, service, base planning object, text item, variable item</p> <p></p> <p>For the item category <i>calculation row</i>, you cannot call the editor or define methods in the object column.</p> <p>You can only select costing models that are valid either for all planning objects or for the same planning object as the costing model in which you want to insert this model as a submodel.</p>
<p><i>Description</i></p>	<p>The description is displayed in the cost estimate as the description for the costing items. The system determines the description for most of the item categories automatically once you have confirmed your entries. (The <i>description</i> is used in the case of the base planning object.) Consequently you only need to make an entry here if the description cannot be determined by the system or if you need to overwrite it.</p>

Template for Easy Cost Planning

<i>Object</i>	<p>Enter the object (such as a material), depending on the item category specified. You can either enter the object directly, or define methods [Ext.].</p> <p>For <i>item categories of the template J to R</i>, you can use the input help to make the required entries. Always enter a cost element if the system is unable to determine one. This applies to those item categories for which the cost element was requested in the possible entries help; with base planning objects the cost element can be determined via the master data providing you have entered one there. If the item does not have a cost element, it is not possible to assign the costs to a cost component. This means that the costs cannot be rolled up if they are incurred in a cost estimate which is part of a costing structure with superior cost estimates.</p> <p>For the categories <i>Process</i> and <i>Cost center/Activity type</i>, you can either predefine an object or determine dynamically one or more processes or cost centers/activity types. For more information, see Object Determination [Ext.].</p>
<i>Quantity</i>	<p>Enter a quantity or characteristic directly. You can enter the appropriate characteristic by defining a formula [Ext.].</p> <p>For more information, see Activity Quantity Determination [Ext.].</p>
<i>Activation</i>	<p>Specify the condition under which an item is active. For the <i>activation</i> of an item, you can predefine values as <i>active</i> or <i>inactive</i> or define a method that returns <i>active</i> or <i>inactive</i> at the point of evaluation. If you do not enter anything in the column, the item is active.</p> <p></p> <p>The item (MATERIAL; Gravel; 0001 / GRAVEL01; M3; QUANTITY_ FILLER;  METHOD) with method: FILLER = "Gravel" is only active if gravel was selected as the FILLER. For all other characteristic values, the item is not included in the costing.</p> <p>For more information, see Activation [Ext.].</p>
<i>Price</i>	<p>Price for a variable item This column is not utilized for any other item category.</p>

Depending on the item category in the template, there are various functions available to define methods and formulas.

For more information on the costing item categories, refer to [Master Data for Unit Costing \[Ext.\]](#).

Revenue Planning and Preinvestment Analysis

Use

Preinvestment analysis provides support and documentation for the approval process for planned capital investments.

Features

Preinvestment analysis in the SAP R/3 System relates to the variants of appropriation requests. Along with expected costs, you can enter the expected revenue for the investment in the appropriation request variant (on the *Variants* tab page, choose the *Planning* tab page). You can enter planned revenue on an annual basis, the same as planned costs (refer to [Cost Planning \[Page 144\]](#)).

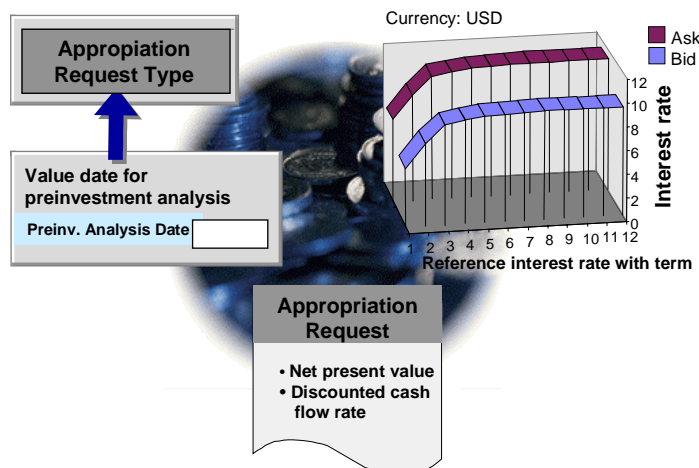


You have to estimate expected revenue as a lump sum amount. At the present time the system does not offer functions for determining expected revenue.

Preinvestment Analysis Figures

On the basis of planned costs and revenue, the system calculates the net present value and the discounted cash flow rate of an appropriation request variant. It enters these preinvestment analysis figures in the detailed master data screen of the appropriation request variant. You can call up the function for this in the same screen. The system uses a yield curve to calculate the net present value. You define the yield curves you want to use in Customizing (under *Planning*). For each currency, you can specify a yield curve for bid and a yield curve for ask figures.

You also specify the value date that the system uses for determining the net present value and the discounted cash flow rate. You can enter this date in Customizing for each appropriation request type. You can change the value date at any time. Changes do not affect net present values that were already calculated. They do not take effect until you call the function in the master data transaction again.



Revenue Planning and Preinvestment Analysis

Calculation of Net Present Value using Yield Curve

Calculation Formulas

The system calculates the net present value (C) using the following formula:

$$C = \sum (R - Cs) / (1 + i)^{** Y}$$

R = annual revenue

Cs = annual costs

i = interest in yield curve (bid or ask, depending on whether R - Cs is positive or negative)

Y = years in which costs, revenue or both are planned The system calculates the total based on the formula for these years.

The system calculates the discounted cash flow rate (Cr) using the following formula:

$$Cr = C / Ci$$

Ci = capital employed = $\sum C / (1 + i)^{** Y}$ (the system calculates the total for the formula using planned costs or revenue over the course of the years)

Manual Specification


If you do not use revenue planning, you can enter the estimated net present value and discounted cash flow rate in the master record manually.

Additional Key Figures

In addition to the net present value, you can enter the following preinvestment figures manually in the master record of the appropriation request variant:

- Internal rate of return
- Payback period

Calculation of Preinvestment Analysis Figures

Choose  to have the system calculate preinvestment analysis figures based on plan values (on the *Preinv. analysis* tab page).

Verbal Assessment

You also have the option of entering a score and a verbal assessment for the appropriation request variant. You define the allowed scores in Customizing (*Master Data* → *Define allowed values for certain master data fields*).

Activities

You can calculate preinvestment analysis figures either individually, or for multiple appropriation requests at the same time. Choose the *Calculate preinvestment analysis figures* function.

SAP supplies two standard yield curves: 9990 (bid) and 9991 (ask).



You have to copy these yield curves from client 000 to your working client.

Revenue Planning and Preinvestment Analysis

If these yield curves are not in the system for some reason, you can create them in Customizing for *Investment Management*. (Choose *Appropriation Requests* → *Planning* → *Specify Yield Curve for Determining Net Present Value*).

Planning in the Implementation Phase

Planning in the Implementation Phase

Use

There are two possible objects that can be used for planning appropriation requests that have already been transferred to measures for their implementation:

- Appropriation request
- Measure (order or WBS element) for the implementation

Usually it is most practical to carry out planning during the implementation phase on the measure itself. However, in some enterprises, investment planning is conducted centrally in the organization, whereas the measures are managed in decentralized organizational units during their implementation. In this case, the appropriation request then serves as the central object for planning and updating the plan, both in the approval phase and in the implementation phase.

Features

You specify in the appropriation request type where planning and plan updates should take place (Customizing: *Control Data*). You specify that planning should be done either:

- After the appropriation request has been released, in the measure that replaces the appropriation request (*Replace by measure* indicator was set)
- Only in the appropriation request (even while the measure is being implemented)

As long as the appropriation request is not released, you have to enter plan values in the appropriation request in any case.

Planning in the Measure

If you have stipulated planning in the measure during the implementation phase, the system automatically sets *Replaced by measure* status when the appropriation request is released. The results are as follows:

- The system rolls up only plan values of the measure, not the appropriation request, on the investment program (refer to [Cost Planning on the Investment Program \[Page 54\]](#)).
- The system no longer displays appropriation requests that have been replaced by measures, in the drilldowns in the Information system.

Planning in the Appropriation Request

You should keep the following points in mind, if you continue to use the appropriation request for planning during the implementation phase:

- You might choose to enter plan values in the measure that belongs to the appropriation request, as well as in the appropriation request itself: If you do, the standard drilldowns in the IM Information System display the measure and its values in addition to the appropriation request and its values. However, the plan values for measures have different value types than the plan values for appropriation requests. It follows, then, that you can define your own drilldowns that show either only plan values from measures, or only plan values from appropriation requests (refer to [User-Defined Drilldown Reports \[Page 318\]](#)).
- When rolling up plan values on the investment program, the system only considers the plan values of the appropriation requests.

Approval Process for Appropriation Requests

Approval Process for Appropriation Requests

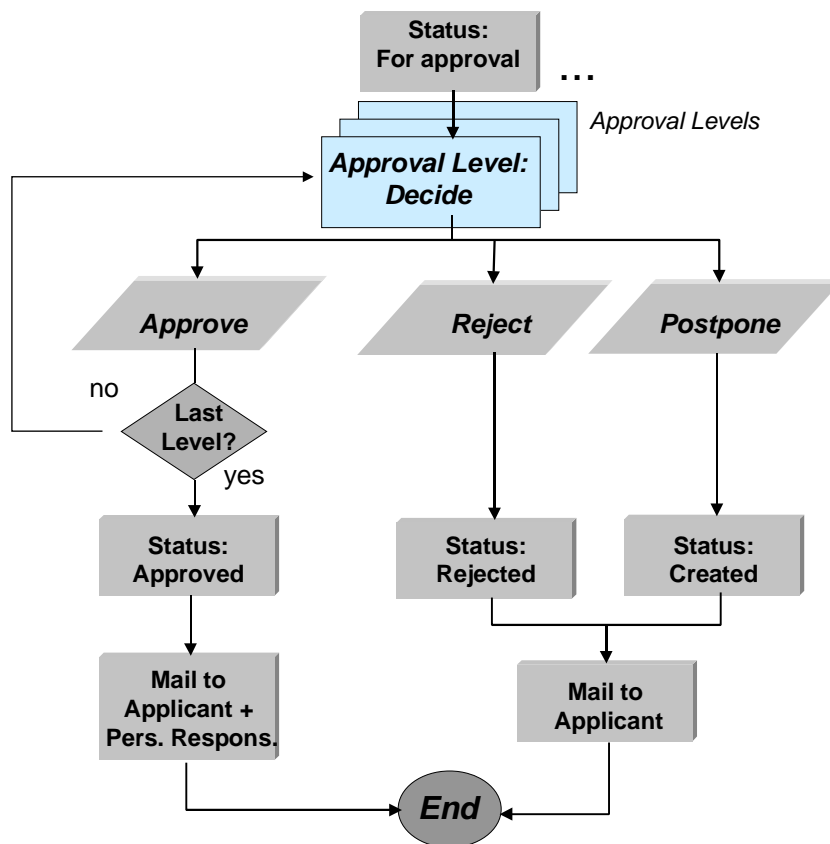
Purpose

The *Approval of Appropriation Requests* process is a sequential approval process for planned investments that take the form of appropriation requests.

For more information on the Customizing settings needed for this process, see [Functions for the Approval Process \[Page 174\]](#).

Process Flow

You control the approval process using approval levels, which you can define separately for each appropriation request type. You can define as many approval levels as you need. You assign a numerical key to each approval level. The number of this key then determines the sequence in which the approval levels are processed. The system processes the approval levels in ascending numerical order (for example, from 1 to 5). The system processes the first approval level (with the smallest numerical key) once the appropriation request has *For approval* status. The system then works through the approval levels sequentially. Once all the levels have been approved, the system sets *Approved* status in the last approval level (refer to [Status Management \[Page 137\]](#)).



Approval Process for Appropriation Requests**Approval Workflow**

There is a person responsible for each workflow level. This person receives the appropriation requests that are assigned to her approval level as Workflow items in her office inbox, where she enters an approval decision. The system uses the partner master data of the appropriation request to determine the responsible person for the approval level.

The appropriation request is rejected or postponed as soon as **one** approval level rejects or postpones it. The appropriation request receives the new status, and the applicant is automatically informed by electronic mail. If the appropriation request is approved in the last approval level, it receives *Approved* status, and the system informs the applicant and the other responsible parties.

The system does not delete appropriation requests that were rejected or postponed. You can manually reset their status to *For approval*. This restarts the approval process from the beginning.

Manual Approval

You can also change the status to *Approved* in the master data transaction. However, this is no longer possible once approval levels have been defined for the appropriation request and the approval workflow has been activated in Customizing.

Partner Management

Partner Management

Use

It is common to want to manage information on all persons who are involved with the creation and further processing of the appropriation request (for example, applicant, person responsible, approver).



The partner functions for appropriation requests are also significant for the approval process. For more information, see [Functions for the Approval Process \[Page 174\]](#).

Features

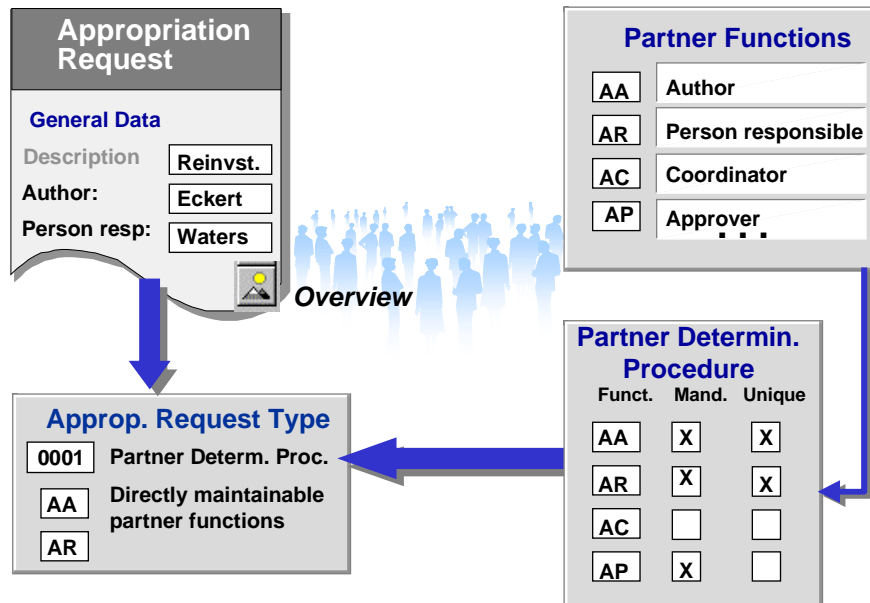
For this reason, appropriation requests have an interface to R/3 partner management. Partner management allows you to define partner determination procedures. (In Customizing for *Investment Management* choose *Appropriation Requests* → *Master Data* → *Control Data* → *Define Partner Determ. Procedure and Partner Functions*). You can assign an unlimited number of partner functions in a partner determination procedure. For each partner function, you can specify whether

- It is a mandatory partner function (that is, you always have to enter a person for the partner function).
- You can assign the partner function to only one person, or to more than one person.



Partner functions that are used in the approval process can be assigned to only one person.

You assign a partner determination procedure to an appropriation request by means of the [appropriation request type \[Page 132\]](#). You enter the partner determination procedure in the Customizing definition of the appropriation request type.



Partner Management

In the master record of the appropriation request, you can assign a person to each partner function in the partner determination procedure. Below are some examples of possible partner functions:

- Applicant
- Person responsible for implementation
- Coordinator
- Approver

You enter the partner functions directly on the *General data* tab page in the *Persons involved* group box.

Partner Types

You have to enter the partner type for the partner functions in their Customizing definition. The following are examples of partner types allowed for appropriation requests:

- US (user)
- O (organizational unit)
- A (work center)
- S (position)

Partner Management

Functions for the Approval Process

Use

As a rule, appropriation requests are subject to an approval process. This approval process usually involves a number of persons, as well as organizational units, within your enterprise.

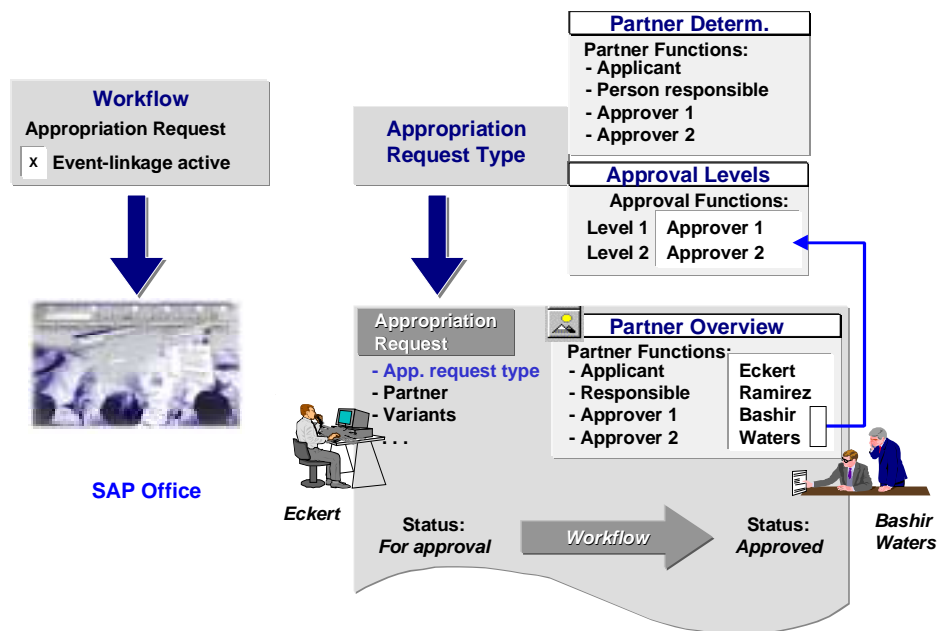
Features

You can therefore design the approval process to meet your specific needs. You use SAP R/3 status management and Workflow functions.

For more information on the approval process, see [Approval of Appropriation Requests \[Page 170\]](#).

Prerequisites

In order to use the automatic approval process, you have to activate the approval workflow for appropriation requests in Customizing for *Investment Management (Approval → Activate Event-Linkage for Workflow Tasks)*.



System Settings for the Approval Process

You have to assign partner functions, which are responsible for approval, to the individual approval levels. You define the partner functions in the partner determination procedure in the appropriation request type (refer to [Partner Management \[Page 172\]](#)). You have to specify the persons, who fulfill the partner functions, in the master data of the appropriation request.

You define the required approval levels for each appropriation request type. You have to go through the approval levels sequentially in the correct order, until your appropriation request is approved or rejected. As soon as the appropriation request is rejected on one approval level, the entire appropriation request is rejected.



Only **one** person can be entered directly for each partner function in the approval process. However, the system determines the person for the partner function indirectly, if you use partner functions that do not have a “system user” partner type. For example, if you use partner type “position”, the system determines the person who occupies the position, and enters that person for the partner function. But it is possible that the more than one person occupies the position. In that case, it is possible to have more than one person fill the partner function. The appropriation request is approved as soon as **one** of these persons gives his or her approval. For more information on partner types, see [Partner Management \[Page 172\]](#).

Starting the Approval Process

Starting the Approval Process

Procedure

1. Choose *Appropriation requests* → *Edit appropriation requests* → *Change*.

The screen for master data maintenance of the appropriation request appears.

2. Choose the *Control data* tab page.
3. Choose the *For approval* pushbutton.

If you created more than one variant for the appropriation request, a dialog box appears. Select the variant you want. For the other variants, set the *Reject* indicator. The system sets the status of your selected variant to *For approval*.

If the appropriation request only has one variant, the system sets the status immediately.



As soon as one of the variants receives *For approval* status, the other variants of the appropriation request are prevented from receiving this status. Before you save, you can still return the status to its original setting using the ▼ pushbutton.

4. Save. This initiates the approval process.

Giving Approval in Master Data Transaction

Procedure

1. Choose *Edit appropriation requests* → *Change* to access the master data of the appropriation request you want to approve.
2. Choose the *Control data* tab page.
3. Set the status of the appropriation request to *Approved*.

Starting the Approval Process

Giving Approval using Workflow

Procedure

1. Access your office inbox. In SAP Easy Access, choose *Office* → *Workplace*.
2. Choose *Inbox* → *Workflow*.
3. Process the work item for approval of an appropriation request (*Work item* → *Execute*).

See also:

[SAP Business Workflow \(BC-BMT-WFM\) \[Ext.\]](#)

Replacement by a Measure for Implementation

Purpose

When an appropriation request is ultimately approved, another system object, referred to as a measure, has to be created. The measure is required in order for you to continue to manage the investment in the system. You can create a measure for an appropriation request directly from master data maintenance for the appropriation request. Below are the system objects that can act as measures:

- Internal orders or maintenance orders
- WBS elements



An appropriation request can have an unlimited number of measures. However, a measure can be related to only one appropriation request.

Prerequisites

The project profile or order type to be used can be entered in one of two places. Either you enter it in the appropriation request type in Customizing, or you enter it when you create the measure.

To generate maintenance orders from appropriation requests, you first have to specify a PM order type as relevant for investment measures. You make this setting in Customizing for *Plant Maintenance and Customer Service*. Choose *Maintenance and Service Processing* → *Maintenance and Service Orders* → *Functions and Settings for Order Types* → *Order Types and Investment Management* → *Indicate Order Types for Investment Measures*. You then enter the PM order type in the appropriation request type or in the master data of an appropriation request.

However, there is a limitation on creating WBS elements in this manner. It is only possible when the appropriation request type for the request specifies the same coding mask for number assignment of appropriation requests and WBS elements (refer to [Number Assignment \[Page 117\]](#)).

Process Flow

The system stores the assignment of the appropriation request to the measure. You can display the mutual dependencies of the two objects in their master data.

Maintaining Assignment Manually

You can maintain the assignment between an appropriation request and a measure even after the measure has been created.

Number Assignment

You control number assignment for creating measures for the appropriation request in the appropriation request type. For more information see [Number Assignment \[Page 117\]](#).

Copying of Master Data Information

When you create a measure for an appropriation request, the system copies certain master data information from the request to the measure. The master data copied is listed below:

Replacement by a Measure for Implementation

- Description
- Planned start and end date
- Depreciation simulation data
- Object currency
- Controlling area
- Company code
- Company
- Functional location
- Plant
- Business area
- Profit center
- Cost center
- Scale
- Environmental indicator

Percentage distribution to several environmental indicators is **not** possible on the measure. The system assigns the measure the environmental indicator that has the largest percentage in the appropriation request.

Copying of Assignment to Investment Program

The system automatically assigns the measure to the investment program position, to which the appropriation request was assigned.

Copying Plan Values

Along with the master data, the system copies planned costs from the appropriation request to the measure. However, there are certain limitations. These are listed below:

- Only overall values and annual values can be copied, since the cost element planning function is not available for appropriation requests.
- If several measures are assigned to an appropriation request, then the system copies the complete plan values to the measure that was created first. If you want to distribute plan values to several measures, then you have to enter these plan values manually in the measures at a later time.

There are two ways in which the copying of plan values can be triggered:

- Automatically, when the measure is created from within master data maintenance of the appropriation request
- By choosing the *Adopt plan values* function on the *Measures/assets* tab page.

Which Variant Supplies the Plan Values to Be Copied?

An appropriation request can have several variants (refer to [Appropriation Request Variants \[Page 128\]](#)). All variants have plan values, but only one can supply the plan values to the measure. There are two possible scenarios:

Replacement by a Measure for Implementation

- **One** variant has *approved* or *for approval* status.
In this case, the system automatically copies the plan values of this variant to the measure. (Only one variant can have either of these statuses.)
- **No** variant has *approved* or *for approval* status.
In this case, the system displays a dialog box. You have to choose the variant to be used. (The dialog box displays all variants that have not been rejected.)

Copy to Which Plan Version?

Plan values of measures are managed in plan versions, which are universally valid (refer to [Versions for Planning \[Page 56\]](#)). Appropriation request variants are also assigned to these plan versions. When you copy plan values to one of these plan versions, there are several possible situations that can occur:

- The *Replace with measure* indicator is set in the Customizing definition of the appropriation request type. Then the system copies the plan values of the variant to the version to which the variant itself is assigned. (This does not apply to costed values, see below.) If the variant is assigned to several versions, the system displays a dialog box in which you can select from the assigned versions.
- The *Replace with measure* indicator is **not** set in Customizing, or the variant is **not** assigned to any version. Then the system automatically transfers the plan values to version 0.

Copying Costed Values

Costed values (values from a cost estimate) can only be copied when you create a measure from within the appropriation request. It is not possible to copy the cost estimate at a later point in time. The system copies either the plan values or the cost estimate to the measure:

- If a cost estimate is entered on the variant, the system copies this cost estimate to the measure. After that, no further copying of plan values is possible.

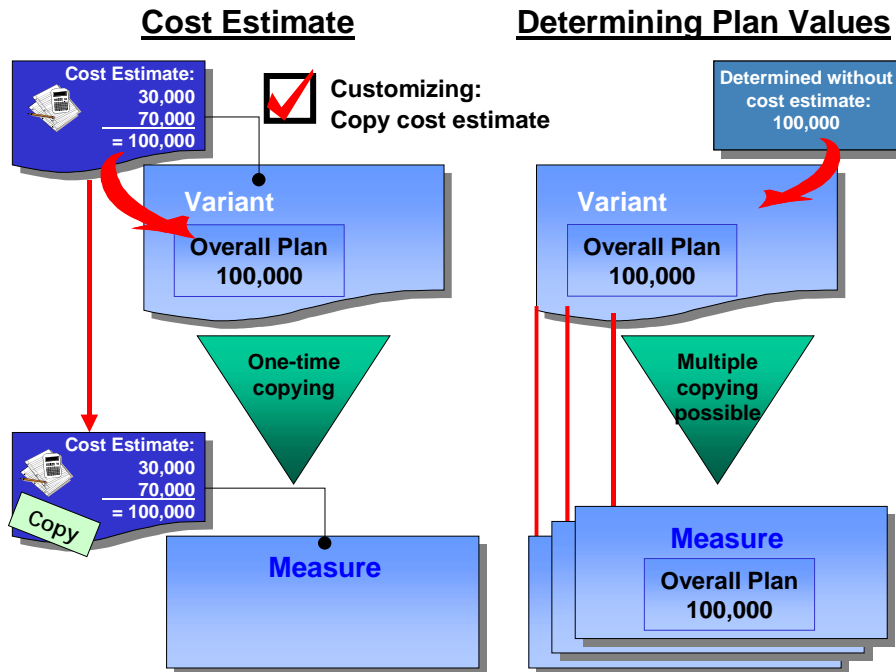


The cost estimate is not copied to the measure unless you set the *Copy cost estimate* indicator in the appropriation request type. If this indicator is not set, you can make numerous cost estimates, and copy the plan values they supply as often as you wish.

- If there is no cost estimate entered on the variant, the system copies the plan values to the measure. After that, you can continue to copy plan values, but only as long as you do not enter a cost estimate for the variant.

The system calculates costs on the measure using the functions for revaluating the cost estimate. The system revalues the cost estimate based on the Customizing settings for Easy Cost Planning of the measure. The overall values of the two cost estimates can differ due to differences in Customizing.

Replacement by a Measure for Implementation



Copying Costed Values

The system determines the variant, from which plan values are copied into the measure, independently of whether or not a cost estimate exists (see above).

Cost Estimate and Plan Version

- For internal orders, the system does not copy the cost estimate to a special plan version. This applies even if the appropriation request type specifies that the appropriation request is replaced by the measure.
- For WBS elements, the system copies the cost estimate to plan version 0. However, you can define a separate plan version in Customizing for the *Project System* for Easy Cost Planning.

Replacing with a Measure

Prerequisites

The order type or project profile have to be created already in Customizing for *Investment Management*:

- *Internal Orders as Investment Measures* → *Master Data* → *Orders* → [Define Model Orders \[Ext.\]](#).
- *Projects as Investment Measures* → *Master Data* → *WBS Elements* → [Define Project Profile \[Ext.\]](#).

For it to be possible to generate maintenance orders from appropriation requests, a PM order type has to be defined as relevant for investment measures. You make this setting in Customizing for *Plant Maintenance and Customer Service*. Choose *Maintenance and Service Processing* → *Maintenance and Service Orders* → *Functions and Settings for Order Types* → *Order Types and Investment Management* → [Indicate Order Types for Investment Measures \[Ext.\]](#).

Procedure

1. Go to master data maintenance for appropriation requests.
2. Choose the *Measures/assets* tab page.
3. Choose either *Create order* or *Create WBS element*.
4. In the dialog box, check the project profile or order type that is displayed. Or enter a project profile or order type.
5. To create multiple measures, repeat steps 3 and 4.
6. Save.



When you create WBS elements, you also have to create a project definition for them.

Result

When you save, the system creates the measure(s).

Authorizations

Authorizations

Use

You can restrict the processing of appropriation requests, including reporting, using authorization objects.

See also:

For general information on maintenance of authorizations, and information on individual authorization objects and the activities that can be limited, refer to:

- Implementation Guide (IMG) of *Investment Management*. Choose *Appropriation Requests* → *Preparing for Production Startup* → *Maintain Authorizations*
- Directly in role maintenance (transaction: PFCG). Choose *Environment* → *Authorization objects* → *Display* → *Investment Management*. To view the long texts for the authorization objects, choose the information icon next to the object.

Archiving of Appropriation Requests

Use

The *Appropriation Requests* component is linked to archive management.

Archiving removes mass data from the database. This data is no longer needed by the system, but should be retained and be available for reports.

See also:

For general information on data archiving, refer to [CA - Application Data Archiving \[Ext.\]](#).

For information on archiving appropriation requests, refer to [Archiving for Appropriation Requests \(IM\) \[Ext.\]](#) and [Carrying Out Archiving \[Ext.\]](#).

BAPIs for Appropriation Requests

BAPIs for Appropriation Requests

Use

Various methods are supplied in the *AppropriationRequest* (BUS2204) business object for accessing appropriation requests of the R/3 System from external systems.

Features

[Business Application Programming Interfaces \[Ext.\]](#) (BAPIs)

BAPI	Description
Create	Create an appropriation request (with variant)
AddVariant	Add a variant to an appropriation request
Change	Change an appropriation request
ChangeVariant	Change a variant of an appropriation request
Delete	Delete an appropriation request
RemoveVariant	Delete a variant of an appropriation request
SetPlanValues	Enter plan values for an appropriation request variant
ResetPlanValue	Reset plan values of an appropriation request variant
AssignVariantToVersion	Assign an appropriation request variant to plan versions
UnAssignVariantVersion	Remove assignment of an appropriation request variant to plan versions
AssignToExpenditureProgPos	Assign appropriation request to investment program positions
ChangeAssignmentToExpProgPos	Change assignment of appropriation request to investment program positions
UnAssignExpenditureProgPos	Remove assignment of appropriation request to investment program positions
GetDetail	Display appropriation request
GetStatus	Display the active system status and user status of an appropriation request



For detailed documentation of the individual BAPIs and their parameters, refer to the *BAPI Explorer* (transaction: BAPI).



BAPIs for Appropriation Requests

The BAPIs for appropriation requests are buffered BAPIs. This means that the changes to appropriation requests triggered by these BAPIs are carried out initially in the buffer. They are not stored in the database until `BAPIService.TransactionCommit` is called.

For this reason, SAP recommends that you do not use the BAPIs for appropriation requests together with BAPIs for other business objects, since the other BAPIs do not have access to the buffer. Therefore, set a `BAPIService.TransactionCommit` before calling BAPIs of other business objects.

Measures (Orders/Projects)

Measures (Orders/Projects)

Purpose

The *Measures* component enables you to manage the accounting and controlling aspects of either:

- Measures that your enterprise undertakes for the purpose of producing long-term fixed assets for its own use, and which have to be entered in the balance sheet as assets under construction
- Other measures, for which you want to plan, collect and oversee costs

Features

Measures are represented in the system either by internal orders or WBS (work breakdown structure) elements, possibly with an asset under construction (AuC) assigned to them.

