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for Utilities

SAP

Flexible Real Estate Management

POWERED BY SAP HANA

SAP S/4 HANA

**A Business and Technical
Roadmap to Deploying SAP**

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INTRODUCTION

Welcome to the fascinating world of SAP. This book helps you crack the tricks of mastering SAP HANA Customization

Activities

Conditions and Flows

Conditions and Flows

Use

In this section, you make the basic settings for linking to financial accounting. The following settings are mandatory:

Definition of condition . types and conditon groups Definition
of flow types.
Assignment of reference . flow types
Specification of distribution . formulas and calculation formulas
Secification of condition . purposes

Calculation and Distribution Formulas

Calculation Formulas

Use

In this section, you create (external) calculation formulas that are based on internal calculation formulas. These formulas are used for determining the condition amount. The system determines the condition amount using the following parameters:

- The unit price of the condition
- A maximum of two parameters. The values for these are entered either in the calculation formula defined here, or you enter them on the condition.
- The internal calculation formula that specifies how the calculation is made

You specify how the unit price and the condition amount are rounded using the rounding type.

Requirements

Internal calculation formulas are provided by SAP in the standard system and are fixed. They each need an external calculation formula, which you have to create and assign in this activity. The following internal calculation formulas are available:

- Calculation Formula : Fixed Amount
- Calculation Formula : Area - Calculation Formula : Each
- Calculation Formula : Object Measurement
- Calculation Formula : % Share of Condition
- Calculation Formula : Sales-Based Rent
- Calculation Formula : % Share of Source Condition (External Condition)
- Calculation Formula : Rental Object Condition
- Calculation Formula : Factor - Condition Group
- Calculation Formula : Differing Measurement
- Calculation Formula : Amount/Object
- Calculation Formula : Amount/Occupancy Status
- Calculation Formula : Amount/Tenant Changeover
- Calculation Formula : % Share of Condition Group
- Calculation Formula : Sales-Based Rent Modifiable
- Calculation Formula : Immediate Billing for Room Usage
- Calculation Formula : Periodic Billing for Room Usage
- Calculation Formula : Fixed Amount - Possession Dates
- Calculation Formula : BAdI Calculation

Note

Calculation formulas , , and are implemented in the same way as the methods of the RECD_CALC_RULE BAdI. If you want to implement your own calculation methods that are similar to one of the methods described, you can use the implementation of one of these methods as a template.

Standard settings

SAP provides at least one external calculation formula for each internal calculation formula.

Recommendation

Delete calculation formulas that are **not** needed.

For frequently used formulas (such as Calculation Based on Space), create calculation formulas with parameters that **cannot** be changed in the application. If needed, create your own condition types (such as Basic Rent per Square Foot), in which the calculation formula is entered as a default.

Activities

You can change external calculation formulas by:

- Renaming them
- Making more specific entries for them. This means you can, for example, define the external formulas, *Retail space in sq. feet* and *Office space in sq. feet*, which are both based on the internal formula *Space*.

If you want to define additional external calculation formulas, choose *New Entries*. Or copy an entry that is already assigned to the internal calculation formula you need, and use it as a template.

1. Enter a unique ID in the *Calculation Formula* field. Enter a short, medium and long name for the formula.
2. In the *Internal Formula* field, select the internal calculation formula you want. Confirm your entry. After that, the fields for the allowed parameters of the formula are available for input.
3. The internal calculation formula also determines if distribution is made as in the calculation, or if you have to assign a distribution formula to the external calculation formula. In that case, the External Distribution field becomes available for input after you confirm your entries (choose *Enter*).

Example: Internal calculation formula 'Fixed Amount:' **one** common condition amount is specified for all calculation objects of the object group. Distribution of the condition amount to the objects therefore has to be defined by assigning a distribution formula. In Customizing, enter the value for these formulas that you would like to use for distribution. For example, choose distribution using a total measurement type (such as Residential/Usable Space) that is entered or derived on all of the objects.

Other calculation formulas (for instance measurement or condition of rental object) calculate the condition amount by adding individual amounts from each calculation object. These kinds of calculation formulas do not need their own distribution formulas. If you want to assign a different distribution formula for them anyway, set the Distribution Formula Independent of Calculation Formula indicator.

Distribution Formulas

Use

In this section, you create external distribution formulas that are based on internal distribution formulas.

Requirements

The following distribution formulas are provided in standard Customizing:

- Distribution Formula: Divided Equally
- Distribution Formula: Area/Object Measurement/Differing Measurement
- Distribution Formula: By Object

To ensure correct reporting for cost and revenue planning, you have to make sure that all costs and revenue on a contract that can be assigned to objects are actually posted to these objects.

If an object is directly assigned to a condition, then all costs and revenue can be posted directly to the object when there is a posting.

However, a direct transfer is not possible if:

- No object assignment was made, so that the system is not able to recognize the object to be posted
- The condition is linked to an object group, so that multiple objects could be affected by the transfer

In these cases, distribution formulas define how the object or objects to be posted are found, and how the costs or revenue are distributed proportionally to these objects.

The resulting amounts then appear in the object cash flow of the contract, and are posted during periodic posting for the contract.

For example, for customer lease-outs:

Partner-related cash flow:

Debit: Customer

Credit: Revenue (Contract) Object cash

flow:

Debit: Revenue Clearing (Contract)

Credit: Revenue (distribution object)

Activities

For distribution formulas, the possible activities are

Renaming

Making more specific entries. This means you can, for example, define the formulas, *Retail space in sq. feet* and *Office space in sq. feet*, both of which are based on the internal distribution formula *Area*.

If you want to define additional distribution formulas, choose *New Entries*.

Enter a unique ID in the *External Formula* field. Enter a short, medium and long name for the formula.

In the *Internal Formula* field, select the internal distribution formula you want. Choose the object type for distribution and posting.

Save your entries.

Implement Enhancements (BAdI)

Calculation Formula for Conditions

Use

Using this Business Add-In (BAdI) you can determine the time-dependent calculation factors that are multiplied with the unit price.

Implementation of this Business Add-In (BAdI) is mandatory for each external calculation formula that is defined in Customizing (under Calculation Formulas) on the basis of internal calculation formula (= BAdI calculation).

You can process all user-specific calculation formulas within the same Business Add-In implementation. This means that you do **not** have to create a separate implementation of the BAdI for each calculation formula.

Activities

1. Create a BAdI implementation that contains the following methods:

- *GET_ATTRIBUTES* - *GET_PARAMETER*
- *GET_UNITS*
- *GET_VALUES*
- *GET_FLEXIBLE*

Each method contains the *ID_CALCULEEXT* parameter, which is used to control the implementation (dependent on the formula).

2. Activate the BAdI implementation.

Method description

- **GET_ATTRIBUTES**

The method returns the following attributes:

- *@@ ID_CALCULEEXT*: Defines the external calculation formula
- *@A @ CF_DISTRIBUTE*: Defines whether or not the calculation can be distributed
- *@A @ CF_ADJUSTABLE*: Defines whether or not the condition can be adjusted
- *@A @ CF_UNITPRICE_HIDE*: Defines whether or not the unit price can be hidden
- *@A @ CF_DEPEND_CONDITION*: Defines whether or not the calculation is dependent on conditions

- **@A@ CF_DEPEND_OBJECT**: Defines whether or not the calculation is dependent on object data
- **@A@ CF_UNIQUE_VALUES**: Defines whether or not the calculation returns one-time amounts
- **@A@ CF_UNIQUE_VALUES_MULTI**: Defines whether or not the calculation returns multiple one-time amounts
- **@A@ CD_INFO_IDENT**: Defines the help text ID
- **@A@ CD_GUI_FM_PARA_PBO**: Defines the PBO function module for maintenance of formula parameters
- **@A@ CD_GUI_FM_PARA_PAI**: Defines the PAI function module for maintenance of formula parameters

Using the *CD_GUI_FM_PARA_PBO* and *CD_GUI_FM_PARA_PAI* parameters, you can link to a special interface for maintaining formula parameters. The function groups *RECD_GUI_CALC_RULE_* and *RECD_GUI_CALC_RULE_* serve as examples for this.

- **GET_PARAMETER**

The method returns the following parameters:

- **@@ ID_CALCULEEXT**: Defines the external calculation formula
- **@@ ID_PARA_NO**: Defines the number of the parameter
- **@@ IO_OBJECT**: Defines the object that has the condition
- **@@ IS_CONDITION**: Defines the condition
- **@A@ CT_PARA_VALUES**: Defines the list of parameter values (F)
- **@A@ CD_PARA_INFO**: Defines the description of the parameter
- **@A@ CF_PARA_CHECK**: Defines whether or not a standard check of the parameter is performed

- **GET_UNITS**

The method returns the following units:

- **@@ ID_CALCULEEXT**: Defines the external calculation formula
- **@@ IO_OBJECT**: Defines the object that has the condition
- **@@ IS_CONDITION**: Defines the condition
- **@A@ CD_UNIT_UNITPRICE**: Defines the unit of the unit price
- **@A@ CD_UNIT_CALCVALUE**: Defines the unit of the calculation factor

- **GET_VALUES**

The method returns the following calculation factors:

- **@@ ID_CALCULEEXT**: Defines the external calculation formula

- **@@ ID_PARA_**: Defines parameter - **@@ ID_PARA_**: Defines parameter
- **@@ ID_ABS_FROM**: Defines the absolute start of the calculation
- **@@ ID_ABS_TO**: Defines the absolute end of the calculation
- **@@ IO_OBJECT**: Defines the object that has the condition
- **@@ IS_CONDITION**: Defines the condition
- **@@ IT_OBJECT_CONTRACT**: Defines the contract object
- **@@ IT_OBJECT_CONDITION**: Defines the condition objects
- **@A@ CT_CALC_VALUES**: Defines the time-dependent calculation factors
- **@A@ CT_DIST_VALUES**: Defines the time-dependent distribution factors
- **@A@ CT_CALC_USED_OBJECTS**: Defines the objects that are considered by the calculation
- **@A@ CT_DIST_USED_OBJECTS**: Defines the objects that are considered by the distribution
- **GET_FLEXIBLE**

The method returns the following flexible values:

- **@@ ID_CALC_RULE_EXT**: Defines the external calculation formula
- **@@ IO_OBJECT**: Defines the object that has the condition
- **@@ IS_CONDITION**: Defines the condition
- **@A@ CF_FLEXIBLE**: Defines whether or not the formula supports flexible intervals
- **@A@ CD_FLEXIBLE_FROM**: Defines the start date of the flexible interval
- **@A@ CD_FLEXIBLE_TO**: Defines the end date of the flexible interval

Using this method, you can define a condition so that it is valid beyond the term of the object.

Dependent on the actual condition object, the table of condition objects is structured as follows:

- The condition object is a concrete object.
The table of condition objects contains the concrete object.
- The condition object is an object group.
The table of condition objects contains the object group and the objects in the object group.
- The condition object is the contract.
The table of condition objects is identical to the table of contract objects.

Note the following:

- Do **not** directly access the database (SELECT statements) on tables where the data could be being processed. Use only the API_RE_XX_GET_DETAIL function module for data retrieval. (Here xx stands for the English abbreviation for the object type, for instance CN for the real estate contract.)
- Do **not** use statements that execute actions on the interface, for example, MESSAGE without RAISING, CALL SCREEN and so on. Also, do not use COMMIT WORK or ROLLBACK WORK.

Example

SAP provides the external calculation formulas that are based on these internal calculation formulas: (*amount per object*), (*amount per rental object status*), (*amount per tenant changeover*) and (*% share of condition group*). You implement these external calculation formulas in the following classes:

- CL_RECD_CALC_RULE_ - CL_RECD_CALC_RULE_ -
CL_RECD_CALC_RULE_
- CL_RECD_CALC_RULE_

These classes have the same structure as a corresponding BAdI implementation for the BAdI definition RECD_CALC_RULE. They can serve as a guide for the implementation of your own formulas.

Notes for Developers

Distribution Formula for Conditions

Use

Using this Business Add-In (BAdI) you can determine a time-dependent distribution for a calculation.

Implementation of this Business Add-In (BAdI) is mandatory for each external distribution formula that is defined in Customizing (under Distribution Formulas) on the basis of internal distribution formula (= BAdI distribution).

You can process all customer-specific distribution formulas you need in the same Business Add-In implementation. This means that you do **not** have to create a separate implementation of the BAdI for each formula.

Activities

. Implement the BAdI and define the following methods:

- GET_ATTRIBUTES - GET_PARAMETER

- *GET_UNIT*
- *GET_VALUES*
- *GET_FLEXIBLE*

Each method contains the ID_DISTRULEEXT parameter, which is used to control the implementation (dependent on the formula).

. Activate the BAdI implementation.

Method description

GET_ATTRIBUTES

The method returns the following attributes:

- @@ ID_DISTRULEEXT: Defines the external distribution formula
- @A@ CF_DEPEND_OBJECT: Defines whether or not the distribution is dependent on object data
- @A@ CD_INFO_IDENT: Defines the help text ID
- @A@ CD_GUI_FM_PARA_PBO: Defines the PBO function module for maintenance of formula parameters
- @A@ CD_GUI_FM_PARA_PAI: Defines the PAI function module for maintenance of formula parameters

Using the CD_GUI_FM_PARA_PBO and CD_GUI_FM_PARA_PAI parameters, you can link to a special interface for maintaining formula parameters. The function group RECD_GUI_DIST_RULE_ serves as an example for this.

GET_PARAMETER

The method returns the following parameter values:

- @@ ID_DISTRULEEXT: Defines the external distribution formula
- @@ ID_PARA_NO: Defines the number of the parameter
- @@ IO_OBJECT: Defines the object that has the condition
- @@ IS_CONDITION: Defines the condition
- @A@ CT_PARA_VALUES: Defines the list of parameter values (input help) - @A@
CD_PARA_INFO: Defines the description of the parameter
- @A@ CF_PARA_CHECK: Defines whether or not the standard check of the parameter is performed

GET_UNIT

The method returns the following units:

- @@ ID_DISTRULEEXT: Defines the external distribution formula
- @@ IO_OBJECT: Defines the object that has the condition

- @@ IS_CONDITION: Defines the condition
- @A@ CD_UNIT_DISTVALUE: Defines the unit of the distribution factor
- **GET_VALUES**

The method returns the following calculation factors:

- @@ ID_DISTRULEEXT: Defines the external distribution formula
- @@ ID_PARA_: Defines parameter - @@ ID_PARA_: Defines parameter
- @@ ID_ABS_FROM: Defines the absolute start of the calculation
- @@ ID_ABS_TO: Defines the absolute end of the calculation
- @@ IO_OBJECT: Defines the object that has the condition
- @@ IS_CONDITION: Defines the condition
- @@ IT_OBJECT_CONTRACT: Defines the contract objects
- @@ IT_OBJECT_CONDITION: Defines the condition objects
- @@ IT_OBJECT_DISTRIBUTION: Defines the distribution objects
- @A@ CT_DIST_VALUES: Defines the time-dependent distribution factors
- @A@ CT_DIST_USED_OBJECTS: Defines the objects that are considered by the distribution

Dependent on the actual condition object, the table of condition objects is structured as follows:

- If the condition object is a concrete object, then the table contains the concrete object.
- If the condition object is an object group, then the table of condition objects contains the object group and the objects in the object group.
- If the condition object is the contract, then the table is identical to the table of contract objects.

- **GET_FLEXIBLE**

This method returns the following flexible values:

- @@ ID_DISTRULEEXT: Defines the external distribution formula
- @@ IO_OBJECT: Defines the object that has the condition
- @@ IS_CONDITION: Defines the condition
- @A@ CF_FLEXIBLE: Defines whether or not the formula supports flexible intervals
- @A@ CD_FLEXIBLE_FROM: Defines the start date of the flexible interval
- @A@ CD_FLEXIBLE_TO: Defines the end date of the flexible interval

Using this method, you can define a condition so that it is allowed to be valid beyond the term of the object.

Note the following:

- Do **not** directly access the database (SELECT statements) on tables where the data could be being processed. Use only the API_RE_XX_GET_DETAIL function module for data retrieval. (Here xx stands for the English abbreviation for the object type, for instance CN for the real estate contract.)
- Do **not** use statements that execute actions on the interface, for example, MESSAGE without RAISING, CALL SCREEN and so on. Also, do **not** use COMMIT WORK or ROLLBACK WORK.

Example

The distribution formula based on internal formula (*Aggregation*), which is provided by SAP, is implemented in the class CL_RECD_DIST_RULE_.

This class has the same structure as a corresponding BAdI implementation for the BAdI definition *RECD_DIST_RULE*. Therefore, you can use the class as a guide for the implementation of your own formulas. Notes for Developers

Condition Types and Condition Groups

Define Condition Types

Use

In this section, you specify condition types for your contracts.

Requirements

You created the necessary flow types in the Flow Types IMG activity.

Activities

Check if the existing condition types are sufficient for your enterprise. For more detailed information on the condition types, double click on the condition type.

If you need additional condition types, then create them by choosing *New Entries* (or @U@):

1. Assign the following default values to the condition types as needed:
 - Unit price
Example: Fees or surcharges that are the same for most contracts (condition type *Security deposit as times basic rent*)
 - Calculation formula
You create calculation formulas in the Calculation Formulas IMG activity.

- Distribution formula
You create distribution formulas in the Distribution Formulas IMG activity.

2. Assign a flow type to each condition type.
3. Assign the necessary attributes to the condition types for service charge settlement and for sales-based rent settlement, for example:

- *Advance payment* attribute - *AP Service Charges/Operating Costs* condition type

- *AP Sales-Based Rent* attribute - *AP Sales-Based Rent* condition type

@S@ You use the attribute to specify how these condition types are treated during certain processes. For example, you can assign a sales rule only to conditions that have an attribute that allows this.

If no attribute is assigned then, for example, the advance payment for sales-based rent is posted regularly, but it is not settled during sales-based rent settlement.

Set the Revenue indicator for advance payments for operating costs or for sales-based rent, if you want them to be posted as revenue.

@S@ Remember that the settings you make here have to agree with the account determination (Condition Type -> Flow Type -> Account Symbol -> Account):

- Indicator is set ('X') -> Account Determination:

Customer Receivable Credit: revenue

- Indicator is not set ('')

-> Account Determination:

J Customer Advance Payment Credit: K Customer Adv.Payment Made

@A@ The system does not check for agreement! However, the periodic posting is incorrect if this indicator does not agree with the account determination.

If you want to delete a condition type, first check in the Define Condition Groups and Assign Condition Types IMG activity if it has dependent entries. Delete these entries if there are any. Then delete the entries in this table.

Define Condition Purpose

Use

In this step you specify, based on the internal condition purposes, how and if the condition is considered during periodic posting.

Requirements

The following internal condition purposes are predefined in standard Customizing:

- Statistical (is not posted, but can be used as a reference for calculations or as a comparison value)
- One-Time Statistical

- One-Time Posting
- Posted

Activities

You can perform the following for the internal condition purposes:

Rename .

Specify more details .for them, that is, for example, you can assign the

ZK>Vacancy Rent and Market Rent external condition purposes to the *Statistical* internal purpose. This combination can be useful for rental object conditions, for instance.

The assignment of an external condition purpose to a condition has to be made in the application. In the contract, you can use the same condition type with different condition purposes.

Setting the **CtrP** (contract purpose) indicator means that the condition purpose (for example, actual rent) is valid for contract conditions.

Set the **Def.** (default) indicator, if you want the condition purpose to appear in the contract as a default value.

Set the **ROPP** (rental object purpose) indicator, if you want the condition purpose (for example, market rent) to be valid for rental object conditions.

Set the **RODf** (rental object default) indicator, if you want the condition purpose to appear in the rental object as a default value.

Set the **TrPp** (transfer purpose) indicator if you want the condition with this condition purpose to appear for selection in the contract when you choose *@D@ Proposed conditions*.

Condition Groups

Define Condition Groups and Assign Condition Types

Use

In this step you define condition groups condition groups and assign condition types to them.

@S@ Condition groups are mandatory. The only condition types available in the contract or rental object (dependent on the contract or usage type) are those that you have assigned to the given condition group for the object type.

You also need condition groups if you want to use proposed conditions. In this case, the condition groups define the condition types for which automatic values should be proposed (Define Proposed Conditions). You may:

a) Use the same condition groups that you assign to usage types of rental objects or contract types

b) Define other condition groups

Before the condition types can be adopted, the system automatically compares the resulting condition types with the condition types that are actually allowed on the object.

You can also use condition groups to show totals for multiple condition types in one column in reporting. To do so, you assign a condition group to a report profile using a condition profile. You should also define special condition groups for reporting, such as, net rent before service charges, or advance payments for operating costs.

Requirements

You have specified the condition types you need in the Condition Types IMG activity.

Activities

Check the existing condition . groups.

Create additional condition . groups if you need them, and define which condition types are allowed in which condition groups. You can add condition types to a condition group at any time. However, you are not allowed to remove condition types if they were already used in rental objects or contracts of the usage type or contract type.

.Assign condition groups in the Assign Condition Group to Rental Object per Usage Type step and the Assign Condition Group to Contract per Contract Type step.

Keep in mind that you no longer distinguish between condition types for flat rates and advance payments using the condition group (as was the case in Classic RE). Instead you make this distinction in the attribute of the condition type.

Example

You create a condition group for vendor contracts (commercial) with conditions that generate postings to the vendor account (for example, basic office rent, basic warehouse rent, advance payment for operating costs, advance payment for heating costs, and so on).

Note

You can also use condition groups when you define report profiles; see Configure Condition Profiles.

If you want to calculate surcharges from the settlement result from the service charge settlement, which you relate to basic rent, you can also work with condition groups. For more information, see Define Calculation of Surcharges.

Assign Condition Group to Contract per Contract Type

Use

In this step, you assign the condition groups, which you created for contract conditions, to contract types.

You define contract types in the Contract Type IMG activity.

Assign Condition Group to Rental Object per Usage Type

Use

In this step, you assign condition groups, which you created for rental object conditions, to usage types of rental objects.

You specify the usage types for rental objects in Customizing in the Usage Types step.

Flow Types

Define Flow Types

Use

In this section, you define flow types. This is a prerequisite for creating condition types and for account determination. Flow types classify flows in:

- a) The cash flow
- b) Accounting

With certain transactions, postings cannot be made using the flow type that was originally assigned (the flow type derived from the condition type). For these transactions, you have to assign reference flow types using a relationship key in the Assign Reference Flow Types IMG activity.

Standard settings

Standard Customizing contains all flow types for the condition types provided in the standard system. The first two numbers of the flow type key are the same as those of the condition type it belongs to. Flow types that are directly assigned to condition types have a number ending with "." Reference flow types, however, have a number ending with same two figures depending on the type of relationship. It is advisable to use the same or a similar type of logic for flow types you define yourself.

Activities

- Create unique keys for flows that are for posting and for statistical flows, or copy the flow types you want use from standard Customizing. For each condition type that you want to be able to post, you have to enter a flow type. You then have to link this flow type with the condition type in the Assign Flow Type to Condition Type IMG activity. It is possible that you might need additional reference flow types for a flow type (for example, for credit memos, receivables, own usage, vacancy, settlement of service charges). You also have to create these reference flow types here. Enter a name for each flow type.
- For each flow type, specify if it is debit or a credit posting. For contracts that post to subledger accounts (customer or vendor account, contract account), you have to set the debit/credit indicator according to which side the posting to the subledger account is made on.
- If you want cash flow amounts for this flow type to be updated in cash management, then set the *Relevant to CM* indicator.
- If you want the system to calculate accruals and/or deferrals for cash flow items with this flow type, then enter the accrual type for accruals and deferrals.
- In the *Summarization Flow Type* column, enter the flow type that you want the system to use for document summarization during periodic posting (rather than the original flow type).

Example

Assign Reference Flow Types

Use

In this step, you assign reference flow types to flow types.

Definition

With certain business transactions, postings **cannot** be made using the flow type that was originally assigned (the flow type derived from the condition type). For such transactions, reference flow types must be assigned in this activity using a relationship key.

- *Example of a Relationship Key*
- *Follow-Up Postings Due to Condition Increase*

You use this reference flow type when rent receivables are increased retroactively (that is, after a debit position posting). Flow types that are referenced by the reference flow type can be the basic flow types (that are assigned directly to a condition type) or can be flow types for own use and vacancy.

- *Follow-Up Postings Due to Condition Reduction*

You use this reference flow type when rent receivables are reduced retroactively (that is, after the debit position posting). Flow types that are referenced by the reference flow type can be the basic flow types (that are assigned directly to a condition type) or can be flow types for own use and vacancy. The reference flow type usually consists of the reversed account determination (whereby the debit and credit postings are transposed) of the account determination in the original flow type.

- *Distribution Postings (Object Transfers)*

In the real estate contract, the periodic posting function generates a primary posting on the basis of the condition type. In the case of vendor contracts, this posting **debits costs to the contract and credits payables**, while in the case of customer contracts it **debits receivables and credits revenue (contract)**. If it is specified in the contract that the costs are to be distributed to the objects (this should normally be the case to enable the costs and revenues on the objects to be seen in Controlling), a reference flow type determined via relationship key has to be specified for the costs to be transferred to the objects. For vendor contracts, the transfer posting **debits costs (object) and credits cost allocation (contract)** and for customer contracts, it **debits revenue allocation (contract) and credits revenue (object)**.

- *Own Use*

The reference flow type for this relationship key is used when the cash flow is generated from a contract with contract type *Internal Contract*.

Caution:

All flow types for condition types that are to be used on internal contracts require a reference flow type here. Otherwise you **cannot** activate the contract.

Specify a G/L account posting for account determination. For reference flow types assigned to these with relationship keys *Follow-Up Postings Due to Condition Increase* and *Follow-Up Postings Due to Condition Reduction*, you also need to specify reference flow types with relationship key *Own Use*.

- *Vacancy*

The reference flow type is used for the vacancy debit position of the rental objects (only for the time during which there is **no** active occupancy contract for the rental object).

Caution:

Vacancy flows are only generated and posted for condition types if a reference flow is defined here for the corresponding flow type.

By defining vacancy flow types, you can control whether a condition type on the rental object is for information purposes only (default value for the contract) or whether vacancy postings are to be made for this condition type.

Specify a G/L account posting for account determination. For flow types assigned to these with relationship keys *Follow-Up Postings Due to Condition Increase* and *Follow-Up Postings Due to Condition Reduction*, you also have to enter reference flow types with relationship key *Vacancy*.

- For information about the reference flow types for service charge settlement (relationship key in the range -), see Reference Flow Types for Service Charge Settlement.
- *Installment Payment*
You use this reference flow type to post an installment payment for an item posted with RE-FX. The posting specification is **debit customer, credit customer**.The open item originally posted is cleared. To define an installment payment for items that were posted to a customer account without a flow type, specify a reference flow type with this relationship type for the empty flow type.
- *Irrecoverable Debt*
You use this reference flow type to write off an item posted with RE-FX (because no more payments are expected on the receivable, for example). The posting specification is **debit costs, credit customer**. The open item originally posted is cleared. To be able to write off items that were posted to a customer account without a flow type, you specify a reference flow type with this relationship type for the empty flow type.

Reference Flow Types for Balance Sheet Valuation of Rental Contracts/Leases

You use the functions for balance sheet valuation for leases. In this case, you require reference flow types for the following relationship keys based on the flow types specified in the valuation rules:

- *CE Posted Initial Costs* or *CE Statistical Initial Costs*
Initial costs can be modeled as a one-time condition directly using the rental contract/lease. They are managed as statistical conditions or as posting conditions depending on whether they are used as input only in the balance sheet valuation or whether they are also posted as vendor payables using the periodic posting for the contract. The initial costs are reflected in the present value of the leased asset in both cases.
To post the payment, the Payment Flow Type from the Customizing for valuation rules is used for the lease installment payments to be paid periodically. However, for postings for initial costs, the reference flow types specified here are used.
- *CE Positive Liability Difference* and *CE Negative Liability Difference*
Note the information for the Payment Flow Type field in Customizing for valuation rules.
- *CE Negative Linearization*
Note the information for the Linearization Flow Type field in Customizing for the valuation rules.
- *CE Direct Balance Sheet Posting*
You want to post the valuation postings directly to the general ledger rather than to the asset subledger. To do this, specify reference flow types for which account determination does not point to assets, but directly to general ledger accounts.
Note the information for the Integration Type field in Customizing for valuation rules.

Assign Flow Type to Condition Type

Use

You can assign defined flow types to the condition type. Assign the flow types that you want to be used for periodic posting for external contracts. The system derives all other flow types from the reference flow types.

Requirements

First define flow types in Customizing.

Activities

In addition to assigning flow types, you can make other settings here for Condition Types.

Conditions in Foreign Currency

Conditions in Foreign Currency

Use

You need to make settings here if you want to have conditions on contracts, rental objects, or contract offers that are in a currency that differs from the local currency of the company code.

Requirements

To be able to use a different currency in a company code, you have to set the *Differing Condition Currency* indicator for that company code in the Make Basic Settings in Company Code IMG activity.

Activities

For the system to be able to properly handle conditions in a foreign currency, you have to answer the following questions for the conditions of the contract, rental object, or contract offer:

- What is the currency of the condition amount?

You can enter the currency directly when processing conditions (if the setting for differing condition currencies was activated in the basic settings of the company code).

- Which exchange rate is used for calculating the amount in your local currency?

The user assigns a currency translation rule when processing the posting term (see the Define Currency Translation Rule IMG activity). The rule is then used for all conditions to which this posting term is assigned. The currency translation rule defines the following:

- Which translation date rule is used?
The translation date rule defines, dependent on the process, how the currency translation date is determined.
- Which exchange rate type is used?
- Should documents that result from the posting term have the condition currency as the transaction currency?
(If the indicator is not set, then the currency of the condition is used only to calculate the posting amount. However, the document is posted in the local currency.)

If you need conditions in a foreign currency, then define currency translation rules and translation date rules.

Specify which currency translation rules are allowed for each contract type and each usage type. Also specify one currency translation rule as a default.

Activate Conditions in Foreign Currency per Company Code

Use

To be able to define conditions with different currencies in a company code, you have to set the *Differing Condition Currency* indicator for the company code.

Activities

Set this indicator for the company codes in which you want to define conditions in foreign currencies. You can then enter a currency translation rule on your posting terms. If you normally create foreign currency conditions in one particular currency, then enter that currency in the *Currency* field. The system then proposes this currency for all conditions that have a currency translation rule.

Specification of Translation Date

Define Translation Date Shift Rule

Use

The translation date shift rule defines how the system determines a translation date on the basis of a starting date that was entered.

You have to define translation date shift rules if the following applies: You use conditions in a foreign currency, and you do **not** want the system to use a fixed date for the currency translation; instead the date entered should only serve as the starting date for determining the translation date.

Example

You have defined conditions with currency EUR in a company code with local currency USD. The exchange rate from dollars (USD) to euros (EUR) is entered daily in the exchange rate table. You run periodic posting on a monthly basis at the end of each month (with the posting date as the first day of the next month). For periodic posting, you want the system to use the exchange rate that was valid two days before the end of the month, that is on the third to the last day of the previous month.

In that case, you define a translation date shift rule, such as BEG-. You have to set up this rule so that it initially shifts the entered date to the first of the month, and then moves it three days backward.

You then assign this translation date shift rule to the process *REPP - Periodic Posting* in the translation date rule. You use the posting date (PSTNGDATE) as the base date for the translation. Set the error response to *Error*.

Activities

- To create a translation date shift rule, choose *New Entries*. Enter a name (you assign this later in the currency translation rule) and a description.
- On the detail screen for the translation date shift rule, specify how the starting date is shifted. You have the following options:
 - **Shift in Relation to Period**
You can specify here that the date is shifted to the beginning or end of the week, month, quarter, or year in which the starting date lies.
 - **Shift by Days, Months, Years**
You can specify here that the starting date is shifted by n days + n months + n years. If you want the resulting date to be before the starting date (as is common for currency translation), then n, n, and n must be negative numbers.
 - **Shift in Relation to Calendar**
You can specify here that the shift is made in relation to a public holiday calendar. Specify to what number working day the date should be shifted, and enter a calendar that can be used to determine the working days.
- You can use the *No.* field to specify the sequence in which the system performs the translation for these three group boxes. Enter a different number in each of the group boxes where you made entries.