The *Measures* component augments the functions of Overhead Cost Controlling - Overhead Orders (CO-OM-OPA) and Project System (PS) by integrating them further with the Asset Accounting (FI-AA) component.

Investment Measures

Definition

Measures are not an object type in their own right in the R/3 System, meaning they do not have their own master record. They are represented in the system using special master records of one of the following:

- Internal orders
- WBS elements of a project

These may or may not have an accompanying asset under construction.

Use

Investment measures are used primarily for planning and monitoring capital investments that are not capitalized directly, due to their scope or the large percentage of in-house production involved. Investment measures become relevant to asset accounting at period-end or at fiscal year closing. Therefore they have extra functions, in addition to the master data and values that are important for management accounting on the order or project. These functions include:

- They have the data of an asset under construction for showing the capitalized portions of the measure in the balance sheet.
- They have depreciation terms for special depreciation and investment support calculations during the under-construction phase.

Measures can also be used for projects that primarily involve costs, such as research and development projects.

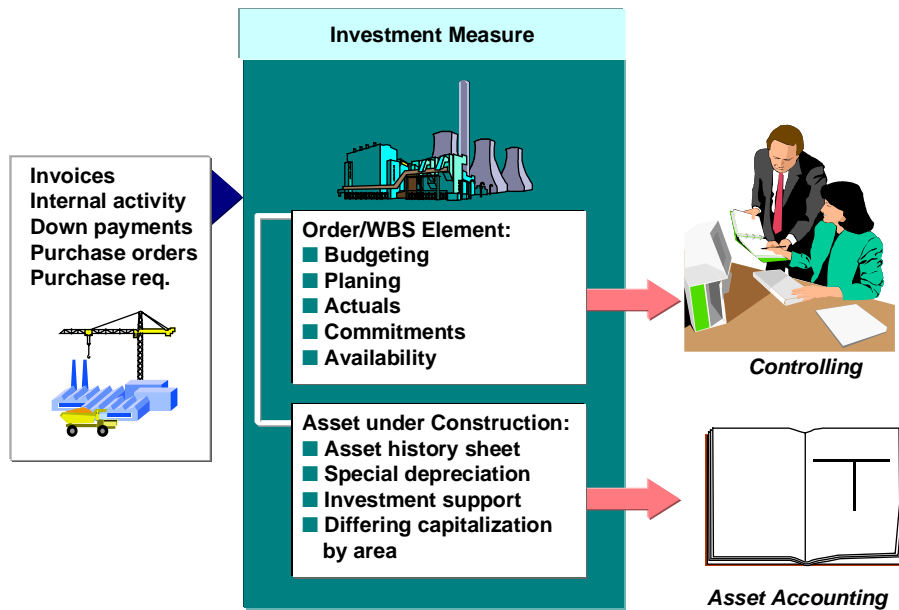
Special Features

Investment measures are basically no different from other internal orders or projects. However, they do have a few special features that have significance for the asset accounting relevance of these orders or projects.

The account assignment object for purchase orders and actual posting is always the order or the WBS element (the one exception is investment support). The asset under construction is the vehicle for

- The balance sheet transfer to the corresponding general ledger account(s) for assets under construction
- Inclusion in the asset history sheet
- Calculation of special depreciation or investment support, if applicable.

Investment Measures



Features of Investment Measures

Networks

At the present time, project networks cannot be represented directly as investment measures, since they cannot be linked to assets under construction. However, you can assign the network to a WBS element to create an indirect link to an asset under construction. For more information on special considerations during periodic settlement, see [Settlement of Objects Subordinate to a Measure \[Page 248\]](#).

Features of Investment Measures

In the next sections, information is provided about the structure and features of investment measures, and their functions for planning and budgeting.

For more information on creating and maintaining internal orders, see [CO - Internal Orders \[Ext.\]](#).
For WBS elements, refer to [PS - Project System \[Ext.\]](#).

Deciding between Orders and Projects

Deciding between Orders and Projects

Use

The advantage of using internal orders or WBS elements as investment measures is that you have the full functionality of Overhead Cost Controlling - Overhead Orders (CO-OM-OPA) and Project System (PS) at your disposal.

Features

Some of the fundamental functions of these two objects are outlined below. For more detailed information, see the documentation for the two components [CO-OM-OPA - Internal Orders \[Ext.\]](#) and [PS - Project System \[Ext.\]](#).

Overhead Cost Orders

Overhead cost orders assist in planning, collecting and settling the costs of relatively uncomplicated internal activity. The system enables you to manage overhead cost orders throughout their life – starting when they are created, through planning and posting of all actual costs, to the final settlement.

The master data maintenance functions assist you in making assignments of overhead cost orders within your enterprise.

Status management makes it possible to control the different accounting transactions that can be carried out on the order during each phase of its life.

Integrated planning functions enable you to make rough cost estimates before the order goes into affect, and to make exact calculations afterward. You can choose between several planning approaches, in order to compare the profitability of various methods of implementation.

You can check the planned and assigned costs of the order in reporting during each phase.

Projects

Projects are activities with special features. For example, they:

- Are normally very complex, one-time undertakings
- Have precisely defined goals
- Are limited in duration and are cost and capacity intensive
- Are subject to certain quality requirements
- Often have strategic importance for the enterprise

Projects are generally part of the internal processes of a company. To be able to control all tasks in project execution, you need an organizational form that is specific to the project and which is shared by all departments involved.

To be able to carry out a project in its entirety, the project goals must be precisely described and the project activities to be carried out must be structured. A clearly and unambiguously structured project is the basis for its planning, monitoring, control and success. A project is structured:

- **According to how it is organized:** This organizational planning specifies the structures for organizing and monitoring the project, and organizes the project in hierarchical elements.

Deciding between Orders and Projects

The criteria for structuring the project can differ according to the type of project and its complexity. For example, it can be based on the responsibility for the project and the structure of the departments or groups involved, or it can be based on requirements of the manufacturing or assembly process.

This planning is represented in the Project System by the work breakdown structure and the work breakdown structure (WBS) elements.

- **According to the processes involved:** This process planning specifies the elements from organizational planning in a chronological sequence. It specifies, for example, the events in the project that are dependent on each other, and which additional activities are required or which require more detail.

This planning is represented in the system by a network.



An asset under construction is assigned at the level of the WBS element, not at the level of the project as a whole. Therefore, you can create a single project that has WBS elements of both types: those that will primarily be capitalized and have an accompanying asset under construction, and those that do not have an assigned asset under construction.

An asset under construction can be created at any level of the work breakdown structure. SAP recommends that you manage assets under construction at the same level in the work breakdown structure at which you later expect to show your completed assets, when the project is completed. Placing your assets under construction at this level makes it considerably more simple to settle the WBS elements at their completion (full settlement) (refer to [Account Assignment for Settlement \[Page 254\]](#)).

Deciding between Orders and Projects

In order to determine whether you should use orders or projects to manage your capital investments, you should consider some of the differences between them:

- Only projects enable you to create a hierarchical structure for the objects that collect costs.
- Orders are always one-dimensional. For example, it is not possible to distribute budgets for several orders in a structured form from top to bottom.
- Projects also offer the advantage of their integration with networks and the functions of logistics. With orders, for example, it is not possible to carry out capacity and resource planning.

Control Functions of the Investment Profile

Use

The most important control feature from the perspective of *Investment Management* (IM) is the investment profile. By assigning an investment profile to an order or WBS element, you make it into an investment measure.

Features

When you create an investment measure, the investment profile controls the following:

- Creation of an asset under construction for the investment measure
- Creation of master data for the depreciation forecast

Asset under Construction

You make the following specifications in the investment profile:

- Automatic creation of an accompanying asset under construction when the order or WBS element is released
- An asset under construction, per source structure and source assignment

Using this indicator, you control whether the system creates exactly one asset under construction per investment measure, or one asset under construction per assignment in the source structure. The system then charges all of the cost elements belonging to one source assignment to the source assignment's own individual asset under construction. When you set this indicator, you can assign each investment profile its own default asset class per source assignment (in Customizing for *Investment Management*, choose *Define Assignment of AuC Classes per Source Assignment*).

For more information on the source structure, see [Settlement Rules \[Page 238\]](#).

- Asset class to be used when the accompanying asset under construction is created. Using the *Fixed default class* indicator, you specify whether this is a default value that can be changed or not.
- Summary or line item settlement

This indicator controls whether the periodic settlement and full settlement of investment measures should be by line item or by totals. Line item settlement has the following advantages:

- You can create settlement rules for individual line items (debits). When you use summary settlement, you are limited to entering blanket settlement rules for the whole measure, or for certain cost element groups.
- – It is possible to trace the origins of each line item from the completed asset back to the original debit on the investment measure. In the case of summary settlement, an audit trail is available by cost elements only.

The advantages of line item settlement, however, are offset by reductions in performance. Therefore, you should use line item settlement only if it is really needed.

Control Functions of the Investment Profile

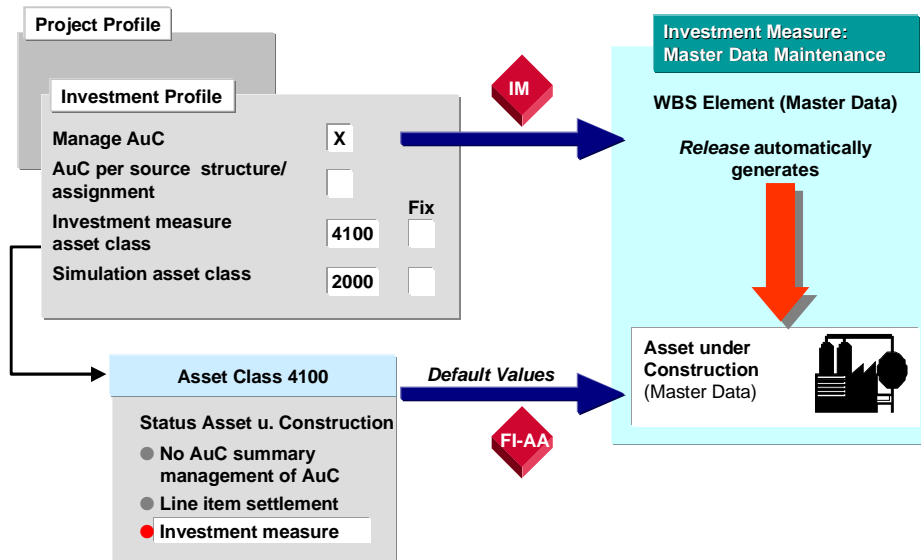
Depreciation Simulation

- Asset class to be used to default the depreciation terms for the depreciation simulation (refer to [Depreciation Simulation \[Page 292\]](#)). Using the *Fixed default class* indicator, you specify whether this is a default value that can be changed or not.



You can only enter the default asset class manually if the investment measure is **not** released immediately after being created. When the investment measure is released immediately, the asset under construction is also created immediately (without your being able to change the asset class).

- You ensure the consistency of the depreciation terms for all distributions in an asset class by setting the *Ident. valuation* indicator.
- Distribution rules for the depreciation simulation



Functions of the Investment Profile

Activities

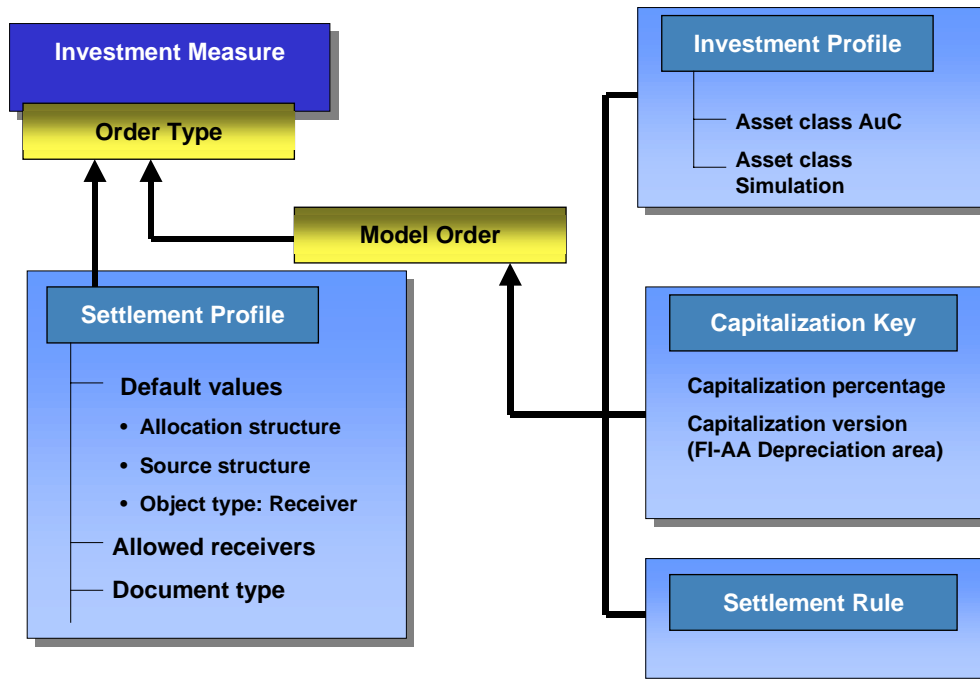
You maintain investment profiles in Customizing for *Investment Management*. Choose *Internal Orders as Investment Measures* or *Projects as Investment Measures* → *Master Data* → *Define Investment Profile*.

There are two ways of assigning an investment profile to an investment order. Either you can enter it directly in the master record of the order on the *Investment* tab page, or you can enter in a model order, also on the *Investments* tab page. The system determines the model order by the order type used when you create the order. For order types for investment measures, therefore, you should specify the following:

- Assign a model order to the order type (Customizing for *Internal Orders: Order Master Data* → *Define Order Types*).

Control Functions of the Investment Profile

- Assign an investment profile to this model order (Customizing for *Internal Orders: Order Master Data* → *Screen Layout* → *Define Model Orders*, choose the *Investments* tab page).



Control Elements of Order Type and Model Order

There are also two ways of assigning an investment profile to a WBS element. You can either enter it directly in the WBS element master record on the *Investment* tab page, or assign it by means of the project profile used when creating the WBS element.

You assign the investment profile to the project profile in the Customizing definition of the project profile (on the *Controlling* tab page). The system uses the investment profile specified in the project profile as a default when you create the project. The investment profile specified in the project definition is also used as a default when individual work breakdown structure (WBS) elements are created. For WBS elements that are not to be capitalized, you can manually remove the investment profile (on the *Investment* tab page).

You can also define orders and WBS elements as investment measures at a later date (after their initial creation). You do this by assigning an investment profile to them. The system then automatically creates the accompanying asset under construction. However, this procedure is only possible if the order or WBS element has not yet been settled.

See also:

Implementation Guide (IMG) of *Investment Management* under *Internal Orders as Investment Measures* or *Projects as Investment Measures* → *Master Data* → *Define Investment Profile*.

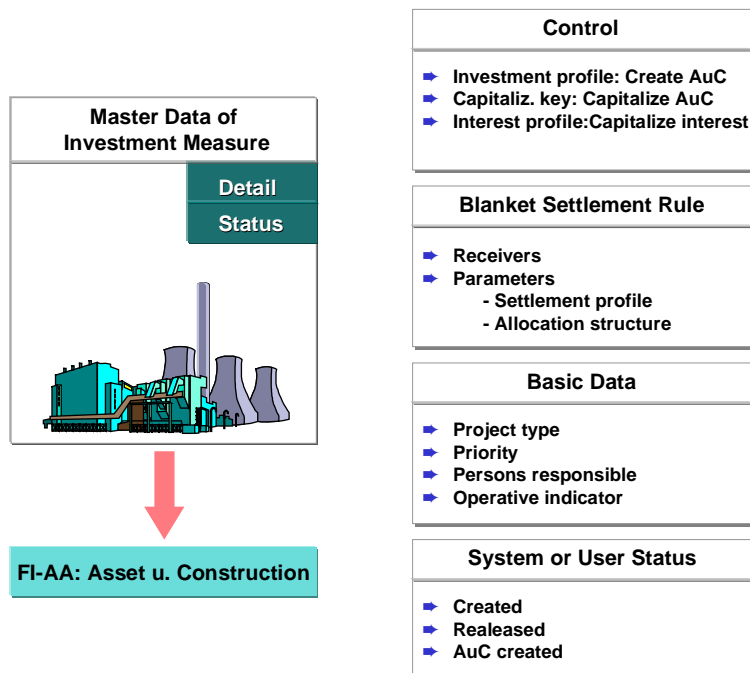
Master Data Maintenance

Use

You create an investment measure in the system by creating an order or a WBS element (refer to [Features of Investment Measures \[Page 189\]](#)).

When the order or WBS element is released, the system checks whether an investment profile has been assigned to it. If there is an investment profile, the system identifies the order or WBS element as an investment measure, and creates (if certain conditions are met) an accompanying asset under construction. The system then assigns the investment measure *Asset under construction created* system status. The investment measure thereby has the master data of the order or WBS element as well as the master data of the asset under construction.

The following graphic shows the most important master data of an investment measure, from the viewpoint of *Investment Management*.



Master Data of an Investment Measure

Features

In order to use the automatic creation of an asset under construction, you have to create one or more special asset classes and enter one asset class in each investment profile. These asset classes provide the system with all the master data needed for creating the asset under construction. The asset classes for investment measures have a special indicator. You set this indicator in the asset class, in order to reserve the asset class for investment measures. Assets in these classes

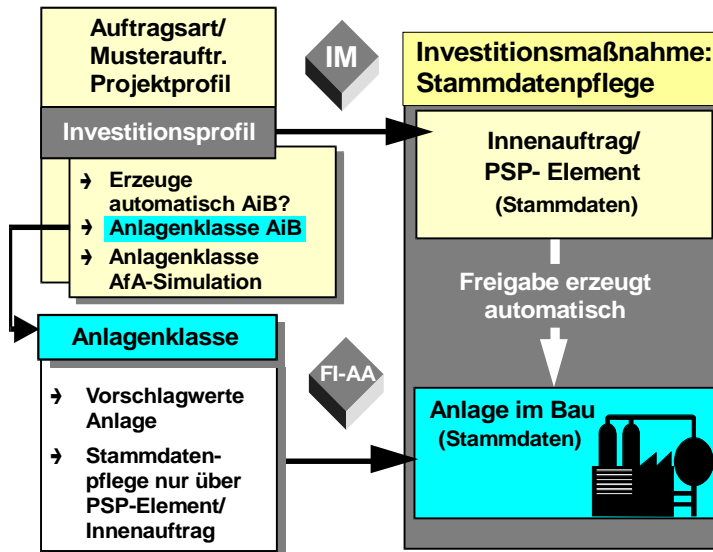
- Cannot be created using the normal asset master data transaction of the FI-AA component

Master Data Maintenance

- Cannot be posted with acquisition and production costs directly in Asset Accounting

It can be helpful to use several asset classes for investment measures, rather than just one asset class for all investment measures. The asset class can then pass on specific values to the asset under construction for special depreciation terms or investment support. It is also useful when you have more than one balance sheet account for assets under construction. You can also specify in the investment profile whether it is permitted to manually enter other asset classes (instead of the default class) when creating an investment measure.

The following graphic shows the functions of the asset class when creating an investment measure:



Function of the Asset Class

Master Data of the Asset under Construction

If the asset class has been maintained sufficiently, you do not need to make any other master data entries in the asset under construction. The system copies the description and the organizational assignments (cost center, plant, location, business area, and jurisdiction code) directly from the order or WBS element. If you need it, you can also call the complete master data maintenance transaction for assets (choose *Extras* from the menu).

The system copies the values from the following fields in the order or WBS element to the accompanying asset under construction:

- Order number or WBS element number
- Description
- Organizational assignments (company code, business area, requesting cost center, location, tax jurisdiction code)



It is important that you do **not** suppress these fields in the screen layout control of the asset class.

It is also basically possible to change these automatically created assets under construction using master data maintenance in the Asset Accounting (FI-AA) component. However, the fields that have to agree with the order or WBS element (such as organizational assignments) cannot be changed there.

Incomplete Assets

Sometimes not all the master record information for an asset under construction can be defaulted from the asset class. Sometimes a given user has only a limited asset view (see the section below titled Authorizations). For these two reasons, the automatically created asset under construction has a status:

- The asset is complete (all required fields are completed).
- The asset is incomplete, but can be posted (all account assignment information is entered).
- The asset is incomplete and cannot be posted.

The system uses workflow procedures to manage incomplete assets. It sends them in the form of a worklist to the R/3 mailbox of the responsible asset accountant. In order for this automatic workflow to take place, however, you have to make some fundamental settings in Customizing for *Asset Accounting*. It is particularly important for the standard task *Change asset* to be correctly assigned and active. For more information, see the Implementation Guide (IMG) for Investment Management (*Master Data → Assets under Construction*).

If you do not wish to use R/3 Workflow, you can find incomplete assets using a special standard report (Asset Accounting menu: *Tools*). For more information, see [FI-AA Asset Accounting \[Ext.\]](#).

Number Assignment for the Asset under Construction

In Asset Accounting, the assignment of the asset number is controlled by the asset class. You specify the number range interval in the asset class. Number assignment must be internal when you plan to use the **automatic** creation of an asset under construction for an investment measure. Enter number range intervals with internal number assignment in the asset classes for these assets under construction.

In order to be able to assign the asset number externally, you have to create the asset under construction manually before its order or WBS element has *Released* status. When using this method, keep the following in mind:

- Use number range intervals with external number assignment in your asset classes for investment measures.
- When you create the order or WBS element, use the function *Extras* to go to the *Create asset transaction*, before you release the order or WBS element.
- Create the asset under construction, entering your external asset number.

Status Management

Internal orders and projects are also linked to general SAP status management. This link to status management means you can guarantee that certain business transactions can only be carried out if the order or WBS element has a certain status.

Along with the freely definable user status, the system automatically sets a system status. You can release an order or WBS element using *Edit* in their master data transaction. This release is a prerequisite for account assignment from the investment measure.

Master Data Maintenance



You can specify in the Customizing definition of the order type that an order should be changed to *Released* status as soon as it is created.

Authorizations

In order to maintain fields in the order or project you need CO authorization. In order to maintain fields in the asset under construction you need FI-AA authorization. You can change the asset under construction using master data maintenance in the Asset Accounting (FI-AA) component. You call the same screens as for normal asset master data maintenance. For more information on the required FI-AA authorizations, see the FI-AA Implementation Guide.

Along with standard authorizations, the FI-AA component uses asset views to limit access to asset master records. For example, the *Cost accounting* asset view allows only asset master record information related to cost accounting to be maintained (refer to [FI-AA Asset Accounting \[Ext.\]](#)). When a user with a limited view creates an investment measure, and important fields are not default values from the asset class, the asset is then incomplete. Such incomplete assets have to be completed later using workflow.

Changing Organizational Assignments

When you make a change to organizational assignments in the master record of an investment measure, the system checks if this change is also permitted for the asset under construction.

Cross-Company-Code Measures

Use

In the case of holding structures, the asset portfolio is frequently managed in a central asset accounting system in the holding company code, while the local company codes handle the day-to-day processing and management accounting for measures.

Features

You can reflect this kind of structure in the Investment Management component. You create investment measures that have their WBS element or order in one company code, and their asset under construction in another. As a result, management accounting functions take place locally in the company code that is carrying out the measure, whereas the asset under construction and the final asset are managed centrally for the balance sheet in the central company code. However, make sure that the order or WBS element and the accompanying asset under construction are both

- In the same controlling area
- In company codes with identical currencies

Master Data

When you create an order or WBS element with an investment profile, the system automatically creates an accompanying asset under construction (refer to [Control Functions of the Investment Profile \[Page 194\]](#) and [Master Data Maintenance \[Page 197\]](#)). Normally, the system creates the asset under construction in the same company code as the order or WBS element. However, you can change this. When you enter a different company code in the master data of the order or WBS element (in the requesting company code field), the system creates the asset under construction in this requesting company code.

Settlement

In this case, the periodic settlement from the order or WBS element to its accompanying asset under construction takes place using the company code clearing accounts of the General Ledger (FI Customizing: *General Ledger Accounting* → *Business Transactions*). In the sending company code, the system debits expense accounts. In the company code of the asset under construction, the system debits the AuC balance sheet accounts. The company code clearing accounts of the particular company code serve as the offsetting accounts in both cases. The system creates a clearing posting document for each settlement.

The needs of legal consolidation are not considered during settlement to a different company code.



Assets under construction and their final assets always have to be in the same company code.

Planning and Budgeting Measures

Planning and Budgeting Measures

Use

Using this function, you can plan and budget investment measures, even if they are not already assigned to an investment program.

Integration

All of the planning and budgeting functions of orders or projects are at your disposal for the corresponding measures. For more information, see the documentation for the R/3 components, [Internal Orders \(CO-OM-OPA\) \[Ext.\]](#) and [Project System \(PS\) \[Ext.\]](#).



Orders or WBS elements that are assigned to investment programs cannot receive their overall budget by means of the budgeting functions in CO and PS, when the *Budget distribution* indicator is set in the program position to which they are assigned. Instead, they are limited to receiving their overall budget only by means of the budgeting functions in *Investment Management*.

Prerequisites

Certain restrictions apply when an investment program type is entered in the budget profile of an order or WBS element. When this is the case, the order or WBS element cannot receive overall budget unless you assign it (or a higher-level WBS element) to an investment program position. Until you make this assignment to a program position, the fields for the overall budget and/or annual budget for orders or WBS elements are not ready for input and cannot be changed.

Activities

To plan or budget orders, choose *Internal orders* → *Planning* → *Overall values* → *Change* or *Budget* → *Original budget* → *Change*.

To plan or budget WBS elements, choose *Investment projects* → *Planning* → *Total costs* → *Change* or *Budgeting* → *Original budget* → *Change*.

Statistical Budget Monitoring for Direct Capitalization

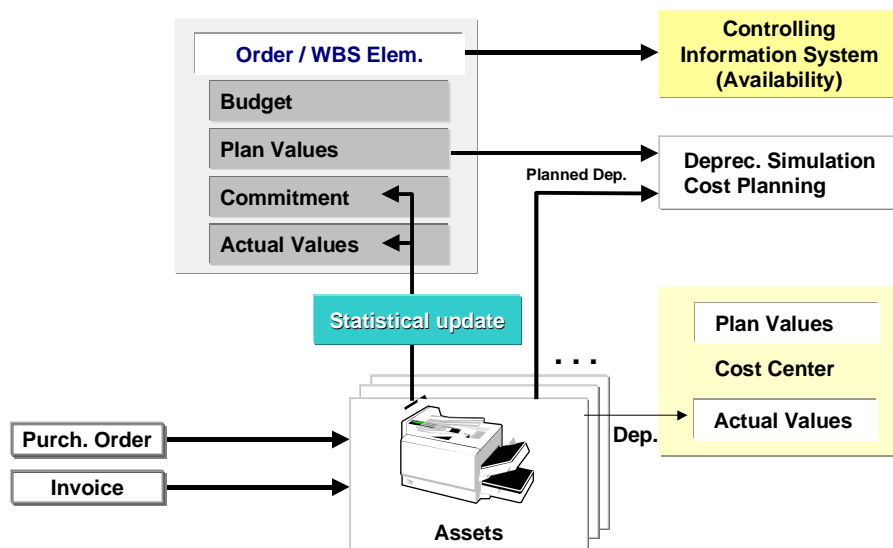
Use

Capital investments that do not have an 'asset under construction' phase are usually capitalized directly in Asset Accounting. However, you may want to manage cost accounting information at the same time. For instance, you may want to manage plan values, budgets and commitments in order to carry out target/actual comparisons. Therefore, the Asset Accounting (FI-AA) component makes it possible to post asset transactions directly to assets, while it posts the transactions automatically as statistics to an internal order or a WBS (work breakdown structure) element.

Features

You enter a CO order or a WBS element as an account assignment for capital investments. You make this entry in the asset master record under origin data (not time-dependent data). The system then makes an automatic, statistical posting to this order or WBS element at the time of the asset transaction. You can also enter such an additional account assignment directly during the posting transaction.

You specify in the control data of the order or WBS element that it is for statistical posting (*statistical* indicator). Then the system does not allow the order/WBS element to be settled.



Account Assignment to Statistical Order or WBS Element

Commitments

The system automatically creates a statistical commitment on the accompanying order or WBS element when you enter purchase orders for to an asset. This commitment is automatically cleared when you post the goods receipt or invoice receipt.

Statistical Budget Monitoring for Direct Capitalization

Internal Activity Allocation

If you want to post internal activity allocation to a statistical order or WBS element, do **not** set the “statistical” indicator. Otherwise, you cannot settle these ‘real’ debits to cost centers or the accompanying asset under construction later.

The system settles the statistical debits from the asset under construction to the order or WBS element using a special statistical value type. The use of this value type ensures that these values are not settled again.

Availability Control

For more information, see [Blanket Asset Budgets \[Page 66\]](#).

Depreciation Simulation

You can include statistical orders and WBS elements in depreciation forecasts in Asset Accounting (for more information, see [IM Information System \[Page 277\]](#)). There are a few prerequisites for this. The statistical orders or WBS elements have to have:

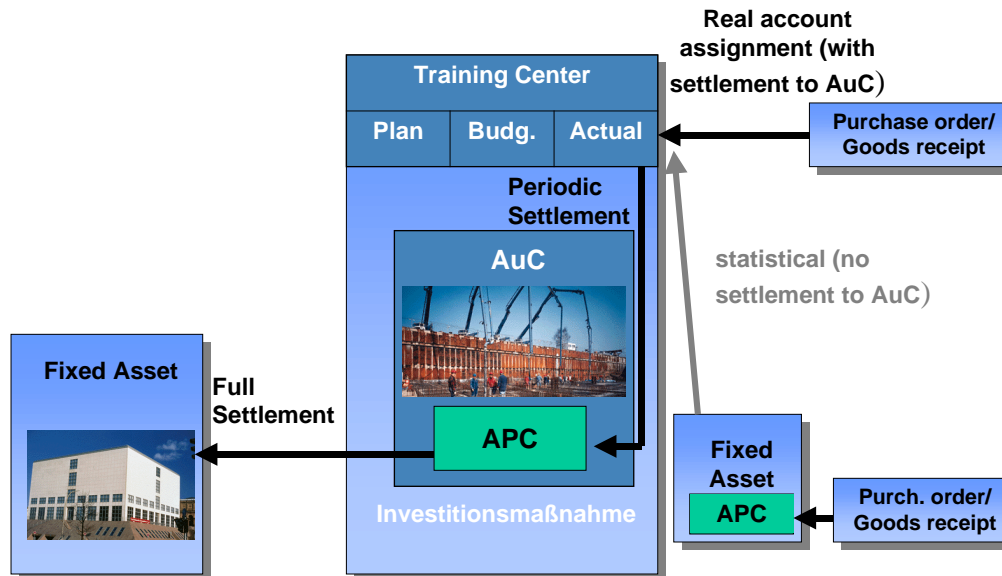
- An investment profile in their master records (WBS elements: on the *Control* tab page, and orders: on the *Investments* tab page. The investment profile has to be defined so that
 - It does not create an asset under construction (IM Customizing: *Master Data* → *Define Investment Profiles* - Do **not** set the *Manage AuC* indicator).
 - It contains an asset class for depreciation simulation.
- Depreciation simulation data and a planned start-up date in their master records (under *Extras*).

Direct Capitalization for Investment Measures

As another option, in addition to using statistical orders or WBS elements for direct capitalization of assets, you can also make statistical postings to actual investment measures that have accompanying assets under construction. This type of statistical posting might be necessary when you acquire an asset for a larger project. For example, you are building a production line, and purchase a drill for construction.

You earmark the direct capitalization amount using the “statistical” value type (cost element category 90). The system then recognizes this amount as a statistical value during the periodic settlement in the IM component. As a result, the system ignores this value during the settlement to the accompanying asset under construction (there is no duplication of the clearing).

Statistical Budget Monitoring for Direct Capitalization



Direct Capitalization for Investment Measures

Prerequisites

The conditions below are necessary for automatic statistical updating of orders or WBS elements:

- The CO object (order or WBS element) has to be entered in the asset master record as investment account assignment (**not** as a maintenance order or cost order in the time-dependent data).
- The indicator for statistical updating of the order/WBS element has to be set in the definition of the transaction types used for asset transactions (*Relevant to budget* indicator). This indicator is already set appropriately in the standard transaction types.
- The asset control accounts for the APC of the assets have to be entered in the CO component as cost elements (cost element type 90).
- The *Internal order* or *WBS element* field has to be set as an optional entry field in the field status variant of the company code/control account for the APC of the asset.

You can make these system settings in Customizing for *Investment Management* (*Investment Orders* → *Planning and Budgeting* or *Investment Projects* → *Planning and Budgeting*)

You control whether or not there is budget monitoring in orders or WBS elements using an indicator in the budget profile. You then enter this budget profile in the model order or the project profile. You also need to define corresponding tolerance limits. For more information, see the Implementation Guide for the component Overhead Orders (CO-OM-OPA) or Project System (PS).



Statistical Budget Monitoring for Direct Capitalization

When you have down payments or settlement from an order or WBS element to an asset, it is **not** possible to have automatic, statistical posting from the asset to a statistical order or WBS element. The reason is that down payment and settlement apply to assets under construction. Budget monitoring for assets under construction is handled in the *Investment Measures* component of the *Investment Management* (IM) component.

Debits on Investment Measures

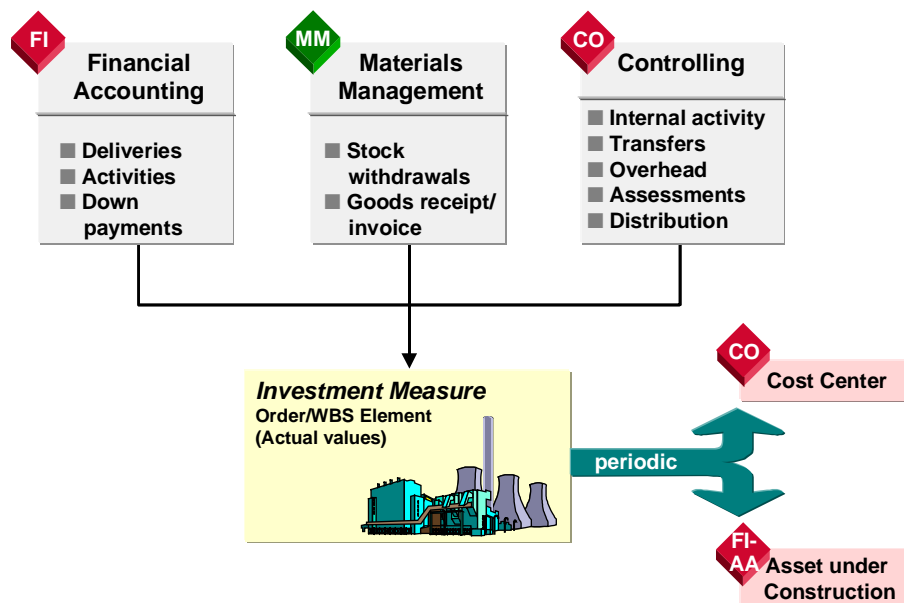
Purpose

The actual costs on investment measures (WBS elements or internal orders) consist of

- Postings in Financial Accounting
- Movement of goods in Materials Management (refer to [Ordering Process \[Page 212\]](#))
- Internal activity allocations and overhead in Controlling (refer to [Activity Allocation and Overhead \[Page 225\]](#))

Process Flow

When you post acquisitions, the account assignment object is the order or WBS element belonging to the investment measure. You cannot post directly to the asset under construction that belongs to the investment measure.



Posting during the Under-Construction Phase

From the point of view of management accounting, an acquisition that is posted to an investment measure goes through the following phases:

1. The acquisition (for example, goods withdrawal from the warehouse) is first posted fully to the order or WBS element and identified as a primary cost element in cost element accounting in the Controlling (CO) component.
2. During the periodic settlement, the costs are divided into amounts requiring capitalization and those not requiring capitalization (refer to [Settlement of Investment Measures \[Page 234\]](#)).

Debits on Investment Measures

3. The periodic settlement credits the order or WBS element and transfers the amounts requiring capitalization from costs (expense) to assets (completed asset or asset under construction). The amounts requiring capitalization are displayed only temporarily in cost accounting as primary costs, until a period closing is carried out (refer to [Basic Information for Settlement of Investment Measures \[Page 234\]](#)). The costs that do not require capitalization can be settled to CO receivers (such as cost centers).
4. The amounts that required capitalization are not actually displayed in cost accounting until depreciation is posted on the capitalized asset during its useful life in the Asset Accounting (FI-AA) component.

When an acquisition to an investment measure is not a cost element, but instead is a posting to assets (such as an asset acquisition), you have to post it with a cost element nonetheless. You post it with a cost element to the order or WBS element (to the expense account for costs that have to be capitalized). This account is credited during the periodic settlement, so that it afterwards has a balance of zero. You might need to create the expense account for costs requiring capitalization.

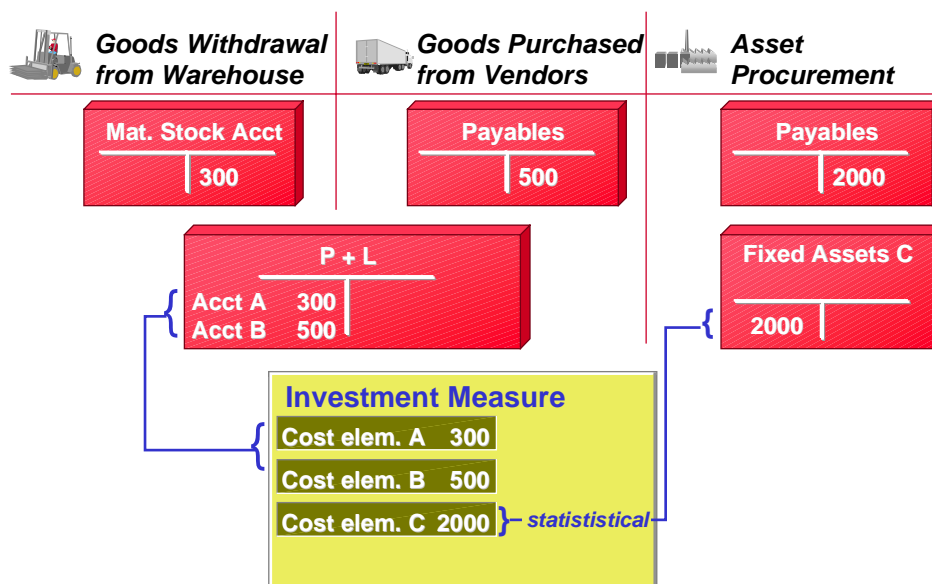
Acquisitions

Use

You can make additional account assignment to investment measures of G/L account postings made in the *General Ledger* (FI-GL) component.

Features

If you enter an investment measure (internal order or WBS element) when entering G/L account items, then the system posts the entered amounts as additional account assignment to the investment measure.



Procurement: Financial Accounting Perspective

From the viewpoint of Financial Accounting, each posting to an investment measure represents an expense posting to the profit and loss statement.

During settlement, the parts that require capitalization are then treated as revenue from capitalized in-house activity. Particularly for costs for external procurement, it is possible to settle the investment measure using the same cost element under which the debit was posted. This prevents the profit and loss statement from being inflated as the result of costs from external procurement that are initially posted to the investment measure but are later settled to fixed assets.

At asset procurement, acquisitions are posted directly to fixed assets and the acquisition value is updated statistically on the investment measure.

See also:

[Posting Charges to Financial Accounting \[Page 211\]](#)

Acquisitions

Posting Charges to Financial Accounting

Procedure

1. Choose *Accounting* → *Financial Accounting* → *General ledger* → *Document entry* → *G/L account posting*.
2. Enter the document date on the *Basic data* tab page.
3. Enter the G/L account or cost element in the table (for example, costs from external procurement). In the *D/C* column, specify that this is a debit posting. Enter the posting amount, and the WBS element or order as additional account assignment. Make entries for input tax, if required (in the *tax code* column).
4. In the next row of the table, enter the offsetting account (for example, bank) as the second line item. In the *D/C* column, specify that this is a credit posting. Enter the credit posting amount and save the document.
5. Save.

See also:

[Acquisitions \[Page 209\]](#)

Ordering Process

Ordering Process

Use

When you are using the integration of the IM component and the Materials Management (MM) component, you can post acquisitions to an investment measure (WBS element or order) using the ordering process in Purchasing.

Features

When you obtain goods or services for your investment measure externally, you can post the purchase requisition or the purchase order directly to the investment measure. You post the goods receipt or invoice receipt in warehouse accounting using the purchase order as a reference. The system automatically debits the investment measure with the order value or invoice value.

Purchase Requisition

You can enter the investment measure in the purchase requisition. Enter account assignment category **P** in the purchase requisition to make account assignment to projects; enter account assignment category **F** for the purchase requisition to make account assignment to orders.

If the investment measure is not known when you enter the purchase requisition, or has not yet been entered in the system, enter **U** for unknown account assignment.

When you enter the investment measure in the purchase requisition, the system creates a commitment on the investment measure for the amount of the order. The system manages commitments from purchase requisitions separately from commitments from purchase orders.

When you create the purchase order, you can use the purchase requisition as a reference.

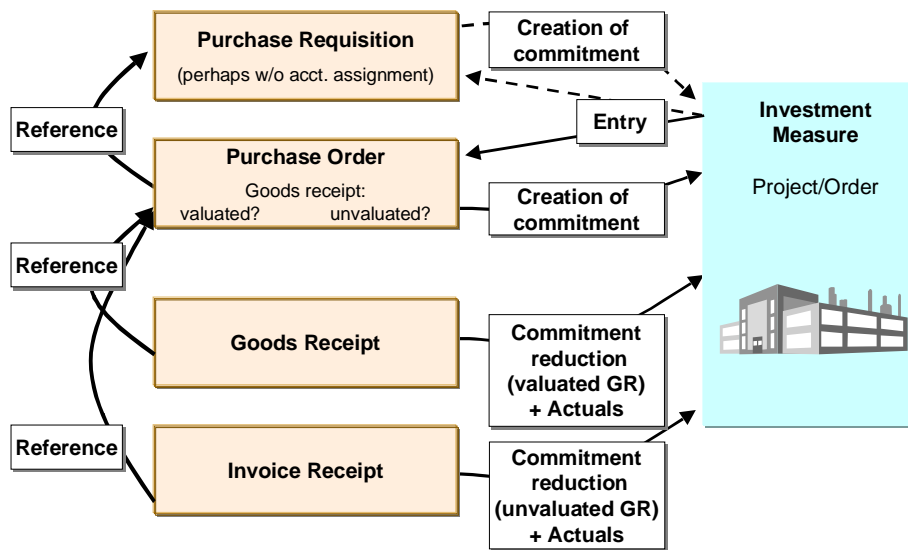
Purchase Order

If you have entered the purchase requisition without an account assignment, you have to enter the account assignment (investment order or investment project) when you create the purchase order. In the purchase order, you specify whether the goods receipt should be valued or unvalued. This decision affects the later reduction of the commitment.

If you enter the investment measure in the purchase order, the system creates a commitment for the order amount on the investment measure. If you had already entered account assignment to the investment measure in the purchase requisition, the system converts the purchase requisition commitment into a purchase order commitment.

When you post the goods receipt, the system automatically adopts the values from the purchase order. You only need to check if the quantity you ordered was delivered. If the delivery is over or under, you can correct the quantity.

Ordering Process



Ordering Process

Valuated Goods Receipt

If you did **not** set the indicator for unvaluated goods receipt in the purchase order, the commitment is reduced by the goods receipt. For partial deliveries, the system reduces the commitment in proportion to the quantity you actually received. The system also offers the option of reducing the commitment based on value amounts.

You may receive a partial delivery and the missing goods will not be delivered later. In this case, you can set the *Final delivery* indicator in the purchase order. The commitment is then reduced completely, although the delivery was not complete.

When posting the invoice receipt, you can use the purchase order as a reference. The system shows the purchase order price, multiplied by any existing purchase order quantity, as the invoice price.

Valuated Invoice Receipt

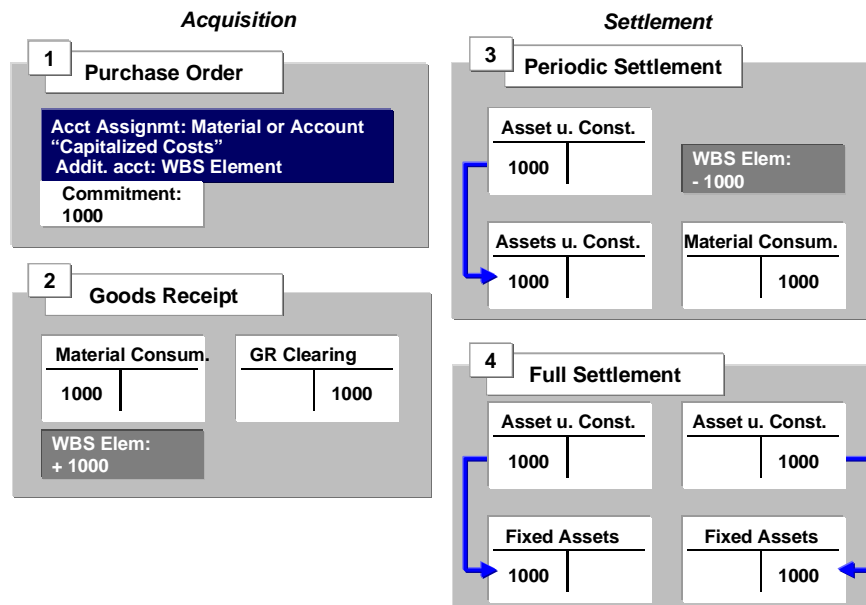
If you set the indicator for unvaluated goods receipt in the purchase order, the system will reduce the commitment when the invoice receipt is entered.

If you did **not** set the indicator for unvaluated goods receipt in the purchase order, the system corrects the price from the goods receipt when the invoice amount is higher or lower than the purchase order amount.

Accounts for Ordering Process

The following graphic provides an overview of the accounts used for the acquisition and settlement of a debit on an investment measure.

Ordering Process



Account Overview of Acquisition

A purchase order for material initially creates a commitment in the amount of the material price. You have to enter the material and the additional account assignment to the WBS element in the purchase order. At the time of the goods receipt, the system creates an expense posting for 'consumption of material.' The system determines this account using the account determination of the material. At the same time, the system debits the WBS element with the 'consumption of material' cost element (corresponding to the expense account). When the periodic settlement takes place, the system credits the WBS element with the 'consumption of material' cost element, and debits the asset under construction that belongs to the investment measure or that asset's APC balance sheet account. During the full settlement, the system transfers the debit from the asset under construction to completed assets, that is, the balance sheet account for fixed assets.

See also:

[Creating Purchase Requisitions \[Page 215\]](#)

[Creating Purchase Orders \[Page 216\]](#)

[Posting Goods Receipts \[Page 217\]](#)

[Posting Invoice Receipts \[Page 218\]](#)

Creating Purchase Requisitions

Procedure

1. Choose *Logistics* → *Materials management* → *Purchasing* → *Requisition* → *Create*.
2. Enter document type NB, the account assignment category (P = project), delivery date, plant, storage location, purchasing group and material group. Press *Enter*.
3. Enter the material number, quantity and units. Press *Enter*.
4. Enter the G/L account or cost element (for example, the account for costs that have to be capitalized, or the account for consumption of raw materials) and the investment measure (WBS element or order) as account assignments.
5. Save the purchase requisition.


Creating Purchase Orders

Creating Purchase Orders

Procedure

1. Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known*.
2. Enter the vendor and the purchasing group on the *Org. data* tab page.
3. In order to create a purchase order related to a purchase requisition, you first have to display the document overview. Select the corresponding purchase requisition by choosing the *Selection variant* pushbutton, and then choosing *Purchase requisition*.
4. Select the purchase requisition and place it in your shopping cart using drag and drop.



Detailed documentation is available directly in the transaction ( *Help* pushbutton). Also see the SAP Library for *Materials Management* → *Purchasing* → [Manual Creation of Purchase Order \(Vendor Known\) \[Ext.\]](#).

Posting Goods Receipts

Procedure

1. Choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Receipt → For Purchase Order → PO Number Known*.
2. Enter movement type 101 (*Goods receipt for purchase order for warehouse*) and the purchase order number.
3. Save the goods receipt.

Posting Invoice Receipts

Posting Invoice Receipts

Procedure

1. Choose *Logistics → Materials Management → Invoice Verification → Invoice Verification → Document Entry → Enter Invoice*.
2. Enter the document date and the purchase order number. Press *Enter*.
3. Enter the amount of the invoice on the next screen. Set the indicator for tax calculation, if necessary.
4. Save the invoice.

Down Payments

Use

Down payments made for investment measures represent acquisition postings. They are usually identified by a separate cost element.

Features

You have to post the following transactions in conjunction with a down payment:

- Posting of the down payment
- Posting the closing invoice belonging to the down payment
- Clearing the down payment with its closing invoice

Account Assignment

The FI component provides the transactions necessary for account assignment of down payments to an order or project.

Along with direct account assignment to orders or projects, it is also possible to have account assignment of down payments to purchase orders. These purchase orders are then assignable to the order or project.

System Settings

You need to make the settings and create the master data outlined below. Once you make these entries in Controlling (CO), it is possible to update down payments that have account assignment to orders or projects.

- Set up a cost element for updating down payments without reference to a purchase order. The cost element type has to be 1 (primary cost element) (*Accounting* → *Controlling* → *Cost Element* → *Master Data*). It is necessary to post the down payments as primary cost elements, in order to provide for their temporary display as costs in management accounting for the project or order. As a result of periodic settlement to the asset under construction at the close of the period, down payments then represent an increase to assets. The down payments are then posted to the correct reconciliation accounts in Asset Accounting.



Since primary cost elements cannot be balance sheet accounts, direct account assignment to the special general ledger accounts of Accounts Payable, or the reconciliation accounts of Asset Accounting is not possible. These accounts are posted only when you carry out periodic settlement of the investment measure to its accompanying asset under construction.

- Assign the cost element to the correct controlling area (Customizing: *Controlling* → *General Controlling* → *Production Start-Up Preparation* → *Follow-Up Posting* → *Post Follow-Up to Down Payments* → *Default Cost Elements for Down Payment Update*).
- Enter the number range for the transaction KAZO (Customizing: *Controlling* → *General Controlling* → *Organization* → *Maintain Number Ranges for Controlling Documents*).

Down Payments

You have to make the following settings in Customizing in the FI-AA component, in order to post down payments to assets:

- Specify the reconciliation account for capitalized down payments, and the accompanying offsetting account for Asset Accounting. Make these entries in the account determination in Customizing for *Asset Accounting*. Choose *Transactions → Acquisitions*. The accounts that are posted are the general ledger accounts for acquisition down payment and the offsetting account for down payments.
- For the asset classes affected, allow posting with the transaction type group for down payments (Customizing for *Asset Accounting: Transactions → Acquisitions*).

Full Settlement

At the time of full line item settlement, make sure that the down payment and clearing of the down payment are settled together using the same settlement rule. Using this procedure guarantees that the down payment and the clearing of the down payment also balance to zero on the settlement receivers.

[Graphic: Full Settlement of Down Payments \[Page 221\]](#)



If you are using foreign currencies in Asset Accounting, you have to post the down payment and the clearing of the down payment with the same translation date (value date). In this way, you ensure that changes in currency valuation have no effect on the balancing of down payments and the clearing of down payments.

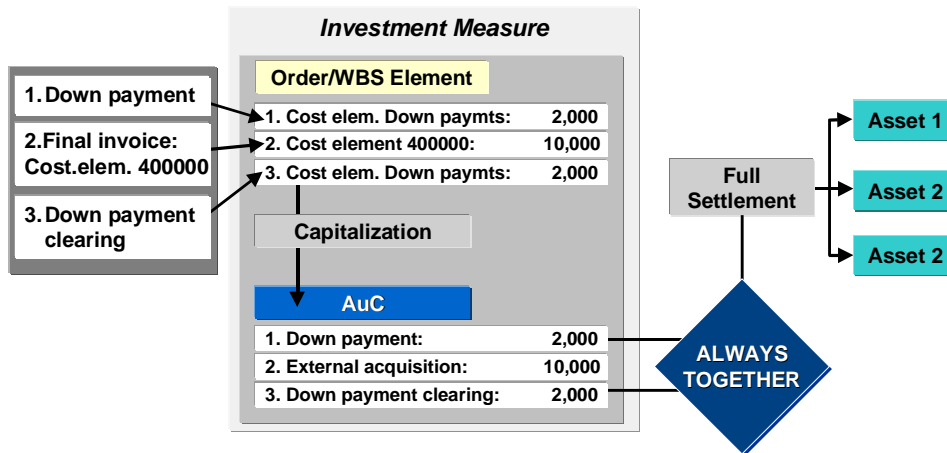
Down payments cannot be transferred from a network to a WBS element. If you want to make account assignment of down payments to an investment measure, then always assign them directly to the WBS element. You can then settle the down payment from the WBS element to the accompanying asset under construction.

Procedure

[Posting Down Payments \[Page 222\]](#)

Graphic: Full Settlement of Down Payments

The following graphic shows the full settlement of an investment measure with down payments.



Posting Down Payments

Posting Down Payments

Procedure

1. Choose *Accounting* → *Financial accounting* → *Accounts payable* → *Document entry* → *Down payment* → *Post*.
2. Enter the value date, a text, the company code and the currency.
The first line item has to be the accounts payable posting. Enter a vendor account, the special G/L indicator A, the bank account and posting amount. Press *Enter*.
3. Enter the posting amount, the tax information, the due date and the purchase order item.
4. Save the down payment.

Goods Issue from the Warehouse

Use

When goods are issued from the warehouse for an investment measure, you can post account assignment directly to the investment order or WBS element.

Features

In the warehouse posting, you only need to enter the material, the quantity and the investment measure that is receiving the goods. The system carries out the transfer from current assets to expense automatically in the background. The system charges the value of the material to the investment measure.

Procedure

[Posting Goods Issue from the Warehouse \[Page 224\]](#)

Posting Goods Issue from the Warehouse

Posting Goods Issue from the Warehouse

Procedure

1. Choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Issue*.
2. Enter the header data for the posting and the header data for the first line item (plant, storage location). Choose a movement type (such as 221 *consumption for project*).
3. Enter the investment measure that should be posted (WBS element or order) in the second screen, with the posting data of the first line item (material, quantity).
4. Enter additional line items if necessary.
5. Save.

Activity Allocation and Overhead

Use

You can charge activity allocation, as well as overhead, to projects and internal orders.

Features

Overhead

In order to calculate overhead on an order or project, you have to supply the key of the costing sheet that you want to use. You enter this key in your investment measure (order, project). For more information, see the documentation for the Project System (PS) and Overhead Orders (CO-OM-OPA).

Internal Activity Allocation

Internal activity is charged from the cost center directly to the investment measure. The system uses an activity price that was set either automatically in cost center accounting, or manually.

Enter the sender cost center, the activity type, and the amount — usually the number of hours. Also enter the investment measure for which the activity was performed. During activity price calculation in cost center accounting, you already set the activity price. The investment measure is charged accordingly. For example: cost center 4100 (technical services) provided 10 hours of activity type 1410 (construction hours) for an investment measure. If the activity price for this activity type is 70 per hour in this cost center, then the investment measure is charged 700.



Overhead and internal activity allocation are secondary cost elements. You cannot settle secondary cost elements by cost element to assets, since they do not have a corresponding FI expense account. Therefore, you have to use a settlement cost element for settling these debits. For more information, see [G/L Accounts and Cost Elements for Settlement \[Page 252\]](#).

See also:

[Posting Activity Allocation \[Page 226\]](#)

Posting Activity Allocation

Posting Activity Allocation

Procedure

1. Choose *Accounting* → *Investment Management* → *Investment Projects* → *Actual Postings* → *Activity Allocation* → *Enter*.
2. Enter a screen variant. Enter a sending cost center, the activity type, the activity consumption/unit and the receiver investment measure (WBS element or order).
3. Save.

Retirements

Use

An actual retirement of an investment measure (for example, scrapping) has to be shown on the books as a retirement of the accompanying asset under construction. A retirement has to be distinguished from a return, which is only posted as a debit reversal on the order.

Features

Debit Reversal

It is basically possible to post a retirement like a debit reversal. The requirement is, however, that costs were posted for at least the same amount (as the retirement) to the investment measure in the same year. However, if you post a retirement as a debit reversal, it appears in the asset history sheet as a reduction of acquisitions and not as a retirement. This means that the identification in the asset history sheet is not completely correct.

Correct Display in the Asset History Sheet

In order to provide for a correct display in the asset history sheet, you have to use a different procedure. There are two options, depending on whether the investment measure is set up for line item settlement or summary settlement (refer to [Settlement of Investment Measures \[Page 234\]](#)):

- **Investment measures with line item management**

Settle the line items or amounts from the investment measure to a different asset in the FI-AA component. This asset has to have the same reconciliation accounts and the same valuation rules as the asset under construction for the investment measure, but it must be created for direct posting (that is, it cannot be an investment measure). You can then post the retirement from this asset using the posting transactions of the Asset Accounting (FI-AA) component.

- **Investment measures with summary management**

When the investment measure is managed for summary settlement, you do not need the extra step of settling to another asset. You can post the retirement directly on the asset under construction belonging to the investment measure using the retirement transaction of Asset Accounting.

See also:

[Posting Retirement without Revenue \(Scrapping\) \[Page 228\]](#)

Posting Retirement without Revenue (Scrapping)

Posting Retirement without Revenue (Scrapping)

Procedure

1. Check the investment profile of the investment measure in IM Customizing (choose *Master Data*). Make sure that the investment measure is set up for summary settlement and not line item settlement.
2. Find the asset under construction for the investment measure in master data maintenance (choose *Extras*).
3. Choose *Accounting* → *Financial accounting* → *Fixed assets* → *Postings* → *Retirement* → *Asset scrapping*.
4. Enter the asset in the *Transaction data* tab page.

Then proceed as described in [Posting Retirement without Revenue \(Scrapping\) \[Ext.\]](#).

Transfers

Use

Transfers between investment measures are generally needed if you have somehow charged the wrong investment measure. You must distinguish between transfers of debits from the current fiscal year, and debits from previous years.

Features

Transfers in the Acquisition Year

You can post transfers in the acquisition year (that is, in the fiscal year in which the original debit was posted) directly to the order or WBS element (*Actual Postings* → *Manual Reposting of Costs* or *Repost Line Items*). The system retains the original cost element during this process. From the point of view of asset accounting, the system treats transfers of this kind like a debit reversal on the asset under construction, when a later periodic settlement is carried out.

For transfers, the system also calculates separate amounts in each depreciation area for the settlement to the asset under construction. This calculation is made according to the capitalization structure. Any special depreciation calculated on the asset under construction is automatically reversed. You have to manually transfer or reverse any investment support posted to the asset under construction, as you do for a debit reversal.

Transfer of Data from Prior Years

In order for them to be displayed correctly in the asset history sheet, you have to post transfers of debits from prior years with a different transaction type than transfers of current-year debits. In addition, it is necessary to calculate and transfer any proportional values for special depreciation, and so on. Therefore, a transfer of data from prior years, like a retirement, is only possible as a settlement. The values for the retiring transfer can also be determined and posted as they are for retirement (refer to [Retirements \[Page 227\]](#)).



If you post a transfer of acquisitions from prior years as if it was a transfer of current acquisitions, the system does not reject the posting, as long as the total of the acquisitions is not negative. Nothing is incorrectly posted that will affect the income account, since a reversal of current-year acquisitions would change the special depreciation in the current year by the same amount as would have been posted for a transfer of prior-year acquisitions. Only the assignment to a column in the asset history sheet is not strictly correct.

Transfer of Prior-Year Acquisitions to Other Receivers

A transfer from fixed assets to current assets cannot be represented directly in the *Asset Accounting* (FI-AA) component at the present time. This type of transfer must be posted as a retirement. In the same way, you should also post the transfer of investment measures to other receivers as a retirement.

See also:

[Posting Transfer of an Investment Measure \[Page 231\]](#)

Transfers

Reposting from an Investment Measure

Procedure

1. Check if the debit was posted in the current fiscal year or in a past fiscal year (*Information System → Investment Management Reports → Project Information System → Line Items*).
You cannot transfer debits from previous fiscal years. Instead, you have to settle them to a different WBS element or order.
2. Choose *Actual Postings → Manual Reposting of Costs → Enter*.
3. If you are posting the transfer of costs, enter a screen variant (for example, order). Enter the transfer data (sender, receiver, amount/line items, and so on).
4. Save.



When transferring line items (*Actual Postings → Repost Line Items → Enter*), you have to enter a document number.

Investment Support and Special Depreciation

Use

In many countries, tax laws allow you to calculate special depreciation during the asset under construction phase. In certain cases, you can deduct investment support amounts directly from the production costs of the asset under construction.

Features

Special Depreciation

Depreciation is calculated and posted to the general ledger for an asset under construction belonging to an investment measure, just as it is for “normal” assets in Asset Accounting. You have to assign a depreciation key to the asset under construction for this purpose. You enter this depreciation key in the asset class, so that it will be proposed as a default value (in Customizing for *Investment Management: Master Data* → *Assets under Construction*).

For more information on asset depreciation, see the documentation for [FI-AA - Asset Accounting \[Ext.\]](#).

Investment Support

You post investment support directly in the Asset Accounting (FI-AA) component to the asset under construction. There is no updating of the accompanying order or WBS element. The support measure, therefore, does not appear in the order as an actual amount. For more information on the how investment support is handled in Asset Accounting, see [FI-AA - Asset Accounting \[Ext.\]](#).

You can jump directly to the master record of the asset under construction from the master data transaction for the order or WBS element, under *Extras*.

At the full settlement of the investment measure (asset under construction), the system determines the support amount to be settled in proportion to the settled APC amounts.

Investment support that was granted in the year the asset was completed (year of capitalization) cannot be charged to the asset under construction. Instead, they must be posted directly to the completed assets.

See also:

[Periodic Posting of Investment Support \[Page 233\]](#)

Periodic Posting of Investment Support

Procedure

1. Choose *Accounting* → *Financial Accounting* → *Fixed Assets*.
2. Create a planning list for each investment support measure with the assets that come under consideration for investment support. Start the standard report for this using the test option. (*Periodic processing* → *Investment grant*). Make your selections, particularly the investment key for the report. Start the report as background processing (in the report selection screen: *Program* → *Exec. in background*).
3. Compare the resulting list with the requirements of your internal revenue service. Change the asset master records, if necessary (delete the investment key) or change the Customizing definition of the investment key.
4. Once your planned investment support measures have been approved by the tax authorities, you can claim the investment support using collective posting.
 - Start the *Investment subsidy* report without the test option. The report creates the posting session you need.
 - Enter the value date for the postings in the request screen for the report (page 2).
5. Process the batch input session the report creates (*System* → *Services* → *Batch input*).
6. Reconcile the account balances of the affected G/L accounts with the totals shown on the list.