Example

1. For translation date shift rule BEG- (two days before month end), which was described above, you make the following settings:
 - **Shift in Relation to Period** No.
Shift To: First Day of Period
Move By: Month
 - **Shift by Days, Months, Years**
No.
Move (+/-) By: Days: -, Months: , Years:
 - **Shift in Relation to Calendar** No.
Leave all fields blank.
2. If you do not want to shift to the third to last **calendar** day of the previous month, but instead to the third to last **working** day of the previous month, then make the following entries:
 - **Shift in Relation to Period** No.
Shift To: First Day of Period
Move By: Month
 - **Shift by Days, Months, Years**
No. Move (+/-) By: Days: -, Months: , Years:
 - **Shift in Relation to Calendar** No.
Move to nth (+/-):
Number: -
Unit: Working day
Calendar: <appropriate calendar for your location>
In contrast to the calculation without considering a public holiday calendar, the date is not shifted by n days, but instead is shifted to the nth day. Therefore the entry number is necessary in this example, in order to first shift to the last day of the previous month.

Specify Calculation of Translation Date Based on Process

Use

The translation date rule specifies, dependent on the process, the date that is used for the currency translation. You assign the translation date rule to the currency translation rule.

Standard settings

Currency translation rule DEFAULT is already defined in standard Customizing. This rule calculates all exchange rates related to the cash flow using the posting date or due date. For all processes that are **not** related to the cash flow, the system uses the current date for the translation (that is, the most recent available exchange rate).

Activities

Choose *New Entries* to create a new translation date rule. Enter a meaningful name and a short description.

- Select the rule you created. In the navigation area on the left side of the screen, choose *Process-Dependent Determination of Date*. Choose *New Entries* . Choose the input help for the *Process* field to see the processes for which you can make settings.

The input help shows all processes for which currency translation might be necessary. For example: You want to generally use the current exchange rate and do not want the system to issue an error message if this is not yet entered in the system. In that case, it is sufficient to make a setting for the process `DEFAULT` . The system then always uses it as long as there is not other specific setting for the current process. For a description of the different processes in the system related to currency translation, see the process documentation.

In some cases you may want to have the system determine the translation date for a given process differently for simulations than in update mode. In those cases you have make two entries in this table for the same translation process. Set the *Simulation* indicator for one of the entries but not for the other. For some processes, it is not helpful to make this distinction between simulation and update runs. The process documentation contains information on which processes these are. The basic distinction is as follows:

- A process that does not write any data that is dependent on the exchange rate to the database, reads the exchange rate for the simulation.
- A process that saves data gets the exchange rate for update mode (simulation indicator is **not** set).

If you execute a simulation run for a process, for which there is both an update run and a simulation run, then the system first tries to determine the exchange rate using the date rule set up for the update run. Only if this is not possible (exchange rate does not exist on date and the error response is set to Error), then the system reads the exchange rate for the simulation run. If there are no settings for a simulation run for the particular process, then the system uses the settings for the `DEFAULT` process with the simulation indicator set. For this reason, you should only make a setting for simulation that differs from the setting for the update run, if the error response for the update run is set to *Error*.

- The translation base date is the date that serves as the basis for determining the exchange rate. You enter a character string here that represents the date. The dates that are allowed depend on the process. The following dates, for example, can be used for the calculation when the cash flow is generated:
 - Due date
 - Start date of period
 - End date of period
 - Today's date

For service charge settlement, on the other hand, the following dates can be used:

- Document date
- Posting date
- Due date
- Today's date

To see which date fields are available, use the input help.

For the default process, you always have to use the current date (today's date).

- Specify how the system should respond when an error occurs. For all processes that run in simulation mode, enter *Warning* or *Accept*. For all other processes, enter *Error*, if you want to make sure that the currency translation is made using the exchange rate of a particular date. Enter *Warning* or *Accept*, if you also want to allow the use of the last exchange rate before the day determined.
- In the Number of Days field, specify how old the exchange rate is allowed to be.
- Using the translation date shift rule, you can set up a more complex rule for calculating the date on which the exchange rate is read. The translation base date is the basis for this calculation.

Currency Translation

Define Currency Translation Rule

Use

You define currency translation rules here.

In processing for the posting term (in the application), the user specifies the currency translation rule to be used. The rule is then used for all conditions to which this posting term is assigned.

Activities

Specify the following for the currency translation rule:

- Which translation date rule is used?
The translation date rule defines, dependent on the process, how the currency translation date is determined.
- Which exchange rate type is used?
- Should documents that result from the posting term have the condition currency as the transaction currency?
(If the indicator is not set, then the currency of the condition is used only to calculate the posting amount. However, the document is posted in the local currency.)

Use of Translation Rule

Specify Possible Currency Translation Rules per Contract Type

Use

Here you specify the contract types for which currency translation rules are allowed.

Activities

For all contract types, for which you want to allow setting up conditions in foreign currency, enter the possible currency translation rules. For each contract type, designate one rule as the default currency translation rule.

Use caution if you use currency translation rules that are for posting in the foreign currency, as well as those that are for posting in the local currency. In this case, make sure that the currency translation rules are assigned correctly. For example, it is advisable to allow posting only in the foreign currency for vendor contracts (if the vendor invoices you in the foreign currency),

Specify Allowed Currency Translation Rules per Usage Type

Use

Here you specify the usage types for which currency translation rules are allowed.

Activities

For all usage types, for which you want to allow setting up conditions in foreign currency, enter the possible currency translation rules. For each usage type, designate one rule as the default currency translation rule.

Note that for rental objects, postings are always made in the local currency. Therefore, it is not logical to allow currency translation rules here that allow posting in a foreign currency.

Default Conditions

Define Default Conditions

Use

In this step, you define condition types per condition group for default conditions.

Activities

You can use condition groups that were already created (in the Create Condition Groups and Assign Condition Types IMG activity), or you can create new condition groups. Create default conditions for the condition groups by specifying condition types per condition purpose. You define condition purposes in the Condition Purpose IMG activity. Using the One-Time Cond. indicator, you specify if condition amounts are only posted once, or if they recur periodically. If you do not want the condition to be considered during periodic posting, set the Stat. Condit. (statistical condition) indicator. Define calculation formulas and distribution formulas.

Define Derivation Steps

Use

The derivation of a condition group can take place in multiple steps. You have to define a rule for each of these steps. The system processes these rules in the sequence in which they are listed in the overview dialog. As soon as a condition group and condition purpose can be determined, the derivation ends. That is, the following steps are not processed. For this reason, you should define object-specific processing steps at the beginning, with the subsequent steps becoming more general.

For example, you can specify that the condition group of a rental object be found in the first step using object-specific characteristics, such as the usage type and the business entity. For objects with a usage type that cannot be captured by this rule, you then define another derivation step that is less specific and uses the business entity, for example, to determine a condition group.

Activities

To create additional derivation steps, choose *@I@ Display <-> Change* in the initial screen. Choose *@Y@ Create Step* to define a new step. In the *Create Step* dialog box, choose *Derivation rule*. You can enter up to six source fields. The system maps the selected source fields to target fields. The target fields are predefined and specify the condition group as well as the condition purpose.

Example: Derivation by Usage Type and Contract Type

You want to define the *company code*, *business entity usage type* and *contract type* fields as source fields.

Save, and choose *@W@ Maintain Rule Values* to define rule values for the derivation step. Enter the value range (for which you want the derivation to be made) for the source fields. In the *Condition Group* and *Condition Purpose* columns, you enter the condition group and condition purpose you want to be derived.

Example

For rental objects of company code with usage type (Store), which are assigned to a contract with contract type CO (Commercial lease-out), you want the conditions of condition group DC to be assigned (these correspond to condition purpose *Market rent*).

Define the following rule:

CoCd	BE to BE	Usage Type	Contract Type	Assigned Group	Condition Purpose
	CO	@G@	DC		Market rent

Calculation of Periods and Due Dates

Due Date Correction Rule

Use

The due dates for a condition are specified by the frequency term. Here you first specify how due dates fall in relation to the calculation period by entering the payment form (due at the start, middle, or end of the period).

In order to reflect more complex methods for determining the due date (for example, always due on rd business day of month), you can relate the frequency term to a due date correction rule.

Here you can define these more complex rules for determining due dates. Keep in mind that the specifications you make here always apply in relation to the due date determined by the payment form.

On the contract, you can still manually change both the due date itself in the cash flow, as well as the parameters of the due date correction rule defined here (with the exception of the parameters for due dates of follow-up postings). It is therefore not necessary to enter rules in Customizing for absolute exceptions.

The due date in the cash flow is transferred to Financial Accounting. This date controls payment and dunning processes for accounts payable and accounts receivable processes. During periodic posting, the items to be posted can be selected either by due date or by calculation date.

Standard settings

SAP provides an empty rule. This rule corresponds to the way due dates were determined in Classic RE and in RE-FX up to and including Release .

Activities

Define the due date correction rule that should be used as the standard for most contracts, and give this rule the key " " (default setting). Subsequent changes you make in Customizing are applicable only when they affect due dates for follow-up postings, and only when there is a contract or rental object with follow-up posting items that are not yet posted.

Define the following parameters for your due date correction rules:

Due Date Correction

First specify how the due date should be corrected (moved). You have two basic options. First, you can shift the originally calculated due date by a given number of days, months and/or years. The shift can be forward (" - " sign) or backward (no positive/negative sign). Second, you can specify that the due date is always a given weekday (for example, "rd Monday," together with a monthly frequency and "in advance" payment form would mean the rent is always due on the third Monday in the month) or you can specify that it is the nth business day. If you use a business day, then you also have to enter the calendar that is used to determine what days are business days.

In the No. field in front of the due date correction rule, you can specify the sequence in which the due dates determined by the payment form are corrected.

Example:

A three-month rent should be due on the rd business day of the rd month. You define the following rule:

No. Move (+/-) By Days
 Months
 Years

No. Move (+/-) To Working Day
 Calendar USA

In the frequency term of the contract, you choose months as the frequency, and the payment form "in advance."

On the other hand, if you agreed that rent is due on the rd business day of the month, and you give the tenant two months in which to pay, then you should set the rule as follows:

No. Move (+/-) By Days
 Months
 Years

No. Move (+/-) To Working Day
 Calendar USA

The rule only appears in maintenance of the frequency rule if you entered a number here. The system displays the rules in the contract in ascending order based on the number entered here. It can be useful to enter a number but leave the parameter empty, if you want to define the correction on the contract.

Behavior of Due Dates at Start and End

If you do not make any entries here, then the system uses the due date determined by the rules defined above, even if the contract starts or ends in the middle of a period. The result could be that rent due in advance would then be due before the start date of the contract. You can prevent this by setting the appropriate indicator here. The due date is then moved to the start date or the end date of the contract as specified.

Due Dates for Follow-Up Postings

Follow-up postings are created when data relevant to the cash flow (values affecting determination of the condition amount, or data of the frequency term) is changed, and the change affects calculation periods that were already posted.

If the due date relates to payments, then it is usually not possible to calculate it using the "normal" rule for follow-up postings, since the tenant is usually not informed of the change until after the due date determined in this way.

For credit memos and receivables, you can decide separately how the due date is calculated.

The options are:

Due Date: Due Date As in Source Flow

The due date is determined according to the rule that is already set. SAP recommends that you set the "Move to Current Date" indicator, at least for follow-up postings. The result is that the due date is moved to the current date (the system date at the time of the change) if the due date is before this date.

Due Date As Entered

When follow-up postings result from a change to the contract, the system asks in the application dialog when these should be due. For all follow-up postings that are due before the date determined by the set rule, the system moves the due dates to this date.

Move +/- Days

Here you can specify that the due date determined in this way for follow-up postings is moved forward or backward by this number of days.

You can make separate settings for follow-up postings from the object cash flow and from the partner-related cash flow. If your object transfers are always synchronous with periodic posting of payments, then SAP recommends setting the "As Partnr-Rel.CashFlow" (as partner-related cash flow) indicator.

Otherwise, it can make sense to leave the due dates originally determined in the object cash flow as they are. (This makes the cash flow easier to understand, and the due date is irrelevant from an accounting perspective in the object cash flow.)

Handling of Partner Changes

Use

Using the due date correction rule, you can influence how partner changes are handled.

Define Fixed Periods (For Example, Quarter Days)

Use

Here you can specify that an annual rent is divided into equal portions, although the periods themselves are of unequal length. This procedure is standard in certain countries (for example, the use of quarter days in the United Kingdom).

If you do not define any *Fixed Periods* here, then this field does not appear when you process the frequency term in the rental object or contract master data. In this way, you can avoid incorrect entries in this field.

Activities

If you need fixed periods, then proceed as follows to define these periods:

- First enter the name you want to use for the fixed periods in the *Fixed Periods* table. (This name is used as a reference in the contract or rental object.)
- Select an entry in the table and choose *Periods of Fixed Period* in the dialog structure.
- In the table that appears, you need an entry for each period into which the year is divided up. For each period, you specify the following:
- The number of the periods (each entry has to be numbered sequentially starting with)
- The day and the month on which the (next) period begins. (The first period in the table is, in this sense, the next period for the last period in the table.) - Specify one period that is used for recording any rounding differences.

Example

The following documentation describes the functions of fixed periods and contains a sample calculation.

Fixed Periods

In Customizing you can specify how a calendar year can be split into periods for calculating the cash flow. Each possible split into periods is given a key. In the frequency term of the contract or rental object you can then refer to this key and specify that the annual amount should be split into equal partial amounts for these periods (which can have varying lengths).

Example:

The following periods are specified for the key *Fixed Periods: QUARTER_UK* (quarter days):

No.	Day	Month	Rounding	Difference
1			x	
2				

3

4

These periods are used as a basis for generating the cash flow. The annual amount is divided by the number of periods and the same amount is calculated for each (full) period. Rounding differences are added to the correspondingly flagged period (exactly one), for example the first period.

For example, if an amount of EUR is agreed as the condition amount per year, this would result in a period amount of Euro in our example. The following cash flow is generated:

```
.....
Calc. from      Calc. to      Amount
...
//             //
//             //
//             //
//             //      ...
```

If fixed periods are used, the following applies:

- The same amount is paid in each full period.
- The amount is calculated by dividing the annual condition amount by the number of periods defined in Customizing.
- Exactly one period can be flagged in Customizing to which any rounding differences are added. If no period has been flagged, the rounding differences are **not** taken into account. The total of all the amounts from each period may be slightly higher or lower than the annual condition amount.
- The due date(*) is calculated on the basis of the total period. If periods are split, the due date remains the same

Example:

Total period: // through // and in advance => Due date // Split on // due to increased condition amount:

// through // => Due date //

// through // => Due date //

Possible calculation methods for the pro rata calculation of amounts are *period-specific* and *by year*.

With a *period-specific* calculation, the period amount is divided by the number of days in the period and multiplied by the number of days in the partial period. For the calculation *by year*, the calculation of the partial period is based on the annual amount. This is divided by (or in a leap year) and multiplied by the number of days in the period. If the partial periods are not completely in a leap year, two partial amounts are calculated:

Example

Calculation method *by year*. On / the annual condition amount was increased from EUR to EUR:

Period (X): // through // => / * =

Period (X+): // through //

This period (X+) is split internally for the pro rata calculation:

// through // => / * = ...

// through // => / * (+ +) = ... The total for period (X+) is .

- If a date is entered in the user-selected start field, the rounding difference will be added to the period which is set in Customizing as relative to this date.

Example

In Customizing, period (/ through /) is flagged as the *Period for Rounding Differences*. The start of the period is set as //. The rounding difference will be added to the period containing /. In this would be the period // through //

(*) The due date is determined in accordance with the payment form and the due date correction rule. The due date correction rule specifies how the date determined from the payment form (in advance, mid-period, in arrears) is moved. In addition you can specify whether or not the due dates should be moved at the start or end of a contract or rental object to the start or end.

Templates for Terms

Define Templates for Frequency Terms

Use

In this Customizing activity, you can define templates that you can use to create frequency terms in real estate contracts, real estate offers, or rental objects. The templates defined here override the conditions predefined by SAP for the term category *frequency*.

Activities

1. Enter a unique, alphanumeric name for the new template. You use this name in the Customizing activity Assign Frequency Term Templates.
2. Enter a name for the template. If you want to create a frequency term for a real estate contract, real estate offer, or rental object, you see this name when you select the template. Exception: If, in the Customizing activity Assign Frequency Term Templates, you assign just one template for the combination of object type and differentiation criterion or make just one assignment at object type level, the assigned template is used automatically to create the term and selection is not required. The name of the template is used as the name for the new term.
3. Enter the *frequency* and select the remaining properties. You can also select a *due date*. You define the due date in the Customizing activity Due Date Correction Rule.
4. Assign the template to an object type (Customizing activity Assign Frequency Term Templates).

Assign Frequency Term Templates

Use

In this Customizing activity, you specify which frequency term templates can be used for which object types. You can also restrict the use to specific differentiation criteria.

Example

You can specify which frequency term templates are to be made available for real estate contracts with the contract type *Residential Lease-Out*.

You can differentiate for the following object types:

- Real estate contract (according to contract type)
- Real estate offer (according to contract type)
- Rental object (according to usage type)

If you select the New Creation indicator for an entry (assignment of a template to an object type or a combination of object type and differentiation criterion), when an object (such as a contract) is created for this object type or combination of object type/differentiation criterion, a frequency term is created automatically based on the assigned template. If you have set the indicator for **no** assignment, when an object is created for the object type or combination of object type/differentiation criterion without an assigned template, a term is created based on the conditions predefined by SAP for the *frequency* term type. A frequency term created in this way contains *<standard>* in the name. The templates assigned for this object type or combination of object type/differentiation criterion are then available for creating further templates.

Example

Object Type	Differentiation Criterion	Term Template No.	New Creation
IS (Real Estate Contract)	TemplateIS	<blank>	X
IS (Real Estate Contract)	CO (Commercial Lease-Out)	MonthlyR	X
IS (Real Estate Contract)	CO (Residential Lease-Out)	MonthlyR	X
IS (Real Estate Contract)	CO (Residential Lease-Out)	DueDateN	< blank >
IS (Real Estate Contract)	CO (Residential Lease-Out)	AnnualR	< blank >
IM (Rental Object)	TemplateIM	<blank>	X

Explanation : When a real estate contract is created with the contract type *Residential Lease-Out* (CO), two frequency terms are created automatically based on the *TemplateIS* and *MonthlyR* templates (the *New Creation* indicator is selected for these templates). *TemplateIS* is also taken into account because differentiation criterion was not specified for this template and this template therefore applies in general for all real estate contracts. When you edit a contract, you can create frequency terms based on the four templates *TemplateIS*, *MonthlyR*, *DueDateN*, or *AnnualR*.

Explanation : When you create a real estate contract with the contract type *Internal Lease-Out* (CO), a frequency term is created automatically based on the *TemplateIS* template because no specific template was assigned for this contract type.

Requirements

You have defined the templates for the frequency terms.

Activities

Select the object type (such as *IS - Real Estate Contract*) and perhaps a differentiation criterion (such as *CO - Residential Lease-Out*) and assign a template.

You can assign any number of templates to an object type or a combination of object type and differentiation criterion.

If you have selected the *New Creation* indicator, note the following:

The *number* that you assign to the entry here is applied as the number of the term when you use the template. When you create an entry in this activity for an object type or for a combination of object type and differentiation criterion, there must always be exactly one assignment for which the *Number* field is empty. The term created based on this entry is the standard term. If you make further assignments for the same object type or combination of object type and differentiation criterion, the numbers **must not** be identical. You should also take this into account, however, if you have **not** selected the *New Creation* indicator.

Examples for New Creation Assignment at object type level only:

<u>Object Type</u>	<u>Differentiation Criterion</u>	<u>Term Template</u>	<u>No.</u>	<u>New Creation</u>
IS (Real Estate Contract)	TemplateIS	<blank>		X
IS (Real Estate Contract)	MonthlyR			< blank>/X
IS (Real Estate Contract)	DueDateN			< blank>/X

Assignments for object type and differentiation criterion:

<u>Object Type</u>	<u>Differentiation Criterion</u>	<u>Term Template</u>	<u>No.</u>	<u>New Creation</u>
IS (Real Estate Contract)	TemplateIS	<blank>		X
IS (Real Estate Contract)	MonthlyR			< blank>/X
IS (Real Estate Contract)	CO (Commercial Lease-Out)	AnnualR		< blank>/X
IS (Real Estate Contract)	CO (Residential Lease-Out)	DueDateN		< blank>/X

Assignments at differentiation criterion level:

If, for each differentiation criterion (such as contract type), you want to use a different template to create the **standard term**, you either must not create an entry for which the *DifCrt* remains empty, that is, you must not assign a template to the object type that applies for all objects (such as contracts) for this object type (case), or you need to create a separate entry for which the *No.* field is empty (case) for all differentiation criteria that are possible for this object type.

Case :

Object Type Differentiation Criterion Term Template No. New Creation

IS (Real Estate Contract) CO (Commercial Lease-Out)	AnnualR	<blank> X
IS (Real Estate Contract) CO (Residential Lease-Out)	DueDateN	<blank> X

Note: In this case, the conditions predefined by SAP for the *frequency* term type are used in real estate contracts with other contract types (such as *Internal Lease-Out (CO)*) and the term created as a result is the standard term.

Case :

<u>Object Type</u>	<u>Differentiation Criterion</u>	<u>Term Template</u>	<u>No.</u>	<u>New Creation</u>
IS (Real Estate Contract)	TemplateIS			X
IS (Real Estate Contract)	AS (Assessment Contract)	MonthlyR		<blank> X
IS (Real Estate Contract)	<blank>		X
IS (Real Estate Contract)	CO (Commercial Lease-Out)	AnnualR		<blank> X
IS (Real Estate Contract)	CO (Residential Lease-Out)	DueDateN		<blank> X
IS (Real Estate Contract)	<blank>		X
...	...	<blank>		X

Note: If you did not create an entry for contract type CO, only the *TemplateIS* template would be available for creating a term in contracts with contract type CO, and the term created with this would have the number ; this means there would be no standard term. A standard term must always exist, however.

Assignment only at differentiation criterion level:

<u>Object Type</u>	<u>Differentiation Criterion</u>	<u>Term Template</u>	<u>No.</u>	<u>New Creation</u>
IS (real estate contract)	CO (Commercial Lease-Out)	MonthlyR		<blank> X
IS (Real Estate Contract)	CO (Residential Lease-Out)	MonthlyR		<blank> X
IS (Real Estate Contract)	CO (Residential Lease-Out)	DueDateN		< blank>/X

Note: In this example, the conditions predefined by SAP for the *frequency* term type are used for frequency terms in real estate contracts with other contract types (such as *Internal Lease-Out (CO)*).

Reason for Change

Define Reason for Change

Use

Here you enter possible change reasons for conditions.

A change reason has to be entered for a condition when you change the condition while processing the contract or rental object.

- If you did not enter a standard reason (with blank key) for the condition type, then you have to enter a reason when the condition is changed.
- If the change to the condition is the result of an adjustment, then you can make the change reason dependent on the adjustment rule. You can still overwrite this change reason at the time of the adjustment run.

Activities

- For each condition type, enter the possible reasons it can change.
- Do **not** enter condition types that do not require change reasons.

- There could be condition types for which you want to allow change reasons, but where they should not be mandatory. For these condition types, you enter the normal change reasons, but in addition you enter a change reason with a blank key. This blank key is then used as the standard default.

Implement Enhancements (BAdI)

Specify Defaults and Perform Consistency Check per Condition

Use

You can use this Business Add-In (BAdI) to influence the standard behavior of conditions.

Activities

The following methods of the BAdI are called automatically when the condition is being processed:

- *CHECK_ALL*
This method is called when the user chooses the *Check* pushbutton.
The returned messages (*CT_MESSAGE* parameter) are displayed in the same list as the messages from standard processing.
The *ID_ACTIVITY* parameter specifies if the object is currently in create mode () or change mode ().
- *MODIFY_DUEDATE*

This method is called when calculation entries are updated.

By modifying the parameter *CD_DUEDATEUP* modifying the parameter *CD_DUEDATEUP*, you have the option of adjusting the due date for follow-up postings that was set manually.

- *GET_ADJUSTMENT_RULE*

The method is called when conditions are created.

If the method returns an adjustment rule (parameter *CD_ADJMRULE*), then the system searches for or creates this adjustment rule in the contract or rental object and assigns it to the condition.

If the *CF_ADJMRULE_NEW* parameter is set, then a new adjustment rule is created.

If you want to always exclude a condition from automatic adjustment, then set the *CF_NOT_ADJUSTABLE* parameter.

- *GET_TAKE_ADJUSTMENT_RULE*

This method controls how a default value is provided (parameter *CF_TAKE_ADJMRULE*) for the adjustment rule transfer indicator when proposed conditions are added.

- *GET_LOCK_CONTEXT*

You can use this method to lock conditions to being changed, as follows:

- *CF_LOCKED*: Locks input fields (exception: memo)
- *CF_COPY_LOCKED*: Prevents the condition from being copied
- *CF_DELETE_LOCKED*: Prevents the condition from being deleted
- *EF_BOOK_UNLOCK_LOCKED*: Prevents the removal of posting locks
- *CD_XLOCKED*: Specifies the reason for the lock in text form (for display when condition changed)

Using table *CT_UNLOCK_FIELD*, you can exclude individual fields from being locked:

- *CONDVALIDFROM*: Condition start date
- *CONDVALIDTO*: Condition end date
- *CALCRULE*: Calculation formula
- *DISTRULE*: Distribution formula
- *DUEDATEUP*: Due date of follow-up posting
- *TERMNOPY*: Posting term
- *TERMNORH*: Frequency term
- *TERMNOOA*: Organizational assignment term
- *TERMNOAJ*: Adjustment term
- *TERMNOSR*: Sales rule term
- *TERMNOMR*: Peak sales rule term

- *TERMNOPYSCS*: Service charge settlement posting term
- *TERMNOPYSCSACT*: Service charge settlement posting term active/inactive
- *UNITPRICE* : unit price
- *CONDCURR*: Currency
- *CHECK_ALL*, *GET_ADJUSTMENT_RULE* and *GET_LOCK_CONTEXT*

The data of the condition is available in these methods in the *IS_CONDITION* parameter. In addition, the *IO_OBJEKT* parameter specifies the object that has the condition (contract or rental object).

- *GET_BEHAVIOR_CONTEXT*

This method controls if the *CFPOSTINGFROM* field is ready for input: 'DATE ST POSTING' for the condition using the parameter '*CF_DISABLE_CFPOSTINGFROM*'. The data of the condition is available in the *IO_CONDITION* parameter.

- *SET_DERIVATION_FIELDS*

Using this method, you can fill your customer-specific additional fields of the structure '*RECDDERIVATIONFIELDS*' for the derivation of the condition group. The object that has the condition is available in the parameter *IO_OBJEKT* . For more information about this topic, see Define Derivation Steps

Note

When implementing the BAdI, you are **not** allowed to use statements that affect the interface, such as direct output of messages using the statement *MESSAGE*. Notes for Developers

Calculation Formula for Conditions

Use

Using this Business Add-In (BAdI) you can determine the time-dependent calculation factors that are multiplied with the unit price.

Implementation of this Business Add-In (BAdI) is mandatory for each external calculation formula that is defined in Customizing (under Calculation Formulas) on the basis of internal calculation formula (= BAdI calculation).

You can process all user-specific calculation formulas within the same Business Add-In implementation. This means that you do **not** have to create a separate implementation of the BAdI for each calculation formula.

Activities

1. Create a BAdI implementation that contains the following methods:

- *GET_ATTRIBUTES* - *GET_PARAMETER*
- *GET_UNITS*
- *GET_VALUES*
- *GET_FLEXIBLE*

Each method contains the *ID_CALCULEEXT* parameter, which is used to control the implementation (dependent on the formula).

2. Activate the BAdI implementation.

Method description

- **GET_ATTRIBUTES**

The method returns the following attributes:

- **@@ ID_CALCULEEXT**: Defines the external calculation formula
- **@A@ CF_DISTRIBUTE**: Defines whether or not the calculation can be distributed
- **@A@ CF_ADJUSTABLE**: Defines whether or not the condition can be adjusted
- **@A@ CF_UNITPRICE_HIDE**: Defines whether or not the unit price can be hidden
- **@A@ CF_DEPEND_CONDITION**: Defines whether or not the calculation is dependent on conditions
- **@A@ CF_DEPEND_OBJECT**: Defines whether or not the calculation is dependent on object data
- **@A@ CF_UNIQUE_VALUES**: Defines whether or not the calculation returns one-time amounts
- **@A@ CF_UNIQUE_VALUES_MULTI**: Defines whether or not the calculation returns multiple one-time amounts
- **@A@ CD_INFO_IDENT**: Defines the help text ID
- **@A@ CD_GUI_FM_PARA_PBO**: Defines the PBO function module for maintenance of formula parameters
- **@A@ CD_GUI_FM_PARA_PAi**: Defines the PAI function module for maintenance of formula parameters

Using the *CD_GUI_FM_PARA_PBO* and *CD_GUI_FM_PARA_PAi* parameters, you can link to a special interface for maintaining formula parameters. The function groups *RECD_GUI_CALC_RULE_* and *RECD_GUI_CALC_RULE_* serve as examples for this.

- **GET_PARAMETER**

The method returns the following parameters:

- @@ ID_CALCULEEXT: Defines the external calculation formula
- @@ ID_PARA_NO: Defines the number of the parameter
- @@ IO_OBJECT: Defines the object that has the condition
- @@ IS_CONDITION: Defines the condition
- @A@ CT_PARA_VALUES: Defines the list of parameter values (F)
- @A@ CD_PARA_INFO: Defines the description of the parameter
- @A@ CF_PARA_CHECK: Defines whether or not a standard check of the parameter is performed

- **GET_UNITS**

The method returns the following units:

- @@ ID_CALCULEEXT: Defines the external calculation formula
- @@ IO_OBJECT: Defines the object that has the condition
- @@ IS_CONDITION: Defines the condition
- @A@ CD_UNIT_UNITPRICE: Defines the unit of the unit price
- @A@ CD_UNIT_CALCVALUE: Defines the unit of the calculation factor

- **GET_VALUES**

The method returns the following calculation factors:

- @@ ID_CALCULEEXT: Defines the external calculation formula
- @@ ID_PARA_: Defines parameter - @@ ID_PARA_: Defines parameter
- @@ ID_ABS_FROM: Defines the absolute start of the calculation
- @@ ID_ABS_TO: Defines the absolute end of the calculation
- @@ IO_OBJECT: Defines the object that has the condition
- @@ IS_CONDITION: Defines the condition
- @@ IT_OBJECT_CONTRACT: Defines the contract object
- @@ IT_OBJECT_CONDITION: Defines the condition objects
- @A@ CT_CALC_VALUES: Defines the time-dependent calculation factors
- @A@ CT_DIST_VALUES: Defines the time-dependent distribution factors
- @A@ CT_CALC_USED_OBJECTS: Defines the objects that are considered by the calculation
- @A@ CT_DIST_USED_OBJECTS: Defines the objects that are considered by the distribution

- **GET_FLEXIBLE**

The method returns the following flexible values:

- @@ ID_CALCRULEEXT: Defines the external calculation formula
- @@ IO_OBJECT: Defines the object that has the condition
- @@ IS_CONDITION: Defines the condition
- @A@ CF_FLEXIBLE: Defines whether or not the formula supports flexible intervals
- @A@ CD_FLEXIBLE_FROM: Defines the start date of the flexible interval
- @A@ CD_FLEXIBLE_TO: Defines the end date of the flexible interval

Using this method, you can define a condition so that it is valid beyond the term of the object.

Dependent on the actual condition object, the table of condition objects is structured as follows: - The condition object is a concrete object.

The table of condition objects contains the concrete object.

- The condition object is an object group.

The table of condition objects contains the object group and the objects in the object group.

- The condition object is the contract.

The table of condition objects is identical to the table of contract objects.

Note the following:

- Do **not** directly access the database (SELECT statements) on tables where the data could be being processed. Use only the API_RE_xx_GET_DETAIL function module for data retrieval. (Here xx stands for the English abbreviation for the object type, for instance CN for the real estate contract.)
- Do **not** use statements that execute actions on the interface, for example, MESSAGE without RAISING, CALL SCREEN and so on. Also, do not use COMMIT WORK or ROLLBACK WORK.