For more information on investment support, see the documentation for [FI-AA - Asset Accounting \[Ext.\]](#).

Settlement of Investment Measures

Settlement of Investment Measures

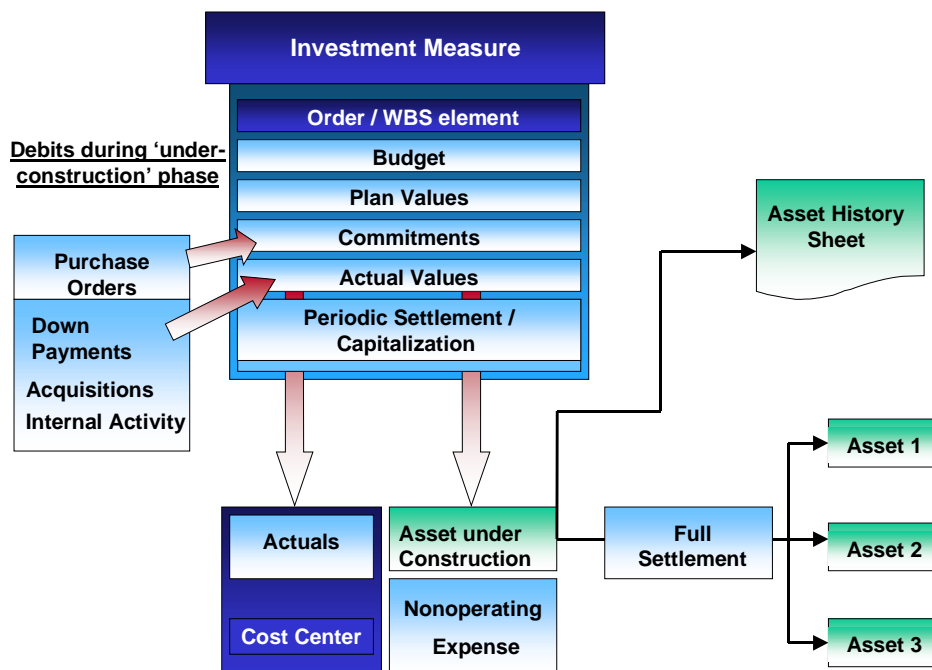
Use

When you settle capital investment measures, you generally need to settle the costs collected on the investment measure to different receivers. The system carries this out automatically for the most part, using control parameters and settlement rules you have entered. There are two ways of settling investment measures:

- Periodic settlement at the close of the period
- Full settlement or partial capitalization of the investment measure at its completion

Features

The following graphic provides an overview of the flow of values during the settlement of an investment measure.



Flow of Values during Settlement

Periodic Settlement

During periodic settlement, the actual costs on the order or WBS element are allocated completely or partially to one or more receivers. At the same time, the system generates automatic offsetting postings that credit the order or WBS element. The original debit postings to the order or WBS element still exist on the receivers after the settlement (and can be displayed). The costs that were settled are updated on the receiver, and can be displayed in reports.

Settlement of Investment Measures

There are two parts to the periodic settlement:

- The settlement to CO receivers (such as, cost center) of debits that do not have to be capitalized
- The settlement to the asset under construction belonging to the investment measure of debits requiring capitalization

The settlement to CO receivers involves all complete debits (not yet capitalized to an asset under construction). It is therefore possible to post and manage debits to an investment measure for management accounting purposes, even if these debits have no relevance for capitalization in the balance sheet (for example, overhead).

In the same step as the settlement of debits to CO receivers, the system settles to an asset under construction. You can define the settlement to assets under construction per depreciation area. The depreciation areas are used in Asset Accounting (FI-AA). They allow you to calculate values for fixed assets for different purposes (for example, book depreciation, tax depreciation, cost accounting depreciation, etc.). They make it possible to take different capitalization rules into account during the settlement to the asset under construction. The system posts costs that do not require capitalization (valuation differences between depreciation areas) to nonoperating expense.

Full Settlement

Full settlement takes place when the investment measure is completed. During the full settlement, the debits that were transferred to the asset under construction are settled to completed assets. If debits were transferred incorrectly to the asset under construction, you can make a correction at this point and make a final settlement of these debits to cost centers. This settlement to cost centers is allowed only for debits that were posted during the current fiscal year. Debits from prior fiscal years are not allowed to be settled to cost centers at this point, since they were already listed under assets under construction in the balance sheet from the previous year.

However, you should note that you can still post acquisitions to the investment measure after the full settlement. There is **no** change to the status of the investment measure. Therefore, it is possible to have any number of full settlements for the same investment measure.



[Flow of Values during Settlement \[Page 237\]](#)

See also:

Information on Settlement

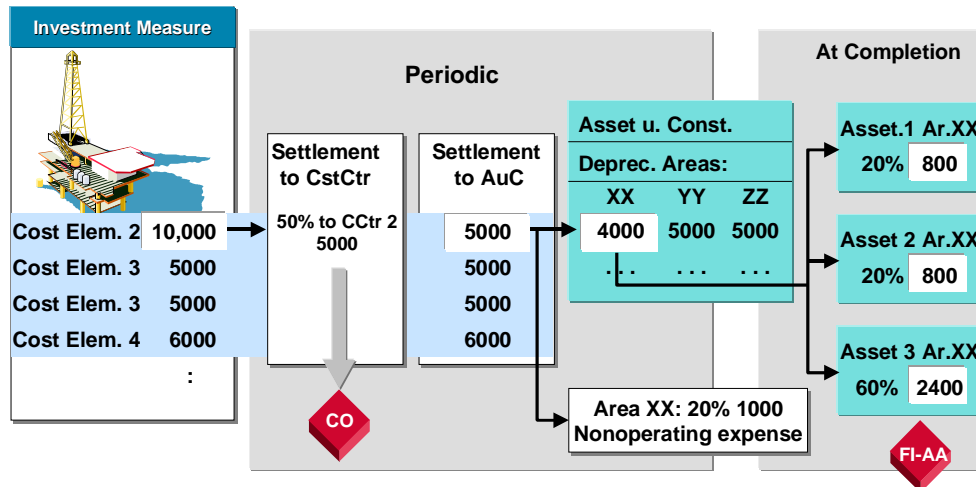
Section...	contains information about...
Settlement Rules [Page 238]	System configuration and settlement parameters [Page 240] for periodic settlement to CO receivers [Page 242] and assets under construction [Page 244] , then full settlement [Page 249] , and settlement of objects subordinate to a measure [Page 248] as well as the G/L accounts and cost elements for settlement [Page 252] .
Account Assignment for Settlement [Page 254]	entering settlement rules and distribution rules for line item settlement [Page 258] as well as for periodic blanket settlement [Page 259] or full blanket settlement [Page 260] .

Settlement of Investment Measures

Settlement [Page 261]	carrying out settlement [Page 264]
---------------------------------------	--

Flow of Values during Settlement

The following graphic provides an overview of the phases in settling a debit on an investment measure. The graphic shows the maximum number of steps that can be used for a single debit.



- A debit of 10,000 is posted to the investment measure with cost element 2 (production overhead costs). 50% of these overhead costs should be capitalized. This is shown in the blanket settlement rule (with source structure) for the investment measure: 50% to be settled at periodic intervals to cost center 2 (refer to [Account Assignment for Settlement \[Page 254\]](#)).
- The system settles the remaining 5000 on a periodic basis to the asset under construction. Tax laws stipulate that less than 50% of the production overhead costs can be capitalized in depreciation area XX (tax depreciation). Therefore, the specification in the capitalization structure is that 80% of the remaining 5000 (=4000) is capitalized to the asset under construction. The remaining 1000 goes to nonoperating expense (refer to [Periodic Settlement to an Asset under Construction \[Page 244\]](#)), to the account entered in the account determination for depreciation area XX.
- When the asset is completed, the system settles the 4000 that was capitalized to the asset under construction on the basis of a blanket total settlement rule. It is settled to three different assets.

Settlement Rules

Settlement Rules

Use

The system uses freely definable settlement rules to carry out the [periodic settlement of cost elements to CO receivers \[Page 242\]](#), or the [full settlement of capital investment measures \[Page 249\]](#) when they are completed. You enter the settlement rules in the master record of the order or WBS element. Assets under construction are settled using capitalization keys.

Features

In the investment profile you specify whether settlement (periodic settlement to CO receivers and full settlement) is summary settlement or by line item.

Differences Between Line Item and Summary Settlement

Line item	Summary
You can enter your own specific distribution rule for each posted debit. In addition, it is possible to trace the origins of each line item from the completed asset back to the original debit on the investment measure.	For all debits posted to the measure, it is only possible to enter blanket distribution rules or settlement rules per cost element or cost element group (when a source structure is used).
It is possible to trace the origins of each line item from the completed asset back to the original debit on the investment measure.	Only a summarized proof of origin [Page 290] by cost element is possible on fixed assets.
Uses more system resources during settlement and for proof of origin than summary settlement does.	Runtimes are shorter than for line item settlement.

When you use line item settlement, you can also enter a blanket settlement rule at the same time, in addition to the line item settlement rules. The system then uses this blanket settlement rule for all line items that do not have their own specific settlement rule. It is thereby possible to have blanket settlement and at the same time settle certain line items individually.



If you use summary settlement only, the calculation of interest for capital investment projects is limited (refer to [Interest in the Under Construction Phase \[Page 265\]](#)) because the system cannot precisely determine the line items relevant to interest.

Settlement by Amount

Along with the option of settling on the basis of percentage rates or equivalence numbers, it is also possible to enter specific amounts directly in the settlement rules. The prerequisite is that the settlement profile allows for settlement by amount.

You can use settlement by amount for the periodic (preliminary) settlement to CO receivers, as well as for the full settlement to completed assets. Amounts that are entered in the settlement rules are only settled once (when the next settlement is carried out).

For investment measures with line item settlement, you have to define a separate settlement rule for each amount to be settled. You then assign these rules to the individual line items. It is

Settlement Rules

important to note that the system does **not** determine any proportional allocation for an amount settlement rule that is assigned to several line items. Instead, the system always settles exactly the settlement amount for each line item. If the amount of the line item exceeds the settlement amount, the difference is ignored. On the other hand, the settlement amount is not permitted to exceed the line item amount.

The periodic settlement of investment measures can be defined differently in different depreciation areas in the asset under construction. Therefore, the system has to interpret the amounts that are entered in the rules for the full settlement. It does so as follows:

The amount entered in the settlement rule always relates to the cost-accounting depreciation area, since nonoperating expense is not filtered out for this area (100% capitalization to asset under construction). The system determines the amounts to be settled for the other depreciation areas proportionally. For example, if the amount settled equals 50% of the total of existing debits in the cost-accounting depreciation area, the system also settles 50% of the total debits in the other areas.



It is **not** possible to enter settlement amounts in the screen for entering settlement rules in the master data of investment measures. Instead you have to enter these amounts in the line item distribution screen.

Settlement of Fixed Values

If you want to settle values (such as fixed values) before the actual debit has been posted, you can post a dummy debit to a reserve account. You can then settle the dummy debit normally. The real debit, that is posted later, is settled to the reserve account for the amount of the dummy debit. The difference is posted to the receiver(s) of the dummy debit.

Settlement to Asset under Construction

The system settles to the asset under construction using the capitalization key. The capitalization key enables you to settle using different percentage rates in each depreciation area.

You are not required to use capitalization keys. If you do not enter any capitalization keys, the system settles all debits, not assigned to CO receivers, to the asset under construction during the periodic settlement. The same amount is settled to all depreciation areas.

See also:

[Periodic Settlement to an Asset under Construction \[Page 244\]](#)

Activities

Specify whether you want line item settlement or summary settlement. You do this in Customizing for *Investment Management*. Choose *Internal Orders as Investment Measures/Projects as Investment Measures* → *Master Data* → [Define Investment Profiles \[Ext.\]](#) .

Parameters for Settlement

Use

The control parameters for settlement of investment measures are explained in this section. You define these parameters in Customizing for *Investment Management*. You assign them to the investment measure by means of the order type, model order type or the project profile that is used. In addition, you can change these parameters directly in the master record of the investment measure.

Features

Together with the settlement rules entered in the investment measure, these parameters control the complete process of settling an investment measure.

Settlement Profile

The settlement profile contains the most important control indicators for the settlement. Of particular importance, you can specify the allowed types of receivers for the settlement there. For example, you could allow for a settlement to cost centers in addition to the usual settlement to assets. The settlement profile also contains default values for the allocation structure and for the source structure. You specify the settlement profile in the order type or the project profile, or directly in the master data of the investment measure.

Investment Profile

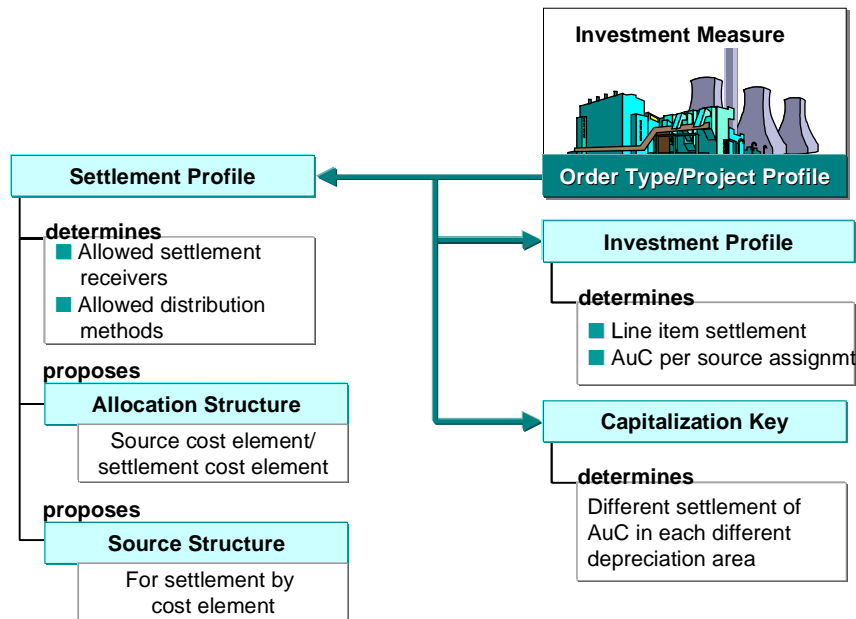
The investment profile also plays a role during settlement. You specify in the investment profile whether the system performs line item settlement or summary settlement.

In the investment profile, you can also specify that an investment measure should have an asset under construction for each source assignment in the source structure.

Capitalization Key

The capitalization key is needed in this context only if you have different capitalization rules for different depreciation areas in Asset Accounting (for example, for local book depreciation, group depreciation and cost-accounting depreciation).

Parameters for Settlement



Parameters for Settlement

Activities

You maintain [settlement profiles \[Ext.\]](#) in Customizing for *Investment Management*. Choose *Settlement* → [Maintain Settlement Profile \[Ext.\]](#).

To maintain [investment profiles \[Ext.\]](#) choose *Master Data* → [Define Investment Profiles \[Ext.\]](#).

To maintain [capitalization keys \[Ext.\]](#) choose *Capitalization Values per Depreciation Area* → [Define Capitalization Keys \[Ext.\]](#).

See also:

[Settlement Rules \[Page 238\]](#)

[Control Functions of the Investment Profile \[Page 194\]](#)

[Periodic Settlement to an Asset under Construction \[Page 244\]](#)

Periodic Settlement to CO Receivers

Use

Periodic settlement to CO receivers makes it possible to post debits to the investment measure which are **not** intended for later capitalization. You can settle these debits directly and completely to CO receivers, usually cost centers, without needing to carry out a settlement to the asset under construction for them (refer to [Periodic Settlement to an Asset under Construction \[Page 244\]](#)).

Note that the periodic settlement to CO receivers and the capitalization to assets under construction take place in the same step with the same processing type (either *Periodic* or *Automatic*).

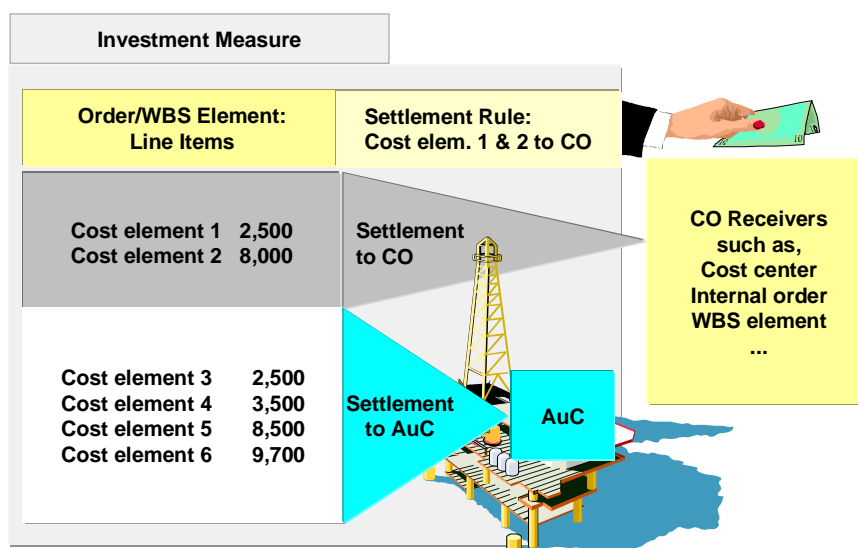
Features

For this settlement to CO receivers, you can define distribution rules for selected line items, or specify a blanket distribution rule for the entire investment measure

The blanket distribution rule (using a source structure) allows you to specify that certain cost centers are not capitalized (refer to [Account Assignment for Settlement \[Page 254\]](#)). The settlement of certain line items to CO receivers is especially useful when certain incidental costs have been posted to an investment measure, but should not be capitalized (for example, removal expenses for an asset that is being replaced). This is necessary in certain circumstances so that the total costs of the measure can be monitored in management accounting (including amounts that do not require capitalization).

Settlement

The following graphic shows the periodic settlement of an investment measure. Cost elements 1 and 2 are settled 100% to CO receivers, based on the definition in the blanket settlement rule with source structure. The system debits the remaining cost elements to the accompanying asset under construction.



Periodic Settlement

Periodic Settlement to an Asset under Construction

Periodic Settlement to an Asset under Construction

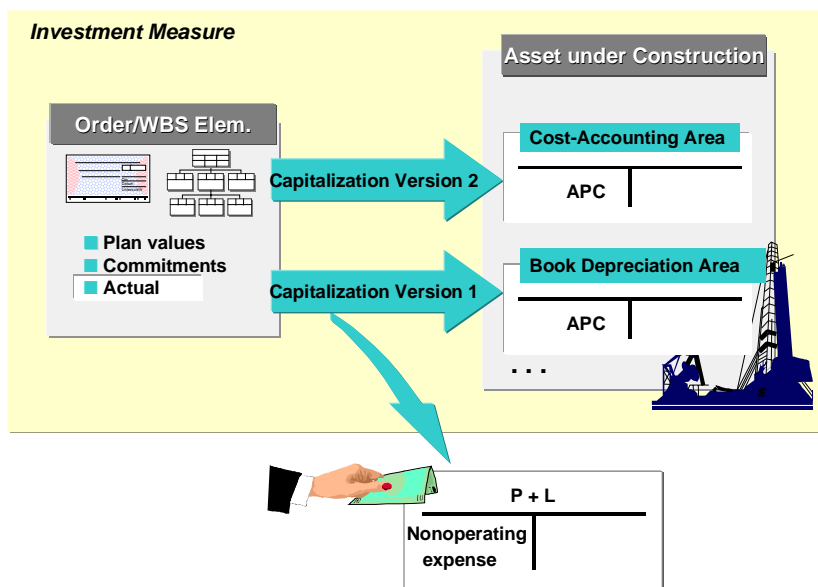
Use

When you carry out periodic settlement to CO receivers, the system automatically settles any remaining debits to the asset under construction that belongs to the investment measure. However, the transfer price of in-house produced goods and the price of warehouse material often includes indirect costs that cannot be capitalized according to commercial or tax law. From the point of view of management accounting and product cost planning, however, it is desirable to completely capitalize the debits on investment measures, in order to achieve leveling of large blocks of costs via depreciation.

Features

Therefore, the Investment Management component enables you to capitalize portions of certain cost elements or cost element groups only in certain depreciation areas of the asset under construction (such as, book depreciation, tax depreciation, group depreciation).

You specify the percentages to be capitalized in a capitalization key. The system filters out the amounts (valuation differences between depreciation areas) that do not require capitalization as nonoperating expense.



Differing Capitalization per Depreciation Area

However, you are not required to use capitalization keys. If you do not enter a capitalization key in the investment measure, the system settles all non-assigned, remaining debits to CO receivers (see [Periodic Settlement to CO Receivers \[Page 242\]](#)) to the asset under construction during the periodic settlement. The same amount is settled to all depreciation areas.

Periodic Settlement to an Asset under Construction

Definition of the Capitalization Key

You define capitalization keys at company code level. You can specify the percentages to be capitalized for cost elements and activity types in the capitalization key. You can enter a capitalization key in the master data of the asset under construction belonging to an investment measure. You can enter a capitalization key in the asset class for the automatic creation of the asset under construction for the investment measure as a default value (refer to [Master Data Maintenance \[Page 197\]](#)). You enter this asset class in the investment profile.

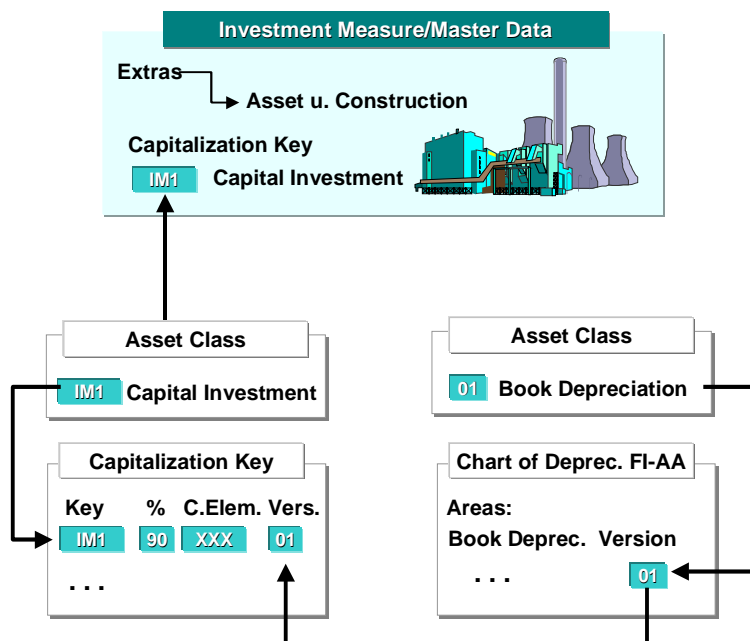
Capitalization Versions

It is often necessary to capitalize different percentages of certain cost elements in the individual depreciation areas in Asset Accounting, depending on the capitalization rule and the purpose of the calculation. For example, in many companies, different capitalization rules are used for tax depreciation than for book depreciation. Therefore, it is possible to have different capitalization percentage rates in a capitalization key both by capitalization version as well as by cost element.

You define the capitalization version in Customizing for *Investment Management* (refer to *Activities* below). Then you assign the capitalization versions to individual depreciation areas in Asset Accounting. The system posts costs which do not require capitalization to the account for nonoperating expense, treating them as capitalization differences specific to a depreciation area. You need to enter this account for each depreciation area in the account allocations of the asset under construction in question.

The account cannot be a cost element. This ensures that debits are not registered twice in cost accounting (once as a capitalization difference, and once as a result of later cost-accounting depreciation of the completed asset). As a prerequisite for the posting to nonoperating expense, the depreciation area must post automatically to the FI General Ledger.

The following graphic provides an overview of the Customizing settings for a capitalization key:



Customizing for Capitalization Key

Periodic Settlement to an Asset under Construction

Capitalization key IM1 capitalizes only 90% of cost element XXX in the Asset Accounting book depreciation area (version 01).

Capitalization in the Cost-Accounting Area

In order to guarantee that all debits that do not require capitalization arrive in cost accounting, the system capitalizes 100%, in to the depreciation area defined for cost accounting, of the amounts that still remain on the asset under construction after the periodic settlement to CO receivers. This means that you cannot create nonoperating expense (difference between capitalization in this and another area) in the cost accounting depreciation area. This is necessary, since the account for nonoperating expense is not permitted to have relevance for CO (see above). Therefore, any amounts charged to this account would be lost in cost accounting. However, you still have the option of settling from this depreciation area using settlement to CO that is not dependent on depreciation areas, within the framework of the periodic settlement to CO receivers (refer to [Periodic Settlement to CO Receivers \[Page 242\]](#)).

You specify the depreciation area to be used for cost accounting in Customizing for Asset Accounting. If you do not make any specification of this kind, the system uses the book depreciation area.



You may have certain overhead that you do not want to capitalize in the cost accounting depreciation area, but in other special depreciation areas. In this case, you have to define negative overhead in the overhead structure for the same amount as the original overhead, with a different cost element. You then capitalize the cost element for the positive overhead in all depreciation areas. You capitalize the negative overhead in all depreciation areas, except the areas desired for the capitalization.

Asset under Construction per Source Structure

It is possible for an investment measure to have more than one asset under construction. It can have an asset under construction for each source assignment in the source structure used. You make this specification in the investment profile for the investment measure (refer to [Control Functions of the Investment Profile \[Page 194\]](#)). When the you capitalize to an asset under construction, the system settles all cost elements of a source assignment to its own asset under construction. For more information on the source structure, see [Settlement Rules \[Page 238\]](#).

Activities

You maintain determination of capitalization value in Customizing for Investment Management. Choose *Internal Orders as Investment Measures* or *Projects as Investment Measures* → *Capitalization Areas per Depreciation Area*.

Enter the capitalization key in the master record of the asset under construction. From the investment measure master data, choose *Extras* → *Asset under construction*. On the master data screen of the asset under construction, enter the capitalization key on the *General data* tab page.

To specify that a depreciation area automatically posts to the FI General Ledger, choose *Integration with the General Ledger* → *Define How Depreciation Areas Post to General Ledger* in Customizing for Asset Accounting.

For more detailed information on the functions of depreciation areas in Asset Accounting, see [FI-AA - Asset Accounting \[Ext.\]](#).

Periodic Settlement to an Asset under Construction

See also:

The following steps in the Implementation Guide (IMG)

[Capitalization Values per Depreciation Area \[Ext.\]](#)

[Define Capitalization Versions \[Ext.\]](#)

[Define Capitalization Keys \[Ext.\]](#)

[Determine Accounts for Nonoperating Expense \[Ext.\]](#)

Settlement of Objects Subordinate to a Measure

Settlement of Objects Subordinate to a Measure

Use

WBS elements that are investment measures with an accompanying asset under construction can have other subordinate objects assigned to them. These subordinate objects can be networks with activities, orders or WBS elements. The subordinate objects present special problems at the time of settlement.

Features

Networks

Networks themselves cannot be treated as investment measures, since they cannot be linked to assets under construction. However, you can create an indirect link by assigning them to a WBS element.

However, you first have to settle all networks assigned to the WBS element to that WBS element (multiple settlement). Therefore, enter the WBS element as receiver in the settlement rule for the network. You can then settle the WBS element to assets or to other receivers outside the project. This procedure ensures that all of the actual values from network activities are reported to the WBS element and are available for possible capitalization to the asset under construction.

Orders and Subordinate WBS Elements

You can settle orders or WBS elements that are assigned to an investment measure using the procedure described below:

- The order or subordinate WBS element is itself an investment measure, and is settled as a separate object directly to the end receivers (assets). You do *not* have to settle the subordinate object to the higher investment measure.
- The order or subordinate WBS element is not an investment measure. Instead, the WBS element it belongs to is the investment measure. The order or subordinate WBS element then has to be settled to the higher WBS element. The periodic settlement of the higher WBS element can only be posted after all the subordinate objects are settled by cost element to the investment measure.

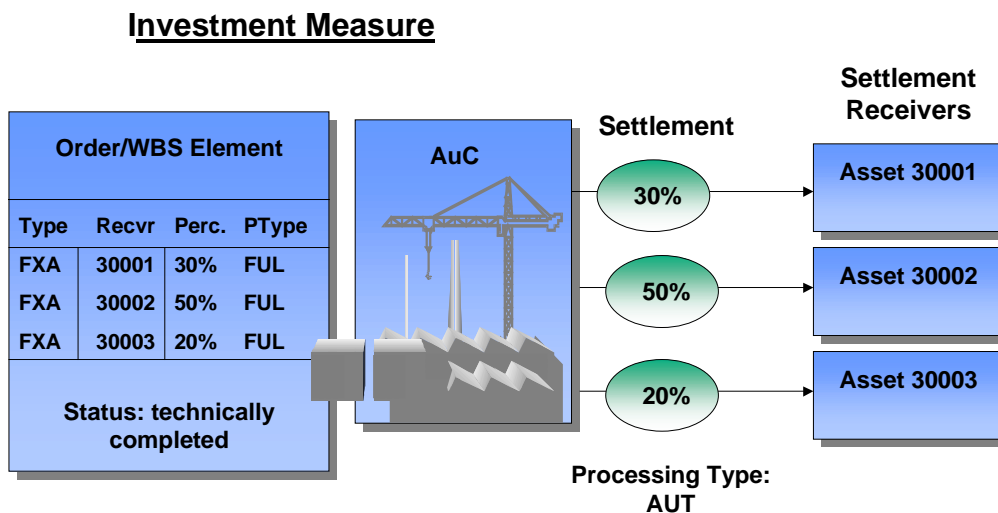
Full Settlement of an Investment Measure

Use

Full settlement is the settlement of the investment measure when it is completed. During full settlement, you settle the amounts that were charged to the asset under construction. As soon as an investment measure has *technically completed* status, the system carries out full settlement. Full settlement can take place to a number of different receivers. Usually the receivers are one or more fixed assets.

Features

Before you post the full settlement, you have to create settlement rules for the investment measure. You can use line item specific or blanket rules for the full settlement as well as the periodic settlement. For more information see [Settlement Rules \[Page 238\]](#). Generally, however, you only need blanket settlement rules for full settlement.



Full Settlement

You can create an asset for the later settlement directly from master data maintenance for orders or WBS elements. The system then automatically creates a full settlement rule with equivalence number 1 and the newly created asset as the receiver.

Partial Capitalization

Especially when you have a large capital investment measure, you may put different parts of it into service, one after the other. In this case, you can define settlement rules for the full settlement that total less than 100%. There is also a special processing type for this kind of

Full Settlement of an Investment Measure

partial capitalization (refer to [Settlement \[Page 261\]](#)). This type of processing allows you to settle amounts from the investment measure to completed assets, although the investment measure does not have *technically completed* status.

After the settlement is posted, the distribution rules used can no longer be changed. However, you can add new receivers for the amount that is still open. When you distribute this remaining amount, the percentages apply to this partial amount and not the original full amount.



In the settlement rules for partial capitalization, you have to enter the period in which the rule becomes valid (the 'from' and 'to' period will be the same).

Full Settlement to CO Receivers

As a rule, debits already capitalized to an asset under construction should not be included again in cost accounting, as they may have already been recorded under fixed assets. For the purposes of making corrections, you can, however, include CO receivers in the distribution rules for the full settlement. There are two different possible situations.

- **Debits from the current year**

It is a fundamental rule that only debits from the current fiscal year can be settled to CO receivers, since debits from the previous year cannot have any cost accounting significance in the current fiscal year. Otherwise, the asset history sheet would be incorrect. You settle the debits from the current year using the normal settlement transaction and entering the CO settlement receivers.