Example

SAP provides the external calculation formulas that are based on these internal calculation formulas: (*amount per object*), (*amount per rental object status*), (*amount per tenant changeover*) and (*% share of condition group*). You implement these external calculation formulas in the following classes:

- CL_RECD_CALC_RULE_ - CL_RECD_CALC_RULE_ -
CL_RECD_CALC_RULE_
- CL_RECD_CALC_RULE_

These classes have the same structure as a corresponding BAdI implementation for the BAdI definition RECD_CALC_RULE. They can serve as a guide for the implementation of your own formulas.

Notes for Developers

Distribution Formula for Conditions

Use

Using this Business Add-In (BAI) you can determine a time-dependent distribution for a calculation.

Implementation of this Business Add-In (BAI) is mandatory for each external distribution formula that is defined in Customizing (under Distribution Formulas) on the basis of internal distribution formula (= BAI distribution).

You can process all customer-specific distribution formulas you need in the same Business Add-In implementation. This means that you do **not** have to create a separate implementation of the BAI for each formula.

Activities

. Implement the BAI and define the following methods:

- *GET_ATTRIBUTES* - *GET_PARAMETER*
- *GET_UNIT*
- *GET_VALUES*
- *GET_FLEXIBLE*

Each method contains the ID_DISTRULEEXT parameter, which is used to control the implementation (dependent on the formula).

. Activate the BAI implementation.

Method description

- **GET_ATTRIBUTES**

The method returns the following attributes:

- @@ ID_DISTRULEEXT: Defines the external distribution formula
- @A@ CF_DEPEND_OBJECT: Defines whether or not the distribution is dependent on object data
- @A@ CD_INFO_IDENT: Defines the help text ID
- @A@ CD_GUI_FM_PARA_PBO: Defines the PBO function module for maintenance of formula parameters
- @A@ CD_GUI_FM_PARA_PAI: Defines the PAI function module for maintenance of formula parameters

Using the CD_GUI_FM_PARA_PBO and CD_GUI_FM_PARA_PAI parameters, you can link to a special interface for maintaining formula parameters. The function group RECD_GUI_DIST_RULE_ serves as an example for this.

- **GET_PARAMETER**

The method returns the following parameter values:

- @@ ID_DISTRULEEXT: Defines the external distribution formula
- @@ ID_PARA_NO: Defines the number of the parameter
- @@ IO_OBJECT: Defines the object that has the condition
- @@ IS_CONDITION: Defines the condition
- @A@ CT_PARA_VALUES: Defines the list of parameter values (input help) - @A@
CD_PARA_INFO: Defines the description of the parameter
- @A@ CF_PARA_CHECK: Defines whether or not the standard check of the parameter is performed

- **GET_UNIT**

The method returns the following units:

- @@ ID_DISTRULEEXT: Defines the external distribution formula
- @@ IO_OBJECT: Defines the object that has the condition
- @@ IS_CONDITION: Defines the condition
- @A@ CD_UNIT_DISTVALUE: Defines the unit of the distribution factor

- **GET_VALUES**

The method returns the following calculation factors:

- @@ ID_DISTRULEEXT: Defines the external distribution formula
- @@ ID_PARA_: Defines parameter - @@ ID_PARA_: Defines parameter
- @@ ID_ABS_FROM: Defines the absolute start of the calculation
- @@ ID_ABS_TO: Defines the absolute end of the calculation
- @@ IO_OBJECT: Defines the object that has the condition
- @@ IS_CONDITION: Defines the condition
- @@ IT_OBJECT_CONTRACT: Defines the contract objects
- @@ IT_OBJECT_CONDITION: Defines the condition objects
- @@ IT_OBJECT_DISTRIBUTION: Defines the distribution objects
- @A@ CT_DIST_VALUES: Defines the time-dependent distribution factors
- @A@ CT_DIST_USED_OBJECTS: Defines the objects that are considered by the distribution

Dependent on the actual condition object, the table of condition objects is structured as follows:

- If the condition object is a concrete object, then the table contains the concrete object.
- If the condition object is an object group, then the table of condition objects contains the object group and the objects in the object group.
- If the condition object is the contract, then the table is identical to the table of contract objects.
- **GET_FLEXIBLE**

This method returns the following flexible values:

- @@ ID_DISTRULEEXT: Defines the external distribution formula
- @@ IO_OBJECT: Defines the object that has the condition
- @@ IS_CONDITION: Defines the condition
- @A@ CF_FLEXIBLE: Defines whether or not the formula supports flexible intervals
- @A@ CD_FLEXIBLE_FROM: Defines the start date of the flexible interval
- @A@ CD_FLEXIBLE_TO: Defines the end date of the flexible interval

Using this method, you can define a condition so that it is allowed to be valid beyond the term of the object.

Note the following:

- Do **not** directly access the database (SELECT statements) on tables where the data could be being processed. Use only the API_RE_xx_GET_DETAIL function module for data retrieval. (Here xx stands for the English abbreviation for the object type, for instance CN for the real estate contract.)
- Do **not** use statements that execute actions on the interface, for example, MESSAGE without RAISING, CALL SCREEN and so on. Also, do **not** use COMMIT WORK or ROLLBACK WORK.

Example

The distribution formula based on internal formula (*Aggregation*), which is provided by SAP, is implemented in the class CL_RECD_DIST_RULE_.

This class has the same structure as a corresponding BAdI implementation for the BAdI definition *RECD_DIST_RULE*. Therefore, you can use the class as a guide for the implementation of your own formulas. Notes for Developers

Real Estate Search

Offered Object

Offered Object

Use

The offered object is an object you can search for using the data of an RE search request. From a technical viewpoint, the offered object improves performance during the search for rental objects. The system automatically generates offered objects for rental objects that will soon be vacant. (You specify how far in advance this should take place.) During the generation of offered objects, the system stores the conditions, measurements, and fixtures and fittings characteristics of the objects so that they can easily and effectively be compared with the data of the RE search request.

Activities

In the following IMG activities, you specify how offered objects are generated from rental objects.

If you change or add to Customizing settings after offered objects have already been generated, then you have to update the offered objects.

Define Number Range for Offered Object

Use

Here you specify the number range interval to be used for the numbers of offered objects.

Standard settings

In standard Customizing, the first number for offered objects is the number .

Activities

Enter a number range for interval . Do not set the *External* indicator, since offered objects are created automatically by the system.

You do not need to define any other intervals except interval . The system ignores any other intervals.

Specify Control Parameters for Updating Offered Objects

Use

Here you specify the basic settings for how the system generates offered objects for rental objects.

Activities

The settings you make are for combinations of *Rental Object Type* and *Usage Type* that you want to search for using the real estate search. For example, you might **not** want to rent out vacant rental spaces again in exactly the same form. (You might only want to rent them out again from the pooled space, after the rental space has been returned to it.) In that case, you do **not** make any settings for the *Rental Space* object type.

You specify the following for each combination of rental object type and usage type:

- *Consideration Period*

Here you enter the number of months in advance of its becoming vacant that a rental object should be available in the real estate search.

Example:

Notice is given on an apartment in January . The notice date is June , . If you enter a consideration period of at least , then the system already generates an offered object for the apartment when the notice is activated. Any real estate searches looking for an apartment starting from July , will then find this apartment immediately. If you enter a smaller number of months for the consideration period, then a search in January cannot find the apartment that is becoming vacant in July.

The system uses the number of months you enter for the consideration period to determine when offered objects are generated for the rental objects. The offered objects are generated using the RFREOROFFEROBJECTSCREATE report. (We recommend you schedule this report as a monthly batch job.)

If you do not enter a consideration period, then the system generates offered objects as soon as the vacancy becomes known, no matter how far in the future the vacancy is. In that case, you do **not** have to run the update report RFREOROFFEROBJECTSCREATE regularly.

- *Vacant Days*

Here you enter the minimum number of days a rental object has to be vacant before the system generates an offered object for it. If you leave this field blank, the system creates an offered object for a rental object even if it is vacant for only one day.

Example:

You enter a consideration period of months for the apartment on which notice was given in January for June , . In January a new lease beginning on August , is signed for the apartment.

At the beginning of February, the RFREOROFFEROBJECTSCREATE report updates the offered objects.

If you entered a value between and days for the vacant days, then the system creates an offered object for this apartment for the period from July , to July . . The search, however, only finds this object if you search explicitly for an apartment for a limited time period in July .

If you enter a value greater than , then the system assumes that it is not beneficial to lease for this short period, and does not create an offered object for this apartment. In that case, you would not find this apartment during the search, even if you explicitly search for an apartment for this limited time period.

Recommendation:

For each usage type, set the number of vacant days to the minimum number of days that a fixed-term lease should have in order for the rental to be cost effective.

- *Key Date Data*

Certain data that is time-dependent on the rental object (conditions, measurements, fixtures and fittings characteristics) is **not managed as time-dependent** on the offered object. The purpose is to improve performance and increase clarity. Therefore, the system needs to know the key date up to which you want the data of the offered object to be valid. If you leave the *Key Date Data* field blank, then the system uses the first day of the vacancy period as the key date. This may not be accurate, if renovations are regularly done at the beginning of the vacancy period and these renovations change the fixtures and fittings, the measurements, and conditions of the rental object. To address this problem, you can enter the number of days that are added to the start of the vacancy period in order to determine the key date.

When renovations are planned, you should enter the planned changes on the rental object with a valid-from date that, at the latest, is the same as the resulting key date, so that the changes are already available in the search.

- *Min. Meas. %*

Here you enter the minimum percentage of the measurement of a pooled space that has to be available in order for an offered object to be generated. For other rental object types, the system ignores the value.

Since the pooled space itself can never be leased out, the generation of an offered object for a pooled space is **not** triggered by the start of the vacancy period for the pooled space. Instead, generation of an offered object is triggered when this minimum percentage of available measurement values is exceeded.

Specify Fixtures and Fittings Characteristics for Real Estate Search

Use

Here you specify the fixtures and fittings characteristics of the rental object that are relevant for the real estate search.

Requirements

You already defined fixtures and fittings characteristics in Customizing.

Activities

You can define a maximum of eighty fixtures and fittings characteristics as relevant for the real estate search. (This restriction is for technical reasons and helps improve performance.) You enter sequence numbers from to , and then assign the numbers to fixtures and fittings characteristics.

The numbers (-) also determine the sequence in which the fixtures and fittings characteristics are displayed on the RE search request and in the offered object in the application.

You specify which characteristics can be used in a given RE search request. You do so in Customizing for the RE search request, dependent on the RE search request type.

Note

The fixtures and fittings characteristics are stored on the RE search request using the sequence numbers you assign here. You are therefore **not** allowed to change the assignment to these numbers later.

However, it is not a problem if you later assign additional fixtures and fittings characteristics to numbers that are not yet assigned. You then have to update the offered objects (report RFREOROFFEROBJECTSCREATE).

Dialog

Change Screen Layout

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout

Field Groups

Field Groups

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status

Use

Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
2. Select the row and choose *Field Modification*.
The system displays all field groups that know the given application. In order to display the fields of a field group, position the cursor on the field group and choose *Environment -> Field check*.
3. Now you can, for example, suppress field groups that are not needed or define other field groups as "Required entry" fields. If you choose the "Not specified" setting, then the system itself determines how the field is treated. (Usually these fields are optional entry fields in create and change mode, and display fields in display mode.) If it is not possible to make a setting for a field group, then the system determines how the field is treated (usually dependent on the situation, or on the contents of other fields).

Note

Before you suppress multiple field groups of a view, a section or a screen sequence, you should consider if it makes more sense to remove the view, section or screen completely from the screen sequence.

Views

Use

Here you specify which field groups are grouped together into a view (part of a screen, technically a subscreen). You should group together the field groups that necessarily belong together during a check.

Example

If you have a field group with a valid-from date and a field group with a valid-to date, and these should be checked against each other in a module, then you should group them together into a view.

The check module is in the detailed data under "Function Module After Entry".

Standard settings

SAP recommends that you not change the standard settings. It is only necessary to make changes if you want to add your own new fields to the master data dialog.

In that case, copy an existing view to the customer namespace (Y* or Z*) and modify the properties of the view accordingly (consider the detail screen). Then assign the field groups to the view. You can assign your own field groups, as well as those delivered by SAP.

Sections

Use

Here you specify which views are grouped together into sections. You can recognize a section because it is surrounded by a frame. Fields that logically belong together should be grouped together in sections.

Standard settings

SAP recommends that you not change the standard settings.

It could be necessary to define new sections, either to arrange views delivered by SAP differently or to add your own fields to the master data dialog.

In that case, copy an existing section to the customer namespace (Y* or Z*) and assign the views you want to this section. The item number specifies the sequence in which the views are arranged in the section. For

technical reasons, if you make your own assignments from sections to views, the item numbers have to be in the customer namespace (that is, they are not allowed to end in ").

This makes it possible for you to also include your own views in SAP sections. Select a section, and choose *Section -> Views* in the dialog tree, and assign the view to a section using a corresponding item number.

Screens

Use

Here you specify which tab pages appear in the dialog, and which sections make up these tab pages.

Standard settings

SAP recommends that you do not change the standard tab pages.

If you want to change a tab page, copy the standard tab page that is closest to the tab page you have in mind, and give it a name in the customer name range (Y* or Z*). Then assign the sections you want. The position number for user-specific entries also has to be other than here.

Screen Sequences

Use

Here you specify which screen sequences should appear in dialog. A screen sequence consists of different screens, and each screen is equivalent to a tab page.

Standard settings

SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories or Screen Sequence Category -> Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):
Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.
- Rental object:
You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).
- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
- RE search request:
For normal entry, you use the standard screen sequence. For fast entry (ad hoc search) the RERRFE screen sequence is used. (This cannot be changed.)

Events

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Tables

You need this dialog only if you want to make complex modifications to the standard dialog.
SAP recommends that you leave the settings delivered here unchanged.

Implement Enhancements (BAdI)

Number Assignment, Validation, Substitution

Use

The Business Add-In supports enhancements to the standard functions of offered objects. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications Notes for Developers

RE Search Request

RE Search Request

Use

The RE search request describes a real estate object from the viewpoint of the person looking for the object (prospect).

It allows you to enter generic data about the rental object that the prospect is looking for. The data is not limited to the data directly on the rental object, but can also include data on the business entity or the building.

Activities

In this section, you define what Customizing data is available for entry on the RE search request.

Note

The rental object describes an existing physical object as exactly as possible, whereas when searching for objects, you normally require more generic entries. Therefore, for the RE search request, some new terms have been introduced in Customizing. These reflect concrete entries on the rental object, but are necessarily more general.

You can also search for offered objects without having a stored RE search request. In this case, you use the same Customizing data as for entering an RE search request.

Define Number Range for RE Search Request

Use

Here you specify how numbers are assigned for RE search requests.

Standard settings

Standard Customizing is set up for internal number assignment beginning with the number .

Activities

Set up a number range for interval . Defining other intervals is pointless, since the system ignores them.

It makes sense to choose internal number assignment, since it is likely a large number of RE search requests will be created, so it would help if the numbers are assigned automatically.

RE Search Request Type, Meas. Types, Condition Types, Fixt./Fitt. Char.

Use

In this section you define the real estate search request types for the real estate search.

Requirements

You already made the following settings in Customizing:

- Define Condition Groups and Assign Condition Types
- Define Fixtures and Fittings Characteristics for Buildings and Rental Objects

- Specify Fixtures and Fittings Characteristics for Real Estate Search

Activities

Create an RE search request type for all object types that you want to differentiate between when you search.

Assign the following to each RE search request type:

. Usage types

Select the RE search request type. Choose *Assignment of Usage Types* and assign usage types to the rental objects that belong to the RE search request.

Make sure that every usage type that you want to be able to search for using the real estate search is assigned to at least one RE search request type.

Note that you are **required** to enter a measurement type for pooled spaces; otherwise the system does not generate any offered objects for pooled spaces. Using the measurement type of the pooled space, you can control which part of the pooled space is relevant for the RE search request type.

Example:

You have a pooled space, "Shopping Mall," for which warehouse space and retail space are defined. You can assign the "Shopping Mall" usage type with the "warehouse space" measurement type to the "Store" RE search request type. In addition, you can assign the "Store" usage type (for stores that are defined as rental units and can be rented as a whole) to the same RE search request type. You assign the "Shopping Mall" usage type with the "Warehouse Space" measurement type to a second RE search request type called "Warehouse." The measurement type that has to be entered for the usage type also has to be set up in the definition of the measurement types (so that it is possible to search for this measurement type, see below).

2. Measurement Types

- a) Select RE search requests. Assign the measurements that you want to search for to them by choosing *Definition of Measurement Types*. Currently you can assign a maximum of four measurement types.

For apartments, for example, you want to be able to search for the size of the apartment and the number of rooms. Then enter the appropriate measurement types in the order you want them to appear in the RE search request. Using the Logical Link field, you specify if all of the criteria have to be met during the search, or if it is enough if one of the criteria is met.

- b) Set the Show indicator for the measurement types that are most commonly searched for. These measurement types then appear on the first screen of the RE search request. For measurement types that you seldom search for, do not set the *Show* indicator.
- c) Define how tolerant the search should be using the *% Upward Var.* and *% Downward Var.* fields. For measurements, it makes sense to allow a higher upward variance than lower variance.

3. Condition Types

- a) Assign the condition groups that you want to search for to the selected RE search requests by choosing *Definition of Condition Types*. Currently you can assign a maximum of four condition groups. You have to assign the condition types to the condition groups that you want to search for in Customizing. You could use the same condition groups here that you use in the Information System (for example, Basic Rent, Service Charges).
 - b) Using condition purposes, you specify which conditions of the rental object should be considered. Normally you use vacancy rent or market rent.
Recommendation:
Choose the same condition purpose here that you set as a default value for the condition type in Customizing for condition groups.
 - c) Specify the currency, the payment frequency and the calculation method, that you want for the RE search request. The system does **not** expect that these entries apply for the rental objects you search for. Instead, the system converts the values as needed at the time the offered objects are created. For example, it can convert a price per square foot into a fixed price. If you have condition groups with different calculation methods or payment frequencies for the same RE search request type, then the name of the condition group should indicate what kind of group it is.
For example, if the calculation method is Price per Measurement, then you have to specify the measurement type that the calculation is based on.
 - d) For the following indicators, you follow the same guidelines as for measurement types: Show, % Upward Var. and Logical Link. Note that by setting the logical link *OR*, it is possible to search for either a price per measurement or a fixed price. In this case, you should name the condition groups accordingly.
 - e) If you want to copy the conditions from the last real estate contract, then set the Contract Conditions indicator.
4. *Fixtures and Fittings Characteristics*
Assign fixtures and fittings characteristics that are relevant for this RE search request type to the selected RE search request type. Choose *Assignment of Fixt./Fittings Characteristics*. You have to define fixtures and fittings characteristics first in Customizing for master data. You have to assign a sequence number to the fixtures and fittings characteristics in Customizing for the Real Estate Search.

Specify Contract Types for Real Estate Search

Use

To be able to generate a contract from an RE search request or a contract offer, you first have to assign the RE search request or contract offer to the contract types for which you want generating a contract to be possible.

Activities

- For all contract types that are relevant for the real estate search, and which relate to offered objects (normally these are occupancy contracts), assign the following:
- Assignment object type: I - RE search request
- Assignment object type: I - Contract offer
- Specify that the object assignment is allowed. Choose *Informational Only* as the assignment option.
- If you also use the "contract offer" application dialog for contracts that do not relate to objects (such as, service contracts), then assign the following to these contracts:
- Assignment type: I - Contract offer
- Specify that the object assignment is allowed. Choose *Informational Only* as the assignment option.

If you do **not** make this setting for any given contract types, then you can create contract offers for them, but the contract offers cannot be converted to contracts.

Search Criteria Related to Data of Rental Object

Neighborhood: Define Preferred Values

Use

You can enter up to three values for a neighborhood on the business entity and on the rental object. This allows you to classify real estate objects further, regardless of their actual postal data.

In the RE search request, you can enter several values for the neighborhood that the prospect prefers. (You enter them in a string with each neighborhood separated by spaces.)

In both these master data objects and in the RE search request, you can enter values that were not explicitly entered in Customizing. However, to increase the likelihood of hits, you should enter values here that you search for frequently.

If you enter a neighborhood in an RE search request, then the standard search only finds those rental objects where at least one of the neighborhoods being searched for is entered on the rental object or the business entity it belongs to.

Activities

Enter the neighborhoods here that you search for frequently.

City section (urban)

Suburb (urban)

Suburb (rural)

Country

Example assignment:

RE search request: City

Business entity: City center, inner city, outer district, city section (urban), suburb (urban)

RE search request: Suburb

Business entity: Suburb (urban), suburb (rural)

RE search request: Country

Business entity: City section (rural), suburb (rural), country

Define Transport Connections for RE Search Request

Use

Here you enter the transport connections that you want to have available in the RE search request.

Normally, the level of granularity is not as fine as on the transport connections in the usage view (business entity) .

Activities

Enter the transport connections and then assign them to the transport connections of the usage view.

Assign Transport Connections to Those of Usage View

Use

A prospect can select multiple transport connections that interest him or her from the transport requests for RE search requests.

The system has to be able to recognize which transportation connections of the usage view correspond to those in the RE search request so that it can find the correct objects. Therefore, you have to assign transport connections from the RE search request and those of the usage view to each other.

Standard settings

You defined transport connections for RE search requests.

Activities

Assign the transport connections to each other. Usually you assign one transport connection of the RE search request to several transport connections of the business entity. However, you can also assign one transport connection of the business entity to several transport connections of the RE search request.

Example

Transport connections of the **RE search request:** Expressway Local public transport
Train (Metroliner)

Transport connections of the **business entity:** Bus
Bus/streetcar
Bus/streetcar/intercity train
Intercity train
Expressway
Expressway/intercity train
All

Example assignment:

RE search request: Expressway

Business entity: Expressway, Expressway/intercity train, All

RE search request: Local public transport

Business entity: Bus, Bus/streetcar, Bus/streetcar/intercity train, All

RE search request: Train (Metroliner)

Business entity: Intercity train, Expressway/intercity train, All

Statistical Data: Source Data

Specify Prospect Sources

Use

In the RE search request, you can enter where the prospect came from. This information can be used in reporting. You enter the possible values for where the prospect came from here.

These values are **not** used during a standard search for real estate objects. However, you can search for them when you perform an extended search from the offered object.

Reporting on statistical data is only possible in the standard system if you save the RE search request. It is **not** possible when you use an ad hoc search.

Specify Reasons for Search

Use

In the RE search request, you can enter reasons that the prospect is interested in a new real estate object (with your company). This information can be used in reporting. You enter the possible reasons here.

These values are **not** used during a standard search for real estate objects. However, you can search for them when you perform an extended search from the offered object.

Reporting on statistical data is only possible in the standard system if you save the RE search request. It is **not** possible when you use an ad hoc search.

Specify Sources of Inquiry

Use

In the RE search request, you can enter the medium that the prospect used to make an inquiry about leasing a property with your company. This information can be used in reporting. You enter the possible sources of inquiry here.

These values are **not** used during a standard search for real estate objects. However, they could be interesting, for example, for performing a cost/benefit analysis of advertising measures.

In addition, you can search for this criterion when you perform an extended search from the offered object.

Reporting on statistical data is only possible in the standard system if you save the RE search request. It is **not** possible when you use an ad hoc search.

Statistical Data: Processing Indicator and Status

Specify Processing Indicators

Use

You can enter a processing indicator in the RE search request. The indicator could be used, for example, to classify prospective tenants based on their credit standing. You enter the possible processing indicators here.

These values are not used during a standard search for real estate objects. However, you can search for them when you perform an extended search from the offered object.

In addition, the system can display the processing indicator in the hit list when you search for RE search requests for an offered object.

Specify Processing Status

Use

You can enter a processing status in the RE search request. You can use the status, for example, to keep track of RE search requests for which you already sent a number of unsuccessful offers. You enter the possible statuses here.

These values are **not** used during a standard search for real estate objects. However, you can search for them when you perform an extended search from the offered object.

In addition, the system can display the processing status in the hit list when you search for RE search requests for an offered object.

Standard settings

Using the values provided in standard Customizing, you can apply the processing status as a criteria to help in deciding which prospect to offer an apartment, when there are several suitable RE search requests for an offered object. However, keep in mind that you have to enter the status manually.

Specify Preselection Indicator

Use

Using the preselection indicator, you can classify an RE search request as selected in advance.

You enter the possible preselection reasons here.

These values are **not** used during a standard search for real estate objects. However, you can search for them when you perform an extended search from the offered object. In addition, the system can display the preselection indicator in the hit list when you search for RE search requests for an offered object.

Depending on how you use the indicator, you should report on it in correspondence (for example, letters for offer).

Example

You can use this preselection, for example, if the prospect has not yet actually made a request for an apartment, but you have some reason to believe that he will need an apartment in the near future.

There could be several reasons for this. For instance, the prospect is already a tenant of yours, but you know that plans are for his apartment to be used for another purpose, and you want to offer him a different one. Another reason could be that you know certain of your tenants have adult children who may soon be looking for their own apartments.

Dialog

Change Screen Layout

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout

Field Groups

Field Groups

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status

Use

Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
2. Select the row and choose *Field Modification*.
The system displays all field groups that know the given application. In order to display the fields of a field group, position the cursor on the field group and choose *Environment -> Field check*.
3. Now you can, for example, suppress field groups that are not needed or define other field groups as "Required entry" fields. If you choose the "Not specified" setting, then the system itself determines how the field is treated. (Usually these fields are optional entry fields in create and change mode, and display fields in display mode.) If it is not possible to make a setting for a field group, then the system determines how the field is treated (usually dependent on the situation, or on the contents of other fields).

Note

Before you suppress multiple field groups of a view, a section or a screen sequence, you should consider if it makes more sense to remove the view, section or screen completely from the screen sequence.

Views

Use

Here you specify which field groups are grouped together into a view (part of a screen, technically a subscreen). You should group together the field groups that necessarily belong together during a check.

Example

If you have a field group with a valid-from date and a field group with a valid-to date, and these should be checked against each other in a module, then you should group them together into a view.

The check module is in the detailed data under "Function Module After Entry".

Standard settings

SAP recommends that you not change the standard settings. It is only necessary to make changes if you want to add your own new fields to the master data dialog.

In that case, copy an existing view to the customer namespace (Y* or Z*) and modify the properties of the view accordingly (consider the detail screen). Then assign the field groups to the view. You can assign your own field groups, as well as those delivered by SAP.

Sections

Use

Here you specify which views are grouped together into sections. You can recognize a section because it is surrounded by a frame. Fields that logically belong together should be grouped together in sections.

Standard settings

SAP recommends that you not change the standard settings.

It could be necessary to define new sections, either to arrange views delivered by SAP differently or to add your own fields to the master data dialog.

In that case, copy an existing section to the customer namespace (Y* or Z*) and assign the views you want to this section. The item number specifies the sequence in which the views are arranged in the section. For technical reasons, if you make your own assignments from sections to views, the item numbers have to be in the customer namespace (that is, they are not allowed to end in ").

This makes it possible for you to also include your own views in SAP sections. Select a section, and choose *Section -> Views* in the dialog tree, and assign the view to a section using a corresponding item number.

Screens

Use

Here you specify which tab pages appear in the dialog, and which sections make up these tab pages.

Standard settings

SAP recommends that you do not change the standard tab pages.

If you want to change a tab page, copy the standard tab page that is closest to the tab page you have in mind, and give it a name in the customer name range (Y* or Z*). Then assign the sections you want. The position number for user-specific entries also has to be other than here.

Screen Sequences

Use

Here you specify which screen sequences should appear in dialog. A screen sequence consists of different screens, and each screen is equivalent to a tab page.

Standard settings

SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories** or **Screen Sequence Category -> Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):
Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.
- Rental object:
You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).
- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
- RE search request:
For normal entry, you use the standard screen sequence. For fast entry (ad hoc search) the RERRFE screen sequence is used. (This cannot be changed.)

Events

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Tables

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Implement Enhancements (BAdI)

Number Assignment, Validation, Substitution

Use

The Business Add-In supports enhancements to the standard functions of RE search requests. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications Notes for Developers

Search Result

Enter Reasons for Search Status

Use

In the hit list for a search based on an RE search request, the processor can assign a status to a combination of an RE search request and the offered object found.

The statuses are predefined:

S - Prospect Rejects Object
S - Prospect Favors Object
S - Processor Rejects Prospect
S - Processor Favors Prospect
S - Offer Created
S - Lease-Out Created
S - Custom Text

The status serves as a reminder. When processing the RE search request again later, the status tells the processor, for example, if the object was already offered to the prospect, and possibly how the prospect responded.

Activities

You can enter additional reasons here for each of the predefined statuses. You define reasons for each status. This means, for status *S*, for example, you can enter up to different reasons why the prospect could reject the object.

The reasons entered for status *S* allow you to evaluate the reasons your real estate portfolio does **not** correspond to the needs of prospective tenants.

You can use status *S* to make comments on combinations of RE search requests and offered objects, which are **not** considered by the system in further searches. The entries you make here are for information only.

Implement Enhancements (BAdI)

Use

This BAdI is called when you search for

- Offered objects
- Meeting rooms

It allows you to influence the conditions for selection and the results of the search.

Offered objects

Meeting rooms

- Method **WHERE_CLAUSE_MODIFY**
You can use the CHANGING parameters to influence the WHERE conditions for the selection of meeting rooms.

Notes for Developers

Contract Offer

Define Partner Transfer When Contract Created from Offer

Use

If you want to generate contracts from contract offers, then the roles of the partners also have to be changed accordingly, for example, from prospect to tenant.

Activities

Enter a new role here for each role, for which you want the partner to be transferred. You have to make an entry here even if the role itself does not change when the partner is transferred (you enter the same role twice). Any partners on the contract offer that have roles not entered in this table are not copied from the contract offer to the contract.

Define Number Range for Contract Offer

Use

Here you specify how numbers are assigned for contract offers.

Standard settings

Standard Customizing is set up for internal number assignment beginning with the number .

Activities

Set up a number range for interval . Defining other intervals is pointless, since the system ignores them.

Specify Contract Types for Real Estate Search

Use

To be able to generate a contract from an RE search request or a contract offer, you first have to assign the RE search request or contract offer to the contract types for which you want generating a contract to be possible.

Activities

- For all contract types that are relevant for the real estate search, and which relate to offered objects (normally these are occupancy contracts), assign the following:
- Assignment object type: I - RE search request
- Assignment object type: I - Contract offer
- Specify that the object assignment is allowed. Choose *Informational Only* as the assignment option.

- If you also use the "contract offer" application dialog for contracts that do not relate to objects (such as, service contracts), then assign the following to these contracts:
- Assignment type: I - Contract offer
- Specify that the object assignment is allowed. Choose *Informational Only* as the assignment option.

If you do **not** make this setting for any given contract types, then you can create contract offers for them, but the contract offers cannot be converted to contracts.

Dialog

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Screen Layout

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Field Groups

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status

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Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
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SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories or Screen Sequence Category -> Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):
Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.
- Rental object:
You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).
- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
- RE search request:

For normal entry, you use the standard screen sequence. For fast entry (ad hoc search) the RERRFE screen sequence is used. (This cannot be changed.)

Events

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Tables

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Implement Enhancements (BAdI)

Number Assignment, Validation, Substitution

Use

The Business Add-In supports enhancements to the standard functions of contract offers. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications

Accommodation Entitlement Certificate

Specify Fixtures/Fittings for Accommodation Entitlement Certificate

Use

You enter the different types of accommodation entitlement certificates needed for an apartment on the rental object as fixtures and fittings characteristics. For the real estate search to be able to consider these characteristics, you have to specify here which characteristics these are.

Requirements

- For each accommodation entitlement type you want to use, you created a separate fixtures and fittings characteristic in the Define Fixt./Fittings Characteristics for Buildings and Rental Object IMG activity.
You specified in that activity that these characteristics are relevant for rental objects.
- In the Specify Structure of Fixt./Fittings Characteristics Independent of RLR IMG activity, you created an *Accommodation Entitlement* characteristic group and an *Accommodation Entitlement* characteristic class. You assigned the fixtures and fitting characteristic to this group and class.

Standard settings

In Customizing in the standard system, the following fixtures and fittings characteristics are defined for accommodation entitlement certificates (AEC). They are assigned to group and class :

- ORCL - ORCL - ORCL
- ORGENE

Activities

Enter the characteristic group that you defined in the *Characteristic Group* field. If there is one fixtures and fittings characteristic that includes all accommodation entitlement certificates, enter it in the *Publicly Subsidized* field.

Characteristics defined in this way can be entered in the RE search request (the number is not limited) to indicate that the prospect possesses these accommodation entitlement certificates. Assuming that the rental object has a fixtures and fittings characteristic from this group, the standard search for RE search requests from the rental object only finds an RE search request if the appropriate fixtures and fittings characteristic is entered on the RE search request (or the fixtures and fittings characteristic is designated as *General*).

If you search for an offered object from an RE search request on which an accommodation entitlement certificate was entered, and condition amounts are also entered, then you have to decide if you want to search using AEC data only, condition amount only, or with both.

Specify Levels of Priority for Accomodation Entitlement Certificate

Use

You can enter a level of priority for an accommodation entitlement certificate. This is for informational purposes only.

Activities

Specify the levels of priority you want to use.

Specify Person Group for Accommodation Entitlement Certificate

Use

You can enter a person group for an accommodation entitlement certificate. This is only for informational purposes.

Activities

Specify a person group.

Specify Additional Information for AEC

Use

You can enter additional information for an accommodation entitlement certificate. This is for informational purposes only.

Activities

Specify the additional information you need.

Accounting

FI Documents Related to RE

Activate RE-FX for Financial Accounting

Use

Note that the "RE" application has to be active. Set the indicator to activate "RE" if necessary.
documentation

Standard settings

In the standard system "RE" is active as a default.

Define RE-Specific Account Properties

Use

In Customizing for your accounting system, you can specify that particular accounts can be used for real estate objects. This is dependent on the account group.

In this step, you can make detailed settings for these accounts. Accounts for which you make no further settings can be used for all real estate objects. However, you cannot use such accounts to directly post service charges to rental objects and contracts.

Activities

Define the account properties as follows:

Choose *New Entries*.

Enter an internal key and a name for the account property.

Example

.

You want certain accounts to be available only for certain object types.

You create the account property *NAC - Non-Appportionable Costs*. This account property is only allowed for the object types business entity, property, building, rental object, and contract (but not settlement unit).

Select the corresponding object types. Account assignment to settlement units is then not possible for accounts that have this property.

•

You want to be able to assign costs directly to rental objects or contracts, and these costs should be charged to the corresponding rental object/tenant of the contract.

Select the **rental object** and **contract** fields, and specify a service charge key with the property RO - Directly Posted or RO/Contract Directly Posted. In the IMG activity Accounts Allowed for Individual Service Charge Keys you can also assign more than one service charge key to the account property.

@AH@ Account properties for directly posted accounts should be allowed only for rental objects and possibly contracts, and not be permitted for any other object type.

•

You want certain accounts to be used only for a particular service charge key.

Enter "Permitted for Certain Service Charge Keys" in the SU field. In the activity Accounts Allowed for Individual Service Charge Keys, enter the service charge keys for which the accounts are to be posted with this property. If you are using only one service charge key, you can also enter it directly.

If you want to post settlement units independently of the service charge key, enter "Generally Permitted" in the SU field.

Define Accounts Allowed for Individual Service Charge Keys

Use

In the RE-Specific Account Properties IMG activity, you can specify that certain accounts can only be used for settlement units with specific service charge keys. To do so, you choose the entry "Permitted for Certain Service Charge Keys" in the SU (settlement unit) field.

In this activity, assign all service charge keys, for which you want to allow posting, to an account property. If you assigned any service charge keys that are for "directly postable costs," then the account properties have to be set up so that they are allowed for rental objects, or for both rental object and contract.

Requirements

First maintain the account properties

Note

For directly posted costs, the system makes checks during posting to see which settlement unit or settlement period the posting belongs to. In addition, the system uses the account property and the account to determine the service charge keys that are compatible with them. Then it tries to find the

posted rental object in a settlement unit that has one of these service charge keys. This indirect assignment between the rental object and the directly postable settlement unit therefore has to be unique. In order to ensure that settlement master data is not created incorrectly, set up the system so that for each account exactly one service charge key can be used for a directly postable rental object. You may also want to allow exactly one service charge key to be used for a directly postable rental object/contract. The same account can also be used for other settlement units.

Assign RE-Specific Properties to G/L Account

Use

In this activity, you assign the RE-specific account properties, which you already defined, to the G/L accounts to which they apply.

Automatically Generated Accounting Documents

Set Up Number Range for Automatically Created Posting Documents

Use

A reference document number is assigned for documents that are automatically generated in Flexible Real Estate Management (RE-FX). This number is structured as follows:

- Unique eight-digit number for the posting process and the calendar year
- Four-digit number that represents the calendar year
- Eight-digit sequence number for the posted document for this posting process (beginning with)

The number is saved in Financial Accounting (FI) in the reference key field in the document header of the posted document. In addition, certain processes transfer a number to the reference document number field. This number consists of the number of the process, an ID for the process, and the fiscal year.

A number range is required for the following processes:

- REPP: Periodic Postings: Contracts
- REVP: Periodic Postings: Objects (Vacancy)
- REIT: Input Tax Distribution
- REOP: One-Time Postings
- RESC: Service Charge Settlement

- RESR: Sales Settlement
- REAL: Accrual/Deferral
- RERV: Reversal (of one of the processes named above)

Activities

Choose *Change Intervals* and create a number range interval with the number for all years in which postings are made. Enter limits for the interval (normally -). Do not set the *Ext* (External Number Assignment) indicator.

Note that a number assigned by the system (*Current Number* field) cannot be reset, otherwise it is no longer possible to correctly assign the posted documents to the processes.

Allow Integrated Posting

Use

You specify here if you want to allow integrated postings: Integrated Postings.

Taxes

Taxes

Use

In this section, you define the tax types and tax groups you plan to use. If you use value added tax: There is no value added tax indicator in RE-FX. You must therefore define other tax indicators and then assign these to the value-added tax codes in your accounting system.

Define Tax Types

Use

In this activity you enter the necessary tax types.

Specifying tax types is mandatory. Tax types are country-dependent.

You can define multiple tax types for each country.

Create Tax Groups

Use

Specifying tax groups is mandatory. The tax group determines the tax rate for a transaction. The tax group, together with the country, the tax type, and possibly the region determines the tax percentage rate.

Example

You can define the following tax groups:

<u>Tax Group</u>	<u>Meaning</u>
Full	Full Tax Rate
Half	Half Tax Rate
None	No Taxation

Activities

Define your tax groups. Then assign the corresponding tax code to them in Customizing for Financial Accounting.

Default Value for Tax Rate per Contract Type

Use

For each contract type, you specify here which tax group and which tax type is proposed by the system when a contract is created. For contract types that are not relevant for tax (internal contracts, G/L account contracts), you can also specify that these contract types are treated as *tax exempt*.

Activities

If you set the *Tax Exempt* indicator, then the tax type and tax group are **not** entered during master data processing of contracts with this contract type. In that case, leave the *Tax Type* and *Tax Group* fields blank in this view, otherwise the cash flow generation would incorrectly use the tax type and tax group entered here.

Account Determination

Account Determination

Use

In this section, you make settings for account determination.

Based on your flow types, you create account symbols for account determination, independent of your accounting system. These account symbols are then replaced by G/L accounts in your accounting system during actual use.

For automatic postings, you also create account determination values .

The account determination process

Account determination controls how posting is made to specific accounts. This control is based on flow types. Flow types point to the desired accounts using account symbols.

In *Flexible Real Estate Management*, postings are initiated by conditions. The conditions point to flow types, which in turn use account symbols to point to the accounts.

For example, condition type 'Basic Rent' points to flow type ". Credit and debit account symbols are assigned to flow type ". These then point to the account to be posted, depending on the chart of accounts.

Requirements

1. The accounts have been created in the accounting system.
2. The flow types have been created in *Flexible Real Estate Management*

Account Symbols

Use

In this activity, you define account symbols that are then replaced in your accounting system by accounts, dependent on the chart of accounts. (For more information, see the Replace Account Symbols IMG activity.)

The posting specifications in RE-FX do not contain accounts. Instead they contain account symbols that refer to accounts in the accounting system.

Account Determination Values

Use

In addition to account symbols, you can define account determination values. You enter them in posting rules on the contract or rental object, and they control account determination for automatic postings.

Assign Account Symbol to Flow Type

Use

In this step, you assign account symbols to the flow types defined in the Define Flow Types IMG activity.

Summarize Documents

Activate Document or Tax Summarization in Company Code

Use

Here you can specify the company codes in which debit/credit line items and tax items should be summarized.

Example

For more information and examples about tax summarization, see this text.

Make Settings for Summarization Flow Type

Use

During periodic posting, items can be summarized for different flow types.

Here you set how the summarization should take place for each flow type that is to be used as a summarization flow type.

Requirements

Summarization is only made in the company codes in which this is set in the Activate Document or Tax Summarization in Company Code IMG activity.

The summarization flow types are technically normal flow types. You have defined this in the Flow Types IMG activity.

Activities

You should make settings for all flow types here that you (want to) use in the flow types IMG activity in the *summarization flow types* column.

Notes

- Note that flow types, which are set as summarization flow types there, but are missing here, are not summarized!
- Summarization only takes place when the same account symbol was assigned for the original flow type in account determination.
- The summarization is always period-based, for example, SC advance payments are only summarized within the respective settlement period, but not outside it.

Settings

Make the following settings for each summarization flow type:

- Control of Due Dates:
How should the due date of the line items to be summarized be entered in the summarized item?
- Tolerances:
 - A tolerance in days for the summarization of credit memos with different due dates.
 - A tolerance in days for the summarization of receivables with different due dates.
- *Settling receivable/credit memo:*
Set this indicator to settle receivables and credit memos with each other.

Then check in the flow types IMG activity whether the desired summarization flow types are assigned to all flow types.

Summarization in the Case of Different Tax Codes

Use

You have activated line item summarization in the company code. As with credit items, debit items with differing tax codes (or tax type/tax group) are not summarized in the standard system. If you want to summarize items with differing tax codes, you can create a customer-specific implementation of the BAdI `BADI_RERA_DOC` (method `BEFORE_POST`). Use the example class `CL_EXM_IM_RERA_DOC_TAXCOMPRESS` as a template.

Important

- Advance payments that are to be included in service charge settlement or sales-based settlement must not be summarized in this way.
- The BAdI changes the RE document before posting and is run for all automatic posting processes that are initiated from RE. Check whether other implementations are already active in your system and ensure that these are compatible with the new implementation to be created.
- Note that the sequence can lead to problems when such items are processed further. For example, the tax data cannot be displayed correctly on the tenant account sheet or in invoice printing because the tax information is lost in the line item. The formation of installment payments or irrecoverable debts can lead to problems.

First test all subsequent processes carefully before you activate this BAdI implementation in the production environment.

Documentation `BADI_RERA_DOC`

Enhancements

Periodic Posting: Restrict Selection of Cash Flow Records

Use

The BAdI allows you to intervene in the process of periodic posting using your own **customer-specific parameters**.

This applies to cash flow records that would be posted in one document in the standard system. You can additionally filter these documents using the BAdI method `SUPPRESS_CF_ITEM`. Notes for Developers

Prevent Object Transfers

Use

You can use this BAdI if you want to suppress object transfers (transfer from the contract to assigned rental objects) during periodic posting and service charge settlement. In that case the real estate contract remains the object to which account assignment is made in the revenue posting.

Activities

Implement the method `SUPPRESS_TRANSFER_POSTING` and set the parameter `cf_suppress_transfer` there to 'X'.

Also see the example implementation in class `CL_EXM_IM_RERA_TRANSFER_POST`.

Example

In the example, the distribution postings are controlled dependent on the contract type of the contract. For contracts with customer accounts, the distributions are suppressed, but not for other contract types.

Notes for Developers

Change RE Document Before Posting

Use

Using this BAdI, you can change document data of an RE document before the FI document data is created, meaning that it is also before the data is transferred to the Accounting Interface.

You can use the following methods:

- **BEFORE_POST**
- **BEFORE_POST_EXTERNAL**
- **AFTER_POST**
- **BEFORE_REVERSE**
- **AFTER_REVERSE**

Using the **BEFORE** methods, you can change or check the data before it is posted or reversed. Using the **AFTER** methods, you can react to the posting or reversal and, for example, send your own messages or update your own tables.

The BAdI is executed for all RE posting processes, such as:

- Periodic posting
- Input tax distribution
- Service charge settlement
- Sales-based settlement

However, the BAdI is **not** executed for pure FI postings (such as, FB, FB), even if there is account assignment to real estate objects.

Important: Only change non-critical data, such as payment data, dunning data, segment text, and so on. **Never** change critical data such as accounts or amounts.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

The following parameters are available for the methods **BEFORE_POST** and **BEFORE_REVERSE**:

- ID_PROCESSMODE: Mode of the process (simulation/update run)
- CS_HEADER: Document header data (can be changed)
- CT_ITEM: Line item data (can be changed)
- CT_WT_ITEM: Withholding tax data for line items (withholding tax type and withholding tax code)
- CT_MESSAGE: Messages (can be changed)

If you insert an error message in CT_MESSAGE, then the document is **not** posted. In this way, you can prevent the posting using your own checks, if you wish.

The following parameters are available for the **BEFORE_POST_EXTERNAL** method:

- ID_PROCESSMODE: Mode of the process (simulation/update run)
- CS_HEADER: Document header data (can be changed)
- CT_ITEM_RE_DOC: Line item data of RE document
- CT_ITEM_EX_DOC: Line item data of external document (can be changed)
- CT_WT_ITEM: Withholding tax data for line items (withholding tax type and withholding tax code)
- CT_MESSAGE: Messages (can be changed)

If you insert an error message in CT_MESSAGE, then the document is **not** posted. In this way, you can prevent the posting using your own checks, if you wish.

Method **BEFORE_POST_EXTERNAL** can be used, for example, to summarize the items of external document CT_ITEM_EX_DOC according to specified criteria. However, in that case, it is important to adjust the item references in the unchanged RE document CT_ITEM_RE_DOC accordingly.

The following parameters are available for the **AFTER_POST** method: -

ID_PROCESSMODE: Mode of the process (simulation/update run) -

IS_HEADER: Document header data (no changes allowed)

- IT_ITEM: Line item data (no changes allowed)
- IT_WT_ITEM: Withholding tax data for line items (no changes allowed)
- CT_MESSAGE: Messages (can be changed)

Once the posting is made, changes are **no longer** allowed. However, you can add your own messages to CT_MESSAGE.

The following parameters are available for the **AFTER_REVERSE** method:

- ID_PROCESSMODE: Mode of the process (simulation/update run)
- ID_REVERSAL_REF: Reference key of the reversal document (no changes allowed)
- ID_LOGSYSTEM: Logical system (no changes allowed)
- IS_HEADER: Document header data (no changes allowed)
- IT_ITEM: Line item data (no changes allowed)
- IT_WT_ITEM: Withholding tax data for line items (no changes allowed)
- CT_MESSAGE: Messages (can be changed)

The data in IS_HEADER, IT_ITEM and IT_WT_ITEM relates to the original document that was reversed.

Example

As an example, you write a reference of your choice in the EXTREF, EXTREF or EXTREF field. The contents of these fields is transferred, when an FI document is posted, to the BSEG-XREF, XREF, or XREF fields, where the contents are then available to other processes. This procedure is used, for example, in Switzerland for the ISR (inpayment slip with reference) reference.

Also refer to the sample code of the BEFORE_POST method. Choose *Goto -> Sample Code -> Display*.

Note:

The system runs through this BAdI before document summarization. In this way, changes to the line items are taken into account during the summarization.

The GENDATA field of the item table is **not** considered during summarization and is **not** transferred to the document. It is a purely technical field, which is suitable for transporting data to the BAdI REEX_FI_BAPI.

See also

For information on using BAdIs, see this documentation.

Notes for Developers

Change Document Split

Use

This Business Add-In (BAdI) can be used to implement your own **customer-specific document splitting**.

This applies to cash flow records that would be posted in one document in the standard system. You can further break these documents down using your own criteria. However, you can only refine the split that would be made in the standard system. It is not possible to merge documents together (for instance, to group line items together in one document if they would normally have different document types).

The following methods are provided:

- **SPLIT_DOCUMENT**: Splits the document based on any customer criteria
- **SET_NUMBER_OF_RECORDS_PER_DOC**: Specifies the maximum number of records per document

The BAdI is executed during periodic posting and periodic posting for vacancy.

The BAdI is not allowed to be used for documents from input tax distribution, service charge settlement, and sales-based settlement, as well as documents from one-time postings. For each of these documents the document structure is fixed.

Activities

Create a BAdI implementation and implement the methods SPLIT_DOCUMENT and SET_NUMBER_OF_RECORDS_PER_DOC as you require. Then activate the BAdI implementation.

The SPLIT_DOCUMENT method contains the following parameters:

- **ID_PROCESSMODE**: Mode of the process (simulation/update run), cannot be changed
- **CT_POSTING_RECORD**: Posting records (cash flow records to be posted); you can change the sorting of this table, and if you wish, place the 'SPLIT' field at another position. But do not change any other fields.

- CT_MESSAGE: Messages (can be changed); normally does not have to be filled; if you add an error message to CT_MESSAGE, then the document is **not** posted. If you add a warning or information message, the document is posted, but the message is entered in the posting log.

The SET_NUMBER_OF_RECORDS_PER_DOC method has the following parameters:

- ID_PROCESSMODE: Mode of the process (simulation/update run), cannot be changed
- IT_POSTING_RECORD: Posting records (cash flow records to be posted); you cannot change this table.
- CD_REC_PER_DOC: Number of cash flow records within the accounting document. In the standard system, the default value is . You can change this value. Keep in mind that an FI document can have a maximum of line items.

Example

For the method SPLIT_DOCUMENT, there is an example implementation that splits the cash flow records to be posted according to their due dates. The result is that in each document all the items have the same due date.

For the method SET_NUMBER_OF_RECORDS_PER_DOC, there is an example implementation that increases the number of cash flow records within the accounting document if line item summarization is active in the company code. Notes for Developers

Prevent Clearing of Items by RE Processes

Use

You use this Business Add-In (BAI) if you want to suppress clearing in the context of service charge settlement, sales-based settlement, COA settlement, and so on, for example because clearing should take place outside of the settlement using your own programs.

You can also influence the selection of items for clearing with respect to rental contracts (transaction RERACL).

Requirements

The advance payment items posted by the service charge settlement then remain open. You have to clear them manually, for example using transaction FB, or using your own customer-specific program.

To be able to clear non-payable special G/L indicators, you have to set message REEXFI to a warning in transaction OBA.

If it afterwards becomes necessary to reverse the service charge settlement, you first have to reset manually made clearings using transaction FBRA.

Activities

Implement the method SUPPRESS_CLEARING and set the parameter cf_suppress_clearing there to 'X'. Implement the method MODIFY_CLEARING_ITEM_LIST if you want to change the list of open items that are intended for automatic clearing (Clearing for RE Contracts RERACL). This makes it possible, for example, to exclude certain contracts from clearing.

Also see the example implementation.

Notes for Developers

Reversal - Additional Checks

Use

You use this Business Add-In (BAI) if you want to intervene in the document selection of the reversal process, or if you want to output errors based on your own checks.

Activities

Implement the method MODIFY_DOC_SEL_FOR_REPP_REV, if you want to execute checks for all of the documents selected during reversal of periodic posting (RERAPPRV).

Parameters:

ID_PROCESS: predefined as REPP

IS_REV_OPTIONS: Options that were selected in the selection screen of RERAPPRV, for example, selected contracts or processes

IT_PROCEDURE: Transactions, for which documents were deleted

CT_DOCGUID_LIST: List of the selected documents that are to be reversed
CT_MESSAGE: If you assign a message (type E) to CT_MESSAGE, the message is displayed in the selection screen of RERAPPRV and the reversal is not performed. Warning message or information messages are not taken into account.

Also see the example implementation in class

CL_EXM_IM_RERA_REVERSAL.

Example

In the example, the system first reads all RE documents using their GUID. In addition, it gets the FI document header information (table BKPF).

Now, for example, you could use your own customer table to check for each selected document if the document is allowed to be deleted, or if another document also has to be deleted, and so on.

Notes for Developers

Integration FI-GL, FI-AR, FI-AP

Integration FI-GL, FI-AR, FI-AP

Use

In this section, you make settings within your accounting system for the General Ledger and Accounts Payable and Receivable.

Account Determination

Replace Account Symbols

Use

The account symbols you specified in the Account Symbols IMG activity have to be replaced

by G/L accounts in the accounting system, dependent on the chart of accounts. Account determination is then able to find these G/L accounts.

Activities

Note:

- If you are posting to accounts in the subsidiary ledgers (accounts payable or receivable, account type D or K in the Assign Account Symbol to Flow Type IMG activity) leave the account blank. Enter only the special G/L indicator, if needed.
- If you want to use a different account for postings in previous fiscal years, enter the account you want to use as the different account.

Define Document Type Determination

Use

In this section, you create defaults for determining document types.

You define document types in Financial Accounting (FI) in the Define Document Types IMG activity.

Standard settings

Not all posting processes use a flow type for posting. Flow types are used primarily in periodic posting. If there are several flow types in one document, then the system uses the setting from the first flow type found.

You do **not** have to make settings here for the following processes:

- *RERV - Reversal Process*: For reversals, the system uses the document type entered in Customizing for Financial Accounting (see Define Document Types).
- *REAL - Accrual/Deferral*: For accruals and deferrals, the system uses the document type entered in Customizing for the Accrual Engine (see Define Set of Rules).

Activities

Document types can be dependent on:

- RE posting processes (periodic posting, service charge settlement, and so on)
- Transactions (receivables, transfers, and so on)
- Flow types

You can leave the *Posting Procedure* and the *Flow Type* blank for any given process you enter. If there is no entry for a posting process, then the posting interface of the FI component automatically uses document type 'AB' (accounting document).

Taxes

Assign Tax Codes

Use

In this step, you assign a tax code in your accounting system to the tax types and tax groups that you defined in *Flexible Real Estate Management*. You define tax codes in Customizing for your accounting system.

The tax code is needed for calculating tax on sales/purchases. The tax code assignment is both country-dependent and time-dependent.

Example

Changes in the value-added tax rate then only have to be made in Customizing, rather than in all affected contracts.

Assign Tax Code (for FI Document)

Use

In this step, you assign a tax code in your accounting system to the tax types and tax groups that you defined in *Flexible Real Estate Management*. You define tax codes in Customizing for your accounting system.

The tax code is needed for calculating tax on sales/purchases. The tax code assignment is both country-dependent and time-dependent.

Example

Changes in the value-added tax rate then only have to be made in Customizing, rather than in all affected contracts.

Note

You have to make this assignment in order for FI documents to be correctly read in RE. This assignment is relevant, for example, for service charge settlement and input tax distribution.

Assign Tax Transaction Key

Use

In this step you assign a tax type to the tax transaction key. This assignment is both country-dependent and time-dependent. The tax transaction key specifies which tax account is posted.

Dunning

Define Dunning Groupings

Use

Dunning notices are normally created per business partner. In special cases, it can make sense to group together the open items of a business partner based on certain criteria, and dun these as a group.

In order to group items together for dunning, you have to define grouping keys. (These are two-character, alphanumeric keys.) The contents of certain line items are the determining factors for the grouping. For each key, you enter up to two fields from these line items. When items have the same contents in these fields, then they are dunned together.

Example

You are using Financial Assets Management, and want to send your business partners a separate dunning notice for each rental object. You define a grouping key that relates to the contract number field. In this way, you can dun open items together that have the same contract number.

Activities

.In Financial Accounting, define the grouping keys you need in the Define Dunning Groupings IMG activity, and enter the dunnable incoming payment methods in the Determine Dunnable Payment Methods IMG activity in Customizing for *Flexible RealEstate Management*.

.Make sure that a grouping key is entered in the master records of those business partners, for whom you want to group items together for dunning.

Result:

In addition to those items that are dunned based on the logic in Financial Accounting, all items are also dunned that have a dunnable payment method in the item or in the customer master record.

If grouping key 'Contract Number/Contract Type' is entered in the customer master record, then all open items of the real estate contract are automatically dunned as dictated by the dunning level.

Requirements

All postings have to be made with contract type and a contract number as a reference.

Further Settings

If you want dunning to be per customer, you have to make settings in the Define Dunning Areas IMG activity.

Define dunning areas

Use

In this activity, you specify all dunning areas that you want to be considered RE dunning areas. This ensures that postings without a reference appear on the dunning form (for example, a payment that was posted with a corresponding RE dunning area).

Dunning areas are used when more than one organizational unit in a company code is responsible for dunning. These organizational units are then designated as dunning areas. The dunning area could be a division, a sales organization or a business area, for example.

The individual dunning areas can use the same dunning procedure or different dunning procedures.

- If they use different dunning procedures, then the dunning area has to be entered in the customer or vendor master record.
- If they use the same dunning procedures, then the system uses the standard dunning procedure. The dunning area then has to be entered in the line item. The system then enters the dunning area, with its data, automatically in the master record.

@S@ The use of dunning areas is optional.

Requirements

In order for the dunning area field to be ready for input in the line item, you have to specify that dunning takes place separately for different dunning areas. This is done in the company-code-specific settings for dunning. For more information, refer to Define Dunning Procedure.

Activities

Define the dunning areas you need.

Make sure that the company codes involved are set up for dunning by dunning areas.

Make sure that the dunning areas, with their dunning procedures, are entered in the master records of your business partners, if your dunning areas use different dunning procedures.

Assign Application/Role Category/Dunning Parameter

Use

In this activity, you can specify which business partners are to be sent dunning notices.

Activities

Assign a business partner role category to the application category for business partner management and specify based on the dunning level whether it is the dunning recipient, alternative dunning recipient, or not a dunning recipient.

Example

<u>Application Category</u>	<u>Role Category</u>	<u>Indicator</u>	<u>Dunning Level</u>
General Real Estate Contract	Mast.Tenant	Cust.	Dunning Recipient
General Real Estate Contract	Tenant (w/o Cust. Account)		Alternative dunning recipient

Determine Dunnable Payment Methods

In this activity, you determine which incoming payment methods can be dunned.

Activities

Define any payment methods as dunnable if you want them to be dunned in Flexible Real Estate Management. For more information, see Define Dunning Groupings.

Payments

Payable Special General Ledger Processes (Debit-Side)

Payable special G/L transactions (debit-side)

Special G/L transactions are required for advance payment postings (operating costs, heating expenses, sales-based rent). You create these G/L transactions in Customizing of Financial Accounting. See also Accounts Receivable and Accounts Payable.

In this table, you determine:

1. Which special G/L transactions to display and which to pay. If you make an entry here, the payment program includes only those items that have one of the special G/L transactions named. The entries in this table also influence the items that are displayed in the tenant account sheet.
2. Which reconciliation accounts are not to be selected by the payment program. This step influences the performance of the payment program. Enter the reconciliation accounts of the special G/L transactions that cannot be paid. These items will then not be selected.

Example

The settings of the standard delivery are such that advance payments are posted on the debit-side with special G/L indicator J, and on the credit side with special G/L indicator K. Postings with special G/L indicator J represent a transaction that has to be paid by the tenant. Those with a K represent noted items that are automatically cleared during the service charge settlement. Consequently you should only enter the J indicator in this table and not K.

The reconciliation account of special G/L transaction K is account . This account should be excluded from the selection to increase the performance of the payment program.

Further notes

Note that this table belongs to Customizing of Financial Accounting.

Other Settings for FI

Use

In this view, you make FI-specific settings that are company-code dependent. See the documentation for the fields.

Incoming Payments Control

Posting Key for Bank Debit Posting (Incoming Payments)

Use

Enter the posting key here that should be used for account statement entry for a bank posting.

Recommendation

Usually posting key is used.

Enter Posting Keys for Clearing and Advance Payment

Use

In this step, you enter the posting keys for clearing transactions. The system uses these keys for automatic creation of line items. The payment program also uses these posting keys. In the Real Estate environment, the settings for the EINGZAHL activity are used to find the posting key for automatic clearing.

The setting is also used to determine the posting key for payments on account during account statement entry.

Recommendation:

If you use the posting keys of the standard system, you can adopt the entered posting keys without changing them.

Activities

1. Check the standard settings.
2. Change the standard settings if necessary.

Determine Incoming Payment Control

In this section, you determine according to which rules the automatic incoming payment clears open items.

Priorities (sort rules) are determined by means of the fields of the open item data structure. The open items are sorted according to these rules. The open items are cleared in the sorted sequence.

The sort rules can then be applied in case where the incoming payment plus the credit balance drops below the totals of the open items.

The rules are defined in three steps:

1. Define order criteria
For company code and contract type (always for Real Estate), data fields from the open item table are defined as criteria, according to which the open items are sorted in ascending or descending order. Furthermore, you have to determine whether sorting is to be done directly or indirectly.
 - a) Direct sorting sorts by the order criterion.
 - b) Indirect sorting determines whether the sorting is done directly by the field contents or whether a priority is assigned, according to which sorting is carried out. Indirect sorting is then defined in detail. Indirect sorting allows sorting not directly by the defining argument 'Flow type' but that a priority is assigned to a special value of a flow type (for example, "), by which sorting is then carried out (see point).
2. Determine the sequence of the order criteria
You have to arrange the defining arguments in a sequence using number values (lowest number = highest priority), by which sorting is carried out.
Important: If no unique sequence was found after the open items were sorted using all the order criteria, the system proceeds as follows:
 - a) First: Clearing the open items according to a unique sort sequence
 - b) Then: Clearing the open items in a random sequence.Clearing is carried out in this described sequence until the incoming payment is exhausted. No partial clearing or residual item formation is carried out. Incoming amounts not used are posted as unqualified down payment of the customer and processed together with later incoming payments.

In the configuration menu (basic settings in the client), you can determine the tax code that is to be used for this posting. The posting rules for the unqualified down payment are defined via the flow category 'UAN' ("Assign internal movement types" activity). The flow type referring to the respective posting rule in the account determination is defined for the flow category.

3. Define indirect sorting

For the company code, contract type (always for Real Estate) and order criterion, sort sequences are assigned to the field values for indirect sorting. That is, that the respective sort priorities or sequences are defined for all values the table field can take on for the order criterion.

Activities

1. Order criteria for assigning incoming payment

a) Determine your work area by specifying

- Company code and
- Contract type

b) To make new entries, choose the 'New entries' function and enter the following line by line:

- an indicator for the order criterion.
- the name of the order criterion.
- the field name of the field to be examined.
- the sort direction for the evaluation of the order criterion (ascending/descending).
- the processing method (indirect/direct sorting)

In case of the indirect method, the referenced values are used as keys for an assignment table. The assignment table assigns a priority to these values, for example flow type. The set of priorities found is sorted and determines the sequence of assignment.

c) Save your entries.

2. Sequence of the order criteria Assignment for incoming payment

a) Determine your work area by specifying

- the company code and
- the contract type

b) To make new entries, choose the 'New entries' function and enter the following line by line:

- a number between and to assign a priority to an order criterion. The highest priority is , the lowest priority is . You do not necessarily have to define the priorities as a sequence without gaps.
- the indicator for the order criterion. The name of the order criterion is assigned to the indicator.

c) Save your entries

3. Value assignment for indirect order criteria Incoming payment

In this table, you define the 'indirect method' for the determination of the assignment sequence of open items. By means of the 'indirect method', you assign different priorities to a table field depending on the field value (field contents). You have to determine the individual priorities for all order criteria, to which the indirect method is assigned (see point).

a) Determine your working group by specifying

- the company code,
- the contract type and -
the order criterion.

b) To make new entries, choose the 'New entries' function and enter the following line by line:

- the internal value.

Here you have to specify the field value (for example, flow type), to which a priority is to be assigned. For field values you do not define here, the lowest priority is assumed for sorting.

Important: Numeric values have to be specified with leading zeros and the number of positions has to be entered left-justified, just as in the table field of the order criterion.

- the priority.

You assign a priority to each value. Sorting is carried out according to this priority in ascending or descending order, depending on the sort sequence of the order criterion.

Note

For more information on specific settings for Real Estate, refer to the documentation for the Real Estate IMG activity Electronic Account Statement Entry.