- **Debits from the previous year**

The situation can arise in which you want to settle debit corrections from the previous year to CO receivers. This procedure corresponds to a retirement from fixed assets, since these debits were already settled to an asset under construction during the last year-end closing. Therefore, in order to guarantee that the display in the asset history sheet is correct, you have to settle the debits to an asset. You have to post a retirement on this asset in the *Asset Accounting* (FI-AA) component, with the *reverse acquisition in following year* transaction type. The offsetting account for this posting is an expense account, and corresponds to a cost element, so that the relevance of the transaction is preserved for cost accounting.

Quantity Update

During settlement to fixed assets, you can transfer the quantity entered in the asset under construction to the new asset master record. You can perform quantity update for objects managed for summary settlement. There is no quantity update for the capitalization of investment measures managed for line item settlement.

You have to enter the same unit of quantity in all of the following:

- Master record of the asset under construction
- Debit cost element
- Master record of final fixed asset

If these prerequisites are met, the system updates the *Quantity* field in the asset master record if the debit cost element has the same quantity unit. During full settlement, the system distributes

Full Settlement of an Investment Measure

the quantity according to the settlement rule. However, quantity update is not possible for assets under construction that do not belong to investment measures.



Currently it is not possible to distribute by quantity in the settlement rule.

G/L Accounts and Cost Elements for Settlement

Use

When carrying out settlement, the system uses cost elements and general ledger accounts. These are described in more detail below.

Features

You specify the cost element for the periodic settlement to an asset under construction or to CO receivers (for example, cost centers) in the allocation structure of the given settlement profile. When making this specification, you can choose if you want:

- To settle by cost element
- To specify a settlement cost element

In the allocation structure, you make specifications for the settlement of debits on the order or WBS element to the given receiver type. You can specify per settlement assignment and per receiver type whether you want to settle by cost elements, or whether you want to use a settlement cost element, and if so, which one. The settlement assignment is a grouping of cost elements or cost element groups that should be treated in the same way during the settlement.

Settlement by Cost Element

During settlement by cost element, the system settles each debit again with the source cost element. The cost element of a debit, therefore, does not change during the settlement transaction. As a result, the cost element is still available on the settlement receiver. Using this method also ensures that the costs that require capitalization are not entered twice in cost accounting after the periodic settlement to the asset under construction.

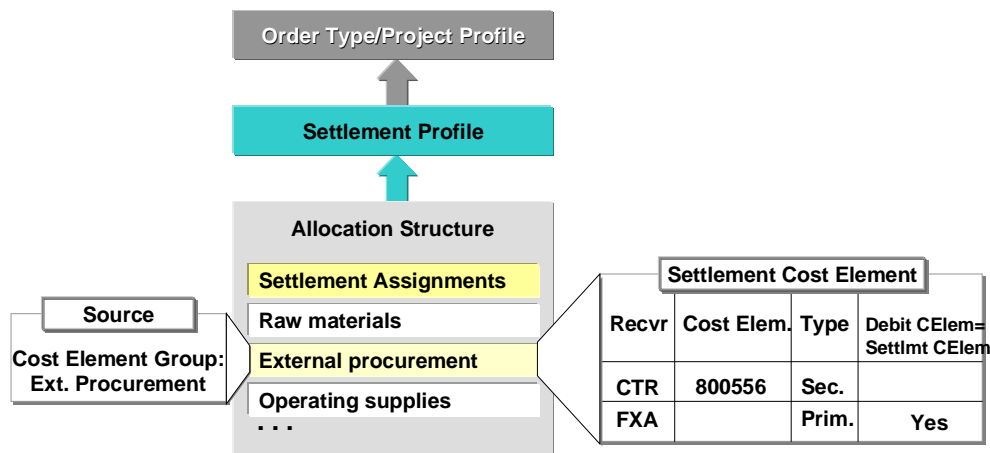
When you settle to the asset under construction, the system transfers the applicable debits from the WBS element or order to the accompanying asset under construction. The result is a transfer from primary costs (expense) to non-current assets (asset under construction). For settlement by cost element, the offsetting account to the asset under construction balance sheet account is the primary cost element of the original debit (refer to [Acquisitions \[Page 207\]](#)).

Settlement with Settlement Cost Element

There are some conditions under which it is **not** possible to settle by cost element to an asset under construction. One of these is when the original debit is a secondary cost, for example, for internal activity allocation. The reason is that there is no corresponding expense account for secondary costs. Therefore, you have to settle secondary cost elements using a settlement cost element.

The following graphic shows the specifications for an allocation structure, along with the assignment to the investment measure by means of the settlement profile and either the order type or the project profile.

G/L Accounts and Cost Elements for Settlement

**Allocation Structure**

The advantage of settlement with a settlement cost element, as compared to settlement by cost element, is the improved performance. The reason is that the system does not have to create as many documents. Instead of creating a document for each source primary cost element, it creates documents for the settlement cost elements, which are usually fewer. Therefore, you should only use settlement by cost element (in conjunction with settlement by cost center to assets), when it is important for the receiver to contain information about the primary cost element of a debit.

Account for Settlement to Nonoperating Expense

You have to enter the account for settlement of capitalization differences (for specific depreciation areas) to nonoperating expense in the account determination for the individual asset under construction. In Customizing for *Investment Management*, choose *Capitalization Values per Depreciation Area*.

Full Settlement

You do not need cost elements for the full settlement, since this is just a transfer posting from assets under construction to completed assets.

You may already have inadvertently capitalized certain debits to the asset under construction. If these debits are now to be settled to CO during the full settlement, you enter a cost element in Asset Accounting Customizing (under *Transactions* → *Capitalization of Assets under Construction*).

Account Assignment for Settlement

Use

In order to settle an investment measure, you need the following account assignments:

- Asset under construction for the periodic settlement to Asset Accounting
The system automatically assigns the asset under construction to the investment measure when the investment measure is released (refer to [Master Data Maintenance \[Page 197\]](#)).
- Settlement rule for the periodic settlement to CO receivers (settlement type PRE)
- Settlement rule for the full settlement when the investment measure is complete (settlement type FUL)

Features

You have the option of using line item settlement or summary settlement, both for the periodic settlement to CO receivers and for the full settlement when the investment measure is complete. You specify the type of settlement in the investment profile (refer to [Settlement Rules \[Page 238\]](#)).

For investment measures managed for line item settlement, you can enter separate distribution rules for each line item or group of line items. This applies to both the periodic settlement and the full settlement. (Choose *Period-End Closing* → *Single Functions* → *Settlement*). For investment measures managed for summary settlement, the only option is to enter a blanket settlement rule in the master record of the order or WBS element.

It is possible to use blanket settlement rules as a way of augmenting line item settlement rules.

Line Item Distribution Rules

Line item settlement is carried out using distribution rule groups. A distribution rule group consists of distribution rules, with proportions for the distribution, and the settlement receivers. The proportions distributed are determined by equivalence numbers or percentages. You can assign these distribution rule groups to one or more line items in an investment measure (*Period-End Closing* → *Single Functions* → *Settlement* → *Investment Order: Line Items*. Choose *Execute*, then choose *Edit*). In this way, you can distribute any combination of line items to any combination of receivers. The allowed receivers are specified in the settlement profile.

For more information, see [Settlement Rules for Line Item Settlement \[Page 257\]](#).

When you create distribution rule groups manually, the system supplies them with a number. The system displays this number in the settlement transactions and in reports on the line items. You cannot change the number assignment. The numbers are assigned in ascending order, starting with 001.

You can display the choice of line items for distribution in various display variants with different types of information. You can define your own display variants for this, in Customizing for *Internal Orders as Investment Measures* or *Projects as Investment Measures* (choose *Settlement*).

You can display the original debit postings with all their data in the distribution transaction.

Blanket Settlement Rules

You can specify blanket settlement rules for periodic settlement to CO receivers and for full settlement. You create these rules in the master record of the order or WBS element, using the *Settlement rule* function in the master data transaction. The system then uses these settlement rules

- For measures managed for summary settlement: for all line items
- For measures managed for line item settlement: for all line items, which are not specifically assigned to their own distribution rule

Blanket Settlement by Cost Element

One of the parameters of the blanket settlement rule is the source structure (choose *Settlement rule* → *Parameters*). This source structure makes it possible to settle by cost elements. The cost elements for which the system should use the distribution rule can be specified in the source assignment. The possible source assignments are grouped in a source structure.

Using a source structure, you can enter a source assignment per settlement rule when you maintain the distribution rules. Then the percentage rates/equivalence numbers in the distribution rule only affect the cost elements specified in the source assignment. It is possible to settle a source assignment to several different CO receivers.

For more information, see [Settlement Rule with Source Structure \[Page 256\]](#).

Automatically-Created Settlement Rules for Full Settlement

The process of entering a settlement rule can be simplified considerably if you make a blanket settlement to one asset at the time of the full settlement. If this is the case, you can create the needed asset from within the master data of the investment measure (order or WBS element) under *Extras*. The system then automatically creates a 100% full settlement rule using the asset created as the settlement receiver.

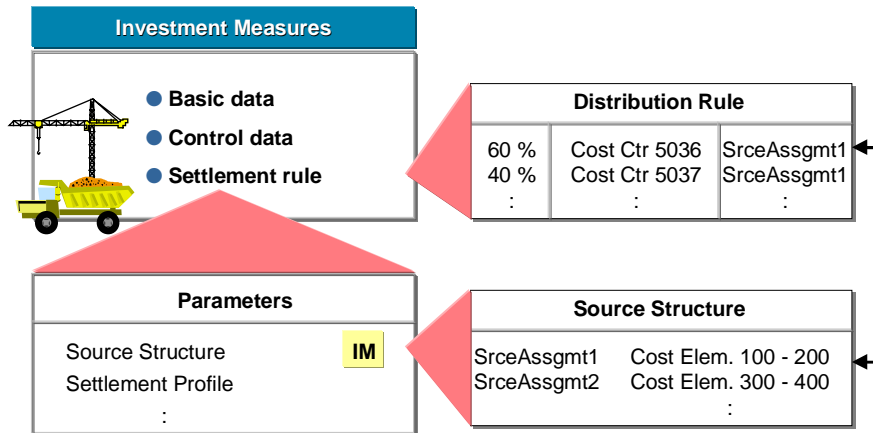
For creating the final fixed asset, a dialog box appears, in which you enter the most important asset master data. From there you can also jump to the *Create asset* transaction in the Asset Accounting (FI-AA) component. At that point in time, the asset class has still not been entered. Since the screen layout rule is dependent on the asset class, the system cannot identify required entry fields. Therefore, no fields are displayed as required entry fields here. However, when the asset is created, the system checks if all required entry fields are completed.

The system uses the asset class that is entered in the depreciation simulation data of the investment measure as the default asset class. However, you can change this asset class in the dialog box that appears.

Settlement Rule with Source Structure

Settlement Rule with Source Structure

The following graphic shows the relationship between the blanket settlement rule in an investment measure and the source structure that belongs to it:



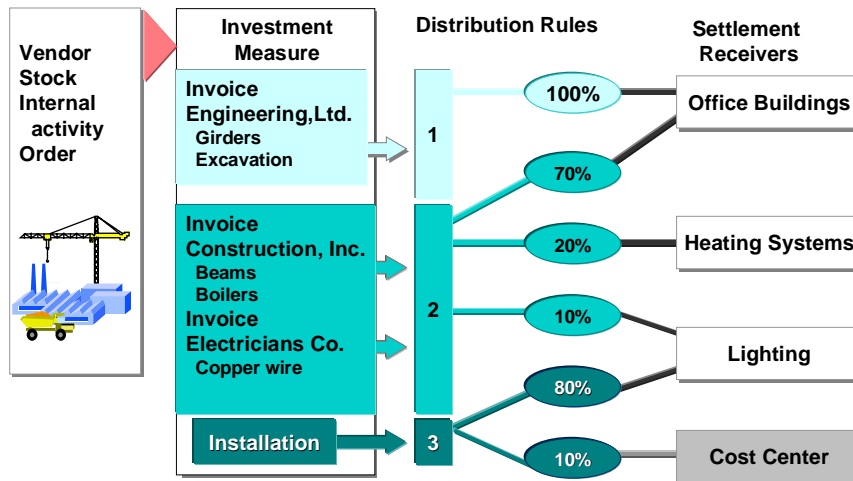
Distribution rule: 60% to cost center 5036
 40% to cost center 5037

Source assignment 1: Cost element 100-200

For cost elements 100 to 200, the system settles 60% to cost center 5036 and 40% to cost center 5037.

Settlement Rules for Line Item Settlement

The following graphic shows the full settlement of an investment measure with line item distribution rules.



The two line items, invoices from Construction, Inc. and Electricians Co., use the same settlement rule. The invoices from Engineering, Ltd. and Installation use different settlement rules.

Entering Account Assignment for Line Item Settlement (Periodic and Full)

Procedure

1. Choose *Accounting* → *Investment management* → *Internal orders/Investment projects* → *Period-end closing* → *Single functions* → *Settlement* → *Investment Order (or Investment Project): Line items*.
2. Enter your order or WBS element number in the initial screen. The system offers default posting dates. Choose *Execute*.
3. In the list display, you see the line items that were posted to the investment measure. Select the line items for which you want to create a distribution rule.
4. Choose *Edit* → *Preliminary settlement* → *Enter distribution rules*. Or choose *Edit* → *Final settlement* → *Assign distribution rules*. Press *Enter*.
5. Enter the receiving cost centers (or other receivers) and the percentage rate (or equivalence number) for the settlement.
6. Save.

Entering Blanket Settlement (Periodic Settlement w/ Source Structure)

Procedure

1. Choose *Master data* → *Order* or *Single element* → *Change*.
2. Enter the order or WBS element.
3. Choose the *Settlement rule* function.
An overview screen appears. You can enter your distribution rules in a table on this screen.
4. Choose *Goto* → *Settlement parameters*.
A detail screen for the entry of settlement parameters appears.
5. Enter a source structure. Choose *Overview* to return to the overview screen.
6. On the overview screen, there is now a column for source assignment in the *Default distribution rules* table. You can thereby enter different amounts for each cost element group that is defined in Customizing.
7. For each settlement share, enter
 - The receiver type (such as CTR for cost center), in *Cat* column
 - The receiver (such as cost center)
 - The percentage or equivalence number for that receiver
 - Settlement type (PRE = preliminary settlement or FUL = full settlement)
 - The source assignment

Entering Account Assignment for Blanket Settlement (Full Settlement)

Entering Account Assignment for Blanket Settlement (Full Settlement)

Procedure

1. Choose *Master data* → *Order* or *Single element* → *Change*.
2. Enter the order or WBS element.
3. If necessary, create the receiving asset. Choose *Extras* → *Create completed asset*. The system then automatically creates a 100% full settlement rule with this asset as the receiver.
4. If you need to make changes to the settlement rule the system created automatically, choose the *Settlement rule* function.
5. Enter additional receiving assets, the percentage rate (or equivalence number) and settlement type FUL. Enter receiver type FXA (= fixed asset).



In order to make corrections, you can also settle to CO receivers (such as cost centers) at the time of the full settlement. This can be useful, for instance, for 'dry hole costs,' that is, amounts were assigned to assets under construction but later are registered as expense. However, this only applies to costs in the current fiscal year, not for prior years.

Settlement

Purpose

Orders and/or WBS elements are used to temporarily collect costs for an investment measure. These debits then have to be debited in turn to assets under construction or cost centers. Therefore, periodic settlement of the measures is required. In addition, an investment measure with an asset under construction has to be settled to fixed assets when it is completed.

Process Flow

The posting of a settlement usually takes place as part of periodic processing. You can choose whether all selected orders or projects are settled, or only individual orders or projects. You make this determination using a freely definable selection variant. By means of the processing type in the initial screen of the transaction, you determine which of the following should be carried out:

- **Processing type 1 (automatic)**

During an automatic settlement, the processing type is determined for each debit based on the applicable distribution rule. If the investment measure is technically closed (the system status *technically completed* is set), then processing type 3 (partial capitalization) applies. Otherwise processing type 2 (periodic settlement) applies.

- **Processing type 2 (periodic settlement)**

The system settles all debits that have a preliminary settlement rule. They are settled to CO receivers. At the same time, the system internally carries out the settlement to an asset under construction.

- **Processing type 3 (partial capitalization)**

The system settles all debits that have been settled to assets under construction. They are settled to the final receiver assets, which have been assigned a full settlement rule.

Before carrying out the full settlement, the system automatically carries out a periodic settlement. This procedure ensures that all of the debits posted to the investment measure that require capitalization have been settled to an asset under construction.

- **Processing type 8 (full settlement)**

The system not only settles the costs in the period, but also determines the cumulative balance on the order up to the settlement period. If there is a balance, the system issues an error message.

The system settles all debits, which have been assigned a distribution rule. This distribution rule has to be either a blanket rule, or a line-item distribution rule, corresponding to the processing type.

Value Date

You can enter the value date for the settlement in the initial screen of the settlement transaction, or in the settlement rules for the respective investment measure. If you enter the value date in the settlement rule, the system uses this date, and ignores any value date you enter in the settlement transaction.

Settlement

If a value date is not entered in the transaction for a full settlement or partial capitalization, and no value date is entered in the settlement rule, the system uses the date of technical completion as the value date.

If the system is unable to determine a value date using any of the above rules, then it uses the last day of the settlement period as the value date.

Point in Time for the Periodic Settlement

You should carry out a periodic settlement at the close of each cost accounting period. This allows these cost amounts to be cleared in the correct period.

If you always capitalize 100% in the cost accounting depreciation area, then you **must** carry out the periodic settlement only at the close of the fiscal year, or at the close of those periods for which a balance sheet is created.

Point in Time for Settlement to Asset under Construction

The settlement to an asset under construction takes place automatically, internally within the system. This transfer takes place automatically at the same time as the periodic settlement to CO receivers.

The percentage rates for the costs that require capitalization can sometimes only be determined at the close of the period. Therefore, the capitalization structure has a time-dependent definition. You can change the capitalization structure during the fiscal year, even if periodic settlements have already been posted. However, a change has no effect on investment measures, for which final settlement has already been posted, or on partially settled line items.



In Asset Accounting only one depreciation area (book depreciation) is posted automatically online to the general ledger. The other areas that are automatically posted to the general ledger can only be posted using periodic processing. Therefore, the settlement to costs is posted immediately only for the book depreciation area during the periodic settlement. The settlement for the other depreciation areas takes place only during the periodic posting of these areas to the corresponding reconciliation accounts.

Transaction Types

The system uses specific transaction types when posting settlements to assets under construction. You define these transactions in Customizing for the Asset Accounting (FI-AA) component. In FI-AA Customizing, you can also specify the transaction types the system should use for the settlement of investment measures (under *Transactions* → *Determine Transaction Types for Internal Transactions*). Appropriate transaction types are provided in the standard system.

Full Settlement/Partial Capitalization

During the full settlement, the system now settles all debits that were settled to assets under construction to the respective receivers (completed assets). Before you can carry out full settlement, the investment measure has to have the *technically completed* status setting.

The system settles prior-year acquisitions and current-year acquisitions separately, so that they are shown correctly in the asset history sheet. Prior-year acquisitions are the values that were already transferred to the asset under construction in previous years. Proportional values for

Settlement

special depreciation and investment support are determined on the asset under construction using a blanket calculation.



At the time of the full settlement, the down payments and the down payment clearings to be settled have to balance to zero (see [Down Payments \[Page 219\]](#)).

Reversal

You can reverse a posted settlement using the settlement transaction, as long as the settlement documents that belong to it have not been reorganized. However, you can only reverse the most recently carried out settlement. If you have to reverse an older settlement, you first have to reverse the most recent settlements (following it) in reverse chronological order.

Carrying Out Settlement

Carrying Out Settlement

Procedure

1. Make sure that the investment measure you want to settle has “technically completed” status, according to the status setting in its master record.
2. Choose *Internal orders/Investment projects* → *Period-end closing* → *Single functions* → *Settlement* → *Individual processing*.
3. Enter the WBS element or order, the period, the fiscal year, and the processing type (1 = automatic).
4. If you want to make a test settlement, set the *Test run* indicator and choose *Execute*.
5. Remove the *Test run* indicator and choose *Execute*.
6. Choose *Accounting* → *Financial accounting* → *Fixed assets* → *Asset* → *Asset Explorer* in order to see the values that were settled to the asset under construction. You find the number of the asset under construction under *Extras* in the master data transaction for the order or WBS element.

Interest in the Under Construction Phase

Use

In certain countries, you are required to calculate interest on capital invested in an asset under construction, either for management accounting purposes or due to legal requirements. This interest should then be fully or partially capitalized on the capital investment measure.

Features

Therefore, the R/3 IM component makes it possible to calculate interest automatically. You can also capitalize the interest differently in different depreciation areas on the asset under construction. However, you can only calculate interest for investment measures that are managed as projects (not orders).

You make the system settings for this in Customizing for the *Project System*. Choose *Project System* → *Costs* → *Automatic and Periodic Allocations* → *Interest Calculation*.



If you only need interest for management accounting purposes (not for capitalization), you can use the corresponding functions in the Asset Accounting (FI-AA) component. There you can calculate interest for the asset under construction belonging to an investment measure. This calculation takes place during the calculation of depreciation, using an appropriate interest key. You can then make account assignment of this interest to an interest account and to a CO receiver, usually a cost center.

Interest Indicator

You specify the rules for the calculation of interest using an interest indicator. You enter general conditions in the indicator, such as calendar and calculation of compound interest. You can also enter the following time-dependent conditions:

- Benchmark interest rate (such as, discount rate) + additional interest rate
- Additional interest rate

If you do not enter a benchmark interest rate, the system automatically uses only the additional interest rate for calculating interest amounts.

- Minimum amount (threshold value)

Interest Profile

Under certain conditions, you may calculate interest for a project in parallel in two different ways with different conditions. This interest would then be posted to two different accounts. You specify the interest indicator to be used for these calculations in the interest profile. The key for this interest profile can then be entered in the WBS element, with a default supplied by the project definition or the project profile.

In addition to the conditions in the interest indicator, you can make specifications in the interest profile. The following specifications can be entered in the interest profile for calculating interest to be capitalized on a project:

Interest in the Under Construction Phase

- The chart of depreciation/depreciation area in Asset Accounting, from which values should be obtained as a basis for the calculation of interest
- The minimum amount of time the project should run, before interest is calculated
- The interval in periods for calculation of compound interest (compound periods).

[Graphic: Customizing Settings for Calculating Interest \[Page 269\]](#)

[Graphic: Interest Profile with Several Percentage Rates \[Page 270\]](#)

Cost Element for Interest

For the calculation of interest, you also have to specify the cost elements that are relevant for interest. To this end, you can group cost elements together into value categories. When you assign these value categories to an interest profile, they become interest-relevant.

Interest is posted with a cost element. You specify this cost element in Customizing for the *Project System* by assigning an account symbol. Choose *Project System* → *Costs* → *Automatic and Periodic Allocations* → *Interest Calculation* → *Update Control* → *Maintain Cost Elements for Interest Calculation*. In the allocation structure of the investment measure, you can then specify the depreciation areas of the accompanying asset under construction, in which these cost elements should be capitalized, and how much should be capitalized in each area. (Refer to [Periodic Settlement to an Asset under Construction \[Page 244\]](#).) This procedure allows you to capitalize interest in certain depreciation areas, while not capitalizing it in others. If you do not make any specifications for the interest cost element, the system capitalizes interest automatically in all depreciation areas.

Calculation of Interest

The system calculates interest to the day on the balance of debits/credits and full settlements to a WBS element. If a periodic settlement is made to an asset under construction, the system calculates interest only on the values that have been capitalized to the asset under construction. The basis for the calculation is the depreciation area that is specified in the interest profile. Interest is not calculated on amounts that were settled as costs to CO receivers, or transferred to nonoperating expense.

The system takes internal activity into account on the posting date. For external activity, you have a choice. You can choose either the actual payment amounts, with their respective value date (regardless of the posting date of the actual debit), or the posting date (PS Customizing: Choose *Project System* → *Costs* → *Automatic and Periodic Allocations* → *Interest Calculation* → *Define Interest Profile* → *Define Interest Relevance*). Interest is calculated on down payments starting from the date of the down payment. On the other hand, you can carry out final settlement for external activity with long payment terms before the payment is actually made, so that no interest at all is calculated.

After a complete full settlement, the WBS element has a balance of zero, so that interest is not calculated after this point.



In order to prevent negative interest from being calculated for a project, do not define credit interest percentages in Customizing for the interest indicators used.

Compound Interest

By means of the cost element used for posting interest, you specify whether the system calculates compound interest. If you do not want to calculate compound interest, you have to select a cost element that is defined as not relevant for interest. If you do want the system to calculate compound interest, you have to select a cost element that provides for interest. You specify the interest relevance of value categories in IM Customizing. A value category is a combination of several cost elements (for example commitment items). Choose *Project System* → *Costs* → *Value Categories*.

You use the interest profile to specify the intervals at which compound interest should be calculated. You might use an interest profile that has several interest indicators in the depreciation area that is the basis for the calculation of interest. If one or more of these interest indicators specifies the calculation of compound interest, then the following applies:

If you want to calculate compound interest on all the interest of the various interest indicators in the depreciation area, you have to use the same cost element (that allows for interest) for these interest indicators when you post the interest. On the other hand, you have to use different cost elements, if you calculate compound interest only on interest that was calculated using the same interest indicator.



When defining the period control for compound interest in Customizing of the *Project System*, keep in mind the following:

Even in a shortened fiscal year, you have to enter the last period of the "normal" fiscal year as the last period of the fiscal year (that is, the number of posting periods that are entered in the definition of the fiscal year variant). This means that in a shortened fiscal year, you would enter '12' as the last period, if your normal fiscal year had 12 periods.

Period control for compound interest always calculates compound interest, at the latest, starting in the first period of the next fiscal year. Therefore the system requires an entry for the last day of the fiscal year, which also designates the last period of the fiscal year.

Interest in Summary Settlements

By making the appropriate definition in the investment profile, you can perform a summary settlement of investment measures (refer to [Control Functions of the Investment Profile \[Page 194\]](#)). Only a limited calculation of interest is possible for these investment measures since the system cannot precisely determine the line items settled to the asset under construction and therefore relevant for interest. However, the following solutions are possible:

- If the portions of costs exempt from capitalization are relatively small and only one final settlement of a WBS element usually takes place (in other words few or no partial settlements are made), then you can stop interest calculation after the final settlement by setting the system status to *closed* or by setting the appropriate user status. (In the user status, you have to block transaction KZRI to actual value interest calculation.)
- If you do not capitalize large portions of costs and/or you often perform partial settlements, you can also calculate the interest to be capitalized on the relevant asset under construction (AuC) instead of on a WBS element by specifying a depreciation key and a corresponding interest key. The interest calculated on the asset under construction can be settled when posting depreciation to an order you enter in the asset under construction, which in turn is to

Interest in the Under Construction Phase

be settled to the WBS element.

The limitations are as follows:

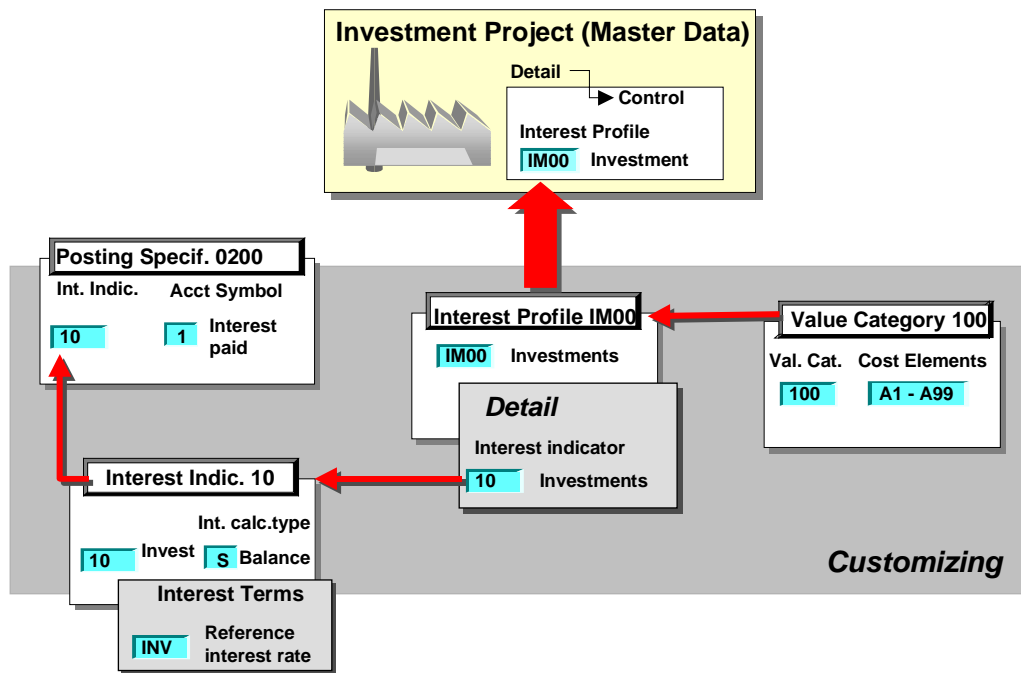
- Interest on the asset under construction is calculated only to the exact month from the date of periodic settlement.
- If the cost element with which the interest is posted is also capitalized in the depreciation area in which the interest is calculated, compound interest is automatically calculated as soon as the interest posted is settled to the asset under construction.



A function for exactly calculating interest for summary settlement is under development.

Graphic: Customizing Settings for Calculating Interest

The following graphic shows the definition of an interest profile and the associated Customizing settings:



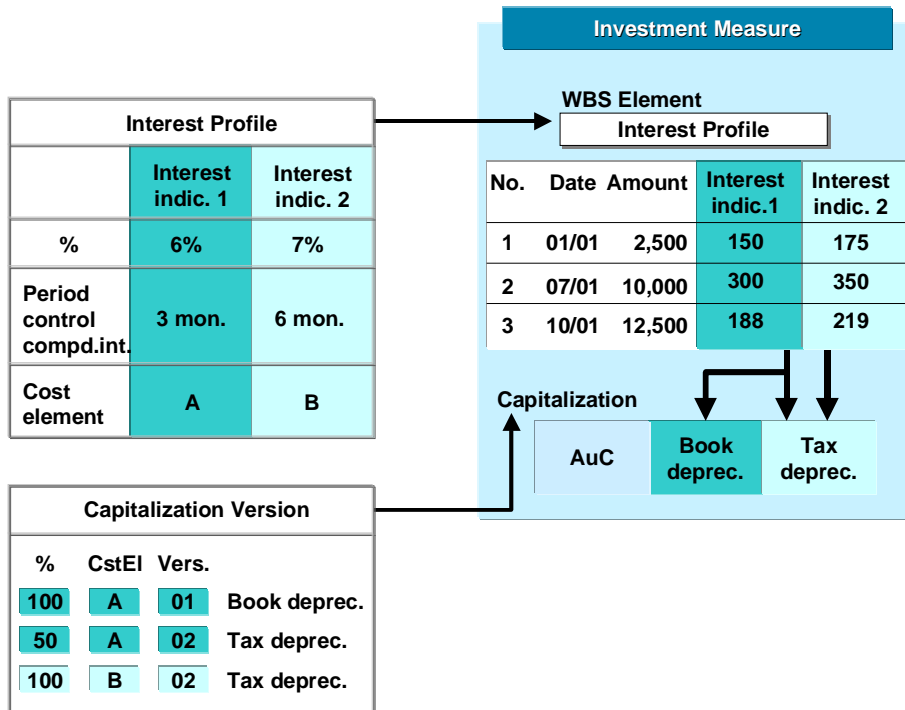
Customizing Settings for Calculating Interest

Interest profile IM00 uses interest indicator 10. The settings for this interest indicator include various interest terms, and account symbol 1 for the interest cost element to be used. Value category 100 is defined as interest-relevant due to its assignment to interest profile IM00. The result is that interest is calculated for all debits that are posted to the given WBS element using a cost element in value category 100. The system posts the interest expense using the cost element that it determines using account symbol 1.

Graphic: Interest Profile with Several Percentage Rates

Graphic: Interest Profile with Several Percentage Rates

The following graphic shows an investment measure. An interest profile with several interest rates has been assigned to this investment measure. The system uses the capitalization structure to determine the depreciation area, in which each interest cost element (A or B) should be capitalized:



Currencies

Use

The R/3 Financial Accounting (FI) component offers you the option of managing up to three different currencies in parallel in one company code. You can define three local currencies for each company code in FI Customizing.

The Asset Accounting (FI-AA) component supports the FI currency functions with its depreciation areas, in which you define the given local currency. In addition, each asset under construction can manage any number of additional depreciation areas, in which other currencies can be managed.

Currencies in Management Accounting

The Controlling (CO) component, on the other hand, offers only two currencies:

- Controlling area currency
- Object currency

Investment measures are represented in the Investment Management (IM) component using the CO objects: order or WBS element. Therefore, you can post an acquisition to an investment measure in at most two currencies (controlling area currency and object currency). During the periodic settlement to an asset under construction, there are only two original currencies available. The system translates into any other currencies, that are used in Asset Accounting or Financial Accounting, at the time of the settlement.

Features

There are two different situations possible for the currency translation of values related to the settlement of an investment measure:

- When line item settlement is used for the measure (refer to [Settlement Rules \[Page 238\]](#)), the system uses the historical exchange rate from the posting date of the original debit for the translation for each line item.
- When summary settlement is used for the measure, the system uses the exchange rate valid on the value date of the settlement for the translation of all values.

In both cases, the currency translation may cause the values to be slightly inexact. For summary settlement, the exchange rate on the value date of the settlement very often does not agree with the exchange rate at the time the debit was posted. For line item settlement, this problem does not arise. However, you cannot exclude the possibility that manual changes were made to the exchange rate within the posting transaction for a debit. These manual changes to the exchange rate cannot be taken into account during the currency translation.



It is currently not possible to manage down payments on investment measures intended for summary settlement, if the accompanying asset under construction manages depreciation areas in a foreign currency, and this currency

- Is not the controlling area currency, and is not managed as a parallel currency in the company code

Currencies

- Is still the controlling area currency

You then have two choices. Either settle the investment measure using line item settlement; or manage the depreciation area in the foreign currency only on the master records for the completed assets. This limitation is necessary, since the system cannot guarantee that down payments and down payment clearing for such currencies are translated using the same exchange rate during summary settlement.

Possible Combinations of Currencies

The currency functions in the FI and CO components limit the handling of currencies for investment measures, under the following conditions:

- Company code currency and controlling area currency are identical, and there are no parallel currencies in the FI component.

In this case, you can use the object currency of the order or WBS element. During the periodic settlement to the asset under construction, the system settles the amounts in controlling area currency to the depreciation areas in company code currency.

- Company code currency and controlling area currency are identical, and there is another parallel currency in the FI component.

In this case, the object currency has to be the same as the additional, parallel company code currency. During the periodic settlement, the system settles the amounts in controlling area currency to the depreciation areas in the company code currency. Amounts in the object currency are settled to the depreciation areas in the parallel FI currency.

For a third parallel FI currency, the system can only provide values by currency translation at the time of the settlement, which results in the inexactness due to exchange rates that was described above.

- Company code currency and controlling area currency are not the same.

In this case, the object currency has to be the same as the company code currency. During the periodic settlement, the system settles amounts in the object currency to the depreciation areas in company code currency. It provides values to the controlling area currency depreciation areas in the controlling area currency.

If there is another parallel FI company code currency, this currency has to be the same as the controlling area currency. For a third parallel FI currency, the system can only provide values by currency translation at the time of the settlement, which results in the inexactness due to exchange rates that was described above.

Authorizations

Use

Using authorization objects, you can limit the processing of investment measures to certain system users.

Features

The authorization objects for investment measures are the same as those for Project System (PS), Overhead Cost Controlling – Overhead Orders (CO OM-OPA) and Asset Accounting (FI-AA). For more information, see the documentation for these components.

Legacy Data Transfer

Use

Legacy data transfer is the transfer of data from your previous system. In the IM component, it is only possible to transfer legacy data manually. At the present time, there is no batch input procedure available for the transfer.

Features

Investment measures are orders or WBS elements and their accompanying assets under construction. These assets under construction cannot be posted directly. They receive their values solely from the order or WBS element. For this reason, you cannot enter this kind of asset under construction from a legacy system using the legacy data transfer transactions of the Asset Accounting (FI-AA) component. At the same time, the orders or WBS elements also have to be supplied with plan, budget and actual values from the past, in parallel to their accompanying asset under construction. Therefore, there is a separate procedure for transferring investment measures from a legacy system into the R/3 System.

It is important to note, however, that the procedure outlined below applies only to investment measures with summary settlement (refer to [Settlement of Investment Measures \[Page 234\]](#)). Legacy data transfer for investment measures with line item settlement is not possible at this time.

1. Enter your investment measures using the master data transaction of the IM component. The system then creates an order or WBS element. When the order or WBS element is released, the system automatically creates an accompanying asset under construction.
2. Enter the legacy budget and plan values for the orders or WBS elements using the budgeting and/or planning functions of the Project System (PS) or Overhead Orders (CO-OM-OPA) components.
3. Transfer the actual values on the orders or WBS elements using the procedure below:
 - Transfer costs, in the amount of the actual values you wish to take over, from a cost center to the respective legacy order or WBS element (transfer within cost accounting: choose *Accounting* → *Controlling* → *Cost centers* → *Actual postings* → *Repost costs*). Choose a screen variant that has cost centers as senders and orders or WBS elements as receivers (under *Extras*). Use a posting date in the previous fiscal year.
 - Settle the order or WBS element to the cost center. You can reorganize this dummy cost center later. Make sure that the settlement rule for settlement to the dummy cost center is valid for only a limited time. Enter a valid from and to date in the distribution transaction for each distribution rule.
4. Determine the number of the asset under construction belonging to the investment measure (see step 1). You can jump directly to the master record of the asset under construction from the master data transaction for the order or WBS element.
5. In order to enter the legacy values on the asset under construction, use the legacy asset **change** transaction (AS92) in the FI-AA component (FI-AA Customizing). You can transfer values in summary form to the asset under construction (*Takeover values*). In addition, you have to enter the historical capitalization date of the asset under construction here.

Legacy Data Transfer

For the benefit of the proof of origin, maintain the original cost element and the source object (cost center or cost center/activity type).

A legacy data transfer during the fiscal year follows this same pattern. The only difference is that when you change the asset under construction, you use the transactions for the current year.

The transfer of open down payments is not possible at this time.



The legacy asset data transaction in FI-AA does **not** update any general ledger accounts in the FI component. Only the asset master records and line items in Asset Accounting are updated.



The following example shows the transfer of an investment measure and its values:

IM <u>Legacy Data</u>	Investment Measure	
	CO Order, WBS Element	FI-AA Asset under construction
Master Data	Create investment measure Order No. 605600	Asset No. 200255
Plan/ Budget Values	CO Planning/ Budgeting 1995: 5000 1995: 4500	
Actual Values	Transfer Cost center Settlement Cost center Cst.el. 4000: 1000 Cst.el. 4200: 2000 Cst.el. 4000: -1000 Cst.el. 4200: -2000	Change legacy asset: APC: 3000 (sum.) Source Cst.el. 4000: 1000 Source Cst.el. 4200: 2000

The data transferred leads to the following values on the investment measure:

Plan: 5,000

Budget: 4,500

Actual: 3,000

Settled: 3,000

The 3000 settled comes about because the transfer from the dummy cost center using the corresponding settlement is reversed by a settlement. This 3000 actually represents the value that would have been settled to the asset under construction for the normal investment measure (if it was not part of legacy data transfer).

Legacy Data Transfer

IM Information System

Purpose

The Investment Management (IM) component has an Information System to assist in planning and monitoring investment programs in your enterprise.

Features

The Information System for investment programs contains drilldown reports for the analysis of plan, budget and actual values in investment programs and the measures and appropriation requests that belong to them (reports from investment program viewpoint). In addition, there are reports for evaluating master data and plan values of appropriation requests, independent of the investment program (reports from appropriation request viewpoint).

For reporting on measures, the Information Systems of CO - Overhead Cost Controlling (CO-OM-OPA) and Project System (PS) are integrated in the IM Information System. For more information, see the documentation for these components.

From the perspective of assets, there are reports for the depreciation forecast, and those that show the origin of debits that were settled to assets. The depreciation forecast in the IM Information System integrates Asset Accounting and Investment Management. As a result, it is possible to include already capitalized assets, along with planned investments, in the depreciation forecast.



- The IM Information System consists of two area menus. There is one for reports from the investment program viewpoint, and one for reports from the appropriation request viewpoint. You can modify and expand these area menus as needed (refer to the Implementation Guide under *Investment Programs* → *Information System* or *Appropriation Requests* → *Information System*.)
- Reports for investment programs show all value categories of the investment program (overall values, balance forward, and so on). For more information, see [Value Categories of Investment Programs \[Page 52\]](#).
- If you use the functions for transfer prices, please keep in mind: Reports for investment programs (refer to [Reporting from Investment Program Viewpoint \[Page 279\]](#)) show only the legal valuation of the assigned investment measures (orders or WBS elements). These reports cannot show other valuations, such as the group valuation, or valuation for the profit center.

Standard Reports

Standard Reports

Features

There are a series of standard reports in the Information System for Investment Management (IM). These reports enable you to analyze plan values, budget values and actual values of investment programs and their assigned measures and appropriation requests.

Reporting from Investment Program Viewpoint

Use

The following reports display values from investment program positions and the measures and appropriation requests that belong to them. These values are displayed from the viewpoint of the investment program. This means that you have to enter an investment program or an investment program position as a selection criterion for these reports.

Features

The output of these reports can be expanded like the investment program structure. Reports for measures or appropriation requests show, in addition, the individual measures or appropriation requests that belong to an investment program position, along with their values.

Standard Reports (Current Data)

Features

The Information System for investment programs allows you to create reports using either the current R/3 online database or a summarization database. Each of these types of database have their own standard reports. Each standard report is designed to be used either with the current database or a summarized database, but never with both.

Using a summarized database is recommended for reporting on large amounts of data (refer to [Information System Using Summarization \[Page 330\]](#)).

Plan values

Use

The drilldown reports listed below are used for analyzing the plan values of an investment program:

- Overall plan values and annual plan values of the positions of an investment program
- Overall plan values and annual plan values of the investment measures, which belong to the positions of the investment program
- Comparison of the plan values from an investment program and the investment measures that belong to it

The system shows the plan value of each program position across from the total of the plan values of all of the measures belonging to it. This comparison can be made for overall values and for annual values.

- Comparison of plan values from an investment program and the investment measures belonging to it, separated by budget categories (refer to [Budget Categories \[Page 70\]](#)).

The system uses the standard budget categories 1 and 2 (“requiring capitalization” and “not requiring capitalization”).

Budget Values

Budget Values

Use

The drilldown reports listed below are used for analyzing the budget values of an investment program:

- **Comparison of plan and budget values in an investment program**

For each program position, the system shows the plan and budget values, and the difference between the two. The comparison is made for the overall values and for annual values.
- **Distribution of the overall budget in the investment program**

For each program position, the system shows the total distributed budget, the budget that was distributed to lower positions in the hierarchy, and the budget that is still distributable. The report shows these values, separately by approval period, for

 - The sum of the overall values (balance forward, current and forecast)
 - The overall value budgeted in the current year (current)
 - The overall value carried forward from previous years (balance forward)
 - The overall value predicted in the forecast (forecast)
- **Distribution of the annual budget in the investment program**

This drilldown report corresponds to the one above. However, it shows the annual values rather than the overall values.

For more information see [Fiscal Year Change \[Page 80\]](#).
- **Overall budget and annual budget in investment program**

For each program position, the system shows the overall value across from the annual values.

 - **Budget updates**

For each program position, the system shows the original budget, supplements and returns, and the resulting current budget. These values are displayed both for overall values and annually.
- **Budget by reason for investment**

Here the system shows the overall and annual budget of all end nodes (the positions in the hierarchy with no positions subordinate to them) in an investment program, broken down by the reason for the investment. (Possible investment reasons include replacement investment, rationalization, expansion, environmental protection). The first screen of the drilldown report shows the totals of all these budgets by company code.
- **Budget distribution from the investment program to the investment measures belonging to it**

The report shows, per program position, the budget value of the position, the budget distributed to the individual measures belonging to the position, the budget that can still be distributed, the budget already used in the form of funds committed at the level of the

Budget Values

individual measures. This comparison can be made for overall values and for annual values.

- **Overall budget and annual budget** of the investment measures belonging to an investment program (totaled by program position).
- **Budget distribution** from the investment program to its investment measures, broken down by standard budget category (refer to [Budget Categories \[Page 70\]](#)).

Availability of Budget Resources

Use

The drilldown reports listed below are used for reporting on the availability of the budget resources in an investment program. When the budget is exceeded, the report highlights those lines in red.

- **Available program budget**

The system shows, per program position, the existing budget, the funds already committed (actual values and commitments), the budget still available, and the percentage of the budget used. The report shows overall values and annual values.

- **Available measure budget**

This drilldown report corresponds to the report for available program budget (above). By double clicking on a program position, you can display the measures that belong to it. The system then shows the same values as described above, but for the investment measure rather than the program.

- **Availability by organizational unit**

In this drilldown report, you can enter a profit center hierarchy and a cost center hierarchy in the selection screen. The system then shows the same assigned values from the end node positions in the investment program as in the previous report, but you have the option of breaking them down according to the hierarchies below:

1. Controlling area
2. Profit center hierarchy
3. Cost center hierarchy
4. End node program positions (positions with no positions below them)
5. Measures (using double click)

You can turn off the hierarchy again in the list display (Overview), or you can change it there (*Edit* → *Hierarchy* → *Choose*).

- **Availability by area of responsibility**

This drilldown report shows the assigned (actual and commitment) values broken down by the responsible party. The report only evaluates the end node program positions. You can enter the responsible party in the master data of the program position.

- **Availability and down payments**

For each program position, the report shows the total of the measure budgets, actual posting, down payments, and commitments. You can display the values for the individual measures by double clicking on the program position.

- **Availability by budget category**

This report shows the assigned values per budget category (refer to [Budget Categories \[Page 70\]](#)). The report displays the values for one year at a time, and the overall values.

- **Annual expected values of measures**

Availability of Budget Resources

This report shows, per program position, the sum of the plan values on the measures, the actual values on the measures, and the expected values on the measures. Before the measure is closed (by changing its status), the expected value is either plan value or actual value, whichever is higher. After it is closed, the expected value is always the actual value. You can display the values for the individual measures by double clicking on the program position.

General Value List

General Value List

Use

The system provides a general value list for use in monitoring investment programs at the level of the investment program. You can also use the value list as a form of availability control.



There is no active availability control (in the form of a system check at the time of posting a purchase order or invoice) at the level of the investment program. However, this check can be carried out at the level of the individual measures. In the PS or CO-OM-OPA component, you can guarantee that the assigned values do not exceed the budget of the project or order.

Features

When you start the report, you can specifically select the type of values you want to be output. You choose these in the report selection screen under *Settings*. A maximum of 13 columns are allowed in the report output.

You also can activate availability control. You can specify your own tolerance limits before you run the report. You set tolerance limits either as a percentage or an absolute amount. You also decide if the tolerance limit is over or under the plan or budget amount. If the assigned values of an individual measure exceed the defined tolerance limit, then the measure is highlighted in the report (exception reporting). The same applies to assigned values that are rolled up on higher investment program positions. When these values exceed the tolerance limit, then the program position is highlighted in the report.

You can also generate a general value list from the maintenance or display transactions for the investment program structure.

Carryforward Values and Forecasted Values

When starting a report you can specify whether an investment program report should display:

- Only new measures, and plan and/or budget values for the current fiscal year
- Also measures, plan values and budget values carried over from prior years
- Also estimated plan and budget values for future years (forecast)

Measures without Values

The report enables you to select all measures that do not yet have values and belong to a given investment program. In order to make this selection, remove all selections in the *Settings* section of the report selection screen. The report displays program positions that you can then select and expand.

Standard Reports (Summarization)

Features

Reports are created from a summarization database (refer to [Information System Using Summarization \[Page 330\]](#)) using R/3 drilldown reporting. There are, therefore, no important differences in this respect between summarization reports and the existing standard reports.

Standard Drilldowns

The standard report selection tree includes the following standard drilldowns for running reports on the summarization database.

Plan values

- Plan from measures/appropriation requests
- Plan from program/appropriation requests/measures
- Investment/expense in appropriation request plan

Budget Values

- Budget distribution from program to measures
- Request plan/Budget for measures
- Appropriation request plan/Measure budget from Consolidation viewpoint (see [Reporting from Consolidation Viewpoint \[Page 316\]](#))

Availability

- Assigned program budget
- Assigned measure budget
- Assigned appropriation request plan
- Assigned measure budget by organizational units
- Assigned per summarization version



- For summarization drilldown reports, you can only select according to characteristics that are managed in the summarization database. General selection (such as, according to status selection profile) is not possible.
- When you define your own drilldown reports for the summarization database, it is absolutely necessary to enter a summarization version specifically for each row and column of the layout form.

Reporting from Appropriation Request Viewpoint

Use

The following reports display the plan values and master data of appropriation requests. You do **not** need an investment program for these reports.

To find measures and appropriation requests that are not yet assigned to an investment program position, choose *Programs* → *Environment* → *Tools* → *Non-assigned meas./req.* (refer to [Reporting from Investment Program Viewpoint \[Page 279\]](#)).

Features

The following reports are in the standard report tree for appropriation requests (IMFR).

Value Lists and Totals Lists

These reports display the plan values of appropriation requests with sub-totals. Like the reports from the investment program viewpoint, these reports are based on the drilldown functions of the R/3 System (refer to [Basic Drilldown Reporting Functions \[Page 312\]](#)). They are especially suited for reporting at a highly summarized level.

- Appropriation requests of investment program (appropriation requests only)
 - Overall/annual plan from appropriation requests
 - Plan version comparison: Requests
 - Investment/expense plan for appropriation requests
- Appropriation requests in investment program (appropriation requests and measures)
 - Plan from appropriation requests and measures
 - Plan versions in appropriation requests and measures
 - Request plan/Budget for measures
 - Request plan/Assigned
- Appropriation requests by organizational unit (appropriation requests only)
 - Overall and annual plan
 - Investment/expense plan
 - Plan version comparison: Requests
 - Request plan by status
- Appropriation requests by organizational unit (appropriation requests and measures)
 - Request plan / measure plan
 - Request plan/Budget for measures
 - Request plan/Assigned

Master Data Lists

These reports display the master data of appropriation requests along with their plan values, without sub-totals. These reports are not based on the drilldown functions of the R/3 System. They are normal ABAP reports. The lists are intended for reporting without summarization. In the list display you can use all of the functions of the ABAP List Viewer. For more information, see *ABAP List Viewer* in the R/3 library under *CA Cross-Application Components → General Application Functions*.

- Appropriation requests without percentage distribution, without variants
- Appropriation requests with distribution, without variants
- Appropriation requests without distribution, with variants
- Appropriation requests with percentage distribution, with variants

The percentage distribution referred to here is the percentages that you can enter for certain master data fields (such as reason for investment) for a proportional distribution. For more information see [Master Data at the Appropriation Request Level \[Page 106\]](#).

Rejected Appropriation Requests

In the standard system, rejected appropriation requests are also selected and displayed in reports. However, using status selection profile SAPIM01, you can limit the selection to appropriation requests that have not been rejected. You can also add this status selection profile to a selection variant.

Reporting from Appropriation Request Viewpoint

Origin from Asset Viewpoint

Use

During the audit of the year-end closing, you often need to examine how the acquisition and productions costs of assets originated.

Features

There are two reports for the origin of values in the IM Information System. One shows the origin of each line item, and one shows a summary verification of the line items posted to an asset.

Line-Item Proof of Origin

The report shows, for each asset, the origin of the transactions affecting acquisition value in a fiscal year. For assets that you produced in-house using an investment measure, additional information is available. Starting with the completed asset, you can backtrack to the original document that was charged to the investment measure and its asset under construction (for example, the goods receipt document). It is not possible at this time to see similar information on the settled line items from orders or projects that are not investment measures.

For each line item, the report shows whether it is:

- A settlement of an order or project
- A settlement of an asset under construction
- An external acquisition (vendor)
- A transfer from another asset
- A balance forward posting after line item settlement (only for assets under construction)
- An acquisition posted to a clearing account (G/L account)
- A goods receipt
- A transaction only in asset accounting (such as, an acquisition posted only to the cost accounting depreciation area)

In certain circumstances, it may not be possible to obtain a clear proof of origin for the following transaction types: external acquisition, asset transfer, acquisition posted to a clearing account, or a goods receipt. If this is the case, the system attempts to determine the origin using plausibility checks. However, these transactions are then marked with a question mark (?). In these instances, you can only obtain more exact information from the original document. You can display the original document from the list using the function *Choose*.



Please note that you can only generate a line-item proof of origin if you use line item (not summary) settlement. For more information, see [Settlement of Investment Measures \[Page 234\]](#).

Summary Proof of Origin

This report provides detailed information on debits to assets resulting from the settlement of investment measures. The report displays these debits, broken down according to the original costs and the origin objects (orders and WBS elements).

Reporting from Appropriation Request Viewpoint

This same information is available for assets under construction, if the transactions affecting acquisition costs resulted from the settlement of an order or WBS element.

The report also displays the origin of costs (cost center, activity type, as well as plant and material).

Depreciation Simulation

Depreciation Simulation

Use

It is important, both from the point of view of management accounting and for the balance sheet, to plan the course of development of fixed assets.

Features

A standard report is therefore available for forecasting and simulating future depreciation. This report can simulate depreciation not only for assets that are already capitalized, but also for planned capital investments. To determine the types of objects included in the report, you enter the appropriate selection indicators in the initial screen of the simulation report.

For capitalized assets, the report forecasts future depreciation on the basis of the APC and the depreciation terms entered for the asset. For planned investments, the report uses the plan values or budget values. The depreciation terms in this case are the depreciation simulation terms you entered specifically for the forecast.



In addition, you can take depreciation and imputed interest into account within the framework of primary cost planning.

Simulation Versions

The general reporting functions, such as sort versions and the option for a totals report, are also available for the depreciation forecast. You can also enter a simulation version for replacing depreciation terms before running the report. Under *Info system* in the Asset Accounting (FI-AA) application menu, you can define an unlimited number of simulation versions. You can then carry out a depreciation forecast using changed depreciation terms.

Report Output

Your entry of the report date in the initial screen of the report determines the fiscal year up to which the simulation will be carried out.

The report displays the following values:

- The book value at the start of the year
- The cumulative transactions affecting APC, up to the beginning of the current fiscal year
- The transactions affecting APC in the current fiscal year
- The planned ordinary depreciation and other depreciation in the current fiscal year
- The planned net book value at the end of the year
- The planned interest in the current fiscal year and the cumulative interest up to the beginning of the current fiscal year

Depreciation Simulation with Planned Investments

Use

Generally, a depreciation forecast is only realistic when it also includes the affects of planned capital investments, in addition to capitalized assets.

Features

The integration of the IM component with Asset Accounting (FI-AA) means that you can include planned capital investments in the simulation, along with the capitalized assets of the FI-AA component. These planned investments can be in the form of:

- Internal orders
- Work breakdown structure (WBS) elements
- Investment program positions
- Appropriation requests

The necessary versions of the simulation report are found in the IM Information System. Along with the depreciation simulation based on individual measures and appropriation requests, you can also include plan values from investment program positions in the depreciation forecast. This function is especially necessary, since the individual measures often do not have enough detail at an early enough date.

Depreciation Simulation Terms

You need to enter the appropriate depreciation terms in order to simulate the depreciation of planned investments. You specify the depreciation terms and the planned start-up date in the master data of the planned capital investment (for orders on the *Investments* tab page, for WBS elements and maintenance orders under *Extras*).

The system uses either the budget or plan values as the APC for planned capital investments. You make this choice when you start the report. If the simulation is based on plan values, you can also enter the plan version to be used. The system determines the expected depreciation based on these entries, and on the plan or budget values.

Percentage Distribution Rules

Using percentage distribution rules, you can distribute simulated depreciation for a planned capital investment to the following:

- Cost centers
- Asset classes
- Start-up dates (for example, 50 % in the year of approval, 30 % in the first year after, 20 % in the second year after)

You can also define distribution rules with equivalence numbers or amounts (IM Customizing: *Master Data* → *Define Investment Profile*).

When you distribute according to asset classes, you can specify different depreciation terms for each part of the distribution. However, you can also use an indicator in the investment profile to specify that the system should keep the depreciation terms and depreciation start date of the

Depreciation Simulation with Planned Investments

parts of the distribution uniform per asset class. This applies to orders, WBS elements, and appropriation requests. By using these indicators, you can reduce the amount of maintenance needed for changes. The system automatically makes sure that a change to the depreciation terms in one part of the distribution is also carried out for all the other parts in an asset class.

Determining the Depreciation Base

There is a danger that assets and those investments that are already completed in the fiscal year being simulated could be counted twice in the forecast, once as plan values of measures or appropriation requests, and again as part of capitalized fixed assets. In order to prevent this from happening, the system provides two options for setting the depreciation base for the simulation.

Simulation of Fixed Assets at Fiscal Year Start

The simulation simulates fixed assets using their values as of the start of the fiscal year. The following are therefore not included in the depreciation simulation:

- All capitalizations that took place in the current fiscal year
- Retirements, transfers, and direct capitalizations that took place in the current year
- Measures that have a start-up date prior to the current year (regardless of their status), because their values should already be included as part of fixed assets
- Measures and appropriation requests that have *Rejected* or *Replaced by measure* status, because the system assumes they are no longer relevant or are represented in the system by appropriate measures

However, the simulation does include the plan values of measures and appropriation requests that have a start-up date in the current year or later, even if they have *Closed* or *Deletion flag set* status. The system bases this decision on the situation at the start of the fiscal year, since these statuses could not have been active at that time.

Reduction of Simulation of Planned Investments by Capitalized Amounts

The current value of fixed assets is used for the simulation. This means all capitalizations made in the current fiscal year are included.

In order to prevent both plan values and capitalized values from being counted at the same time, the system reduces the planned depreciation values by the amount of the actual settlements that have already taken place.

The simulation does not include measures and appropriation requests that have *Closed* or *Deletion flag set* status. The system assumes that their values are already a part of fixed assets.

The simulation also does not include measures and appropriation requests that have *Rejected* or *Replaced by measure* status. Here the assumption is that their values are no longer needed, or they were replaced by an appropriate measure.

See also:

For more information on the determination of the depreciation base for depreciation simulation, refer to:

[Example: Reducing Depreciation \(Plan\) by Capitalizations \[Page 295\]](#)

[Example: Reducing Depreciation \(Plan\) Using Reversal \[Page 298\]](#)

Example: Reducing Depreciation (Plan) by Capitalizations

Example: Reducing Depreciation (Plan) by Capitalizations

The example shows the logic the system uses for calculating depreciation simulation, when it reduces planned depreciation amounts by the capitalizations already made in the current fiscal year.

The aim is to avoid duplicating plan values and values already settled during the fiscal year in the depreciation simulation, and at the same time to make it possible to display data by asset class and cost center in depreciation simulation reports. To achieve this end, the already settled actual values have to be subtracted from the planned depreciation values.

The system distinguishes between suitable and unsuitable records of asset classes and cost centers. Suitable records are those found both in the actual settlement and in planned depreciation. Unsuitable records are those that are only found in one of the two lists.

Planned Depreciation Distributions					
Class	CstCtr	Cap.date	Amount	Offset	Open Plan
2000	1407	01/31/1999	200	0	500 { 200 300
2000	1407	06/30/1999	300	0	
2000	1512	08/31/1999	1000	0	
3000	1111	08/31/1999	500	0	500

Actual Settlements					
Class	CstCtr	Cap.date	Amount	Offset	Open Actuals
2000	1407	02/28/1999	130	0	580 { 130 450
2000	1407	05/31/1999	450	0	
3100	1111	07/31/1999	520	0	

Graphic 1: Offsetting of Suitable Records

The system checks if there are suitable records from cost center and asset class in both the actual settlement and in planned depreciation in the same fiscal year. There is a suitable record in the example: The combination of asset class 2000 and cost center 1407 exists both in the planned depreciation values and in the settled values. The system offsets the total amount of the actual settlement amount of this record with the depreciation values.

Example: Reducing Depreciation (Plan) by Capitalizations

Depreciation Distributions					
Class	CstCtr	Cap.date	Amount	Offset	Open Plan
2000	1407	01/31/1999	200	200	0
2000	1407	06/30/1999	300	300	0
2000	1512	08/31/1999	1000	0	1000
3000	1111	08/31/1999	500	0	500

Actual Settlements					
Class	CstCtr	Cap.date	Amount	Offset	Open Actuals
2000	1407	02/28/1999	130	130	0
2000	1407	05/31/1999	450	370	80
3100	1111	07/31/1999	520	0	520

Graphic 2: Offsetting of Unsuitable Records

The suitable combination from Figure 1 was offset. A value of 80 still remains from this record. Like the 520 from the record for asset class 3100/cost center 1111, this 80 also does not have a corresponding amount in the plan values.

Depreciation Distributions					
Class	CstCtr	Cap.date	Amount	Offset	Open Plan
2000	1407	01/31/1999	200	200	0
2000	1407	06/30/1999	300	300	0
2000	1512	08/31/1999	1000	400	600
3000	1111	08/31/1999	500	200	300

Actual Settlements					
Class	CstCtr	Cap.date	Amount	Offset	Open Actuals
2000	1407	02/28/1999	130	130	0
2000	1407	05/31/1999	450	450	0
3100	1111	07/31/1999	520	520	0

Example: Reducing Depreciation (Plan) by Capitalizations

Graphic 3: Proportional Distribution of the Actual Values

The system distributes the remaining actual values to the remaining depreciation values. In our example, this means: The two remaining, unsuitable depreciation records have values in a ratio of 2:1. Based on this, the actual values (600) are also distributed in a 2:1 ratio (400 and 200) to the depreciation records.

The system then performs the distribution simulation on the basis of the open plan values that were determined in this way.

Example: Reducing Depreciation (Plan) Using Reversal

Example: Reducing Depreciation (Plan) Using Reversal

The example shows how the system handles reversals during the depreciation simulation, when the depreciation plan amounts are reduced by the capitalizations already made in the current fiscal year.

Depreciation Distributions					
Class	CstCtr	Cap.date	Amount	Offset	Open Plan
2000	1407	01/30/1999	2000	0	2000
2000	1407	06/30/1999	1000	0	1000

Actual Settlements					
Class	CstCtr	Cap.date	Amount	Offset	Open Actuals
2000	1407	01/30/1999	4000	0	5000 { 4000
2000	1407	07/31/1999	1000	0	1000 { 1000
2000	1407	07/07/1999	- 800	0	- 800 { - 800
2000	1407	06/30/1999	-1000	0	-1800 { -1000

Graphic 1: Creation of Totals

The system adds together posted settlements to create a total. This totaling applies to suitable records from asset class and cost center, also for prior fiscal years. Reversals of settlements are also added together to form a total.