Prepare Account Statement Entry

Electronic Account Statement Entry

Prerequisites

The Business Transaction Events (BTE) must be active. Check the following setting:

1. Start transaction FIBF.
2. Choose *Settings --> Identification --> SAP Applications*.
3. Check whether the *Active* field is set for the *Real Estate (RE-FX)* application.

Procedure

In RE-FX you can automatically process incoming payments and returned debit memos using account statement entry with different file formats (such as MultiCash or DTAUS).

The method is based on the standard function electronic account statement entry in Financial Accounting (FI). The IMG activities are in Customizing for Financial Accounting under Bank Accounting and are also summarized in RE-FX.

Account statement entry is divided into three steps:

1. File import
2. Analysis of the note to payee for each line item
3. Corresponding postings

Since RE-FX intervenes in the standard FI function (to assign an incoming payment directly to a contract, for example), the Customizing settings for the individual steps are explained in the following.

. File Import

Make the settings for the electronic account statement, particularly:

1. Enter the house bank and the corresponding house bank accounts.
2. Make the global settings for the electronic bank statement:
 - Create account symbols and assign accounts.
 - Create posting rules and assign them to the external transactions (see step Analysis of Note to Payee).
3. Configure returns processing

For more information, see the documentation for the individual IMG activities.

. Analysis of Note to Payee

There are a number of standard and application-specific interpretation algorithms available for analyzing the note to payee of a line item.

To assign incoming payments, standard FI (interpretation algorithm) carries out a search for a document number or a reference document number of the open item.

Tenants, however, do not usually know the document number, so they will enter the rental agreement number as the assignment criterion in the *Note to Payee* field.

- To interpret the data on the data medium differently from the standard procedure, assign the Real Estate-specific interpretation algorithm () in the activity Make Global Settings for Electronic Bank Statement under *Assign External Transaction Types to Posting Rules*. If you have entered the RE-specific algorithm for a bank account and an external transaction, the RE-specific analysis of the note to payee in BTE (see Prerequisites) is run. Otherwise the module is exited and other applications (such as Treasury) can register for the transaction.
- With returned debit memos, FI standard processing is used (see Configure Returns Processing). You should nevertheless enter the RE-specific algorithm for this transaction because only then can the

search for a clearing document number find the RE agreement and transfer it to the subsidiary ledger document. This makes it possible to assign the new open item and any fee to the agreement.

Note: The interpretation algorithm *REAL ESTATE: First Standard, Then Rental Agreement Search* is a setting for Classic RE and triggers the same search in RE-FX as for algorithm .

. **Corresponding Postings**

- If the incoming payment could be assigned to a rental agreement, the system now searches for the open items of the customer for that rental agreement.
- If their sum is greater than the incoming payment, the open items are sorted according to rules that you define in Customizing. The open items are cleared in the predefined sequence until the incoming payments are depleted.
- Choose the sort criteria for the open items in the activity Determine Incoming Payment Control.
- In the following activity, enter a *processing type* for the posting rule that is to clear the open items:
Account Statement Entry: Assign Transactions
Example: *Returned debit memo (outgoing payments)* or *incoming payments*
- If a difference remains, you can specify in the IMG whether an unqualified down payment or a new residual item should be posted.
- You make the settings for account determination for the unqualified down payment in the IMG activity of Financial Accounting with the transaction EINZAHL: Define
Posting Keys for Clearing
Overpayments are posted to the customer account with this account determination.
- For new residual items, check the indicator in the IMG activity of RE-FX: Basic Settings in Company Code.
If the *residual items* indicator in the company code is set, open items are partially cleared and a new open item is posted for the remainder If the indicator is **not** set, an unqualified down payment is posted.

Define House Banks

Use

Each house bank of a company code is represented by a bank ID in the SAP system, every account at a house bank by an account ID.

In the SAP system, you use the bank ID and the account ID to specify bank details. These specifications are used, for example, for automatic payment transactions to determine the bank details for payment.

Standard settings

Several house banks are supplied as examples in the standard system in order to enable configuration of the payment program.

Note

For domestic banks, you should enter the bank number in the "bank key" field and for foreign banks, you should enter the SWIFT code in this field.

For Belgium, the first three house bank ID items must be numeric.

Do not forget to create a G/L account for the specified bank account. The G/L account is to be managed in the same currency as the account at the bank.

Activities

1. Work out the specifications you have to enter in the system for your house banks.
2. Define your house banks and the corresponding accounts in the system under a bank ID or an account ID.

Additional information

If you have already carried out the step "Copy bank directory", you have already created house banks in the system or have updated the house bank data that already existed.

If this is the case, in this step you only have to create the house banks that were not created in the "Copy bank directory" step. You can also add any data that may be required to house banks that were copied along with the bank directory.

Make Global Settings for Electronic Bank Statement

Use

Use

In this Customizing activity, you can make basic settings for the account statement. There are six main steps to be carried out:

1. **Create account symbol**
Specify G/L accounts (such as bank, cash receipt, outgoing checks) to which postings are to be made from the account statement. You assign account symbols to the G/L account numbers. These are required for the posting rules in step .
2. **Assign accounts to account symbols**

Define postings to be triggered by possible transactions in the account statement (such as bank transfer, debit memo).

Note: In the posting specifications debit -> credit that you define here, use the account symbols from step , **not** the G/L account numbers. This prevents similar posting rules being defined several times, the only difference between them being the accounts to which postings are made.

3. **Create keys for posting rules**

Assign the posting rules to the possible transactions in the account statement file. A list of such assignments where one external transaction code is assigned to one posting rule is called a *transaction type*.

4. **Define posting rules**

Create a posting specification for each posting rule. You thereby specify how a given business transaction is to be posted.

5. **Create a transaction type**

Create the names and descriptions of the various transaction types you require.

In this activity you assign (external) business transaction codes to an (internal) posting rule. As a result, you can use the same posting specifications for different business transaction codes.

6. **Assign bank accounts to transaction types**

Assign the bank details to a transaction type, for which the account statements are to be imported. All the house bank accounts at a particular bank are usually assigned to the same transaction type.

Requirements

You have already entered your house bank data for the account details. If **not**, define your house bank data in Customizing under *Bank Accounting -> Bank Accounts -> Define House Banks*.

Create account symbols

In this activity you create the account symbols that you later need for defining the posting specifications. Before the posting rule is used, the account symbols are replaced with the relevant accounts to which posting is to be made.

Example

Create the account symbols BANK and CASH RECEIPT so that you can later define a posting rule for cash receipt.

Activities

1. Define an ID for each account symbol.
2. Enter a description in the text field.

Assign accounts to account symbols

In this activity you define the account determination procedure for each individual account symbol.

Example :

Assigning G/L account to account symbol BANK *Chart of*

Accounts: INT (sample chart of accounts):

<u>Account symbol</u>	<u>Acct mod.</u>	<u>Currency</u>	<u>G/LAcct</u>
BANK +	+		

Example :

To avoid having to define a separate account symbol for every single house bank account (with a different G/L account in each case), the G/L account field can contain a masked output.

Chart of Accounts: INT (sample chart of accounts)

<u>Account symbol</u>	<u>Acct mod.</u>	<u>Currency</u>	<u>G/LAcct</u>
BANK +	+		+++++++

Here, the account determination replaces the account symbol BANK with the G/L account number of the house bank account defined in the house bank master data. The appropriate masking can also be used for the bank subaccounts.

Example :

Standard procedure for defining bank subaccounts

Chart of Accounts: INT (sample chart of accounts)

<u>Account symbol</u>	<u>G/LAcct</u>
BANK	+++++++
CASH RECEIPT	+++++++
INCOMING CHECKS	+++++++

You can influence account determination further by making entries in the *Account modification* and *Currency* fields.

Example a :

You wish to manage incoming checks in foreign currency (such as USD) in a different clearing account to incoming checks in local currency (such as EUR). You can do so by making the following setting.

Chart of Accounts: INT (sample chart of accounts)

<u>Account symbol</u>	<u>Acct mod.</u>	<u>Currency</u>	<u>G/LAcct</u>
INC. CHECKS +	+		+++++++
INC. CHECKS +		USD	+++++++

Example b :

You wish to process the business transaction **credit memo for rent** in a different account than is otherwise used for the *credit memo* posting rule. For this business transaction, you specify an account modification and the account to which posting is to be made (such as).

Chart of Accounts: INT (sample chart of accounts)

<u>Account symbol</u>	<u>Acct mod.</u>	<u>Currency</u>	<u>G/LAcct</u>
INC. CHECKS +	+	+++++++	
INC. CHECKS RENT	+		

In addition, the field FEBEP-KFMOD has to be filled for the given transactions, either in the function enhancement for the electronic accounts statement (see the Customizing activity Develop Enhancements for Electronic Bank Statement (General)), or by using the search string search with the target field *Account Modification* (see the Customizing activity Define Search String for Electronic Bank Statement).

Note

Note that masked entries (using a plus sign +) are always based on a ten character account number. If you are using a shorter account number (six characters, for example), the entries must be right-aligned.

Create keys for posting rules

In this activity you enter descriptions for the necessary posting rules. Each posting rule represents a business transaction from the SAP System that is included in the account statement, such as:

- Incoming check
- Credit memo
- Debit memo
- and so on

Example

You create the posting rule (cash receipt via interim account) for cash receipt.

Activities

1. Define an ID for each posting rule.
2. Enter a description in the text field.

Define posting rules

In this activity you create posting specifications for each posting rule. You use the posting specifications to specify how a certain business transaction (such as a credit memo) is to be posted.

Posting specifications consist of one or two posting records debit -> credit, where the first posting record is called posting area , and usually represents a G/L account posting (BANK -> CASH RECEIPT, for example). The optional second posting record is called posting area (CASH RECEIPT -> CUSTOMER, for example).

Depending on whether a posting transaction affects bank accounting **only**, or also affects subledger accounting, define the posting rules either for the first posting area only, or for both the first and the second posting areas.

Example

For the transaction "check credit memo", you only need posting rules for G/L accounts because the customer account has already been cleared as a result of the check deposit. For a bank transfer, however, you will need a second posting area in addition to the posting rules for the G/L accounts in order to clear the customer account.

Activities

Define the posting rules for posting area and :

1. Enter the posting type (posting or clearing G/L accounts or subledger accounts, reversing clearing).
2. Enter the accounts (that is, the account symbols) and posting keys for both the debit and credit sides of the posting record. Depending on the type of posting (clearing/posting), it may be necessary to leave the fields on either the debit or credit side blank. For example, with posting type (credit clearing for subledger accounts), the system uses the note to payee information to try to identify and clear an appropriate open item. In this case, there is no need to specify the account and posting key beforehand since they will be determined automatically during the open item search.
3. Specify the document type.
4. If required, make entries in the optional fields for compression, special G/L indicators, and posting keys for payment on account.

Example

Posting rule

PArea PK (D): Account (Deb.) PK (C): Account (Cred.) DT PstType
BANK CASH RECEIPT SB
CASH RECEIPT DZ

Create a transaction type

In this activity you create the names and descriptions of the various transaction types you require. House banks that use identical lists of business transaction codes (external transactions) can be assigned to the same transaction type later.

Example

You create transaction type **MC** for account statements in MultiCash format.

Activities

Create the names and descriptions of the various transaction types you require.

Assign external transaction codes to posting rules

In this activity you assign (external) transactions to an (internal) posting rule. This means that the same posting specifications can be used for different business transaction codes.

Example

1. Business transaction code is for debit memos by direct debit

2. Business transaction code is for debit memos by automatic debit
3. Business transaction code is for debit memos by transfer order

From the point of view of your organization, the external business transactions listed above use identical posting procedures and must therefore be assigned to the same posting rule (for debit memos). The same posting rules can also be used for different bank details, even if different business transaction codes are used (if different file formats are used, for example).

Activities

1. For each transaction type, assign a posting rule to each external transaction key.
2. In the +/- *Sign* field, enter + or - to indicate whether payments are incoming or outgoing.
3. If necessary, define an interpretation algorithm if open items are to be cleared automatically as a result of the posting.

Remark

The *Processing Type* field is currently **only** used for the formats BACS (England), BAI (USA), and BRADESCO/ITAU (Brazil).

For business transaction codes for messages in format camt, you have to place the prefix <> before the business transaction code of the bank. Example for a business transaction code in the statement file:

```
<BkTxCd><Domn><Cd>PAYM</Cd><Fmly><Cd></Cd><SubFmlyCd><
/SubFmlyCd></Fmly></Domn><Prtry><Cd></Cd></Prtry></BkTxCd>
```

For this example, you would make the entry <>PAYM in Customizing.

Note regarding unknown external transactions

If the bank uses an external transaction that you have **not** yet entered in Customizing, the system terminates the processing of the account statement.

In order to ensure that the processing of the account statement does **not** terminate, you can define the external transaction **UNALLOCATED**.

Example

To have the system post the unknown external transaction in bank accounting, but assign them to the worklist for postprocessing in the subledger, proceed as follows (for example):

Create two posting rules **UNA** (unknown cash receipt transaction) and **UNA** (unknown cash disbursement transaction):

Posting rule	Posting area	Debit Account	Credit Account	Posting type
UNA	Bank	Cash Receipt		
UNA	Cash Receipt			
UNA	Cash disbursement		Bank	
UNA		Cash disbursement		

Then set up the external transaction UNALLOCATED for each of the transaction types you use, as follows:

External transaction +/- Sign Posting rule Interpretation algorithm

UNALLOCATED + UNA No interpretation

UNALLOCATED - UNA No interpretation

Assign bank accounts to transaction types

In this activity you assign each of your bank accounts to a transaction type.

You can specify a worklist of G/L accounts. This enables you to search several bank subaccounts for open items that the system could not clear during posting of the account statement when you postprocess the account statement.

If you select the field *No Automatic Clearing*, an open item remains, even if the amount of the open item agrees with that in the account statement.

Example

- In the account statements you receive from bank X and bank Y, the business transaction code indicates that the transaction involves a credit memo. This transaction is represented by the posting rule in your organization.
- Bank Z uses different business transaction codes than banks X and Y. A different posting rule should be used for business transaction code in this case. It is also possible that a totally different business transaction code is used for credit memos for the file formats used by bank Z, and that posting rule must be assigned to this code. In this scenario, you would use two transaction types: One transaction type for bank Z and another transaction type for banks X and Y.

In addition, you can assign your house bank accounts to a currency class. This setting is necessary for the Spanish CSR format.

Activities

Assign your banks to a transaction type and, if necessary, a currency class. The banks are identified by their bank key and external account number.

Further notes

For more information, see the SAP Library under *Financials -> Financial Accounting -> Bank Accounting -> Electronic Bank Statement*.

For information on the settings specifically for Real Estate, refer to the RE-specific IMG documentation, Electronic Account Statement Entry.

Configure Returns Processing

Use

Here you specify how the electronic account statement processes returned debit memos.

- *Assign Internal Return Reasons to External* (return reasons):
You assign a combination of an external transaction and an external returns reason to an internal returns reason, dependent on the bank details.
If you want to make the same assignment for all bank details of a transaction category then you can enter the transaction type, and leave the fields for the bank details blank. If the bank statement does not contain a return reason, or if you want to define the same return activities for all return reasons, then enter only the external business transaction code and leave the *External Returns Reason* blank.
- *Return Activities*:
Here you specify the account to which the return line items and fees should be posted. You also specify if clearing should be reversed for the source document (also see Reverse Clearing).
- *Change Open Items*:
If you set the *Reverse Clearing* indicator in the *Return Activities*, then you can have the system automatically change the customer items that are reopened, per company code. For this procedure, you can
- Set a dunning or payment block
- Change or delete the payment method
If you do not enter anything in these fields, then the system does **not** change these documents.

Business Add-In: Processing of Returns

Use

This Business Add-In (BAI) is used in the component *Electronic bank statement (FI-BL-PT-BS-EL)*.

With this BAI you can control the processing of returns. On the basis of the bank statement data (Import Parameter I_FEBKO (header data),

I_FEBEP(Line item) and the table T_FEBRE (Payment note)) you can decide if a line item is a return and if there are bank charges. You can also search for the returns reason and charges in the payment note.

The BAI is called up directly after importing the bank statement data.

Requirements

Standard settings

The Business Add-In is not active in the standard system.

Activities

After calling up the IMG activity, a dialog box appears, in which you can enter a name for the implementation.

If you have already made other implementations for this BAdI, another dialog box appears, in which the existing implementations are displayed. In this case, choose *Create*, and proceed as follows:

1. In the dialog box, enter a name for the BAdI implementation in the *Implementation* field, and choose *Create*.
The screen for creating BAdI implementations is now displayed.
2. Enter a short text for the implementation in the *Short text for implementation* field.
3. From the tab index, choose *Interface*.
The *Name of implemented class* field is already filled on the tab page, as a class name was automatically assigned to the implementation when you named it.
4. Save your entries, and assign the implementation to a development class.
5. Place the cursor on the method, and double-click to enter method processing.
6. Enter the code for the implementation between the statements `method <Interface name> ~`
`<Name of method> and endmethod.`
7. Save and implement your code. Return to the *Edit Implementation* screen.
8. Save the entries on the *Edit Implementation* screen.
Note: You can also create an implementation, and then activate it at a later time. In such a case, end the processing stage at this point.
9. Choose *Activate*
The code you stored in the method will be run when the application program is executed.

Example

To display example coding, select *Goto -> Example coding -> Display*.

If the standard program finds a return reason, then only the charge in the payment note is searched for in the example coding.

If the standard program finds **no** return reason, then the return reason is also searched for in the example coding.

Also see:

Method

Return inbank statement

Account Statement Entry: Assign Transactions

In this section you determine which procedures in account statement entry are to be considered as incoming payments in the real estate management sense. The procedures are either considered as returned debit memos or as incoming payments. If none of the assignments apply, the payments are treated according to the standard logic of FI Financial Accounting (for instance check deposit, outgoing payments to vendors etc.)

You define the procedures for account statement entry in Financial Accounting Customizing.

Also read Electronic Account Statement Entry.

Account Statement Entry: Test Tool

Generate Data for the Electronic Account Statement Entry

Test Environment for Electronic Account Statement Entry

The test environment is designed to help you during implementation of the electronic account statement in the Real Estate component with:

- a) Generating test data (credit memos or returned debit memos) that can be modified as required.
- b) Generating these files in the required format (MULTICASH or DTAUS) as a data file.

Attention: This test environment is for use only in your test system. Do not use it in your productive system!

Prerequisites

You must maintain a house bank and a house bank account in the company code for which the account statements are to be produced. You must also maintain the general ledger account in the master data for the house bank account (for example, G/L account). For the DTAUS bank procedure, you must maintain a bank procedure account number in the contract.

The following external transaction keys must be assigned to the transaction type, which is linked to the house bank (Refer to Assign external transactions):

- MULTICASH Format:
- Transfer credit memo: - Returned debit memo : - Format DTAUS:
- Transfer credit memo:
- Returned debit memo :

Test Procedure

1. Creating test data

Choose the action **Generate test data for the electronic statement entry** (Refer to Report documentation)

You must make the following preparations in the Real Estate component:

- To simulate a credit memo (incoming payment): Create one or more rental agreements and carry out a debit position to generate open items.
 - To simulate a returned debit memo (outgoing payment): Clear open items for rental agreements using, for example, the payment program.
2. Processing test data
The data can also be over-modified, for example, "mutilating" a rental agreement number. In this case, choose the action **Change test data to multicash format** or **Change test data to DTAUS format**.
 3. Generating a data file for testing purposes
To generate the prepared data in the required format (multicash or DTAUS) as a data file for the account statement entry, choose the action **Generate data for the electronic account statement entry**. (Refer to Report documentation)
 4. Using this generated data you can now test the account statement entry. The files are further processed using the program RFEBKA (Account statement import) or via menu path: Accounting -> Real estate management -> Rental management -> Rental accounting:
Incoming payment -> Account statement entry or
Country specifics -> Bank procedure

Change Test Data to Multicash Format

Test Environment for Electronic Account Statement Entry

The test environment is designed to help you during implementation of the electronic account statement in the Real Estate component with:

- a) Generating test data (credit memos or returned debit memos) that can be modified as required.
- b) Generating these files in the required format (MULTICASH or DTAUS) as a data file.

Attention: This test environment is for use only in your test system. Do not use it in your productive system!

Prerequisites

You must maintain a house bank and a house bank account in the company code for which the account statements are to be produced. You must also maintain the general ledger account in the master data for

the house bank account (for example, G/L account). For the DTAUS bank procedure, you must maintain a bank procedure account number in the contract.

The following external transaction keys must be assigned to the transaction type, which is linked to the house bank (Refer to Assign external transactions):

- MULTICASH Format:
- Transfer credit memo: - Returned debit memo : - Format DTAUS:
- Transfer credit memo:
- Returned debit memo :

Test Procedure

1. Creating test data
Choose the action **Generate test data for the electronic statement entry** (Refer to Report documentation)
You must make the following preparations in the Real Estate component:
 - To simulate a credit memo (incoming payment): Create one or more rental agreements and carry out a debit position to generate open items.
 - To simulate a returned debit memo (outgoing payment): Clear open items for rental agreements using, for example, the payment program.
2. Processing test data
The data can also be over-modified, for example, "mutilating" a rental agreement number. In this case, choose the action **Change test data to multicash format** or **Change test data to DTAUS format**.
3. Generating a data file for testing purposes
To generate the prepared data in the required format (multicash or DTAUS) as a data file for the account statement entry, choose the action **Generate data for the electronic account statement entry**. (Refer to Report documentation)
4. Using this generated data you can now test the account statement entry.
The files are further processed using the program RFEBKA (Account statement import) or via menu path: Accounting -> Real estate management -> Rental management -> Rental accounting:
 Incoming paymenty -> Account statement entry or
 Country specifics -> Bank procedure

Change Test Data to DTAUS Format

Test Environment for Electronic Account Statement Entry

The test environment is designed to help you during implementation of the electronic account statement in the Real Estate component with:

- a) Generating test data (credit memos or returned debit memos) that can be modified as required.
- b) Generating these files in the required format (MULTICASH or DTAUS) as a data file.

Attention: This test environment is for use only in your test system. Do not use it in your productive system!

Prerequisites

You must maintain a house bank and a house bank account in the company code for which the account statements are to be produced. You must also maintain the general ledger account in the master data for the house bank account (for example, G/L account). For the DTAUS bank procedure, you must maintain a bank procedure account number in the contract.

The following external transaction keys must be assigned to the transaction type, which is linked to the house bank (Refer to Assign external transactions):

- MULTICASH Format:
- Transfer credit memo: - Returned debit memo : - Format DTAUS:

- Transfer credit memo:
- Returned debit memo :

Test Procedure

1. Creating test data
Choose the action **Generate test data for the electronic statement entry** (Refer to Report documentation)
You must make the following preparations in the Real Estate component:
 - To simulate a credit memo (incoming payment): Create one or more rental agreements and carry out a debit position to generate open items.
 - To simulate a returned debit memo (outgoing payment): Clear open items for rental agreements using, for example, the payment program.
2. Processing test data
The data can also be over-modified, for example, "mutilating" a rental agreement number. In this case, choose the action **Change test data to multicash format** or **Change test data to DTAUS format**.
3. Generating a data file for testing purposes
To generate the prepared data in the required format (multicash or DTAUS) as a data file for the account statement entry, choose the action **Generate data for the electronic account statement entry**. (Refer to Report documentation)
4. Using this generated data you can now test the account statement entry.
The files are further processed using the program RFEBKA (Account statement import) or via menu path: Accounting -> Real estate management -> Rental management -> Rental accounting:

Incoming paymenty -> Account statement entry or
Country specifics -> Bank procedure

Generate Data File for Electronic Account Statement Entry

Test Environment for Electronic Account Statement Entry

The test environment is designed to help you during implementation of the electronic account statement in the Real Estate component with:

- a) Generating test data (credit memos or returned debit memos) that can be modified as required.
- b) Generating these files in the required format (MULTICASH or DTAUS) as a data file.

Attention: This test environment is for use only in your test system. Do not use it in your productive system!

Prerequisites

You must maintain a house bank and a house bank account in the company code for which the account statements are to be produced. You must also maintain the general ledger account in the master data for the house bank account (for example, G/L account). For the DTAUS bank procedure, you must maintain a bank procedure account number in the contract.

The following external transaction keys must be assigned to the transaction type, which is linked to the house bank (Refer to Assign external transactions):

- MULTICASH Format:
- Transfer credit memo: - Returned debit memo : - Format DTAUS:
- Transfer credit memo:
- Returned debit memo :

Test Procedure

1. Creating test data

Choose the action **Generate test data for the electronic statement entry** (Refer to Report documentation)

You must make the following preparations in the Real Estate component:

- To simulate a credit memo (incoming payment): Create one or more rental agreements and carry out a debit position to generate open items.
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2. Processing test data
The data can also be over-modified, for example, "mutilating" a rental agreement number. In this case, choose the action **Change test data to multicash format** or **Change test data to DTAUS format**.
3. Generating a data file for testing purposes
To generate the prepared data in the required format (multicash or DTAUS) as a data file for the account statement entry, choose the action **Generate data for the electronic account statement entry**. (Refer to Report documentation)
4. Using this generated data you can now test the account statement entry. The files are further processed using the program RFEBKA (Account statement import) or via menu path: Accounting -> Real estate management -> Rental management -> Rental accounting:
 Incoming paymenty -> Account statement entry
 or Country specifics -> Bank procedure

COA Mandate: Assign Flow Types for Account Statement

Use

In order to be able to represent inflows and outflows in the report for the reserve fund statement for a condominium owners' association, you need to assign flow types to flows that are posted using the electronic bank statement.

Enhancements

Change Account Determination (BAdI)

Use

You can use this BAdI to determine the G/L account HKONT and to influence the use of the special G/L indicator UMSKZ in RE posting processes.

When the REPLACE_ALL interface method is implemented, the standard implementation for determining these fields is completely replaced. If no account is determined, this causes an error message in the posting interface. The error message is output in the log of the relevant posting process.

When the CHANGE_KEYDATE interface method is implemented, the original due date that was transferred can be changed in the standard implementation. As a result, the system can determine a

different account, which was entered in Customizing, if the fiscal year of this key date differs from the fiscal year of the posting date. If an (optional) RE line item is transferred by the standard implementation, then any date from the RERA_DOC_ITEM_EX structure can be used.

Requirements

The standard behavior of account determination has to be changed because the existing functions are not sufficient.

Activities

Implement one of the methods of the BAdI using transaction SE.

Example

1. Implementation of the REPLACE_ALL interface method: You want to use your own table instead of the standard table for account determination TIVEXFIREPSYMB.
2. Implementation of the CHANGE_KEYDATE interface method: The RE line item IS_DOCITEM is transferred by the calling program. The key date CD_KEYDATE (in the standard the original due date) is overwritten by the current due date IS_DOCITEM-BLINEDATE that was entered manually in the cash flow. Notes for

Developers

Change Document Data (BAdI)

Use

The REEX_FI_BAPI BAdI makes it possible to change document data before it is transferred to the Accounting Interface. To do this, implement the BAPIDOC_MODIFY method.

The BAdI is executed for all RE posting processes, such as periodic postings, input tax distribution, service charge settlement, sales-based settlement, and so on. However, it is not executed for pure FI postings (such as FB, FB, and so on), even if there is account assignment to real estate objects.

Caution: Only change non-critical data, such as payment data, dunning data, segment text, and so on. Never change critical data such as accounts or amounts.

Requirements

You want to change document data, for example in periodic postings.

Activities

Implement the BAPIDOC_MODIFY method of the BAdI using transaction SE.

The parameters are:

ID_MODE: Mode of the posting run (E: update run, S: simulation)

ID_PROCEDURE: Procedure (such as REDP for customer receivables, RETP for G/L account transfers, RECP for vendor payables, and so on)

IS_RE_HEADER: Document header data of RE document

IT_RE_ITEM: Table of line item data of RE document

CS_BAPI_HEADER: Document header data

CT_BAPI_ITEMS_AR: Document line items of debit items (except amounts and RE data)

CT_BAPI_ITEMS_AP: Document line items of credit items (except amounts and RE data)

CT_BAPI_ITEMS_GL: Document line items of G/L account items (except amounts and RE data)

CT_BAPI_ITEMS_TAX: Tax lines

CT_BAPI_ITEMS_AMOUNT: Amount items

CT_BAPI_ITEMS_RE: Data of RE, such as contract number

CT_BAPI_ITEMS_WT: Withholding tax types and withholding tax codes for the corresponding items

Example

The following example describes how the BAdI can be used.

In contract maintenance for customer contracts, you defined payment method 'E' (bank debit). For credit memos, you want to replace this with 'U' (bank transfer), if the contract is already ended on the posting date.

In a loop over the debit items in table CT_BAPI_ITEMS_AR, you check if the credit memos have payment method E. After that, the end date of the contract is determined and compared with the posting date of the document. If the contract is ended, the payment method is changed to 'U.'

Refer to the sample code (Goto -> Sample Code -> Display). Notes for Developers

One-Time Postings

One-Time Postings

Use

Using the *One-Time Postings* function, you can post documents in *Financial Accounting* (FI) with reference to data in *Real Estate Management* (RE-FX).

The data entry screens for one-time postings are considerably simplified, as compared to the normal FI interface, and better adapted to the needs of real estate management.

You first enter the posting activity and the company code. Based on the settings made in Customizing for the posting activity, the system constructs one or more documents that you can then add to (for example, by entering the invoice amount or the concrete real estate object).

Activities

In this section, you specify the following:

- You set up posting activities.
- You assign them to posting activity groups.
- You specify the field status variants for the posting activities.
- You specify how the settlement reference date is determined based on the service charge key.

You start one-time postings either using the RE Navigator (transaction RE) from the object overview for the company code, or using transaction RERAOP - One-Time Postings.

If you want to set up individual transactions for each posting activity, you can set up parameter transactions for this in the customer namespace using transaction SE. Use transaction RERAOP_SC as a template.

Overwrite the value SC (in the *Value* column in the *Default Values* table) with the key of your posting activity.

You can then link the parameter transactions you created in this way with your role menu.

Define Posting Activities

Use

Using the *One-Time Postings* function, you can post documents in *Financial Accounting* (FI) with reference to data in *Real Estate Management* (RE-FX).

The data entry screens for one-time postings are considerably simplified, as compared to the normal FI interface, and better adapted to the needs of real estate management.

You first enter the posting activity and the company code. Based on the settings made in Customizing for the posting activity, the system constructs one or more documents that you can then add to (for example, by entering the invoice amount or the concrete real estate object).

Based on the Customizing settings you make for the posting activity, the system determines the following (among other information):

- How many documents are to be posted
- How many items the documents being posted have

- Default data for the document header and the line items (especially account symbols, bank details, account assignment objects, and percentage of total amount)

Field status variants for the document header and line item data

Here you specify what part of the data determined by the system can be manually overwritten by the user.

- If and how distribution should be made to objects of the contract

Standard settings

Some posting activities are delivered with standard Customizing, such as:

- Posting of vendor invoices with reference to real estate objects
- Posting of one-time receivables for contract partner with customer account
- Posting of costs of condominium owners association (COA)

You can copy these Customizing settings and use them as a template for defining your own posting activities.

For example, if you are using condominium owners' association (COA) management, then you could define a separate posting activity for each service charge key that is used for the condominium owners association. To post an incoming invoice then, the user only has to enter the amount and the vendor. The system determines all other data, including the settlement unit, automatically.

Activities

- Define the posting activities you need. (The simplest way is copying from standard Customizing.)
Make the settings for the posting activity. For information on the meanings of the different settings, see the field documentation.
- In the detail screen for the *Posting Activity*, make settings for all documents that are posted using this posting activity.
In the application transaction, the user enters *Basic Data* in the upper part of the screen. The system then derives other data for the document (document header and line items) from this basic data.
Here you specify what this basic data is:
 - Does the posting activity reference a real estate contract or a rental object?
 - Does the document require you to enter a customer or vendor partner explicitly, or is it possible for the system to derive the customer or vendor from the real estate contract or rental object?
 - In which company codes is the posting activity allowed to be used?
 - Should a house bank account be entered explicitly for the posting activity? This house bank is used for all payments resulting from the posting. (This is useful, for example for COA postings to special asset accounts.)
- What are the general settings in document entry?