Example: Reducing Depreciation (Plan) Using Reversal

Depreciation Distributions					
Class	CstCtr	Cap.date	Amount	Offset	Open Plan
2000	1407	01/30/1999	2000	0	3000 { 2000 1000
2000	1407	06/30/1999	1000	0	

Actual Settlements					
Class	CstCtr	Cap.date	Amount	Offset	Open Actuals
2000	1407	01/30/1999	4000	800	3200 { 3200 0 0 0
2000	1407	07/31/1999	1000	1000	
2000	1407	07/07/1999	- 800	- 800	
2000	1407	06/30/1999	-1000	-1000	

Graphic 2: Calculating the Actuals

The system adds the depreciation values together to form a total. For the actual values, the system subtracts the reversals from the original settlements.

Depreciation Distributions					
Class	CstCtr	Cap.date	Amount	Offset	Open Plan
2000	1407	01/30/1998	2000	2000	0 0
2000	1407	06/30/1998	1000	1000	

Actual Settlements					
Class	CstCtr	Cap.date	Amount	Offset	Open Actuals
2000	1407	01/30/1998	4000	3800	200 0 0 0
2000	1407	07/31/1998	1000	1000	
2000	1407	07/07/1998	- 800	- 800	
2000	1407	06/30/1998	-1000	-1000	

Graphic 3: Reducing Depreciation Plan Values by the Actual Settlements

Example: Reducing Depreciation (Plan) Using Reversal

Base Value for Depreciation Simulation for Planned Investments

Use

In contrast to depreciation forecasts for already capitalized assets, there are special considerations when the forecast is for planned investments. With depreciation forecasts for planned investments, there are also some aspects that are open to interpretation. These special considerations and some of the leeway for interpretation are explained below.

Features

Base Value for Depreciation Simulation within Hierarchies

For depreciation simulation, the system uses either budget or plan values as the APC for planned capital investments. This is a parameter in the report selection screen. Within the hierarchy, (investment program, positions or measures), the plan or budget values of the subordinate hierarchy elements are considered “from values” of the plan or budget values of the elements just above them in the hierarchy. Therefore, the system ensures that plan and budget values are not included more than once in the depreciation simulation.

The system does this by determining the base amounts for the depreciation “from the bottom up” within a hierarchy. This means that the system reduces the base amount for depreciation simulation on a given element of the hierarchy, by the total amount of all base amounts determined on the elements subordinate to it in the hierarchy. This principle applies to:

- The hierarchy of an investment program, including all measures and appropriation requests assigned to it
- Project hierarchies

Determining the Capitalization Date for Plan or Budget Values

The system uses the following set of rules for determining the capitalization date:

- If there is no percentage distribution of depreciation terms on the position or measure (there is only one set of depreciation terms), then the depreciation terms are used in the depreciation simulation with the annual plan or budget values of the program positions or individual measures. The system then assumes that both of the following are true:
 - The plan or budget value of the start-up year will be capitalized on the start-up date entered in the depreciation terms.
 - The plan or budget values of all later years will be capitalized on the first day of each plan year.

The system only assumes that the overall value is capitalized on the start-up date, if no annual values have been entered in the planned investment.



[Example 1 \[Page 304\]](#)

Base Value for Depreciation Simulation for Planned Investments

- The same procedure is used when there are several sets of depreciation terms entered, but the resulting distribution is only based on asset class or cost center (that is, all the depreciation terms have the same start date).
- If you have a number of sets of depreciation terms with different start-up dates, then these terms are related to the overall plan or budget value.



[Example 2 \[Page 305\]](#)

- If you have a number of depreciation simulation terms with different start-up dates, but no overall plan or budget value has been maintained, then the annual values for the percentages entered in the depreciation term records are taken into account as in the first instance. You should avoid this situation, however, since the simulation created is inconsistent and not clear.

Past Acquisitions

As described above, it is always possible to derive one or more simulated acquisitions, based on the depreciation terms and the overall or annual values of a planned capital investment. Since the system is simulating capitalization to fixed assets, it assumes that all simulated acquisitions, before the current fiscal year, were actually carried out. These simulated acquisitions, therefore, are **not** included in the depreciation simulation!



See examples 1 and 2. The acquisitions that resulted on July 1, 1998 are not included in the depreciation simulation in fiscal year 1999 (for the years 1999 and following).

Cumulative Annual Values before Start-Up Date

As already mentioned above, the system uses the depreciation terms and the annual plan or budget values of the planned capital investment as a basis for the simulation, when these are maintained, and when only one set of depreciation terms is entered (or else all the sets of depreciation terms entered have the same start-up date). If annual values exist in years prior to the fiscal year of the start-up, the system assumes that costs requiring capitalization accrued in those years, but that these costs should not be capitalized until the start-up date, and then cumulatively.



[Example 3 \[Page 306\]](#)

Capitalization in the Current Fiscal Year

For determining the APC basis for depreciation simulation for planned investments, the system uses the corresponding plan or budget values as a basis. For orders and WBS elements, the system normally does not modify these plan or budget values, as long as parts of the planned capital investment were already settled to fixed assets. If you have already settled to fixed assets, and you simulate depreciation for capitalized assets together with planned capital investments, both the unchanged plan or budget values of the order or WBS element, as well as the already capitalized asset values would be included in the simulation. As a result, the already capitalized values would incorrectly appear twice in the report. To avoid this situation, there are two options in the system:

Base Value for Depreciation Simulation for Planned Investments

- The system ignores the capitalization postings of the current year. That is, the depreciation simulation is always based on the values at the start of the current fiscal year.
- The system deducts the amount of these capitalization postings from the APC basis for the depreciation simulation of the order or WBS element.

To determine the method you use, enter the appropriate indicator in the initial screen of the depreciation simulation report before starting the report.

See also:

For more detailed information on the calculations, see the section on depreciation forecast with planned investments, as well as the field documentation for the above indicators.

Example 1**Example 1**

One set of depreciation terms is entered for a planned capital investment. The fiscal year and the calendar year are the same.

Deprec. terms/Plan values

No.	Start-up date	Percent	Year	Plan values
1	7/1/1998	100%	1998	6,000
			1999	3,000
			2000	1,000

Simulated Acquisitions

No.	Date	Amount
1	7/1/1998	6,000
2	1/1/1999	3,000
3	1/1/2000	1,000

Example 2

Three sets of depreciation terms, with different start-up dates, are entered for a planned capital investment. The fiscal year and the calendar year are the same.

Deprec. terms/Plan values

No.	Start-up date	Percent	Year	Plan values
1	7/1/1998	50%	Overall	10,000
2	1/1/1999	30%		
3	1/1/2000	20%		

Simulated Acquisitions

No.	Date	Amount
1	7/1/1998	5,000
2	1/1/1999	3,000
3	1/1/2000	2,000

Example 3**Example 3**

A planned capital investment has the start-up date of July 1, 1999. The year 1998, however, already has plan values.

Deprec. terms/Plan values

No.	Start-up date	Percent	Year	Plan values
1	7/1/1999	100%	1998	6,000
			1999	2,000
			2000	2,000

Simulated Acquisitions

No.	Date	Amount
1	7/1/1999	8,000
2	1/1/2000	2,000

Primary Cost Planning

Purpose

For primary cost planning related to cost center accounting, you need to forecast future depreciation. Therefore, you can determine planned periodic depreciation and interest for any Asset Accounting depreciation area. The depreciation area has to be a real depreciation area, not a derived depreciation area. Using a special report (*Periodic Processing*), you can transfer this depreciation and interest to the Controlling (CO) component. There is an indicator in the report request screen you use to specify if planning should take place on cost centers or on orders.

Process Flow

The way the system determines planned depreciation for this purpose is similar to the way it simulates depreciation. For more information, see [Depreciation Forecast \[Page 292\]](#) and [Depreciation Forecast with Planned Investments \[Page 293\]](#) and [APC Values for Planned Investments \[Page 301\]](#).

The transfer report plans the depreciation, using the appropriate cost element, on the cost center or order. The report **overwrites** any existing planned costs for this cost element (meaning that the new costs **are not added** to the existing costs). When you run the report in update mode and it is not possible for the report to transfer certain values, the report terminates and issues an error message. After you correct the error, you can restart the report for the original dataset. This does not present a problem, since the plan values that were already transferred are now overwritten (rather than being added to).

Planned Investments

If you are using the Investment Management (IM) or Overhead Orders (CO-OPA) and Project System (PS) components, you can also include the simulated depreciation and interest derived from the planned values of investment measures and investment program positions, in addition to those of capitalized assets, in primary cost planning. You can choose whether the system uses the budgeted values or plan values as the APC for planned capital investments. You make this specification when you start the report. When the simulation is based on plan values, you can also specify the plan version to be used.

In order to carry out primary cost planning with planned investments, the requirements below must be met:

- Depreciation simulation data has to be entered in the master data of the order or WBS element or investment program position (master data maintenance is found under *Extras*).
- The planned investment has to have budget or plan values.

Capitalizations in the Current Fiscal Year

The system bases the calculation of the APC basis for the depreciation simulation of planned investments on the plan values or budget values.

The system does not normally adjust these values for orders or WBS elements when part of the planned investment has already been capitalized (that is, settled to capitalized assets). For a depreciation simulation that includes capitalized assets and planned investments at the same time, this could cause problems. The system would include the plan or budget values from the

Primary Cost Planning

order or WBS element along with the values from the capitalized asset. As a result, the already capitalized values would be duplicated.

In order to prevent duplications, there are two options in the initial screen of the depreciation simulation for handling capitalizations in the current fiscal year:

- The report ignores the capitalization postings in the current year. As a result the simulation is always based on the asset balance sheet values at the start of the current fiscal year.
- The report excludes capitalization that has already been posted for orders and WBS elements. These amounts are not considered as part of the APC basis for the depreciation simulation.

You specify the method you want to use by setting that indicator in the initial screen before starting the depreciation simulation.

Refer to:

For more detailed information on the logic used for the calculation, refer to [Depreciation Forecast with Planned Investments \[Page 293\]](#) . Also refer to the field documentation for the related indicators.

Determination of the Cost Center or Order

For capitalized assets, the system plans on the cost center or order that is entered in the asset's time-dependent data, and which is valid during the planning time period. For planned investments, the system uses the cost center or order in the depreciation simulation data (the receiving cost center/order).

The assets, orders, and projects, for which the system cannot determine a cost center or order, are listed in the log under the cost center (or order) ??????????. This is a problem particularly for orders for which you have already entered explicit settlement rules. The system can no longer determine a cost center for these orders, since the settlement cost center is no longer available from the order master record. The system lists records under the cost center (or order) ?????????? in the log, but the values for these records are not included in the transfer to the Controlling (CO) component during an update run. You need to perform a manual follow-up, in which the costs from the log are planned for the desired cost centers.

Activity Type

You can request activity-type dependent and/or activity-type independent planning.

- **Planning only independent of activity type**
Planning takes place in the cost center, independent of the activity type. Any activity types in the asset master record are ignored.
- **Planning only dependent on activity type**
Planning takes place in the cost center, dependent on the activity type. Any asset master records without activity types are ignored.
- **Planning activity type dependent *and* independent**
Costs for assets with activity types are planned in the cost center, dependent on the activity type. Costs for assets without activity types are planned in the cost center independent of the activity type.

Distribution Key

If you specify a distribution key when starting the report, values are determined based on the time period specified in the from/to period. The values are then distributed according to the distribution key to the individual periods. If you do not enter a distribution key, the system determines the values individually for each period in the specified planning interval.

Separation of Fixed and Variable Costs

It is basically possible to separate the depreciation of assets into fixed and variable portions (refer to [Depreciation for Multiple-Shift Operation and Shutdown \[Ext.\]](#)). This separation is also recognized in primary cost planning. The report calculates the pure fixed cost portion along with the total costs. The variable costs are determined, according to the definition, as the difference between these two values. However, the system only calculates fixed costs separately if the following requirements are met:

- You must have requested activity-type dependent planning.
- There has to be an activity type and a multiple shift factor specified in the asset master record. If the asset is not used in multiple shifts, you have to set a multiple shift factor of 1.
- The planning parameter that is entered must specify manual fixed cost planning that is activity type-dependent.

Changing the Cost Center in the Asset Master Record

The assignment of the asset to a cost center may change during the fiscal year. When this happens, the system recognizes the period in which the change took place. The following should be kept in mind:

- The change of cost center has to take place at the end of one period or the beginning of the next.
- There are special considerations if primary cost planning takes place using a distribution key. You then have to sub-divide the period interval into smaller intervals, so that the change of cost center is always at the start of one of these smaller intervals. Start a separate primary cost planning run for each sub-interval.



You want to plan for an entire fiscal year for periods 1 to 12. Changes to the cost center took place on April 1 and October 1.

If you enter a distribution key when starting primary cost planning, you have to carry out three primary cost planning runs:

- For periods 1 to 3
- For periods 4 to 9
- For periods 10 to 12

If you do not enter a distribution key, then you only have to carry out a primary cost planning run for periods 1 to 12 at the same time.

Limits

You can limit the selection of assets in the initial request screen for the report. Limitations according to company code, asset class, business area, cost center and plant apply to assets as

Primary Cost Planning

well as to orders or projects. Limitation according to location and asset super number applies only to assets. Also enter the depreciation area, from which the depreciation or interest that is being planned stems.

Enter the fiscal year, for which you are planning. The system determines the cost center/activity type for assets based on the cost center/activity type that is valid for the asset at the **end** of this fiscal year.

You can limit the planning to a given period interval in the fiscal year. If you do not make any limitation, the system plans for the entire fiscal year (from the first period to the last period).

Procedure

[Carrying Out Cost Planning \[Page 311\]](#)

Carrying Out Cost Planning

Procedure

1. Call up the report for primary cost planning (*Periodic Processing* → *Primary Cost Planning*).
2. Set up the standard limits of the logical data base for Asset Accounting.
3. Enter a depreciation area. The values from this depreciation area are used for cost planning. You cannot use a derived depreciation area (refer to [Derived Depreciation Areas \[Ext.\]](#)).
4. Limit the report:
 - Enter the controlling area/activity type for the transfer.
 - Specify whether you want to include planned capital investment measures.
 - Specify how you want to handle capitalizations in the current fiscal year.
 - Limit the periods to be planned.
 - Specify if you want activity type dependent planning, or activity type independent planning.
5. Specify how you want capitalizations in the current fiscal year should be calculated.
6. Start the report.

Basic Drilldown Reporting Functions

Basic Drilldown Reporting Functions

Use

The reports for investment programs in the area menus of the Investment Management (IM) component are based on drilldown functions in the R/3 System. The only exception is the General Value List. This enables you to analyze all program positions of an investment program, along with their assigned investment measures, in reports in which the level of detail increases step-by-step.

Along with analysis of the investment program structure, you can also obtain additional detail using profit center and cost center hierarchies. For example, you can enter a profit center hierarchy or cost center hierarchy when you execute the standard drilldown report on budget availability (refer to [Availability \[Page 284\]](#) and [User-Defined Drilldown Reports \[Page 318\]](#)).

Features

The list display for these drilldown reports contains functions (especially navigation functions) which allow you to easily analyze the information displayed. The most important of these functions, from the point of view of IM, are explained below.

Drilldown List vs. Detail List

The standard drilldown reports in the IM component initially display a drilldown list. This drilldown list displays all the values of a characteristic (for example, all the positions for an investment program). From this drilldown list, you can display more detailed information on the values for the characteristic (focus on the characteristic values of a characteristic). Place the cursor on the rhombus at the beginning of the line. You can then use the navigation function with the magnifying glass icon.

Drilldown					
Object	Overall	1999	2000	2001	2002
- 1.1	44,000				
- Admin.	14,000				
- Pharma	20,000				
- Training	10,000				
- WBS IM1001					
- WBS IM1002					
...					

Detail list:		
Lead column		
Budget.Maßn.Ges.	5,000	
Meas. Budg. to 1999	1000	
Meas. Budg. 2000	2500	
Meas. Budg. 2001	500	
Meas. Budg. 2002	0	
Total annual budget	3,500	

Drilldown List vs. Detail List

Basic Drilldown Reporting Functions

In some drilldown reports, you can double-click on a line in the display for a program position and jump directly to the measures that are assigned to it. This only applies in lists in which the characteristic “measure” is displayed in the first position in the navigation block. The system then shows the same values for the measures belonging to the program position.

Additional Functions

- The system shows a maximum of four columns in a drilldown at one time. The function *Next column* allows you to see the rest of the report (for example, additional years).
- The function *Sort ascending/descending* lets you sort the displayed list starting from the key figure (column) on which the cursor lies.
- The function *Extras* → *Display master data* allows you to jump to the master data for the respective characteristic (for example investment program position, investment measure).
- The function *Goto* → *Graphics* enables you to create an SAP Business Graphic from the list displayed.

For more information on jumps from the display of the drilldown report, see [Report Interfaces and Navigation \[Page 314\]](#) .

Saving Data

Under *Report* → *Save data* you can save the results of a drilldown report. For each report you can save the last list that was displayed. When this report is called up again with the same selection specifications, the system then displays the saved data. You can use the function *New selection* to end access of the saved data and to start a new report.

Under *Report* → *Save definition* you can save report parameters which have been changed interactively. All the parameters set then become active when you call up the report again.

Exceptions

R/3 drilldown functions allow you to define exceptions for each report (choose *Extras* in the definition of drilldown reports, also refer to [User-Defined Drilldown Reports \[Page 318\]](#)). The system then highlights in color those values in the report that fulfill the conditions.

The following standard exceptions are defined in the system for availability check:

- The available budget was exceeded by actual postings and commitments.
- The amount of the budget used by commitments and actual postings exceeds 90% of the budget.



For more information on R/3 drilldown reporting, see [Drilldown Reporting \[Ext.\]](#).

Report Interfaces and Navigation

Use

Interfaces are used to link the standard reports for investment programs to other reports in IM and to other R/3 components. These interfaces make it possible to jump from the display of the drilldown report directly to another corresponding report. There you can see the origin of the values displayed in the drilldown. Place the cursor on a line in the drilldown display. Choose the desired report in the menu under *Goto → Measure reports*. Or you can choose the appropriate icon in the navigation block.

Features

IM-Internal Report Interfaces

You can jump from a program position listed in some standard drilldown reports for investment programs to the investment measure belonging to it (by double clicking on the program position). The system then shows the same drilldown report (such as, the comparison of plan and budget values) for all investment measures that belong to the program position. In order for this procedure to work, the drilldown report must be defined with *investment measure* as a characteristic. You can tell that a report is defined with this characteristic if the *measure* characteristic is in the first position in the navigation block.

You can also display the planning/budgeting line items for the program position, and the master data for the position. You can also jump (under *Extras*) directly to the master data of investment measures, cost centers, profit centers, and so on, when these objects are being displayed.

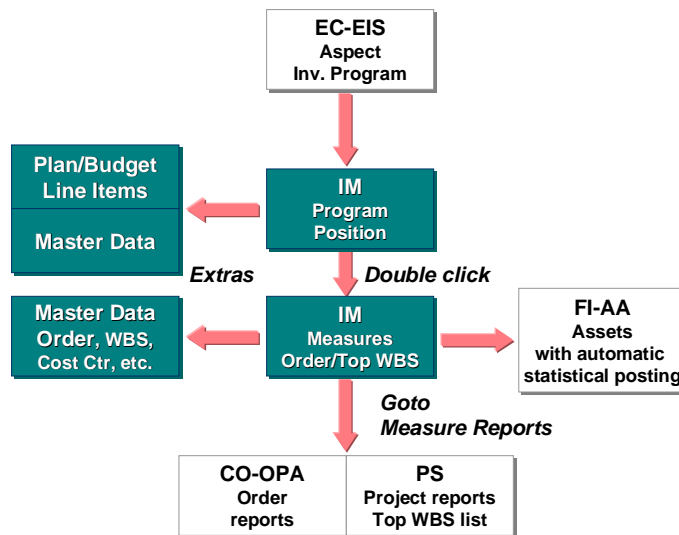
IM-External Report Interfaces

In addition to this internal navigation, IM drilldown reports also offer interfaces to other R/3 components. These interfaces enable you to jump

- From a user-defined Executive Information System (EIS) aspect for investment programs to program positions
- From an investment measure in the list to the corresponding order report or project report (select the line in the report, choose *Goto → Measure reports*)
- From an investment measure in the list to an asset list

This link to Asset Accounting comes into play when the orders or WBS elements are automatically statistically posted. The system then shows all the assets that post statistically to the given order or WBS element. For more information, see [Statistical Budget Monitoring for Direct Capitalization \[Page 203\]](#).

The following graphic shows an overview of navigation between reports:



Navigation between Reports

User-Defined Navigation

Along with the standard navigation options, you have the option of linking a drilldown report with other drilldown reports. In order to do this, you have to change the definition of these standard drilldown reports (see the Implementation Guide under *Information System*). Enter the drilldown reports, to which you would like a link, in the definition of the characteristic in one of your drilldown reports (*Extras* → *Report assignment*). The system then displays these drilldown reports in the list display of your drilldown report under *Goto* → *More reports*. When you call up one of these reports from the list, the system starts this drilldown report with the same selections as the original drilldown report, as well as with the selections resulting from lines and columns you have selected.

Reporting from Consolidation Viewpoint

Use

A group normally does not have to fully finance capital investments made by companies in which it has an interest of less than 100%. The percentage of financing is usually the same as the percentage of its interest in the other company. For this reason, groups are interested in seeing the capital investments in their group-wide investment programs from the viewpoint of consolidation, meaning that the values are shown in relation to the percentage of equity holdings in affiliated companies.

Features

Therefore, you can enter a consolidation group in reports on the values of your investment program. The system then determines the values of the investment program positions based on the equity holding percentages in the consolidation group.

Consolidation Units

A consolidation group consists of consolidation units. For the purposes of IM reports, a consolidation unit has to be a company. The system determines the company that is involved in a given investment using the organizational assignments in the master data of the measure, appropriation request and investment program position.

Equity Holdings Percentages

The system determines the values of measures or appropriation requests belonging to a program position. It then weights these values using the group share of the given company. In order to use this function, you have to enter the group shares of the consolidation group in IM Customizing (with a valid-from date). The group share is expressed as a percentage rate. This percentage rate expresses the proportion of ownership of the consolidation group's **parent company** in the subsidiary.



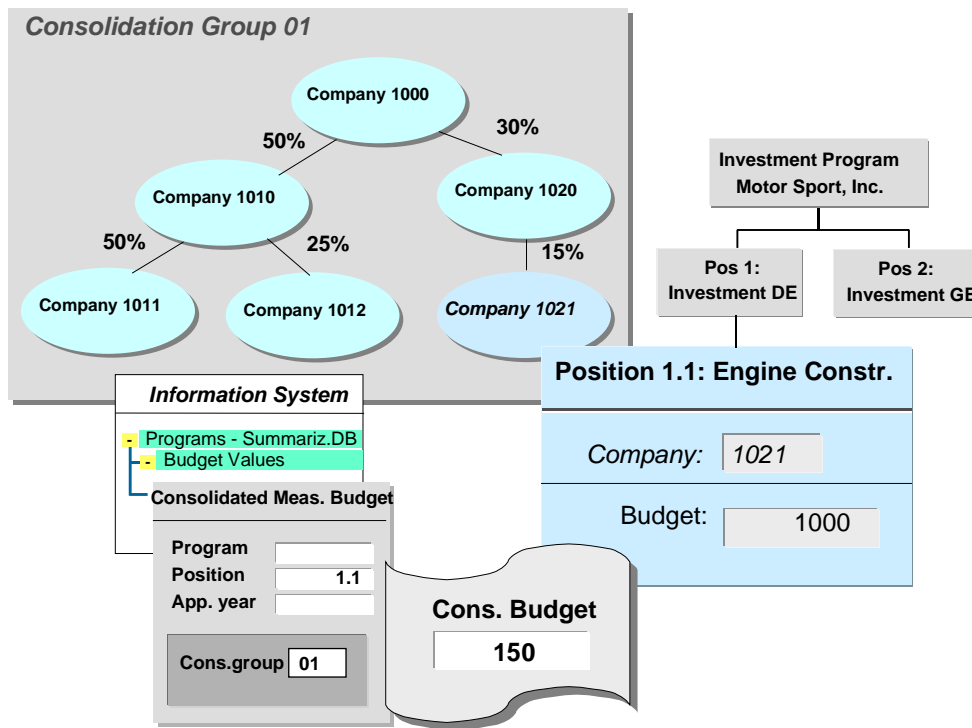
It is currently not possible to automatically copy the group shares from the Legal Consolidation (FI-LC) or Consolidation (EC-CS) components.

Standard Report

There is a standard report in the Information System for investment programs (summarization database) under *Budget values*. The report provides information based on the consolidation group entered. The system determines the values of the measures, appropriation requests and program positions of those companies that belong to this consolidation group. At the same time, it weights these values according to the group shares that have been entered in Customizing.

The graphic below shows an example of the logic the system uses in this report on a consolidation group:

Reporting from Consolidation Viewpoint



Reporting from Consolidation Viewpoint

The investment program position for construction of engines belongs to company 1021 (determined on the basis of the *company code* organizational assignment in the master record). This program position has a budget of 1000. Company 1000 (parent company of consolidation group 01) has a group share in company 1021 of 15%. As a result, the consolidated budget, as displayed in the report, is shown as only 150 (15% of 1000).

It is important to note that the group share is always seen in relation to the parent company of the consolidation group. In this example, company 1000 holds 50% of companies 1010 and 1011. The logical consequence of this is that company 1010 holds 100% of company 1011. You have to ensure the consistency of the group shares yourself when you enter them. The system does not carry out a consistency check here.

Activities

In order to use this function, you have to maintain the group shares of the companies in IM Customizing manually (under *Information System*).

User-Defined Drilldown Reports

Use

The IM Information System and its standard reports for investment programs are based on drilldown functions in the R/3 System (exception: master data lists for appropriation requests). Drilldown functions make it possible for you to easily define your own reports in order to meet your enterprise's individual requirements. Knowledge of ABAP programming is not required in order to define your own drilldown reports.

Features

The basis of all drilldown reports for investment programs and appropriation requests is an ABAP dictionary structure which defines characteristics (such as program position or measure) and key figures (such as overall distributable value) that can be used. On the basis of these dictionary structures, you can define individual drilldown reports for investment programs or appropriation requests.

You can define drilldowns for reports from the viewpoint of investment programs and drilldowns from the viewpoint of appropriation requests. Drilldowns based on the viewpoint of appropriation requests allow you to run reports that are not dependent on the use of an investment program (refer to *Customizing: Investment Programs → Information System and Appropriation Requests → Information System*).

SAP supplies a wide range of drilldown reports for investment programs and appropriation requests. You may still want to define your own drilldown report. It is recommended that you refer to a supplied standard report which is similar to the report you want to define. Or you should at least copy the form from a standard drilldown report, and use it to construct your own drilldown definition.

Standard Drilldown Functions

The functions of standard R/3 drilldown reporting allow you to define both basic drilldown reports and drilldown reports based on forms. However, for Investment Management (IM), you can **only** define **form reports**.

The standard drilldown reports in the IM component always display a drilldown list initially. You can jump from the drilldown list to a detail display.

Otherwise, all the functions of standard R/3 drilldown reporting are available for drilldown reports for investment programs:

- For each drilldown report you can select the characteristics for the drilldown. In IM drilldowns, the most useful characteristics are 'program position,' 'measure,' 'appropriation request' and 'object.' When you use the characteristic 'object,' the drilldown list displays the entire investment program hierarchy, including the assigned measures.
- Using forms, you can easily define the detail screen of a drilldown report. For the lines and columns of a form, you can define whether you want the drilldown to output:
 - A key figure, with specific characteristic values
 - Additional characteristic values
 - A value based on a mathematical formula
 - An element already defined in another form

User-Defined Drilldown Reports

You can choose columns or rows in the detail screen, that will then be displayed in the drilldown list.

- You can define both global variables and local variables. The global variables can then be used in all drilldowns as selection criteria. All necessary global variables for investment programs are pre-defined in the standard system (for example fiscal year and plan version). A particular advantage of using these variables is that you can define drilldown reports which show annual values, without having to modify the form definition each year.

Local variables are valid only within one form. You can use them to meet specific needs. There is an important syntax rule for local variables: Local variables have to begin with the dollar sign (\$) symbol.

- Use of profit center and cost center hierarchies (see below)



For more information on the standard functions of R/3 drilldown reporting, see [CA - Drilldown Reports \[Ext.\]](#)).

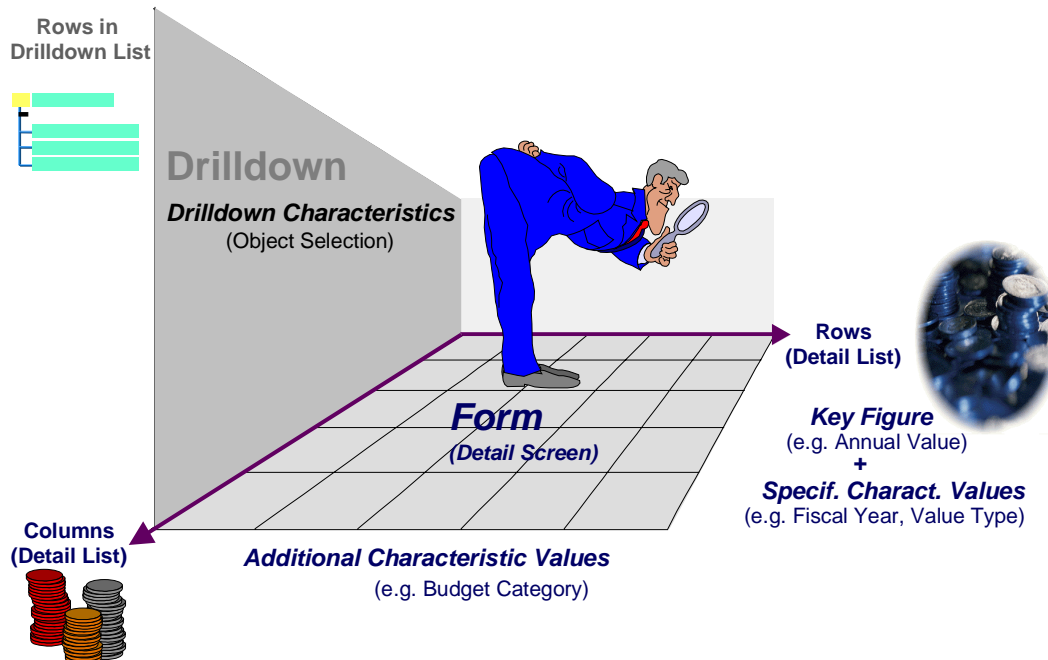
Using Forms, Characteristics and Key Figures when Defining the Drilldown Report

The first step when defining a drilldown report is defining (or copying) a form. The form defines the layout of the report as it will appear later. The detail screen in particular is an exact copy of the form screen. In the form, specify the key figures you want the report to output (either for each row or for each column). You can then make further specifications for each key figure using additional characteristics. In most cases, this characteristic is the value type, which defines the significance of the key figure (for example, actual value, plan value, and so on). For key figures that are dependent on the year, you also have to specify the characteristic "fiscal year."

You can also make more detailed specifications for these defined key figures by choosing additional characteristics. For example, a key figure that is specified by row can also display a different budget category per column in the form. You could also specify the value type by column.

The characteristics that will be displayed in the drilldown list in the report are not defined in the form. They are defined in the definition of the drilldown report itself. The characteristics "program position," "object" and "measure" are particularly important in this regard. Organizational units could also be used at this level as further characteristics. The graphic shows examples for how characteristics and key figures can be used in defining a drilldown report.

User-Defined Drilldown Reports



Definition of a Drilldown Report

In the Implementation Guide for the IM component (choose *Investment Programs* → *Information System*), you can perform all the activities required for defining a drilldown report for an investment program. For more information, see the Implementation Guide documentation for each individual activity.