- Which help text is displayed when the user chooses @AI@ with the quick info text *Posting Activity Help*?
 - Help texts are defined for the posting activities delivered by SAP, for instance, for posting activity CNC: Vendor Invoice for Tenant:
RERA_OP_EXAMPLE_CNC.
 - You can enter your own help texts. In transaction SE, enter General Text in the *Document Class* field and choose *Create*. Or enter the name of your help text in the field for it in this dialog, and choose change mode to be able to process the text. For your own texts, choose names from the customer name range (beginning with Y or Z).
 - For posting activities, for which you do not want to write your own texts, you can use the standard text RERA_OP_EXAMPLE_GENERAL.
- In the detail screen for the *Documents*, make settings for the individual documents that are posted using this posting activity.
- Most posting activities only post one document. However, you can post several documents using the same posting activity (for instance, when a vendor invoice is passed on to a tenant using another document).
- The documents can also post in different company codes. In this case, there is no clearing posting. Instead, the documents are posted independently from each other as entered.
- Is the activity subject to taxes?
- In the detail screen for the *Document Line Items*, you specify the account the document posts to, by entering the account type and account symbol. In addition, you can define the following:
 - If and how the account assignment object, and possibly the customer or vendor account, are derived from the basic data (for G/L account items)
 - The default values for dunning and payment data (for debit or credit line items, these values can also be copied from the contract in the basic data)
 - The tax code used for posting this item
- If a distribution formula is used, and which one
 - If a distribution formula is used, multiple line items might be generated, depending on the objects that the contract in the basic data is assigned to.
 - Dependent on the distribution key and the contract, the system determines the objects to which account assignment is made. Then it distributes the amount in the basic data of the posting to these objects based on the distribution formula. The line items generated are essentially the same as those generated by the object cash flow of a contract using this distribution formula, as far as the CO account assignment and amount are concerned.
- Save the posting activity once all of your settings are made.
- On the detail screen for the *Posting Activity*, assign the posting activity to an existing posting activity group. Or define a new posting activity group and assign the posting activity to it.
- Define a field status variant for the basic data, and assign it on the detail screen for the *Posting Activity*.
 - Assign a field status to the *Line Items* on the detail screen. If there is no suitable field status yet, define one in the Field Status Variants for Line Items IMG activity. Note: The field status variant is

not allowed to contradict the field status variant entered in Financial Accounting (FI) for the account group of the account, which is derived from the account symbol of the item. This means, for example, you have to make sure that all fields that are defined there as required entry fields receive values from your one-time postings. Either the values for these fields have to be derived, or they also have to be required entry fields (in the case of manual entry).

- Save your settings.
- Before you set a posting activity to active in your production system, you should test it carefully using transaction RERAOP (or RE) to make sure it does what you intended.
- After going live, you might find that users still perform certain postings in the RE context using FI transactions. In that case, you might consider if you want to define posting activities for these postings also.

Define Groups for Posting Activities

Use

In order to structure posting activities, you can define groups of posting activities. The posting activity group is displayed as a node in the navigation tree in the RE Navigator (RE). The posting activities are displayed below the group.

Activities

Define the posting activity groups and then assign posting activities to the groups.

If you want the group (and its posting activities) to be displayed in the navigation tree, then set the *Active* indicator.

To prevent a group of posting activities from being used, deselect the indicator.

Define Rule for Proposing Settlement Reference Date

Use

Here you define, dependent on the service charge key and the settlement variant, how the settlement reference date should be determined based on the document date.

The settings you make here are used as follows:

- Only for one-time postings
- Only if you defined the line item in the Define Posting Activities IMG activity, so that the settlement reference date is proposed
If the *Prop.Sett.Rf.Dt* (Propose Settlement Reference Date) indicator is set there, but no setting is made here in this IMG activity for the service charge key or the settlement variant that the settlement unit belongs to, then the system uses the document date as the settlement reference date.

Activities

For all appropriate service charge keys, define how the system should determine the default value for the settlement reference date. For more information, see Determine Settlement Reference Date.

Field Status

Define Field Status Variants for Basic Data

Use

Using the field status variant of the basic data, you can control which data is visible in the upper part of the screen when you enter one-time postings. You also specify which fields are ready for input and which fields are required entry fields.

Activities

- Define different field status variants for different types of posting activities. Usually one field status variant for basic data is enough, for example, for all posting activities that post to vendor invoices on a real estate object.
- You can use standard Customizing as a guide when you create your own new field status variants. You can copy the field status variant that most closely approximates your requirements and use it as a reference.
Select the field status variant you want to change. Choose *Fld Status* to set the field status of the individual fields. If you set the *Suppress* indicator, the field is **not** displayed on the screen. Even if the field is not displayed, the system might determine a value for the field and transfer the value to

Financial Accounting. Therefore, to make the entry screen more concise, you can suppress fields, for which the system determines the values, when you do **not** want these values to be overwritten by the user (and the user does **not** need the information in the field).

- In the Define Posting Activities IMG activity, assign the field status variants in the detail screen of the *Posting Activity*.

Define Field Status Variants for Line Items

Use

Using the field status variant of the line items, you can control which data is visible for each line item on the lower part of the screen when you enter one-time postings. You also specify which fields are ready for input and which fields are required entry fields.

Activities

- At the minimum, define a field status variant for each account type that you need for one-time postings. In addition, you could also define different field status variants dependent on the context of the posting activity.
- You can use standard Customizing as a guide when you create your own new field status variants. You can copy the field status variant that most closely approximates your requirements and use it as a reference.
- Select the field status variant you want to change. Choose *Fld Status* to set the field status of the individual fields. If you set the *Suppress* indicator, the field is **not** displayed on the screen. Even if the field is not displayed, the system might determine a value for the field and transfer the value to Financial Accounting. Therefore, to make the entry screen more concise, you can suppress fields, for which the system determines the values, when you do **not** want these values to be overwritten by the user (and the user does **not** need the information in the field).
However, you should always have the system display the account assignment object, for example, even if it is **not** modifiable. Remember that whether or not the account assignment object is modifiable depends on whether the derivation of the account assignment object is required, and **not** on the field status.
- In the Define Posting Activities IMG activity, assign the field status variants to each line item in the detail screen for the line items.

Allow Partly Automatic Creation of Company-Code-Dependent Data

Use

In the course of condominium owners' association (COA) management, one vendor can be the business partner of different COAs. To be able to post to this vendor in a COA (that is, in the COA company code, see company code type), the following requirements have to be met:

- The vendor master record has to exist.
- The company-code-dependent data of the vendor has to exist.
Normally this is **not** the case for the first posting to this vendor in the COA.

During one-time posting, the system checks if the vendor exists in the company code. If this vendor does **not** exist, and if you set the Create Customer/Vendor? indicator in this activity, then the system displays a pushbutton in the one-time posting transaction in the application. You can choose this pushbutton to create a vendor in the company code.

If the current company code is a mandate company code, then the system first tries to copy the company-code-dependent data of the reference company code. If the vendor also does **not** exist in the reference company code, then the system creates the vendor using the default values you entered in Customizing.

It is **not** possible for the system to also create the data of the vendor that is **not** company-code-dependent from the one-time posting in the application. If you choose, you can create this data in another session.

Activities

If you want the system to behave as explained above, then set the indicator in the reference company code and in any existing mandate company codes. The system then copies the indicator for any new mandates you create.

Search Strategy

Vendor

Define Search Strategies for Vendor

Use

The vendor in the basic data of a posting activity can often be derived from other data (for example, from the contract). If it is **not** possible to derive the vendor in this way, you can specify a search strategy here for the vendor. The result is that, in the context of this posting activity, the system first proposes those vendors in the search help that are specified by the search strategy. This makes it easier for you to select, since the number of proposed values is smaller. In addition, one of these "preferred" vendors can be designated as a default value.

Activities

Define the search strategies for the VENDOR search field as follows:

Enter a name for the search strategy.

Specify how the search takes place:

- *Name*
Text of search strategy (informational only)
- *Search Method*
This is a method that is predefined in the system. The method describes how the search is performed. The way the system processes the values for the search strategy depends on the method you select here. Choose a method using the input help.
- *Active?*
You can only use search strategies. For example, if you copied the search strategies from standard Customizing, then set the *Active?* indicator for those that you want to actually use in your system.
- *Other Values*
Set this indicator, if you also want the standard search help to be available. The system then displays a *Further Values* row, in addition to the values returned by the search strategy. From there you can navigate to the standard search help.

The following search methods for the vendor are predefined in the system:

- <blank> Individual values for vendor
You enter the values for each search strategy in the value table.
- ROLE Partners for a role (example implementation of BAdI)
In the value table, you enter the partner roles the system searches for. The search strategy then returns all vendors for the partners with this role.

Specify Possible Vendors for Search Strategy

Use

You enter the possible values here for a search strategy that was already defined. For search strategies with the individual values method, enter the vendors in the *Differentiation Criterion* column. For search strategies with the role method, enter the role or roles in the *Differentiation Criterion* column.

Activities

For each search strategy, enter the search values that are needed based on the search method:

Where you enter these values is dependent on the search method used by the search strategy. For search methods where the values for the strategy are simply entered, you enter the values directly in the *Differentiation Criterion* field. In that case, you can specify only one value for each search strategy as a default value.

For search methods that recognize a differentiation criterion (such as, the location of the current object), you have to enter the possible values for each differentiation criterion in the *Field Contents* field.

You can use wildcard characters here: An asterisk (*) replaces any number of characters, while a plus sign (+) replaces exactly one character. If more than one value is possible for a differentiation criterion, then enter a number to distinguish the values in the *Seq. Number* (sequence number) field. You are only allowed to designate one value as the default value for each combination of search strategy and differentiation criteria.

To help you select possible values more easily, you can choose *Propose Values*. Position the cursor on the search strategy, for which you want to propose values (or, if there is no entry yet for search strategy, on the search field). Then choose *Propose Values*. The system displays a search help appropriate for the search strategy. You can select the values there that you need for this search strategy.

Note on transport:

If you enter vendor numbers in the table, transporting to another system only makes sense if the vendor numbers are the same in both systems!!

Example

Search strategy /INS:

Insurance

with individual values search method, contains these vendors in the *Differentiation Criterion* column - ABC Insurance Co. - XY Insurance, Ltd.

Search strategy

/ENERGY: Energy provider with ROLE search method, contains this role in the *Differentiation Criterion* column

ZZENER - Energy provider

Service Charge Key

Define Search Strategies for Service Charge Key

Use

You use this activity if you want to be able to select a service charge key for an item of a posting activity from a number of various service charge keys. This requires entering a search strategy for this service charge key. The result is that the service charge keys specified by the search strategy appear in the input help for each line item. This makes it easier for you to select, since the number of proposed values is small.

Activities

Define the search strategies for the SCSCKEY search field as follows:

Enter a name for the search strategy.

Specify how the search takes place:

- *Name*
Text of search strategy (informational only)
- *Search Method*
This is a method that is predefined in the system. The method describes how the search is performed. The way the system processes the values for the search strategy depends on the method you select here. Choose a method using the input help.
- *Active?*
You can only use search strategies. For example, if you copied the search strategies from standard Customizing, then set the *Active?* indicator for those that you want to actually use in your system.
- *Other Values*
Set this indicator, if you also want the standard search help to be available. The system then displays a *Further Values* row, in addition to the values returned by the search strategy. From there you can navigate to the standard search help.

For service charge keys, the only search method supported by the system is the < blank > (individual values) method. You enter the possible service charge keys for all defined search strategies in the value table.

Specify Possible Service Charge Keys for Each Search Strategy

Use

You enter the possible values here for a search strategy that was already defined. For search strategies with the individual values method, enter the service charge key in the *Differentiation Criterion* column.

Activities

For each search strategy, enter the search values that are needed based on the search method:

Where you enter these values is dependent on the search method used by the search strategy. For search methods where the values for the strategy are simply entered, you enter the values directly in the *Differentiation Criterion* field. In that case, you can specify only one value for each search strategy as a default value.

For search methods that recognize a differentiation criterion (such as, the location of the current object), you have to enter the possible values for each differentiation criterion in the *Field Contents* field.

You can use wildcard characters here: An asterisk (*) replaces any number of characters, while a plus sign (+) replaces exactly one character. If more than one value is possible for a differentiation criterion, then enter a number to distinguish the values in the *Seq. Number* (sequence number) field. You are only allowed to designate one value as the default value for each combination of search strategy and differentiation criteria.

To help you select possible values more easily, you can choose *Propose Values*. Position the cursor on the search strategy, for which you want to propose values (or, if there is no entry yet for search strategy, on the search field). Then choose *Propose Values*. The system displays a search help appropriate for the search strategy. You can select the values there that you need for this search strategy.

Example

Search strategy /HEAT:

Heating costs

with individual values search method, contains these service charge keys in the *Differentiation Criterion* column

Heating costs

Furnace check
Heat and hot water
Chimney cleaning

Search strategy

/ENERGY: Energy costs contains
these service charge keys

Lighting

Heating costs

Furnace check

Heat and hot water Chimney
cleaning

Enhancements

One-Time Postings: Change Default Data

Use

Using this Business Add-In (BAI), you can change the default data for one-time posting documents. The data changed by the BAI is displayed before posting, and the user can modify the data again if necessary.

Activities

Create a BAI implementation and implement the methods you require for your enhancement. Then activate the BAI implementation.

You can use the following methods:

- **COMPLETE_BASE_DATA:** Change or add to basic data of document
- **COMPLETE_HEADER_DATA:** Change or add to header data of document
- **COMPLETE_ITEM_DATA:** Change or add to item data of document

In each case, you can change data and/or have the system issue messages. If an error message is issued, the document cannot be posted.

- **CHECK_BASE_DATA:** Validation of document basic data
- **CHECK_SINGLE_HEADER:** Validation of document header data per document header
- **CHECK_SINGLE_ITEM:** Validation of line item data per line item

The CHECK methods are called after data entry (PAI) and for explicit checks ('Check All Entries' key). If an error message is issued, the document cannot be posted.

Example

You can use the implementation of the **COMPLETE_BASE_DATA** method as an example.

First there is a check of whether a contract was entered in the basic data. The system then determines the standard posting terms for this contract. If there is an entry in the Note to Payee field there, then it is copied to the document reference. The user can still change this entry.

See also

For information on using BAdIs, see this documentation.

Notes for Developers

Define Custom Search Methods for Search Strategies

Use

Here you define your own custom search methods. You can then process the corresponding implementations for them using a BAdI. For more information, see Implement/Activate Search Methods for Search Strategies.

Standard settings

Some methods are predefined in the system. However, they only deliver the expected results when the sample code of the BAdI is activated.

Activities

If the predefined search methods are not sufficient to meet your needs, you can define your own methods. Choose names for your methods that begin with the letter Y or Z.

You can assign one method to several search fields. However, doing so makes sense only if the search fields point to the same domain (for example, the land registry and the agency responsible for the parcel, since both are business partners).

In addition, specify the following for the search method:

- A descriptive name
- The search help for the differentiation criterion (when entering allowed values)
- The type of the method

Then implement the BAdI for the search method.

Implement/Activate Search Methods for Search Strategies

Use

This BAdI can be used to define your own search methods for a search strategy. Search methods are each assigned to a search strategy. The BAdI method that is used depends on the type of search method that is entered for the method in table TIVCASHMETH. The following applies:

Type SPACE - Single Value Method, Values Are in VICASHFVALUES-SHMETHDIFF

There is no BAdI call, the values for the search strategy are entered directly in table VICASHFVALUES.

Type - Search Strategy + Possibly Object Data => (Program) Values The BAdI determines the possible values solely from the name of the of search strategy and possibly from the object data.

BAdI method to be implemented: **GET_VALUES**

Type Search Strategy =>SMETHDIFF => (Program) Values

First a differentiation criterion is determined for the search strategy from the value table VICASHFVALUES. The BAdI then determines the possible values from this differentiation criterion, possibly dependent on the object data and the name of the search strategy. BAdI method to be implemented: **GET_VALUES_FOR_SHMETHDIFF**

Type Object Data => (Program) SMETHDIFF => (VICASHFVALUES) Values

The BAdI determines a differentiation criterion from the object data and possibly from the name of the search strategy. The values for this differentiation criterion are then read from table VICASHFVALUES.

BAdI method to be implemented: **GET_SHMETHDIFF** Search

strategies are used in the following contexts:

- One-Time Postings:
Vendor search field (VENDOR) and service charge key (SCSCKEY)

The search strategy is determined from the Customizing settings for the posting activity (VENDOR) or for a specific item of the posting activity (SCSCKEY). An object reference is **not** transferred.
- Master Data of Parcel:
Search fields for main contractual partner (PARCOFF) and for all hierarchical locations (LOCHIER). The object reference of the parcel is transferred.
For the LOCHIER search field, the location structure of the hierarchical location you are searching for is also in the ID_CONTEXT field.
- Master Data of Land Register:
Search fields for land registry (LROFFICE) and for the hierarchical location (LOCHIER). The object reference of the land register is transferred.

For the LOCHIER search field, the location structure of the hierarchical location you are searching for is also in the ID_CONTEXT field.

The following applies to the search fields for the land register and parcel:
For each search field, only one search strategy is allowed to be designated as active.

Activities

Depending on the type of search method, implement one of the methods:

- **GET_VALUES**
- **GET_VALUES_FOR_SHMETHDIFF**
- **GET_SHMETHDIFF**

Description of parameters:

Method **GET_VALUES** and **GET_SHMETHDIFF**:

FLT_VAL

Search method

IO_REF_OBJ

Reference to the real estate object that is currently being processed. The reference is empty when the call is from posting activities. For the land register, the reference contains a reference to the land register master data; and for parcels, a reference to the parcel master data.

The BAdI method can retrieve the current object data using the API that belongs to it.

ID_CONTEXT

For the LOCHIER search field, contains the location key of the hierarchical location being searched for; otherwise it is empty.

IS_SHSTRAT

Contains certain Customizing data for the active search strategy

IS_SHFIELD

Contains the system Customizing data for the current search field

CT_VALUES

The result of the search is to be placed in this table. The KEY field has to be filled with the determined key of the search field. The text for it does not have to be entered. For methods of type , the value of the search field is not entered. Instead the differentiation criterion, which should be used to search in VICASHFVALUES, should be filled. In this case, wildcard characters ('%') are allowed for a search for similar values.

CD_DEFAULT_VALUE

If a default value was determined, it can be returned here. The default value is set when the value of the field, for which the search help was called, was initial at the time of the call.

CF_OTHER_VALUES_ALLOWED

This value should be returned as TRUE, if you want to have an option to choose "Other Values" in the search dialog box, in addition to the search result. If the user chooses this option, then the system calls the standard search help. The value does not influence whether the system checks the result of the search help (normally there is no check).

Method GET_VALUES_FOR_SHMETHDIFF

In addition to the parameters of GET_VALUES, the values that are maintained in the value table for the search strategy are also transferred to table IT_SHVALUES.

Example

Example class **CL_EXM_IM_RECA_SEARCH_METHOD** contains examples for the following search methods:

Type - Search Strategy + Possibly Object Data => (Program) Values**GET_VALUES** for **LOCHIER** search method

The hierarchical location of the parcel is derived from hierarchical locations to other location structures that are already entered in the system. A value is allowed here if the same text is entered for this location in Customizing.

GET_VALUES for **PARTNR** search method

The prerequisite here is that there is external number assignment for land registries (land register) and for the main contractual partner (survey office or responsible agency) of the parcel.

The partner number of the land register corresponds to the land register district; the number of the survey office corresponds to the first characters of the leading hierarchical location. This method might need to be adjusted to agree with the practices of your company regarding partner numbers. For example, it is possible that the partners could all have a prefix in the number, such as LR for land registry.

GET_VALUES for **ADDR** search method

The assumption here is that the postal code of the land registry corresponds to the land register district. All land registries, where postal code = land registry, are offered for selection. For the parcel, the system searches for a partner with the "Responsible Agency" role, where the city agrees with the text of the hierarchical location of the parcel.

Type Search Strategy =>SMETHDIFF => (Program) Values**GET_VALUES_FOR_SHMETHDIFF** for **ROLE** search method

This search method is appropriate for the **VENDOR** search field. The search method returns all vendor numbers of partners for the role that are maintained in the value table for the search strategy.

For example, if you create your own role for insurance, you can assign a search strategy with this search method to a posting activity for "insurance costs".

Type - Object Data => (Program) SMETHDIFF => (VICASHFVALUES) Values**GET_SHMETHDIFF** for **VALREG** search method

You can use this search method when the land registries for the land register district are entered in the value table. The search method determines the land register district for the current land register, or for the first characters of the hierarchical location of the current parcel.

Notes for Developers

Accrual/Deferral**Accrual/Deferral Using Accrual Engine in RE Environment****Use**

The Accrual Engine is used for posting accruals and deferrals periodically in RE-FX.

Standard settings

Copy the settings for the RE-FX application component that are delivered by SAP in the standard system and adjust them to your enterprise structure (company codes, accounting principles, and so on) if necessary.

To offer more flexibility, the entire Implementation Guide for the Accrual Engine is provided here.

However, you do not need to configure any settings for RE-FX for the following points:

- Derived Accrual Types
- Define Layout for Accrual Objects
- Extended Account Determination
- Document Change Using BAdI

Activities

- For the activities that are not listed here, check the settings delivered by SAP and adjust them if necessary.
- Create accrual types for the RE-FX component: Define Accrual Types.
- Specify an accounting principle for the RE component: Define Customer Settings for Components. The default accounting principle entered here is adopted automatically when an accrual object is created.
- In addition, you have to define a standard accrual method in Define Standard Settings for Accrual Calculation. Since the accrual objects are created automatically, the accrual method you specify here is adopted.

- Also assign an accrual type and a summarization flow type to the flow type in *Conditions and Flows: Flow Types*.

Legacy Data Transfer

The settings for legacy data transfer are not relevant in the context of RE-FX. Do not make any entries for the RE component here. Instead, proceed as described in SAP Note .

Accrual/Deferral

Basic Settings

Assign Company Codes

Use

In this IMG activity, you have to assign to the Accrual Engine those company codes in which you want to calculate and post accruals. This setting is required, as company codes **cannot** be transferred directly from Customizing for the enterprise structure.

Activities

For your application component, enter **all** company codes in which you want to calculate and post accruals.

Company Code Settings for Accrual/Deferral

Use

For the company code, specify whether:

- Taxes are also to be accrued/deferred
- Periodic postings are to be taken into account

Accounting Principles

Define Accounting Principles

Use

In this activity, you define your accounting principles. You have to make this setting if you want to depict a parallel valuation method in an additional ledger. You then assign accounting principles to the ledgers to which the postings are made.

Note

For performance reasons, you can combine several different accounting principles in one entry; for example, you create one accounting principle for *IAS/US GAAP*. This can be useful if, in an application, you have to create the data for each accounting principle, even if the postings derived from the data are identical for each accounting principle.

If, for example, you reflect both IAS and US GAAP in your system, in the application *Manual Accruals*, you have to create one accrual item for each accounting principle. However, the accruals are identical for IAS and US GAAP. You therefore only have to create one accounting principle in the system, for example *IAS/US GAAP for Accruals*.

Caution

The accounting principles that you have defined are available in various functions in Financial Accounting, such as in the report for foreign currency valuation, in *Manual Accruals* and in Provisions for Awards. SAP therefore advises you **not** to delete accounting principles. This is particularly important in the case of accounting principles that have already been used.

Activities

1. Enter a four-digit key in the *Accounting Principle* field.
2. In the *Description* field, enter a description for your accounting principle.
3. Save your accounting principle.

Assign Accounting Principle to Company Code

Use

In this IMG activity, you assign the relevant accounting principle(s) to the company codes that use the Accrual Engine.

AP System

Each time an accrual object is created, the system checks whether the entered company code/accounting principle combination is permitted.

This setting is necessary in order to guarantee that the authorization check is carried out at the company code and accounting principle level. For example, it is important to ensure that a German account has authorization to carry out an accrual run for his/her local accounting principle only. Meanwhile, the group accountant should also be able to carry out the accrual run in the group accounting principle (such as GAAP).

Activities

Assign the relevant accounting principles to the company codes.

Example

In company code (*USA*), you want to allow accounting principles *GAAP* and *IAS*. You therefore create the following combinations:

- Company code / Accounting principle *GAAP* -
- Company code / Accounting principle *IAS*

Accrual Types

Define Accrual Types

Use

In this IMG activity, you define the accrual types that you require.

If you want to perform all postings provided for by the system for an accrual type, the system makes the following postings:

- **Opening entry**
With an opening entry, the entire amount to be accrued is posted as the value. Account determination is normally set in such a way that the entire amount to be accrued is posted to an accruals account.
- **Periodic postings**
When periodic accrual is started, the accrual amount that is due at the key date is calculated and posted. Account determination is normally set in such a way that the posting is made from the accruals account to a profit and loss account.
- **Closing entry**

A closing entry is only made if the accrual object has been deactivated, even if all accruals have not yet been posted. The amount that has not yet been accrued at the time of deactivation is posted as a deactivation amount.

Activities

1. Choose *New Entries*.
2. In the *AccrualType* field, enter a text for your accrual type, such as *COSTS*.
3. You can create a derived accrual type. To do this, set the *derived* flag. By setting this flag, you specify that this accrual type is to be calculated from other accrual types, for example as the difference between or sum of these other accrual types. You then define the calculation rule that defines how this accrual type is to be calculated from other accrual types. You do this in Customizing, under *Derived Accrual Types*.
4. Specify which postings you want to be made for this accrual type:
 - *None*
For this accrual type, the amounts to be accrued are calculated but **no** corresponding postings are made.
 - *All*
An opening entry, the periodic posting and a closing entry are all posted.
 - *Periodic only*
Only periodic postings are made. No opening or closing entries are posted.
 - *Opening entry only*
Only the opening entry is posted.
5. In the *Description* field, enter a more detailed description for your accrual type.
6. Save your accrual type.

Derived Accrual Types

Define Operators for Derived Accrual Types

Use

In this IMG activity, you can define the operators for derived accrual types. An operator specifies how the accrual values of a derived accrual type are calculated from the values of the referenced accrual type, for example Operator + for adding or - for subtraction.

Requirements

You must have already created your accrual types in the IMG activity Define Accrual Types.

Standard settings

SAP delivers standard predefined operators. If the predefined operators do not meet your requirements for calculation of derived accrual types, you can create your own operators.

Activities

To create a new operator, proceed as follows:

1. In the *operator* field, enter a one-digit key for your operator.
2. Enter a *text* for your operator.
3. Save your operator.

Assign Operators to Function Modules

Use

In this IMG activity, you can assign a function module to an operator for a derived accrual type. This function module contains a description of how your operator works. You have the option of using SAP function module *ACE_DS_OPN_ADD* as a template.

Note

The function module must have a defined interface.

Requirements

You must already have created your operator in IMG activity Define Operators for Derived Accrual types.

Activities

To assign a function module to your operator, proceed as follows:

1. Enter the key for your operator.
2. Enter the name of the function module.
3. Save the assignment.

Define Calculation Guidelines for Derived Accrual Types

Use

In this activity, you define the calculation rule that you want the system to use to determine the accrual values for derived accrual types. In this calculation rule, you can also use the operators that you have defined.

Requirements

You must have already created your accrual types in the IMG activity Define Accrual Types.

Activities

1. Choose *New Entries*.
2. Make the following settings:
 - In the *Accrual Type* field, enter the derived accrual type for which you want to define the calculation rule.
 - Enter the required *accounting principle* for the derived accrual type.
 - Enter the *sort number*.
 - Enter an *operator*, such as Add, according to which you want the accrual values to be determined.
 - Enter the *referenced accrual type* from which you want the derived accrual type to be determined.
 - Enter the *referenced accounting principle* for the referenced accrual type.
- . Save your calculation rule.

Example

In this example, you calculate and post your accruals according to just one country-specific accounting principle ().

When you create an accrual object, you can choose between the following accrual types:

- *RVNUES* (revenues)
- *COSTS*

You also want to accrue the profit using the formula $PROFIT = RVNUES - COSTS$. To do this, you have to make the following settings.

1. In IMG activity Define Accrual Types, create an additional accrual type *PROFIT*. The operators *Add* and *Subtract* are provided by SAP in the standard system.

2. Create a calculation rule for **adding the revenues** with the following entries:
 - Accrual type: *PROFIT*
 - Accounting principle:
 - Sort number:
 - Operator: *Add*
 - Referenced accrual type: *RVNUES*
 - Referenced accounting principle:
3. Create a calculation rule for **subtracting the costs** with the following entries:
 - Accrual type: *PROFIT*
 - Accounting principle:
 - Sort number:
 - Operator: *Subtract*
 - Referenced accrual type: *COSTS*
 - Referenced accounting principle:

In Accrual Engine Reporting, accrual type *PROFIT* is then taken into account if all referenced accrual types necessary for the calculation are available. This means, for example, that the accrual type *PROFIT* is considered provided that the referenced accrual types *RVNUES* and *COSTS* are available. If accrual type *PROFIT* is marked as *To Be Posted*, the value determined is posted during the periodic accrual run.

Special Operators

Set Percentage Rates for Operator P

Use

In this IMG activity, you can define which percentage you want to use for the derived accrual type *P* (*percentage*).

Note

However, you only need to make this setting if you use derived accrual types and use derived accrual type *P* in your calculation rules.

Activities

1. Choose *New Entries*.
2. Enter the *company code* for which you want to define the percentage.
3. Enter the *percentage* you have chosen.
4. Save your settings.

Example

In this example, you calculate and post your accruals according to just one country-specific accounting principle ().

You want to accrue costs (accrual type *COSTS*). In addition to the costs, you also want to accrue the interest for this amount. To do this, you have to make the following settings.

1. In IMG activity Define Accrual Types, create an additional accrual type *INTRST* (interest).
2. In IMG activity Define Calculation Rule for Derived Accrual Types make the following entries for accrual type *INTRST*.
 - Accrual type: *INTRST*
 - Accounting principle:
 - Sort number:
 - Operator: *Percentage*
 - Referenced accrual type: *COSTS*
 - Referenced accounting principle:
3. Now define the chosen percentage in this IMG activity.

Open Fiscal Year for Accrual Postings

Use

In this IMG activity, you specify for your individual company codes which fiscal years are to be open for changes to accrual objects and for accrual postings.

Activities

1. Enter the required company code.
2. Make the following settings for the fiscal year:
 - *Completed fiscal year*

Enter the most recent completed fiscal year.

No more changes can be made to accrual objects in a fiscal year that is already completed. However, you can perform periodic accrual postings in closed fiscal years. Fiscal years are closed for accrual postings using the period lock in Financial Accounting at the account level.

- *Current fiscal year*

The system finds the current fiscal year automatically if the balance has been carried forward in the Accrual Engine. Periodic accrual postings can only be made in the current fiscal year or in previous years, but not in future fiscal years.

Technical Settings

Accrual Objects

Define Layout for Accrual Objects

Use

In this IMG activity, you can define the layout variants with which you define the screen layout for creating, changing and displaying accrual objects.

In a layout variant, you can define the fields to be displayed and the order in which they are to be displayed. You can also determine how the fields are displayed, meaning that you can choose whether the values for the fields are to be displayed with values and/or text.

Requirements

If you want to add a user-defined field to your layout variant, you must have assigned this to an accrual object category. You make this assignment in IMG activity Assign Parameters to Accrual Object Categories.

Standard settings

SAP delivers layout variant *STANDARD* in the standard system. If you want to define your own layout variants, you must create these in customer namespace *Z**. You can also use the SAP standard layout variant as a template.

Activities

1. Choose *New Entries*.
2. Enter a name for your layout *variant* in the variant field and a descriptive text in the *text* field. The name of the layout variant must begin with *Z*.

3. Select your layout variant and double-click on *field sequence* in the navigation area.
4. Choose *New Entries*.
5. Via the *field* field, choose the fields that you want to display and enter the sequence in which you want to display these fields in the *sequence* field.
6. Choose the *display* for the individual fields.
7. Save your layout variant.

Define Customer Navigation

Use

This BAdI enables a customer-defined navigation to any target from the accrual (sub)object of the accrual engine.

Requirements

The BAdI is called when you double-click on the field or the fields that identify the accrual object uniquely in the display transaction for accrual objects (for example, in transaction ACENAVIGATOR).

These are usually the fields in the upper left of the screen.

Standard settings

See the example below.

Activities

Since you can use this BAdI more than once, you can also create your own BAdI implementations, for example, to define your own navigation logic.