[Definition of a Drilldown Report \[Page 322\]](#)

Profit Center and Cost Center Hierarchies in Drilldown Reports

You can use profit center hierarchies or cost center hierarchies, and order groups, to represent the hierarchy of characteristics in a drilldown report. This is possible for the following characteristics:

- Profit center
- Cost center
- Internal order

For more information, see [Availability \[Page 284\]](#).

When you define the drilldown report, choose the desired characteristic. Then, under *Extras* → *Choose hierarchy*, specify whether:

- You want to always use a given hierarchy (profit center or cost center hierarchy, order groups) in the report.
- You want the hierarchy to be entered each time the report is run (making it possible to change the hierarchy when you call the report).

User-Defined Drilldown Reports

- You are not permitted to use a hierarchy.

You can only use profit center or cost center hierarchies, however, if the controlling area has already been specified in the system at the time you make the selections for the report. That is, the controlling area must be entered in the definition of the form or the report, or a variable has to be used for the controlling area. If a variable is used, an entry has to be made for the controlling area parameter in the selection screen of the drilldown report. Otherwise the system cannot create a hierarchy representation of the profit centers or cost centers.

When a drilldown report works with hierarchies, you can turn off the hierarchy or change it in the list display (overview) of the report (*Edit* → *Hierarchy* → *Choose*).

Scale

When you define drilldown reports for investment programs, you can use a scale as a selection criteria. Selecting by scale, you can, for example, start drilldown reports which show only investment measures or appropriation requests for investment programs having an overall budget that exceeds a certain amount (scale).

You can define scales in IM Customizing for Investment Programs. You enter the scale in the master record of the investment measure or appropriation request.

The standard drilldowns for investment programs do not use scales.



Once you assign a scale to an investment measure or appropriation request, this assignment is fixed. It is not dependent on the plan or budget values. This fixed assignment is generally preferable. Otherwise the scale would be subject to change as the result of minor changes to the plan or budget values.

Example: Definition of a Drilldown Report

Example: Definition of a Drilldown Report

Example 1

The following graphic shows the definition of a drilldown report for Budget Values of Investment Measures. The form has only one column. You specified that the first row of the column should display the key figures: *overall budget value*, *budget values of individual years* and *annual budget totals*. You specified that the column should display the *budget* value type.

Under *Extras*, you specify which columns and rows should be displayed in the drilldown list.

Definition of Form:

Lead Column	
Overl Meas. Budget	xxx.xxx.xxx
Meas. Budg. to &1YT	xxx.xxx.xxx
Meas. Budg. &1YF	xxx.xxx.xxx
Meas. Budg. &1YF	xxx.xxx.xxx
Meas. Budg. &1YF	xxx.xxx.xxx
Total annual budget	xxx.xxx.xxx

Key Figures:

☒ Overall vals in prog. currency

Spec. Characteristics:

☒ Value type

Charact. Values:

41 Budget

Drilldown Definition:

Char. selection: Object
Variable: Fiscal year

Select Rows/Columns:

Lead column	Overall	...
-------------	---------	-----

Zusätze -> Aufrißliste

Definition of a Drilldown Report

Also note: you have to further specify the rows for the annual values by entering the *annual values* characteristic and the variable for the year.

In the actual drilldown definition, you only need to enter the *object* characteristic and the *fiscal year* variable.

Example 2

You want to create a drilldown report for comparing plan and actual values of investment measures for the year 1997. The example shows a one-dimensional form for doing this:

Lead column | |

Plan |xxx,xxx|

Actual |xxx,xxx|

Example: Definition of a Drilldown Report

Both rows have the same key figure (*annual value in investment program currency*) and the same selection of characteristics (*value type* and *fiscal year*). In both rows, you should enter the *fiscal year with the value 1997* characteristic. In the first row, the *value type* characteristic has to be entered with the value 01 (plan value). Enter the value 04 (actual) in the second row.

When you create the drilldown report, you have to use this form as a basis. In the definition of the drilldown report, you then only have to select the *measure* characteristic. When you call the report, the drilldown list then looks like this:

Measure	Plan	Actual
WBS 864.013 De-aerator	105,000.00	75,898.00
WBS 736.001 Extruder	73,380.00	34,226.00
WBS 600.711 Assembly line	365,000.00	265,000.00
. . .		

The detail list for a selected measure (for example, WBS 736.001) would look like this:

Lead column	
Plan	73,380.00
Actual	34,226.00

Characteristics and Key Figures

Characteristics and Key Figures

Use

Below is a list of the characteristics that can be used in drilldown reports for investment programs. The characteristics are grouped according to type.

Features

Characteristics generally usable in a drilldown report:

- *Object selection*
 - Object (complete investment program hierarchy with measures and appropriation requests)
 - Investment program position
 - End node of investment program (lowest level program position)
 - Measure (order or top WBS element)
 - Order (hierarchy possible)
 - WBS element (top WBS element only)
- *Organizational units*
 - Company
 - Company code
 - Business area
 - Controlling area
 - Profit center (hierarchy possible, but only with controlling area)
 - Cost center (hierarchy possible, but only with controlling area)
 - Plant
 - Company area
 - Functional location
- *Miscellaneous*
 - Old or new measure assignment (indicator: measure new in approval year / measure carried forward from prior years)
 - Person responsible
 - Balance sheet item
 - Reason for investment
 - Priority
 - Main status (for measure: created/partly released/released/technically completed/closed)
 - Object type (order, WBS element – usually only for scale)

Characteristics and Key Figures

- Scale (for order, WBS element)

Characteristics for more precise specification of key figures in a form (see below)

- Fiscal year
- Value type (plan, budget, and so on)
- Plan version
- Budget category (standard use: capital vs. expense)
- New/old indicator (current values, balance forward, forecast)
- Type of business transaction (as explanation of the budget)
 - KBUD budgeting (original budget)
 - KBN0 budget supplement
 - KBR0 budget return
 - KBUE budget transfer (receiver)
 - KBUS budget transfer (sender)

Key Figures in a Form

The following key figures are defined for investment programs:

- Overall value in investment program currency
- Distributable overall value in investment program currency
- Distributed overall value in investment program currency
- Annual value in investment program currency
- Distributable annual value in investment program currency
- Distributed annual value in investment program currency
- Overall expected value in investment program currency
- Annual expected value in investment program currency

You can only use these key figures in conjunction with the “value type” characteristic (see below). You can define additional key figures using customer enhancements (SAP enhancement AAIP0002 for investment programs and SAP enhancement AAIR0001 for appropriation requests).

Characteristics/Key Figures for Appropriation Requests

A similar list of characteristics and key figures exists for drilldowns on appropriation requests. To see these characteristics and key figures, analyze the definition of a standard drilldown report (such as 112PLANMR).

Unique Properties of IM Drilldowns

All standard drilldown functions are available for drilldown reports on investment programs or appropriation requests. The following special features are, however, specific to IM:

Characteristics and Key Figures

- Some key figures are year-dependent (annual values). These key figures therefore are only valid in association with the characteristic “fiscal year”.
- In drilldowns that report on plan values, you always have to specify the “plan version” characteristic. Otherwise, the system totals the plan values of all plan versions.
- All other key figures, except those for the expected value, can only be defined logically when associated with the characteristic “value type.” The value type specifies the type of value concerned. The following value types are of significance here:
 - 1 plan values (investment measures)
 - 4 actual values
 - 10 statistical plan values
 - 11 statistical actual values
 - 12 down payments as expense
 - 21/22/23 commitments from purchase requisitions/purchase orders/reservations
 - 24 commitments posted manually
 - 25 remaining plan values from apportioned orders/networks
 - 26 commitments from fixed price agreement
 - 39 planned costs (appropriation request)
 - 40 planned costs that can be capitalized (appropriation request)
 - 41 budget (investment measures)
 - 47 budget (program positions)
 - 48 plan values (program positions)
 - 52 planned cash flow (appropriation requests)

In this context, “statistical” means that the values originated during automatic, statistical posting from an asset to a project or order.



Normally the options for reporting offered by standard drilldowns using a large number of pre-defined characteristic values are sufficient. However, if you want to create drilldown reports using characteristic values that are not provided here, you can define your own characteristics using customer enhancement AAIP0003 (for investment programs) or AAIR0004 (for appropriation requests).

For more information on specific customer enhancements, refer to their online documentation (transaction SMOD). For general information on customer enhancements, see transaction CMOD (*Information* pushbutton).

Drilldowns and Forms in Standard Report Tree

The following lists the drilldown reports provided in the standard IM report tree. The forms belonging to the drilldowns are shown in parenthesis.

Investment Programs - Summarization DB

Plan values

112PLANMR (112PLANMR Plan from Measures / Appropriation requests)

113PLANPRM (113PLANPRM Plan in Program, App. Req., Measures)

114PLANIR (114PLANRI Request Plan: Investments/Expenses)

Budget Values

123BUDGM (123BUDGM Budget Distribution to Program/Measures)

121PLANBUDRM (121PLANBUDRM Request Plan/Budget for Measures)

Availability

131BUDGAVPR (131BUDGAVPR Program Budget/Committed Funds)

132BUDGAVM (132BUDGAVM Measure Budget/Committed Funds)

133PLANAVR (133PLANAVR Request Plan/Assigned)

134BUDGAVOE (132BUDGAVM Budget for Measures/Assigned by Org. Unit)

138BUDGAVMV (138BUDGAVMV Assigned Funds per Summarization Version)

Investment Programs - Current Data

Hierarchy and value list for cap. inv. programs (these are not drilldowns)

RAIMINFO (Report variant SAP&IMFA10 Program Structure)

RAIMINFO (Report variant SAP&IMFA00 General Value List)

Plan values

111PLANPR (111PLANPR Overall Plan/Annual Plan in Program)

112PLANMR (112PLANMR Plan from Measures / Appropriation requests)

113PLANPRM (113PLANPRM Plan in Program, App. Req., Measures)

114PLANIR (114PLANRI Request Plan: Investments/Expenses)

115PLANPRMV (115PLANPRMV Plan Version Comparison: Program/Measures/App. Req.)

Budget Values

Budget from Program

121PLANBUDG (121PLANBUDG Plan/Budget Comparison in Program)

122BUDGPR (122BUDGPR Distribution of Overall Budget in Program)

122BUDGPRY (122BUDGPRY Distribution of Annual Budget in Program)

124BUDGPRY (124BUDGPRY Overall/Annual Budget in Program)

Drilldowns and Forms in Standard Report Tree

126BUDGHIS (126BUDGHIS Budget Update in Program)

127BUDGREASN (124BUDGRY Program Budget/Standard Investment Reasons)

Budget from Measures

123BUDGM (123BUDGM Budget Distribution to Measures)

125BUDGMY (125BUDGMY Overall/Annual Budget in Measures)

123BUDGMBT (123BUDGMBT Distribution of Budget to Measures by Budget Category)

121PLANBUDRM (121PLANBUDRM Request Plan/Budget for Measures)

Availability

131BUDGAVPR (131BUDGAVPR Budget Availability in Program)

132BUDGAVM (132BUDGAVM Budget Available for Measures)

134BUDGAVOE (132BUDGAVOE Available Measure Budget by Org. Units)

135BUDGAVRES (132BUDGAVM Available Measure Budget by Person Responsible)

131BUDGACTPM (131BUDGACTM Measure Budget/Down Payments/Assigned Values)

131BUDGAVPRT (131BUDGAVPRT Available Budget in Program by Budget Category)

137EXPPRMY (137EXPVALMY Annual Expected Value from Measures)

133PLANAVR (133PLANAVR Request Plan/Assigned)

Depreciation Forecast (these are not drilldowns)

RASIMU01 (Variant SAP&IMFA141 Planned Investments and Assets)

SAP&IMFA142 Investment Program

SAP&IMFA143 Investment Projects

SAP&IMFA144 Investment Orders

SAP&IMFA145 Appropriation Requests

Appropriation Requests on Investment Program**Plan Values of Appropriation Requests**

111PLANRY (111PLANR Overall/Annual App. Request Plan)

115PLANRV (115PLANRV Comparison of App. Request Plan Versions)

114PLANIR (114PLANRI Request Plan: Investments/Expenses)

Appropriation Requests and Measures

112PLANMR (112PLANMR Appropriation Request Plan / Measure Plan)

115PLANPRMV (115PLANPRMV Plan Version Comparison: Measures/App. Req.)

121PLANBUDRM (121PLANBUDRM Request Plan/Budget for Measures)

133PLANAVR (133PLANAVR Request Plan/Assigned)

Appropriation requests by Organizational Units**Plan Values of Appropriation Requests**

Drilldowns and Forms in Standard Report Tree

111PLANPR (111PLANRY Overall Plan/Annual Plan)

114PLANRI (114PLANRI Request Plan: Investments/Expenses)

115PLANRV (115PLANRV Comparison of App. Request Plan Versions)

116PLANRS (116PLANRS Request Plan by Status)

Appropriation Requests and Measures

112PLANMR (112PLANMR Appropriation Request Plan / Measure Plan)

121PLANBUDRM (121PLANBUDRM Request Plan/Budget for Measures)

133PLANAVR (133PLANAVR Request Plan/Assigned)

Master Data Lists (these are not drilldowns)

RAIMAVAR Appropriation Requests without Distribution without Variants

RAIMAVAR Appropriation Requests with Distribution without Variants

RAIMAVAR Appropriation Requests without Distribution with Variants

RAIMAVAR Appropriation Requests with Distribution with Variants

The integrated reports from the Project System (PS), Overhead Cost Controlling – Overhead Orders (CO OM-OPA) and Asset Accounting (FI-AA) components are not listed here. For more information, see the documentation for these components.

Information System with Summarization

Use

The Information System for investment programs consists of two parts. There are the drilldown reports for the “normal” database of your system or client. Along with these, there are also drilldown reports that access a summarization database. The summarization database makes it possible for you to update and report on a summarized dataset for an investment program and its dependent appropriation requests and measures. This offers several advantages:

- The drilldown reports that access the summarized dataset have better performance than unsummarized reports.
- Data from several local systems can be imported into the summarization database. These local systems can be SAP R/3 Systems, SAP R/2 Systems or non-SAP systems.
- You can manage different versions of the summarization database. You can thereby manage “snapshots” of the investment data of your enterprise. Using versions, you can create a sequence showing the data on the investments in your enterprise over time.
- You can still generate reports on data from the past, even if the objects to be reported on have themselves already been deleted from the system.

Features

The central part of summarized reporting is the summarization database. In the summarization database, you store summarized characteristics and key figures on investment programs and the appropriation requests and measures assigned to them. You store these on a periodic basis. The characteristics and key figures contain three types of data:

- The actual values
- The master data
- The investment program hierarchy

The summarization database is client-dependent. You can define only one summarization database in each client for investment programs. But you can still define any number of summarization versions in a given client.

Data Transfer

Depending on the source of the summarization data, there are different system functions for transferring the data to the summarization database (*Investment Programs → Periodic processing → Summarization*).

- The summarization data come from the same client or R/3 System as the client or system in which the summarization database is managed. In this case, you can select summarization data immediately (*Copy program*) and write it to the summarization database (*Summarize values*).
- The summarization database is supplied with values from other R/3 systems. Then you have to first export the data to a file (*Output to file*). Then you can import the data to the central system and summarize it there (*Import from file*).

When you export data to a file, you can select either already summarized data, or unsummarized data. Selecting summarized data makes sense when the system

Information System with Summarization

providing the data has its own summarization database that is supplied with data from other local systems (such as, other subsidiaries).

- The data comes from an SAP R/2 RK-P System. In this case, there is a data procurement program you can use to select the relevant projects. It then writes them to the summarization database in the R/3 System. You can also assign a project in SAP R/2 RK-P to an investment program position in the reporting system. You can either assign the project directly, or by means of the appropriation request.
- The data comes from an external, non-SAP system. There is an interface for updating the summarization database from external systems. For more information, see [Special Considerations for Summarizing from Local Systems \[Page 337\]](#)

Entities

Along with the investment program structure and the values, you can also store the following entities in the summarization database with their keys and short texts:

- Measures
- Appropriation requests
- Profit centers
- Cost centers
- Plants
- Functional locations

Storing the key and short text of the entities in the summarization database is necessary in order to be able to display the entities in report. The same applies when the summarization takes place within one system or client. There is a function for this in the menu. Choose *Programs* → *Periodic processing* → *Summarization*.

Storing in the summarization database also has another advantage. The entities are still available, even if they are changed or reorganized in their original database.

Characteristics that Can Be Summarized

The system achieves the summarization by summarizing using specific characteristics, rather than storing all characteristics and all characteristic values of the investment program. For example, if you want to create reports using the summarization database that only have to do with organizational units, you do not have to store investment data at the object level. Instead, you summarize using the *appropriation request* and *measure* characteristics. In this way, you can considerably reduce the number of data records in the summarization database.

In Customizing, you specify which characteristics the system should summarize, and which should not be summarized (*Information System Using Summarization*).

You cannot summarize using the *fiscal year*, *plan version*, or *value type* characteristics. Otherwise the information about the type of key figure is lost. Summarizing using the *investment program* or *approval year* characteristics is also not possible, because the summarization data always has to be stored in relation to an investment program. Since most standard reports use investment program positions as drilldown characteristics, it generally does not make sense to use *investment program position* as a characteristic for summarization.

Information System with Summarization

Summarization by Scale

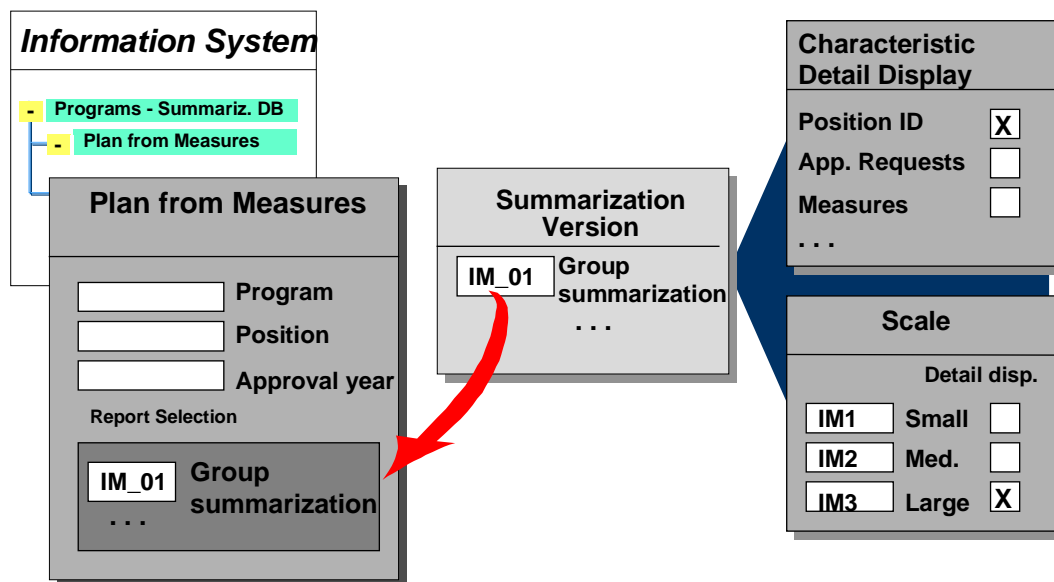
If you manage the *appropriation request* or *measure* characteristics in the summarization database in detail display form (meaning that the data are not summarized), then you can specify in Customizing that objects that have a certain scale are summarized anyway. To do this, remove the *Detail display* indicator from the definition of the scale you want to use (*Appropriation Requests* → *Master Data* → *Define Allowed Values for Certain Master Data Fields* → *Define Scale*).

Using this method, you can exclude measures and appropriation requests that have an insignificant value from summarization reporting. At the same time you benefit from a detail display of more important measures and appropriation requests.

You enter scales in the master data of investment program positions, appropriation requests and measures. For objects that are not managed in an SAP R/3 System, the system determines the scale from the appropriation request or investment program position to which they are assigned.

Summarization Versions

In order for you to have multiple “snapshots” of your investment programs at different times, the system saves the data in the summarization database in summarization versions. The summarization versions allow you to “preserve” the investment program in different phases. You have to enter a summarization version for the procurement of data for the summarization, as well as when you run summarization reports. If you request data collection for a summarization version that already has data in the summarization database, the system overwrites the existing data.



Summarization Versions

You can define any number of summarization versions in Customizing for *Investment Management* (*Information System* → *Information System Using Summarization*). A summarization version consists solely of a key and a text.

Activities

You create a summarization database in the following steps (*Periodic processing → Summarization*):

- Copy the investment program to the summarization database (*Summarization → In own client → Copy program*).
- Export the investment program values from the original system to a file (*Summarization → Output to file*).
- Export the entities from the original system, each to its own file.
- Import the investment program values and entities (*Summarization → Import from file*).

Exporting and importing are not necessary if the data does not come from other clients or systems (that is, all the data is in the same system or client as the summarization database). In that case, you have to use the functions *Summarize values* and *Copy entities* (choose *Summarization → In own client*).



Summarization reports relate to only one investment program. You can use summarization versions to create summarization reports that give a “snapshot” of your investment program, but the program hierarchy has to be exactly the same in all the versions.

Characteristics and Key Figures (Summarization)

Characteristics and Key Figures (Summarization)

Features

Characteristics

The system manages the following master data type characteristics in the summarization database:

Master Data Characteristics

- Summarization version (for saving snapshots)
- Investment program name
- Approval year
 - Logical system
 - Investment program position
 - Appropriation request
 - Measure
 - Company
 - Company code
 - Business area
 - Controlling area
 - Profit center
 - Cost center
 - Plant
 - Functional location
 - Functional area
 - Responsible person for program position or appropriation request or measure
- Partner name
- Indicator: Measure new in approval year (or carried forward from prior years)
- Balance sheet item
- Reason for investment
- Reason for environmental investment
 - Priority
 - Main status of appropriation request or measure
 - Object type
 - Scale

Characteristics and Key Figures (Summarization)

- User fields (in appropriation requests)

The characteristics below are for specifying the key figures:

Specifying Characteristics

- Fiscal year
- Plan version
- Value type with following possibilities:
 - Plan for measures
 - Actual
 - Statistical plan
 - Statistical actual
 - Down payments as expense
 - Commitments from purchase requisition
 - Commitments from purchase order
 - Commitments from reservations
 - Manual commitments
 - Remaining plan of apportioned orders/networks
 - Budget for measures
 - Budget for program position
 - Plan for program position
 - Plan for appropriation request (overall)
 - Plan for appropriation request (less capital investments)
- Budget category (investment program)
- Indicator new/old (only for more detail for investment programs):
 - Current values for investment program
 - Carryforward for investment program
 - Forecast for investment program
- Accounting transaction (Budget):
 - Original budget
 - Budget supplement
 - Budget return
 - Budget transfer (receiver)
 - Budget transfer (sender)
- Customer expected value type (for customer enhancements)

Characteristics and Key Figures (Summarization)



- Further limiting the key figures by period or cost element/cost element group/value category is not possible.
- The customer expected value type serves the same function as the SAP value type. It is intended to explain a key figure by its character. The customer value type can be supplied by the data collection program of the customer enhancement (SAP enhancement AAIP0002). Using this enhancement, you can store and evaluate special key figures that have not been provided by SAP for this purpose. (You can use **either** the customer value type **or** the value type.)

Key Figures

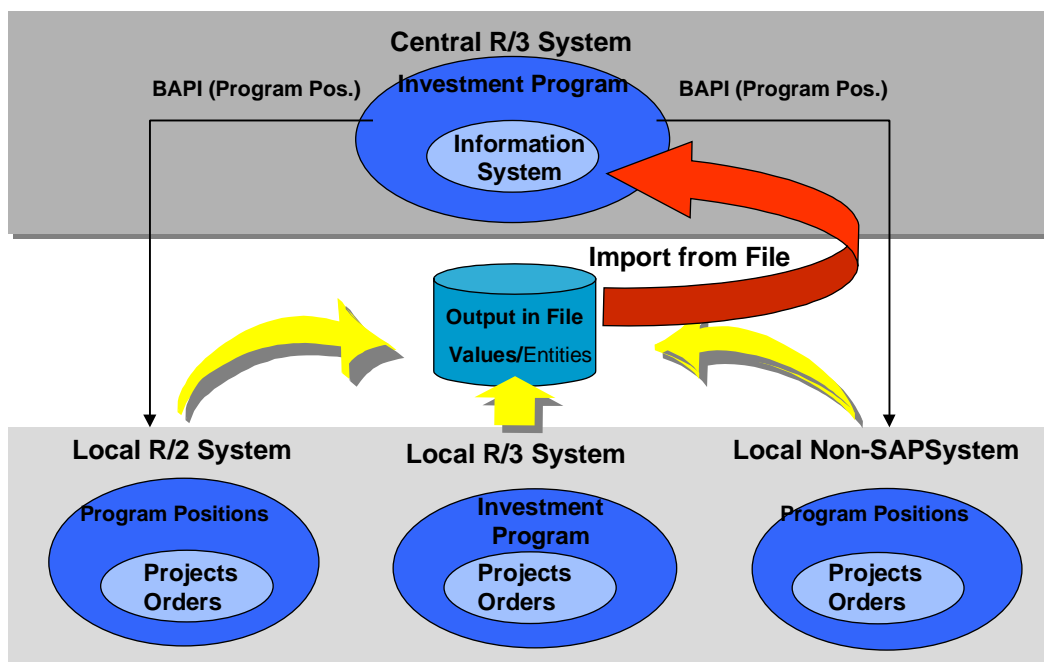
In conjunction with the “value type” characteristic, the summarization database offers the following “key figure types.” The individual characteristic values that belong to these key figure types can be found under the value type characteristic in the above characteristic list.

- Plan (the individual characteristics are found under the characteristics “plan versions/variants” and/or “indicator new/old”)
- Budget (the individual characteristics are found under the characteristic “accounting transaction”)
- Actual
- Down Payments
- Commitments

Special Considerations for Summarizing from Local Systems

Use

A summarization database can summarize data from a number of local (decentralized) systems (R/3 Systems, R/2 Systems and non-SAP systems). Using this method, you can improve reporting in a corporate group, for example. Summarization reports can be run in the central Info System of your corporate headquarters, even if the objects being reported on are in different local systems. The local system might belong to a subgroup or a subsidiary of the corporate group.



Summarizing from Local Systems

Features

You are able to output investment program information from one system or client to a file, and then import this file to a central system or client. During the output to a file, the system can access current information on the investment program, as well as data from a summarization database that was generated in the local system or client. This last feature makes it possible to summarize in increasing steps over a number of levels in the group.

Investment Program Structure and Positions

The summarization database always relates to an investment program. Therefore, you have to make sure that the positions of the central investment program are also there in full in all local systems. When the local systems are also SAP R/3 Systems, then the complete investment

Special Considerations for Summarizing from Local Systems

program in the local systems has to have the identical structure to the investment program in the central system.

The function module BAPI_INVPROGRAM_GET_LEAVES can be used for transferring investment program positions to non-SAP systems.

Local Entities

Special care must be taken when you supply the summarization database with investment program data from external systems. You have to make certain that any entities that are managed only in the local systems are also available to the central summarization database. For example, for a summarization report based on profit centers, the profit centers of the local system have to be in the summarization database, along with their keys and short texts.

For this reason, there is a function for exporting the keys and short texts of the entities from the local SAP R/3 system to a file. You can then import this dataset into the summarization database (*Investment Programs* → *Periodic processing* → *Summarization*). The system recognizes the following entities:

- Measures and appropriation requests
- Profit centers
- Cost centers
- Plants
- Functional locations

All other entities that can be used as characteristics for reporting have to be defined identically in the central system and in the local systems. The system assumes that the following characteristics have a globally valid definition:

- Controlling area
- Company
- Investment program (characteristics: investment program, approval year, investment program position and investment program end node)

Other characteristics (such as company code, business area, and so on) have to be defined in the central system also, even if they are only significant for the local system.

Uniqueness of Local Characteristics

In order to be able to uniquely identify the local characteristics, the system assigns these characteristics to a unique, global characteristic:

Appropriation request/measure → Company

Profit center/cost center → Controlling area

Plant/functional location → Original system

You have to ensure that each local characteristic is unique within the global characteristic. The system then manages the system-dependent characteristics in the summarization database combined with its assigned global characteristic. This procedure guarantees that the characteristic is treated as unique in the central system.

Special Considerations for Summarizing from Local Systems

There is another option for solving this problem without using the global characteristics as described above. Instead you can use a customer enhancement. SAP provides two customer enhancements for this purpose:

- AAIC0001 for processing the values (changing their keys) following the data selection
- AAIC0002 for processing the entities following the data selection

Both SAP customer enhancements contain function module EXIT_SAPLAIC2_001. The system calls this function module, when the customer enhancement is active, before the data to be summarized is exported to a file (or before the selection within a client). You can program the changing of the keys in the function module.

Currencies

The system translates the currency of all key figures that come from local systems into the investment program currency of the central system. The central system has to have the necessary exchange rates and exchange rate types to make this conversion.

Data Structures

In order to import data from non-SAP systems to an SAP R/3 summarization database, you have to retrieve the data and import it in the correct files (refer to [Summarization \[Page 330\]](#)). The files have to be structured according to the following R/3 ABAP Dictionary structures:

- Investment program and values: BAPI1057CD
- *Measures* entity: BAPI1057C1
- *Profit centers* entity: BAPI1057C2
- *Cost centers* entity: BAPI1057C3
- *Plant* entity: BAPI1057C4
- *Functional location* entity: BAPI1057C5
- *Appropriation requests* entity: BAPI1057C6

There has to be a separate file for each structure. You import these separate files.

Upload/Download of Summarized Data

Upload/Download of Summarized Data

Download and upload functions make it possible to summarize data across system or client boundaries. First you export the investment program data and entities from the local system into respective files, and then import these files into the central system.

Download

When you download data, you specify the investment program, the approval year and the 'from' program position. The system then outputs the specified data to the file. You can also limit the selection by entering a value type and a timeframe. For the summarization data of appropriation requests, you can specify a partner function. The system then writes the holders of this partner function to the summarization database.

In addition, you have to enter the file to which the program should write the data. You can choose whether the data should be output in a file on the application server, or in a file on a presentation server.

You specify in Customizing those characteristics and scales that you do not want to be summarized. These Customizing settings are valid for the client as a whole. However, when you export the summarization database, you can specify which Customizing settings the system should use. You can choose the Customizing settings from the local client, or from an exported file on an application server, or from another R/3 System (using RFC). To export Customizing settings to a file, use the special Customizing function for this purpose (*Investment Programs → Information System → Information System Using Summarization*).

Import

To import data, you only have to enter the file from which the import should be made.

File Structure

When you export data, the system creates the file using the file name you enter in the report selection screen. This file is an ASCII file. The system creates one files for the investment program data and one file for the entities. The structure of the files is as follows:

- First there is a header containing the name of the ABAP Dictionary structure and the number of data records that follow.
- Then there is a second header containing the names of the fields that are being transferred. The fields have to be in the same sequence as the data records that follow then.
- Then the actual data records appear.

The following list contains the names of the Dictionary structures:

- BAPI1057CD for the values and master data of investment programs
- BAPI1057C1 for the entity 'measure'
- BAPI1057C2 for the entity 'profit center'
- BAPI1057C3 for the entity 'cost center'
- BAPI1057C4 for the entity 'plant'
- BAPI1057C5 for the entity 'functional location'

Upload/Download of Summarized Data

- BAPI1057C6 for the entity 'appropriation request'

You can display these structures using transaction SE11. In that transaction, you can also see the field names of the structures.

Within a data record, the individual entries are separated by a tab (tabulator).



Make sure that the ASCII files you create are structured so that they can be processed using various PC applications (such as Excel).