Example

For the application "Manual Accruals", SAP delivers the implementation ACAC_UI_NAVIGATION. Therefore, the component "ACAC" has been entered as filter value in this implementation.

The implementation is therefore only carried out for the application "Manual Accruals" and not for other applications of the accrual engine.

The BAdI, that is, the implementation, is called when you double-click on the accrual object number in transaction AACTREE or AACTREE.

The following program logic is implemented in the implementation:

1. The system checks whether the accrual object type = "VENDORINV".
If this is the case, the system assumes that the accrual object number is an external number in the form <FI document number>/<Fiscal year>/<Posting item>. Accrual objects with such numbers are created by the data transfer program
ACAC_DATA_TRANSFER_EXAMPLE.
This FI document number is the document number of the underlying invoice that is to be accrued.
2. The FI document number is determined from the accrual object number.
3. You navigate to the FI document display to display the FI document, that is, the invoice.

Basic Settings for Components

Make Settings for Components

Use

In this IMG activity, you can decide how and in what form you want the Accrual Engine to be implemented for a given component. Components are applications that call up the Accrual Engine to calculate and/or post accruals. Examples are Manual Accruals or Provisions for Awards.

Transaction data and Customizing data are stored separately for each component in the Accrual Engine.

Note

Changes to the component settings can only be made by SAP AG.

Activities

To be able to use the Accrual Engine functions for a component, you have to make the following settings:

1. Choose *Display -> Change*.
You are now in change mode. You can change the settings of an existing component or add a new one. To add a new component, proceed as follows:
2. Choose *New Entries*.
You have to make the following settings:
 - Enter the *component*.
 - Under *Type*, specify whether you want to use the Accrual Engine for calculating accruals and/or posting accruals.
 - Enter the *Reference Process*, with which the accruals are posted in Accounting.
 - You can enter *source fields*. You can use source fields in account determination, for example.

3. Save your settings.

Assign Alternative Data Elements for Components

Use

In this IMG activity, you can assign component-specific data elements to data elements in the Accrual Engine. This ensures that the posting lists display the component-specific data elements as column headers.

Note

Changes to the component settings can only be made by SAP AG.

Activities

1. In the *ACE Data Element* field, enter the technical name of the Accrual Engine data element that you want to replace with a component-specific data element.
2. In the *Alt. Data Element* field, enter the technical name of the component-specific data element.
3. Save your assignment.

Develop Component-Specific System Exits

Use

In this IMG activity, you can define component-specific source code for each component that uses the Accrual Engine. System exits are provided in the Accrual Engine at defined points.

These points are flagged by the following fields:

- *APPL*: Area within the Accrual Engine

This field serves to subdivide the possible system exits and has the classifications:

- *ACE*: Accrual Engine
- *ACE-DS*: Accrual Engine, Distribution Server
- *ACE-DS*: Accrual Engine, Posting Server

- *EVENT*: System Event

There are a larger number of possible system events, such as

- *REP_COMMND*: Component-specific processing OK codes in Reports

In this view, you have to define a function module for each system exit used.

Note

Changes to the component settings can only be made by SAP AG.

Develop Component-Specific Program Components

Use

In this IMG activity, you enter the component-specific program components that you need for your component to use the Accrual Engine. You must specify **all** program components that you need.

Note

Changes to the component settings can only be made by SAP AG.

Activities

To enter the required program components, proceed as follows:

1. Choose *New Entries*.
2. Enter your application component in the *Component* field.
3. Choose the required program components or enter the names of these program components. Some program components are optional.
For further information on the individual program components, see F possible entries.
4. Save your settings.

Define Customer Settings for Components

Use

In this IMG activity, you can define the central properties of your application component:

- **Source Fields**
When defining account determination, you have the option of using user-defined fields

(source fields). To be able to use these fields, you have to define your user-defined DDIC structure containing your user-defined fields in the *Source Fields* field in this IMG activity.

Note

You only need to define a DDIC structure if too few fields are available to you in the standard.

The DDIC structure can only contain fields that are stored in table *ACEDSOP* table in the *PARAM_NAME* field. Entries are generated in the *ACEDSOP* table when accrual objects are created.

- **Default Accounting Principle**
You can define an accounting principle that will always be proposed as a default value whenever you create an accrual object.
- **Determine Next Open Period**
If a posting period is locked for a posting date found by the system, you can specify that the system should automatically post to the next open posting period. To do this, set the indicator *Determine Next Open Period*. If you do **not** set this indicator, the system issues an error message.
- **Do not automatically Transfer Postings to Accounting**
You can suppress an automatic transfer of Accrual Engine documents to Accounting. This is useful, for example, if you are still testing the manual accrual functions.
- **Layout Variant**
You can define a standard layout variant. This is then used to display the tree structures in the functions for processing accrual objects. SAP delivers layout variants for the individual application components.

Requirements

To be able to define the central properties, the following conditions must be met:

- **DDIS Structure**
The DDIC structure can only contain fields that are stored as entries in the *ACEDSOP* table in the *PARAM_NAME* field. Entries are generated in the *ACEDSOP* table when accrual objects are created.
- **Standard Accounting Principle**
It can make sense to specify a default accounting principle if you do **not** want to post and calculate accruals according to various accounting principles. When you create an accrual object (such as a leasing contract or a provision), the standard accounting principle then applies, meaning that you **do not** have to enter another accounting principle.

Note

In some cases, however, you may still have to enter an accounting principle when creating an accrual object.

Activities

Check whether you have to create a customer-specific DDIC structure or a standard accounting principle.

Legacy Data Transfer

Define Legacy Data Transfer

Use

In this IMG activity, you can define how you want legacy data to be transferred from the system to the Accrual Engine for the required company codes . A distinction is made here between the following types of legacy data transfer:

- **Legacy data transfer for test purposes**
This allows you to delete the data again after the transfer. You can repeat the data transfer as often as you like.
- **Productive legacy data transfer**
With this type of transfer, you cannot delete the transferred data.

Activities

1. Enter the *company code* for which you want to transfer the legacy data.
2. Define the following control parameters:
 - *Legacy Data Transfer Date*
Enter the date from which you want the legacy data transfer to be carried out.
 - *Legacy Data Transfer Mode*
Specify whether you want to perform the legacy data transfer for test purposes or in the productive system.
 - *Legacy Data Transfer Only*
Specify whether you only want legacy data to be allowed in the Accrual Engine. If you set this flag, you cannot create new data in the Accrual Engine. By doing this, you make sure that the system contains legacy data only before the system is set to productive. After checking the legacy data transferred, you can reset the flag, meaning that you can create new data again in the productive system, for example when posting.
 - *Legacy Data Transfer Data to Accounting*
Specify whether you want the legacy data to be transferred to Accounting.
3. Save your settings.

Example

Delete Legacy Data after Transfer

Use

In this IMG activity, you can delete legacy data that has already been transferred.

Archiving

Prepare Archiving Run

Use

In this IMG activity, you carry out a preparation run for archiving accrual objects. You **must** carry out a preparation run before running an archiving session. In a preparation run, the system performs the following functions:

- It selects the accrual objects that you have defined on the selection screen
- In accordance with pre-defined rules, it assigns all selected accrual objects the status *To Be Archived* or *In Processing*

Afterwards, when you run the archiving session, the system will archive all archiving objects with the status *To Be Archived*.

Note

In future accrual runs, accrual objects with the status *To Be Archived* will no longer be included, even if you have not yet actually archived them. This means that **no more** accrual postings will be made for these accrual objects.

However, accrual objects with the status *To Be Archived* are still displayed in Reporting, as accrual postings may have been made for these objects in the past.

Standard settings

The rules used to determine the archiving status for the individual accrual objects is provided by SAP. In the *Manual Accruals* component for example, the following conditions must be met for an accrual object to have the status *To Be Archived*:

- The life of the accrual object ends before today's date.
- No periodic accrual postings have been made for at least days.

You can change the status assigned to an archiving object using the Business Add-In (BAdI) *ACE_ARCHIVING_PREP*. To do this, choose IMG activity *Correct Archiving Status* in Accrual Engine Customizing. You can also use this BAdI to define your own rules for status assignment.

Activities

Before starting a preparation run for archiving, run it in test mode:

1. Enter the *company codes* in which you want to archive the accrual objects.
2. Enter the *key date* for your preparation run.
3. Set the *Display Results List* flag.
4. Set the *Test Run* flag.
5. Choose *Execute*.

Check the results list for your test run. You have the following options:

- If you are happy with the status assigned to the individual archiving objects, execute the preparation run in update mode. Do *not* set the *Test* run flag.
- If you want to change any of the status assignments, use the BAdI ACE_ARCHIVING_PREP. To do this, choose the IMG activity *Correct Archiving Status* in Accrual Engine Customizing.

Note

The archiving preparation run can be repeated as many times as you like, even in update mode.

Correct Archiving Status

Use

This Business Add-In (BAdI) is called during the preparation run for archiving Accrual Engine data.

During the preparation run for archiving, Accrual Engine data is selected.

On the basis of predefined rules, the system decides how the data for an accrual object is to be archived. The system sets the

CD_ARCHIVE_OBJ indicator. This flag can have the following values:

- *X*
This accrual object is to be archived. This means that you want the system to change the status of this accrual object to *To be archived*.
- *< initial >*
This accrual object is not to be archived. This status of this accrual object should **not** be changed to *To be archived*.

The rules (conditions) which your system uses to decide whether the accrual object is to be archived or not are defined in function module ACE_ARCHPREP_DECIDE. This function module is called up in the default implementation of this BADI.

By creating your own BADI implementation for this BADI, you can replace the standard logic with your own logic.

Description of the parameters in the method:

- *IS_ACEOBJ*
Accrual object. Entry from database table ACEOBJ
- *IT_ACEDSOH*
Table with header data for subobjects of the accrual object. This table contains, for example, the validity periods of the accrual subobjects. These are entries from database table ACEDSOH.
- *IT_ACEPSOI*
Table with item data for the accrual subobjects. This table contains, for example, the data of the most recent periodic accrual posting. It also contains the accrual amounts posted grouped by year. These are entries from database table ACEPSOI.
- *ID_KEYDATE*
Key data on which the archiving preparation run is executed.

Using the parameters described, in the BADI you can decide whether an accrual object is to be archived or not.

Allgemeine Informationen zur Definition von BAdIs finden Sie in der SAP-Bibliothek unter *Basis -> ABAP Workbench (BC-DWB) -> Änderungen des SAP-Standards (BC) -> Business Add-Ins -> Definition eines Business Add-Ins*.

Example

The preparation run is executed for the key date December , . A number of accrual subobjects have a runtime from January , to November ,

The system therefore sets the *CD_ARCHIVE_OBJ* indicator to *<initial>*, meaning that the system would not archive this accrual object, as some accrual subobjects are still valid and it is therefore expected that accrual postings might still be made to these in future.

You know, however, that no more accrual postings will be made to these accrual objects, and they can therefore be archived.

You therefore create your own BADI implementation where the indicator *CD_ARCHIVE_OBJ* is set to *X* for these accrual objects.

Validation

Define Validation

Use

In this IMG activity, you can define a validation that the system will work through when you create or change accrual objects. You can use the validation, for example, to check whether you can enter a certain accrual type is allowed when creating an accrual object for an accounting principle.

For general information on creating validations, see

- the Implementation Guide for Special Ledgers, under *Tools -> Maintain Validation/Substitution/Rules -> Maintain Validation*
- the SAP library, under *Accounting -> Financials -> Special Ledgers -> Tools -> Validation, Substitution and Rules*

Requirements

In your validation, you can also use a user-defined field that you have created in your own parameter structure. To ensure that you can use this field for defining a validation, you have to make the following settings:

1. You have to define an append structure zu for the SAP structure *ACEVSR_VAL_PAR*. You have to add the required user-defined field to the append structure. Proceed as follows:
 - a) From the SAP Easy Access screen, choose *Tools -> ABAP Workbench -> Development -> Dictionary* (transaction *SE*).
 - b) In the *database table* field, enter *ACEVSR_VAL_PAR* and choose *Change*.
 - c) Choose *Activate* and then *Append Structure*.
 - d) Choose *New Entries*, enter a name in the customer namespace and choose *Enter*.
 - e) Add the required field to your append structure.

Save your settings.

2. You have to add the field to the SAP structure *ACAC_PARAMETERS*. To do so, proceed as follows:
 - a) From the SAP Easy Access screen, choose *Tools -> ABAP Workbench -> Development -> Dictionary* (transaction *SE*).
 - b) In the *database table* field, enter *ACAC_PARAMETERS* and choose *Change*.
 - c) Enter the required user-defined field.
 - d) Choose *Activate*.
 - e) Save your settings.
3. Assign the required user-defined field to the accrual object categories in which you want to use the field.

To do so, call up Customizing for Manual Accruals and choose *Basic Settings -> Technical Settings -> Accrual Object Categories -> Assign Parameters to Accrual Object Categories*

Activities

4. Define your validation.
5. Activate your validation.

Activate Validation

Use

In this IMG activity, you activate your validations. You activate the validations on a company code and accounting principle basis.

Requirements

You must have already created your validations in IMG activity Define Validations.

Activities

To activate a validation, proceed as follows:

1. Choose *New Entries*.
2. Enter the *time* at which you want the validation to be processed.
3. Enter the *company code* and the *accounting principle* for which you want the validation to be valid.
4. In the *Valid* field, enter the name of your validation.
5. Set the validation to active in the *Activate* field. You can choose whether the validation is to be *inactive*, *active* or *active without batch input* - that is, without background processing.
6. You can also define a validity period for your validation in the *Valid from* and *Valid to* fields.
7. *Save* your settings.

Performance

Specify Package Size for Processing

Use

You can use this customer implementation to determine the package size of the accrual objects processed in a work process. The size of a package influences the consumption of system resources.

The higher the number of objects,

- The more memory is used
- The lower the number of times that the database is accessed
- The lower the number of RFC modules sent
- The longer it takes to process a processing package

The package size that allows you to achieve optimum throughput depends on your system.

Standard settings

With the default setting, the package size is .

Accrual Calculation

Accrual Methods

Define Accrual Methods

Use

In this IMG activity, you define your accrual methods. The accrual method specifies how amounts are to be accrued, for example straight-line or declining balance accrual.

You must assign a function module specifying the calculation of accruals to each accrual method.

Caution

The function module for an accrual method must have a defined interface. You can use function module *ACE_DS_METHOD_LINEAR_P* as a template.

Activities

1. Enter a key with two or more digits in the accrual method field.
2. In the **Function Module Name** field, enter the function module for you accrual method.

3. In the **Text** field, enter a text for your accrual method.
4. Save your accrual method.

Develop Function Modules for Accrual Methods

Use

In this IMG activity, you enter the function modules that you can assign to your accrual methods. Function modules are used to calculate the accruals (or provisions).

Standard settings

SAP delivers a number of function modules in the standard system. You can also use these function modules as templates for your own function modules.

Activities

Enter the function modules that you require.

Example

Define Standard Settings for Accrual Calculation

Use

In this activity, you define which accrual method the system should use as **standard** for calculating accruals. You do this for each accrual type/accounting principle combination.

This means that, when creating an accrual object, you no longer need to specify the accrual method to be used for calculating amounts to be accrued. However, you can still choose to replace the proposed standard accrual method with a different one.

If you do **not** define a standard method, you have to enter the required accrual method every time you create an accrual object.

Activities

For each combination of accrual type and accounting principle, specify the desired standard method.

Accrual/Deferral Posting

Define Posting Control

Use

In this IMG activity, you have to decide how you want accrual postings (or provisions postings) be made for each of your company code/accounting principle combinations. You have to make the following settings.

- **Frequency of the periodic accrual postings**
You define the frequency with which you want the accruals to be posted, for example by posting period or monthly.
- **Summarization for transfer to Accounting**
You define if and in what form you want to summarize data when transferring accrual postings to Accounting.

If you do **not** want any summarization at all, a document line will be created in Accounting (Account document) for each accrual item or type

Standard settings

The following settings are provided by SAP as standard. Unless you make any settings yourself, the setting will use these standard settings:

- Frequency of the periodic accrual postings: *Per posting period*
- Summarization for transfer to Accounting: *No summarization active*

Activities

Make the required settings for each of your company code/accounting principle/accrual type combinations.

Number Ranges

Define Number Ranges for Periodic Posting Runs

Use

In this IMG activity, you have to define the number ranges for your posting runs. This ensures that each periodic accrual posting run has a unique number.

Number Range Intervals and Application Components

Every application component in the Accrual Engine needs its own number range interval. This interval is identified by a two-digit number. This number therefore represents an assignment to an application component:

Application component Two-digit number

Leasing Accounting Engine

Manual Accruals

Provisions for Awards

Revenue Recognition: Rights Management

Provisions: Rights Management

You can find assignment of the two-digit number to an application component in Accrual Engine Customizing, activity Make Settings for Components.

Note

To avoid overlaps between application components, make sure of the following:

o In each number range definition activity, a number range interval must be created for your application component under the assigned two-digit number.

In the definition of a number range, the number range intervals of the different application components **must not** overlap.

Activities

To create a new number range, proceed as follows:

1. Enter the *company code* and choose *Change Intervals*. The *Maintain Number Range Intervals* screen appears.
2. Choose *Insert Interval*.
3. You can make the following settings:
 - *Number*
Enter the *number* of the number range interval, that is, enter the number of your application component.
 - *From number*
Enter the lower limit of the interval.

- **To number**
Enter the upper limit of the interval.
 - **External**
You can specify that number assignment is to be made externally. If you do not set this flag, number assignment is made internally, meaning that numbers are assigned automatically in sequence by the system. The last number assigned is always displayed in the **current number** field.
4. Save your number range.

Define Number Ranges for Application Log

Use

In this IMG activity, you have to define the number ranges for the application log. Each application log then contains a unique number and can be assigned uniquely to an accrual run.

Number Range Intervals and Application Components

Every application component in the Accrual Engine needs its own number range interval. This interval is identified by a two-digit number. This number therefore represents an assignment to an application component:

Application component Two-digit number

Leasing Accounting Engine

Manual Accruals

Provisions for Awards

Revenue Recognition: Rights Management

Provisions: Rights Management

You can find assignment of the two-digit number to an application component in Accrual Engine Customizing, activity Make Settings for Components.

Note

To avoid overlaps between application components, make sure of the following:

- o In each number range definition activity, a number range interval must be created for your application component under the assigned two-digit number.

In the definition of a number range, the number range intervals of the different application components **must not** overlap.

Activities

To create a number range, proceed as follows:

1. Choose *Change intervals*.
The *Maintain Number Range Intervals* screen appears.
2. Choose *Insert Interval*.
3. You can make the following settings:
 - *Number*
Enter the *number* of the number range interval, that is, enter the number of your application component.
 - *From number*
Enter the lower limit of the interval.
 - *To number*
Enter the upper limit of the interval.
 - *External*
You can specify that number assignment is to be made externally. If you do not set this flag, number assignment is made internally, meaning that numbers are assigned automatically in sequence by the system. The last number assigned is always displayed in the *current number* field.
4. Save your number range.

Define Number Ranges for Accrual Engine Documents

Use

In this activity, you define the number ranges for the Accrual Engine documents. Accrual Engine documents are created in addition to Accounting documents during posting of accruals (opening entry, periodic posting, closing entry).

```
INCLUDE ACC_GL_ACE_NUMBRANGE OBJECT DOKU ID TX LANGUAGE EN
```

Activities

To create a new number range, proceed as follows:

- . Enter the *company code* and choose *Change Ranges (Intervals)*

```
INCLUDE ACC_GL_ACE_NUMBRANGE OBJECT DOKU ID TX LANGUAGE EN
```

Define Number Ranges for Assigning ACC Doc. to ACE Doc.

Use

In this IMG activity, you define number ranges for the Accounting documents. When accruals are posted (opening entry, periodic posting and closing entry) documents are created both in the Accrual Engine and in Accounting. Firstly, Accrual Engine documents are created. These are transferred to Accounting, leading to the creation of Accounting documents. A unique external reference is required so that Accrual Engine documents can then be assigned uniquely to Accounting documents.

When transferring Accrual Engine documents to Accounting, you have the option of summarizing Accrual Engine documents to a single summarized document in Financial Accounting. Alternatively, you can transfer the documents to several different documents in Financial Accounting (no summarization)

Achtung

You define the linking of these Accrual Engine documents to Accounting documents using a separate number, the reference number. This is part of the reference key.

Number Range Intervals and Application Components

Every application component in the Accrual Engine needs its own number range interval. This interval is identified by a two-digit number. This number therefore represents an assignment to an application component:

Application component Two-digit number

Leasing Accounting Engine

Manual Accruals

Provisions for Awards

Revenue Recognition: Rights Management

Provisions: Rights Management

You can find assignment of the two-digit number to an application component in Accrual Engine Customizing, activity Make Settings for Components.

Note

To avoid overlaps between application components, make sure of the following:

- o In each number range definition activity, a number range interval must be created for your application component under the assigned two-digit number.

In the definition of a number range, the number range intervals of the different application components **must not** overlap.

Activities

To create a new number range, proceed as follows:

1. Enter the *company code* and choose *Change Intervals*. The *Maintain Number Range Intervals* screen appears.
2. Choose *Insert Interval*.
3. You can make the following settings:
 - *Number*
Enter the *number* of the number range interval, that is, enter the number of your application component.
 - *From number*
Enter the lower limit of the interval.
 - *To number*
Enter the upper limit of the interval.
 - *External*
You can specify that number assignment is to be made externally. If you do not set this flag, number assignment is made internally, meaning that numbers are assigned automatically in sequence by the system. The last number assigned is always displayed in the *current number* field.
4. Save your number range.

Account Determination

Simple Account Determination

Define Set of Rules

Use

In this IMG activity, you have to define a set of rules for account determination.

Account determination is called up when Accrual Engine documents are passed on to Accounting, meaning that account determination occurs automatically with every posting (opening entry, periodic accrual posting or closing entry).

To ensure error-free account determination, the following information must be defined:

- Document type
- Start account (such as accrual account)
- Target account (such as P&L account)

With a set of rules, you define the dependencies between the source fields and the target fields from which the document type and the accounts are to be derived. You have to define a set of rules before you can define the values for it (such as document type, accounts).

A set of rules is made up of a series of individual rules. When creating the individual rules, you have the following options:

- You can define rules **that build on one another**. Here, you must create the rules in the order in which you want the system to work through them.
- You can define **parallel rules**. Here, you must remove the flag *Post error message if no value found* from the *Properties* tab when defining the individual rules.

As source fields, you can use standard fields and component-specific fields:

Standard fields

ACCRULE	Accounting principle (RLV)
ACRTYPE	Accrual type
CHOACC	Chart of accounts

Component-Specific Fields

You can use the component-specific fields that you defined as source fields in IMG activity Make Settings for Components.

Customer-Specific Fields

You can use the customer-specific fields that you defined as source fields in IMG activity Define Customer Settings for Components.

You can also use the component-specific fields that you defined in IMG activity Make Settings for Components as source fields.

Requirements

To display or change settings in this IMG activity, you need the authorization in authorization object *S_DEVELOP*.

To change or display the account determination, you require the authorization for authorization object *S_TABU_DISS*.

Activities

To create a set of rules for account determination, proceed as follows:

1. Choose *Create Step*.
The *Accrual Engine - Account Determination: Rule Definition* screen appears.
2. In the *Derivation Rule* field, you can enter a text for your rule.
3. In the *Definition* tab, choose the required source and target fields.

4. In the *Condition* tab, you can enter a condition for linking source and target fields.
5. In the *Properties* tab, you can make extra settings for your rule. If you set the *Entries Can Be Maintained with Validity Date* flag, your settings for the set of rules are time-dependent.
6. Save your rule.

You can call up IMG activity Define Values for Set of Rules directly, in which you enter the values for your rules. To do so, choose *Maintain Rule Entries*.

Define Values for Set of Rules

Use

In this IMG activity, you enter the values for the individual rules in a set of rules. For each rule, you enter the following:

- The transaction in the Accrual Engine during which this rule is to be called up
- The document type document type to be created
- The *start account* and the *target account* to which the posting is to be made The following postings can be made, depending on the process:
- from a start account of your choice to an accrual account as target account
- from an accrual account as start account to a P&L account as target account (for example during periodic recognition or closing)

Requirements

Before you can define the values for a set of rules, you must have defined the set of rules with its individual rules. You can find the IMG activity under: -Simple account determination: Define Set of Rules/>

- Extended account determination: Define Set of Rules for Extended Account Determination

Activities

To enter the values for account determination, proceed as follows:

1. Select the rule for which you want to enter the values and choose *Change Rule Entries*.
2. Entering the values for the rule. You can assign several transactions with their own account determination to each rule.

3. Save your entry.

Extended Account Determination

Define Account Symbols

Use

In this activity, you define your account symbols. Under an account symbol, you can summarize accounts from various charts of accounts. For example, you could define account symbol *ACCRUALS* under which you could summarize the individual accruals accounts from the various charts of accounts. This makes it possible during an accrual run to post to accounts in various company codes and from various charts of accounts.

```
INCLUDE ACC_GL_ACE_ACCSYMB OBJECT DOKU ID TX LANGUAGE EN
```

Activities

1. In the *Account Symbol* field, enter a suitable name for the account symbol.
2. In the *Description* field, enter a full description for your account symbol.
3. Save your account symbol.

Define Combination of Characteristics

Use

```
INCLUDE ACC_GL_ACE_CHARACT OBJECT DOKU ID TX
```

Activities

To define an combination of characteristics, proceed as follows:

1. Choose *New Entries*.

2. In the *Rule* field, enter a four-digit number for your account determination rule.
3. In the *Description* field, enter a descriptive text for your combination of characteristics.
4. Save your combination of characteristics.

Set of Rules with Account Symbols and Characteristic Combinations

Define Set of Rules for Extended Account Determination

Use

In this IMG activity, you define a set of rules for account determination. In contrast to simple account determination, extended account determination provides you with account symbols and characteristic combinations during definition of the set of rules.

Account determination is called up when Accrual Engine documents are passed on to Accounting, meaning that account determination occurs automatically with every posting (opening entry, periodic accrual posting or closing entry).

To ensure error-free account determination, the following information must be defined:

- Document type
- Start account (such as accrual account)
- Target account (such as P&L account)

With a set of rules, you define the dependencies between the source fields and the target fields from which the document type and the accounts are to be derived. You have to define a set of rules before you can define the values for it (such as document type, accounts).

A set of rules is made up of a series of individual rules. When creating the individual rules, you have the following options:

- You can define rules **that build on one another**. Here, you must create the rules in the order in which you want the system to work through them.
- You can define **parallel rules**. Here, you must remove the flag *Post error message if no value found* from the *Properties* tab when defining the individual rules.

As source fields, you can use standard fields and component-specific fields:

Standard fields

ACCRULE	Accounting principle (RLV)
ACRTYPE	Accrual type
CHOACC	Chart of accounts

Customer-Specific and Component-Specific Fields You

can also use the following fields:

- The **customer-specific** fields that you have defined as source fields in the IMG activity Define Customer Settings for Components
- The **component-specific** fields that you have defined as source fields in the IMG activity Make Settings for Components

Requirements

To be able to use account symbols and characteristic combinations when defining your set of rules, you must have already defined these. You can find the settings under:

- Define Account Symbols
- Define Characteristic Combinations

Activities

1. Choose *Create Step*.
The *Accrual Engine - Account Determination: Rule Definition* screen appears.
2. In the *Derivation Rule* field, you can enter a text for your rule.
3. In the *Definition* tab, choose the required source and target fields.
4. In the *Condition* tab, you can enter a condition for linking source and target fields.
5. In the *Properties* tab, you can make extra settings for your rule. If you set the ***Entries Can Be Maintained with Validity Date*** flag, your settings for the set of rules are time-dependent.
6. Save your rule.
You can call up IMG activity Define Account Determination directly by entering the values for your rules. To do so, choose ***Maintain Rule Entries***.

Define Values for Set of Rules**Use**

In this IMG activity, you enter the values for the individual rules in a set of rules. For each rule, you enter the following:

- The transaction in the Accrual Engine during which this rule is to be called up

- The document type document type to be created
- The *start account* and the *target account* to which the posting is to be made The following postings can be made, depending on the process:
- from a start account of your choice to an accrual account as target account
- from an accrual account as start account to a P&L account as target account (for example during periodic recognition or closing)

Requirements

Before you can define the values for a set of rules, you must have defined the set of rules with its individual rules. You can find the IMG activity under:

- Simple account determination: Define Set of Rules/>
- Extended account determination: Define Set of Rules for Extended Account Determination

Activities

To enter the values for account determination, proceed as follows:

1. Select the rule for which you want to enter the values and choose *Change Rule Entries*.
2. Entering the values for the rule. You can assign several transactions with their own account determination to each rule.
3. Save your entry.

Rule for Deriving Account from Account Symbol

Define Rule with Account Symbol

Use

In this IMG activity, you define a rule for your set of rules in order to define how to derive different accounts from an account symbol.

You use this rule to define the dependency between the source fields and the accounts. You have to define a rule before you can define any values for it.

As source fields, you can use standard fields and component-specific fields:

Standardfelder:

ACCRULE	Accounting principle
CHOACC	Chart of accounts

GLSYMB Chart of accounts

Customer-Specific and Component-Specific Fields You can also use the following fields:

- The **customer-specific** fields that you have defined as source fields in the IMG activity Define Customer Settings for Components
- The **component-specific** fields that you have defined as source fields in the IMG activity Make Settings for Components

Requirements

You must have already defined the set of rules in which you derive the account from the account symbol. You can find the IMG activity under Define Set of Rules for Extended Account Determination.

Activities

1. Choose *Create Step*.
The *Accrual Engine - Account Determination: Rule Definition* screen appears.
2. In the *Derivation Rule* field, you can enter a text for your rule.
3. In the *Definition* tab, choose the required source and target fields.
4. In the *Condition* tab, you can enter a condition for linking source and target fields.
5. In the *Properties* tab, you can make extra settings for your rule. If you set the ***Entries Can Be Maintained with Validity Date*** flag, your settings for the set of rules are time-dependent.
6. Save your rule.

Define Values for Rule with Account Symbol

Use

In this IMG activity, you enter the values for the rule in which you derive accounts from the account symbol.

Requirements

You must have defined the rule for deriving the account from the account symbol. You can find the setting under Define Rule with Account Symbol.

Activities

1. Select the rule for which you want to enter the values and choose *Change Rule Entries*.
2. Entering the values for the rule. You can assign several transactions with their own account determination to each rule.
3. Save your entry.

Document Change Using BAdI

Change Document Before Summarization

Use

This Business Add-In (BAdI) allows you to change the temporary accounting document or to add document lines to it *before* it is summarized and transferred to Accounting.

When an Accrual Engine document is transferred to Accounting, the system performs the following processes:

- Firstly, a temporary two-line accounting document is made up from the Accrual Engine in the form of BAPI structures.
- Secondly, a number of these temporary two-line accounting documents are summarized before being transferred to Accounting. You can decide whether or not you want these temporary accounting documents to be summarized in IMG activity Define Posting Control.

The BAdI uses the following parameters:

- IS_ACEDOCITEM
This parameter represents the Accrual Engine document.
- CS_BAPI_HEADER
Header data of the accounting document
- CT_BAPI_ITEMS
Items in the accounting document, contains two entries
- CT_BAPI_CURR
Currency information for the items

You can use the BAdI *ACEPS_BAPIDOC_MODIFY* (Change Document After Summarization) to change the accounting document *after summarization* but *before transfer to Accounting*.

For general information about defining BadIs, see the SAP library under *Basis -> ABAP Workbench (BC-DWB) -> Changes to the SAP Standard (BC) -> Business Add-Ins -> Defining a Business Add-In*.

Change Document After Summarization

Use

This Business Add-In (BAdI) allows you to change the temporary accounting document or to add document lines to it **after** it is summarized but **before** it is transferred to Accounting.

When an Accrual Engine document is transferred to Accounting, the system performs the following processes:

- Firstly, a temporary two-line accounting document is made up from the Accrual Engine in the form of BAPI structures.
- Secondly, a number of these temporary two-line accounting documents are summarized before being transferred to Accounting. You can decide whether or not you want these temporary accounting documents to be summarized in IMG activity Define Posting Control.

The subsequent transfer to Accounting is carried out using BAPIs.

Note

You also have the option of making as many entries as you like in an EXTENSION table in order to change the accounting document. This table is given over to the BAPI. You can evaluate the table immediately after calling up the BAPI in Accounting. To do this, you have to activate enhancement *ACBAPI* using transaction *CMOD*. It can make sense to use the extension table if, for example, you want to fill user-defined fields in Accounting that are not available in the BAPI interface (in the BAPI structures).

However, SAP recommends that you change the accounting document directly using this BAdI, without using the extension table.

The BAdI uses the following parameters:

- ID_TESTRUN
Flag: This is a test run.
No data is updated in the test run.
- ET_EXTENSION
Extension table when BAPI is called up.

CS_BAPI_HEADER

Header data of the Accounting document.

- CT_BAPI_ITEMS
Items in the Accounting document, contains
- two entries if summarization is not active in the Accrual Engine,

- at least two entries if summarization is active in the Accrual Engine.
- CT_BAPI_CURR
Currency information for the items.

You can use *BAdI ACEPS_BAPIPREDOC_MOD* Change Document Before Summarization to change the Accounting document **before** summarization.

For general information about defining BadIs, see the SAP library under *Basis -> ABAP Workbench (BC-DWB) -> Changes to the SAP Standard (BC) -> Business Add-Ins -> Defining a Business Add-In*.

Fill Data Buffer for Document Change

Use

You can use this Business Add-In (BAdI) to buffer data that needs to be written to the BAPI document at a later point in time. The Accrual Engine creates a package of accruals that are processed together. In this way, all of the data for this package can be determined together at the start. Consequently, you can reduce the number of times that the database is accessed.

Example

You want to add the customer#s region to the FI document. In this case, you use this BAdI to buffer the customer data of all accrual objects instead of reading it from the database with the BAdIs *ACEPS_BAPIPREDOC_MOD* and *ACPES_BAPIDOC_MODIFY*.

Make Settings for Accrual/Deferral of Taxes

Activate Tax Accrual/Deferral per Company Code

Use

For the posting of accruals/deferrals for contracts, you can specify whether or not the tax amount should be accrued/deferred in addition to the net amount. This is a common practice in some countries, such as Japan.

Activities

Set the *Tax Accrual/Deferral Active* indicator for the company codes, in which you want taxes to be accrued/deferred.

Assign Accrual Type to Tax Code

Use

Here you assign an accrual type to each tax code. You need to make this setting if you want to post accruals or deferrals of tax amounts.

Requirements

You already defined accrual types.

Activities

Assign an accrual type to each tax type or tax group that is used in company codes where tax accrual/deferral is active. You can set up account determination for accrual types used for tax accrual/deferral so that the accrued or deferred tax amounts are posted directly to the tax account or to a tax clearing account.

- Posting to a **tax account**:
- If you want the accrual/deferral to be posted to a tax account, then enter any tax account for the accrual type (= account with tax category ">" (output tax) or "<" (input tax)).
When the accrual/deferral posting is made, then the system automatically replaces this tax account with the account that results from the tax code of the cash flow item concerned.
- If the accrual/deferral posting is made to a tax account, then the accrual documents show the tax data, and are included in the advance return for tax on sales/purchases.
- Posting to a **tax clearing account**:
- If the accrual/deferral posting is made to a tax clearing account, then enter the account you want to post to in the account determination for the accrual type.
- The accruals/deferrals account and the tax clearing account have to have the same tax type.
- If the tax type is not entered, then the accrual documents do not receive a tax code.
- If the tax type is "+" or "-", then the accrual documents receive the tax code of the original flow.
- Regardless of the tax type, when you post the accrual/deferral to a tax clearing account, the documents are **not** included in the advance return for taxes on sales/purchases.

Implement Enhancements: Exclude Contracts (BAdI)

Use

Using this Business Add-In (BAdI), you can exclude the cash flow records of individual contracts from the accrual/deferral of net amounts or taxes. To do this, implement the IS_CONTRACT_ACR_RELEVANT method.

SAP Note makes it possible to use this Business Add-In to exclude individual cash flow records from the accrual/deferral of net amounts or taxes. To do this, implement the IS_CFITEM_ACR_RELEVANT method.

The BAdI is called during accruals/deferrals (transaction RERAALCN) for each contract.

Standard settings

If you do not implement this BAdI then the accruals/deferrals are performed as follows:

- The accrual/deferral of net amounts is made for all contracts provided that the used flow types of the cash flow are indicated as relevant for accrual/deferral.
- The accrual/deferral of tax amounts is made for all contracts provided that the tax accrual/deferral has been activated in the company code and the used tax types and groups of the cash flow are designated as relevant for accrual/deferral.

Activities

Implement the IS_CONTRACT_ACR_RELEVANT method using transaction SE.

The following parameters are used:

- IO_CONTRACT: Reference to the contract that is currently being processed
- ID_KEYDATE: Key date of accrual/deferral
- ID_MODE: Mode of the posting run ('E': update run, 'S': Simulation)
- CF_TAX_ACR_REL
Change this indicator if you want to override the company code default setting for tax accruals/deferrals for the current contract.
- CF_NET_ACR_REL
This indicator should not be set if the contract is to be excluded from the accrual/deferral. This indicator is set in the standard system.

Important: It is **not** possible to accrue only the taxes but not the net amounts.

To exclude individual cash flow records from the accrual/deferral, implement the IS_CFITEM_ACR_RELEVANT method.

You can use the following parameters:

- IO_CONTRACT: Reference to the contract that is currently being processed
- ID_KEYDATE: Key date of accrual/deferral
- ID_MODE: Mode of the posting run ('E': update run, 'S': Simulation)
- IS_CASHFLOW_PAY: The cash flow record that is currently being processed from the partner-related cash flow. If the cash flow record that is currently being processed is a record from the object cash flow, then this parameter is blank.
- IS_CASHFLOW_OBJ: The cash flow record that is currently being processed from the object cash flow. If the cash flow record that is currently being processed is a record from the partner-related cash flow, then this parameter is blank.
- CF_TAX_ACR_REL
Change this indicator if you want to override the company code default setting for tax accruals/deferrals for the current cash flow record.
- CF_NET_ACR_REL
This indicator should not be set if the current cash flow record is to be excluded from the accrual/deferral. This indicator is set in the standard system.

Important: It is **not** possible to accrue only the taxes but not the net amounts.

In the standard system, accruals and deferrals that have begun for the cash flow records and that have the status "Actual" (CFSTATUS = I) are reversed during the next scheduled accrual/deferral run. In subsequent runs, they are not taken into account if the underlying contract or condition has expired. This logic can be altered with an implementation of method GET_BEHAVIOR_CONTEXT.

You can use the following parameters:

- IO_CONTRACT: Reference to the contract that is currently being processed
- ID_KEYDATE: Key date of accrual/deferral
- ID_MODE: Mode of the posting run ('E': update run, 'S': Simulation)
- IS_CASHFLOW_PAY: The cash flow record that is currently being processed from the partner-related cash flow. If the cash flow record that is currently being processed is a record from the object cash flow, then this parameter is blank.
- IS_CASHFLOW_OBJ: The cash flow record that is currently being processed from the object cash flow. If the cash flow record that is currently being processed is a record from the partner-related cash flow, then this parameter is blank.
- CF_REVERSAL_ON_ENDED_CONTRACT
If you change this indicator to ABAP_FALSE, any accruals/deferrals that have begun are continued and new accrual/deferral records are created even if the contract has expired.
- CF_REVERSAL_ON_ENDED_COND
If you change this indicator to ABAP_FALSE, any accruals/deferrals that have begun are continued and new accrual/deferral records are created even if the underlying condition has expired (explicitly).

- CF_CFSTATUS_RELEVANT_FOR_REV
If you change this indicator to ABAP_FALSE, any accruals/deferrals that have begun are reversed regardless of the cash flow status (CFSTATUS) if the underlying contract or condition has expired.

Implement method SET_ADDITIONAL_PARAM to save additional parameters for the deferral subobject (corresponds to a cash flow record). These parameters are stored in table ACEDSOP and can be accessed using function module ACEDSDB_PARAM_READ_SID_ALLDAT, for example. The following parameters are available:

- IO_CONTRACT: Reference to the contract that is currently being processed
- ID_KEYDATE: Key date of accrual/deferral
- IS_CASHFLOW_PAY: The cash flow record that is currently being processed from the partner-related cash flow. If the cash flow record that is currently being processed is a record from the object cash flow, then this parameter is blank.

IS_CASHFLOW_OBJ: The cash flow record that is currently being processed from the object cash flow. If the cash flow record that is currently being processed is a record from the partner-related cash flow, then this parameter is blank.

- CT_PARAMETERS: Add the parameters that you want to save for the deferral subobject to this table. Caution: Do not use any parameter names (PARAM_NAME field) that are already used by SAP. These are TAXCODE, ALLOCATION, and OBJNR.

Example

For a contract type EXMP, no taxes should be accrued, regardless of the company code default setting.

Therefore you determine the contract type for the current contract in the IS_CONTRACT_ACR_RELEVANT method. If the contract type is EXMP, you reset the indicator CF_TAX_ACR_REL.

In addition, no planned records from the cash flow should be accrued/deferred for contract type EXP. Therefore, determine the contract type of the current contract in the IS_CFITEM_ACR_RELEVANT method. For contracts with contract type EXP and planned cash flow records, reset the indicators CF_NET_ACR_REL and CF_TAX_ACR_REL.

Refer to the sample code (*Goto -> Sample Code -> Display*).

Notes for Developers

Rent Invoice

Number Range for Rent Invoice

Use

Here you specify the number range interval to be used for the invoice number.

Activities

Define at least one number range interval for each company code in which invoices are printed, and for each fiscal year for which you want to print invoices. If this interval has the number , you do not need to make any number range settings in the IMG activity Company Code-Dependent Settings for Invoice.

Choose *Internal Number Assignment* for all intervals.

Company-Code-Dependent Settings for Invoice

Use

Here you can make settings for assigning the invoice number for each company code.

Activities

- If you want to number invoices that (per balance) contain a receivables amount differently than invoices containing (per balance) a credit amount, then edit the number range interval in the appropriate columns, *SC Invoice* or *SC Credit*.
If you do not make an entry in these columns, the interval is used.
- Set the indicator No Update if the invoice number is **not** to be updated in the FI document. See the notes in the documentation for updating the invoice number.

Implement Enhancements (BAdI)

Use

By implementing this Business Add-In you can influence the standard system procedure for creating rent invoices (transaction RERAIV) and for deleting rent invoices (transaction RERAIVRV). The methods of the Business Add-In are automatically called for all active implementations at certain events during creation of invoices.

To modify the correspondence for the invoices created (such as the layout), use the settings in Customizing for correspondence.

Activities

The following methods are available for the **Creation of Rent Invoices** and are executed by the system in this order during an invoicing run:

- CHECK_IGNORE_CONTRACT

You can exclude contracts that were selected based on the standard settings. To do so, set the return parameter `CF_IGNORE = 'X'`. To determine the contract data, call the `API_RE_CN_GET_DETAIL` function module within the BAdI implementation with the parameter `IO_OBJECT = IO_CONTRACT`. Number of calls: once for each selected contract.

ADAPT_INVOICE_ITEM_LIST

Once the invoice items of a contract have been retrieved, you can modify the individual invoice items. To have certain items **not** invoiced, delete those entries in the internal table `CT_INVOICE_ITEM`. To change items (for example, their text), modify the entries in `CT_INVOICE_ITEM` accordingly.

Number of calls: once for each partner with a vendor contract of each selected contract (as long as invoice items could be determined).

- `GROUP_INVOICE_ITEM_LIST`

Once all invoice items for the whole invoicing run are determined, the system groups the items together based on either the invoice recipient or the contract (setting in the selection screen). Following this standard grouping of the items, you can make an additional, more specific grouping by entering a sequence number in the invoice number field (`INVNO`). This number is **not** the final invoice number. The system only uses it to recognize the start of a new invoice.
Number of calls: once for the entire invoicing run.

- `GET_NUMBER` (only in an update run, not for a simulation)

In Customizing, you can specify which number range interval of the number range object `RE_INVOICE` should be used for invoices. You can use the same or a different number range interval for credit memos. If you want to use a different procedure, or want to use your own number range object, then return the new invoice number to be used in the `CD_INVNO` parameter. The invoice number has to be unique for the company code and fiscal year.
Number of calls: once for each invoice created.

- `AFTER_STORE` (only in an update run, not for a simulation)

In Customizing, you can specify if the system should update the invoice number in the `XREF` field of the FI document. If you want to update other information in addition to that, then you can perform the needed change operations in this method. However, do not perform `COMMIT WORK` or `ROLLBACK WORK`, since these controls are the responsibility of the standard program.
Number of calls: once for each invoice created.

- `GET_FISC_YEAR` (only in an update run, not for a simulation)

In the standard system, the system determines the fiscal year of an invoice based on the company code and the current date. If you want to use a different approach instead, then return the fiscal year to be used in the parameter `CD_FISC_YEAR`. The method makes available the importing parameters `IS_INVOICE` (RE invoice header) and `IT_INVOICE_ITEM` (table of RE invoice items).
Number of calls: once for each invoice created.

In the `IS_OPTIONS` parameter, the selection parameters from the selection screen are available to you in these methods: `CHECK_IGNORE_CONTRACT`, `ADAPT_INVOICE_ITEM_LIST` and `GROUP_INVOICE_ITEM_LIST`.

The following method is available for **Reversal of Rent Invoices**:

- `GET_BEHAVIOR_CONTEXT`

Returns the behavior context of the invoice

You can exclude invoices selected in the standard way from reversal by setting the return parameter `CF_IGNORE = 'X'`. The method makes available the importing parameters `IS_INVOICE` (RE invoice header) and `IT_INVOICE_ITEM` (table of RE invoice items). Number of calls: once for each invoice to be reversed.

Note that when implementing the BAdI you are not allowed to use statements that affect the interface, such as direct output of messages using `MESSAGE`. Notes for Developers

Cash Management and Forecast

Cash Management and Forecast and RE-FX

Use

You have to make settings in the following IMG activities if you want to be able to see receivables and payables generated by contracts in RE-FX displayed in cash management and forecast (in the liquidity forecast).

Activities

Specify the following:

- For which company codes should cash management and forecast be active in RE-FX?
- Which flow types should be considered in cash management?
- Which source symbols should planning levels receive in RE-FX? We recommend using source symbol REM for RE-FX.
- Which planning levels should be used in RE-FX?
- Which planning groups should there be for these levels?
- Which contract types should use which planning levels?

The following prerequisites have to be met in order for the cash management data of a contract to be updated:

- The *Cash Management* indicator must be active for the company code that the contract belongs to. The contract must have at least one condition that is assigned to a flow type, for which cash management update is active.
- A planning level must be assigned to the contract type.
- The partner (customer/vendor) must be assigned to a planning group.

Activate Cash Management and Forecast for RE-FX in Company Code

Use

For each company code, you can decide if the contract data for cash management and forecast should be updated in the company code.

Standard settings

In the standard system, the *Activate CM* indicator is **not** set for the standard company codes.

Activities

Set the indicator for those company codes where you want to use Flexible Real Estate Management (RE-FX) with cash management and forecast. If you set this indicator later when your system is already live, then you have to recreate the necessary cash management data in the company codes affected. In that case, use the IMG activity Prepare Production Startup and Data Setup.

Activate Cash Management for Flow Types

Use

For each flow type, you can decide if the cash flow data for this flow type should be updated in cash management and forecast.

Standard settings

In standard Customizing, the *Relevant to CM* indicator is set for all standard flow types. If the Activate CM indicator is set for the company code, then all flow records in the cash flow are updated in cash management and forecast.

Activities

Set the *Relevant to CM* indicator for the flow types that you want to update to cash management and forecast. Keep in mind that only those cash flow records that are considered during periodic posting can be updated to cash management and forecast. For example, you do **not** need to set the indicator for flow types that are used for posting receivables or credit memos resulting from service charge settlement or sales-based settlement. On the other hand, it does **not** cause problems if this indicator is set for those flow types.

If this indicator is set, you should distinguish between receivables from advance payments and real receivables (such as, basic rent).

If you summarize flow types, then always set this indicator both for the original flow type and the summarized flow type. Make sure that the indicator is set uniformly for all flow types that are summarized on the same flow type.

If you set or deselect the indicator when your system is already live, then you have to have the system regenerate the cash management data in all company codes in which cash management and forecast is active. To do so, use the Reorganize Cash Management IMG activity.

Basic Settings for Liquidity Forecast

Define Source Symbols

In this step you define source symbols and allocate them either to the liquidity forecast or to the cash position.

The source symbol divides the planning levels according to the sources that supply them with data, for example:

- Bank accounting
- Subledger accounting
- Materials management
- Sales and distribution

Actions

1. Create a symbol for data from bank-related accounting.
2. Create a symbol for data from subledger accounting.

3. Create a symbol for data from Materials Management and a symbol for data from Sales and Distribution.
4. Select the "*CM posit.*" field for bank data in order to assign this data to the cash position.

Do not select this field for the other sources, since they supply the liquidity forecast with data.

Standard settings

For RE, the source level REM (Real Estate Management) is used in standard Customizing.

Define Planning Levels

In this step, you specify a planning level for each cash account and allocate this planning level to the cash position by using the appropriate source symbol.

Financial transactions in Cash Management are displayed using planning levels in order to explain beginning and ending account balances.

In the standard R/ System, levels starting with "F" or "B" are reserved for automatically updating data during posting so that you can easily analyze the cash position. Manually created payment advice notes or planned items, however, are allocated to different levels.

Recommendation

SAP recommends using the following levels:

- Level F for bank accounts
- Level F for customers and vendors
- Levels B to Bn for bank clearing accounts
- Level CP, for example, for confirmed payment advice notes
- Level UP, for example, for unconfirmed payment advice notes
- Level NI, for example, for noted items

When displaying the cash position, you can then see because of level F that the amounts are posted to bank accounts. The other levels reflect planned bank account transactions, which include postings to bank clearing accounts or entered payment advice notes. Therefore, you can use the display to compare planned data with actual data.

Actions

Check the standard planning levels and change them if necessary.

Standard settings

Real Estate Management

In standard Customizing, planning levels RC (for customer contracts) and RV (for vendor contracts) are assigned to the source symbol REM (Real Estate Management).

Define and Assign Planning Groups

Define Planning Groups

In this step, you define the planning groups for customers and vendors. A planning group represents particular characteristics, behaviors or risks of the customer or vendor group. Therefore, you can break down incoming and outgoing payments according to the amount, the probability of the cash inflow or outflow, and the type of business relationship.

Example

- O Domestic vendors
- O Foreign vendors
- O Affiliated companies: vendors
- O Major suppliers
- I Bank collection: customers
- I Domestic customers
- I Foreign customers
- I Risk customers

You assign customers and vendors to a planning group by making a entry in the master record.

In addition, you allocate your planning groups to a planning level.

Actions

1. Create planning groups according to your requirements.
2. Allocate the planning groups to a planning level you have created for your subledger accounts.

Standard settings

The assignment of planning groups to partners is company-code-dependent. For example, in standard Customizing, E is used for tenants. If you have the business partner with customer account created

P System

automatically from RE, you can specify (in this IMG activity) which planning group this partner receives, dependent on the company code.

The group that the level is assigned to becomes significant when a planned record is generated by periodic posting. Assign a level here that is normally used for receivables in Financial Accounting (for example level F) found in standard Customizing).

Standard Values for Autom. Creation of Customers (Company-Code-Dependent)

Use

In this section you make presettings for creating company code-dependent customer data. These presettings are used when you process a business partner in the customer role of the respective company code **for the first time** and you access the processing screen in contract management.

@AH@The only product type (PTyp) relevant for Real Estate is **IMV**.

Activities

- If the company code you wish to process is not included in the list, create the required presettings with the *'New Settings'* function. Otherwise choose the company code you wish to process.

Assign Planning Levels to Contract Type

Use

You assign planning levels to contract types here. These planning levels are used for updating the planned records of the cash flow to cash management and forecast.

Assigning a planning level is required before cash management data can be updated.

Requirements

The planning levels must have been created already and assigned to the appropriate source symbol.

Standard settings

P System

In the standard system, these two planning levels are defined for RE-FX:

- **RC** is assigned to all customer contact types.
- **RV** is assigned to all vendor contract types.

Activities

Assign planning levels to those contract types for which you want cash management data to be updated. The system displays the source of the planning level. We recommend that you only create one planning level source for RE-FX. If you follow this recommendation, then the source displayed here for all contract types having a level assigned to them should be the same.

Never assign a planning level here that is used by another application (has a different source). Otherwise, it is **not** possible to regenerate the cash management records solely for RE-FX.

In the table, you can also change the time period for which the cash flow can be updated in advance. This is exactly the same time period for which the cash management data is generated.

If you change, specify, or remove a planning level assigned to a contract type later when your system is already live, then you have to have the system regenerate the cash management data in all company codes in which cash management and forecast is active. To do so, use the Reorganize Cash Management IMG activity.

Balance-Sheet Valuation of Contracts**Balance Sheet Valuation: Overview****Use**

The functions for the balance sheet valuation of real estate contracts and leases allow you to show contracts in the balance sheet according to different accounting principles (such as IFRS, US GAAP, HGB).

Requirements

1. **Activate the** subfunction CE.
2. **Set up contract dialog**

To enable balance sheet valuation, two tabs are provided in the contract. These contain:

- Valuation rules
- Results of the **valuation** with the valuation cash flow

The tabs for valuation can be shown in the screen sequence for transaction RECN for those contract types for which the balance sheet valuation is relevant. The screen sequence used for transaction RECN is defined in the Customizing settings for the contract type. For an alternative screen

sequence for the contract, you can use transaction RECECN. The screen sequence that is used in this transaction can be found in the Customizing settings for Valuation-Specific Attributes for Contract Type in Company Code.

The use of different screen sequences allows you to control access to the contract data by the respective users responsible. For example, you could use transaction RECECN to maintain the valuation data, while operative contract management uses transaction RECN, where the valuation data may be hidden.

The respective screen sequence used is to be enhanced with the valuation parameters and the valuation (views REGC and REGC, subscreens SAPLREGC and , sections REGC and REGC, screens REGC and REGC). After changing the screen sequences, start transaction BUSP for application object REGC and generate all screens. **Note that** the valuation for contracts with contract category (= Internal Contract) is not supported.

. Enhance authorizations

Note the explanations for the authorization objects F_RECE_*. Configure the authorizations for your users accordingly.

Financial accounting

Parallel accounting

The balance sheet valuation of real estate contracts and leases allows parallel valuations and postings for different accounting principles. While the periodic posting RERAPP always posts to all ledgers, the *valuation posting RECEEP* can post on an accounting-specific basis. You control at valuation rule level which accounting principle is used.

If you are using the **ledger solution**, you need to make the assignment to the accounting principle in the valuation rule.

If you are using the **account solution**, you need to control account determination for the individual valuation rules in such a way that the posting is made to the correct accounts assigned to the respective balance sheet variant. In the valuation rule, you need to assign the relevant depreciation area to asset accounting on a company-code-specific basis in this case.

Account determination

Account determination for postings of the balance sheet valuation is carried out based on the flow types in the valuation rule. Similar to account determination for the periodic posting, you configure the account symbols that are used to define posting records (Assign Account Symbol to Flow Type). Finally, you specify which accounts replace the account symbols. Postings that affect assets are controlled using asset transaction types. These are derived from the flow type stored in the valuation rule: Assign Asset Transaction Types.

Posting real estate contracts and leases to the balance sheet

According to the rules of IFRS and FASB, tenants and lessees must show their contracts in the balance sheet. The possession dates for the contract object must be shown as right-of-use (RoU) to which a leasing liability relates.

- Initial posting after receipt of contract *RoU* asset to leasing liabilities
- Postings at period-end closing

Leasing interest expense to leasing liabilities
Leasing liabilities to allocation of rental payments
Expense from depreciation to RoU asset

Posting without asset accounting

If you do not want to use asset accounting, you can post directly to balance sheet accounts as an alternative. You can specify whether you want to post to asset accounting or post directly to general ledger accounts by defining the integration type in Customizing under Valuation-Specific Attributes for Contract Type in Company Code or in the valuation rule.

Changing account determination for periodic posting

In the *periodic posting* (transaction RERAPP), the payment-relevant postings are carried out based on the partner-related cash flow. In the case of vendor contracts, the posting:

Costs of rent/leasing to vendor

To ensure consistency when valuation is active, the posting of the rent/leasing rate in RERAPP has to be redirected from the *costs of rent/leasing* account to the *allocation of rental payments* account as soon as the valuation is active. To do this, you need to enter the *allocation of rental payments* account under Replace Account Symbols in the Account Valuation field.

Controlling

If balance sheet valuation is not active, costs that are assigned to the contract after the partner-related cash flow has been posted are transfer posted to the originating objects during the periodic posting RERAPP based on the object cash flow.

Costs of rent/leasing (object) to costs of rent/leasing (contract)

This function of this transfer posting is replaced by the valuation postings. Costs on the controlling objects arise if the leading ledger (such as IFRS US GAAP) capitalizes a RoU no longer during the periodic posting but through posting of depreciation and interest. This normally leads to a different cost distribution over the term of the contract.

Omission of object cash flow

The valuation postings replace the function of the postings from the object cash flow. Therefore, the object cash flow ends when the valuation starts.

Note:

If you are using customer-specific applications in conjunction with the object cash flow, you need to modify these.

Asset accounting

Asset classes

According to the accounting principles IFRS and US GAAP, RoU assets are to be managed separately from other fixed assets. You therefore need to set up corresponding asset classes.

Valuation postings to assets are managed using asset accounting. For example, since in the case of acquisition postings, a *leasing liabilities* account is posted to as the offsetting account, unlike with other asset classes for which a *clearing account* is posted to as the offsetting account, you need to set up separate account determination for your leasing assets so that you can assign separate general ledger accounts.

Asset transaction types

When classic asset accounting is used, accounting-specific postings to the RoU asset need to be assigned to the asset depreciation areas that represent the respective accounting principle. The assignment is made using asset transaction types, which are limited to the specific depreciation areas. These asset transaction types are derived from the flow type stored in the valuation rule: Assign Asset Transaction Types.

Depreciation key

During the depreciation run, the depreciation calculated in the real estate contracts and leases is read from the contract valuations by means of a special depreciation key. You create the depreciation key as follows:

- Transaction AFAMR: Check whether the LERE base method exists. If it exists, use it. Otherwise, create a base method with the text *Normal: Depreciation from Real Estate Leasing*. The method is ordinary depreciation and uses the depreciation method *B Depreciation from Real Estate Leasing*. All other indicators are set to *No*. Save and activate the method.
- Transaction AFAMS: Create a new multilevel method (such as ZLE) *Leasing from Real Estate* with the validity *From ordinary depreciation start date*. The multilevel method has only one level with acquisition year and a validity of years. The base value is *- External Base Value from Real Estate Leasing*. Save and activate the method.
- Create the new depreciation key by using transaction AFAMS: *Depreciation from Real Estate Leasing* (such as ZLEA). The key has exactly one phase for ordinary depreciation with the base method and multilevel method described above. As the period control method, you can use a standard method (depending on what is required, , for example). For multiple shift, scrap value, and shutdown, you should set *No effect*, *Cutoff value is ignored* or *No*. Save and activate the key.
- Assign this key to the asset classes that you want to use for the RoU assets: Enter Default Values in Asset Classes.

Control Settings for Each Contract Type in Company Code

Use

In this dialog, you make specific settings for the balance sheet valuation for each contract type. For more details, see the field documentation.

Valuation Relevance

Use

Enter the reasons here why balance sheet valuation is carried out for a contract or the contract is not valuation relevant.

Valuation Rule

Use

Rental and lease contracts can be valued according to different accounting principles. The accounting principles contain different rules regarding the way contracts are represented in accounting, and how the various contract conditions (periodic payments, one-time payments, service costs) are included in the valuation.

Multiple valuation rules are possible for each accounting principle. The valuation rules determine how the valuation for the respective accounting principle is calculated and to which ledgers or accounts the postings are made.

- Define how you want to model your valuation rules.
- Specify for which contract types the valuation rules are relevant.
- Define the company code in which valuation rules are to be applied.

Valuation Rule Parameters

The central parameter of the valuation rule is the valuation type. It determines the algorithm based on which the cash flow is calculated for the valuation and thus also which other parameters are needed, particularly for account determination.

You can use the condition valuation group to specify which contract conditions are to be used in the calculation.

Account Determination

IFRS and US-GAAP (Valuation Type: Balance-Sheet Capitalization)

Lease contracts must be capitalized as right-of-use assets according to the rules of IFRS and US-GAAP. You need flow types for the acquisition posting, the depreciation of the asset, the interest paid posting, and the posting of the payment. Please note that reference flow types must be created for each of the flow

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types, as described in the field documentation. If percentage shares of conditions (such as service shares) are to be linearized, you also require a flow type for the linearization posting.

To be able to distinguish between US-GAAP contracts with classification type *finance lease* and *operating lease* in the valuation, you require different valuation rules.

Linearization (Straightlining, Valuation Type: Linearization)

Specify a flow type for the linearization posting. Please note that the reference flow types are also needed here.

Use different valuation rules and valuation types for vendor and customer contracts.

HGB (Valuation Type: Transfer Posting)

The flow type for the transfer posting of costs according to HGB is analogous to the distribution posting using the reference flow type for distribution postings ().

Requirements

Create the required flow types and configure the associated account determination.

Example

You prepare balance sheets according to IFRS and US GAAP in company code and only according to IFRS and German HGB in company code . Both company codes have concluded tenant rental agreements. Lease-outs (operating lease) are carried out in company code only. In this case, it is appropriate to create the following valuation rules:

- For vendor rental contracts (lease-in):
 - *IFRS* for valuation according to international leasing standard IFRS
 - *FASB FL* for valuation according to US GAAP as finance lease
 - *FASB OL* for valuation according to US GAAP as operating lease - *HGB K* for valuation of vendor contracts according to German Commercial Code.
- For customer rental contracts (lease-out):
 - *FASB* for linearization of revenue from lease-outs (operating lease)
 - *HGB D* for valuation of customer contracts according to German Commercial Code

For valuation rules *IFRS* and *FASB*, specify the accounting principle that you use for IFRS, for *FASB FL* and *FASB OL* the accounting principle for US GAAP, for *HGB K* and *HGB D* the accounting principle for German HGB.

The valuation rules *IFRS*, *FASB FL*, and *FASB OL* are used in company code , the valuation rules *IFRS*, *FASB*, *HGB D*, and *HGB K* in company code .

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The valuation rules *IFRS*, *FASB FL*, *FASB OL*, and *HGB K* must be assigned the relevant vendor contract types (lease-in), the valuation rules *FASB* and *HGB D* the customer contract types (lease-out).

Note:

Linearization of conditions not to be activated (such as service conditions or service shares included in rent or lease payments) according to FASB is possible within IFRS and US-GAAP valuation rules and therefore does not need to be modeled by an additional FASB valuation rule for vendor contracts.

Condition Valuation Groups

Use

Contract conditions are included in the valuation in different ways. To control this, you create condition valuation groups and assign condition types to them. Using the assignment to the valuation rules, you define how the conditions are used in the calculations for the respective valuation.

Tip: Use statistical conditions

Contract conditions are typically conditions that model rent, lease payments, or one-time payments and are posted during the periodic posting. For proper valuation, these actual rents are not always sufficient. Therefore, you should also use statistical conditions in certain cases.

Examples:

- In conjunction with the contract origination, payments have already been made in advance (for example, to brokers), which means that **initial costs** have been incurred. These have already been posted elsewhere and so must not be posted again. However, they must flow into the present value of the RoU asset. In this case, you can use a one-time statistical condition that represents the initial costs.
- The contract contains multiple contract objects, but there is only one payment condition. However, the valuation must be carried out for each contract object. In this case, a proper estimate must be made regarding what share of the payment condition is to be assigned to which contract object. The result of this estimate can be defined as a statistical condition with reference to the relevant contract object in the contract. This statistical condition can then be used as a basis for the **valuation for each contract object**.

Asset Classes for Object Types

Use

Specify in which asset class the right-of-use asset is to be created for the leased object.

Assign Asset Transaction Types

Use

To the RE flow types for the individual contracts, assign the corresponding asset transaction types that you want to use for posting to the RoU assets.

Enhancements (BAdI) Contract Valuation

Use

The following Business Add-Ins (BAdIs) support enhancements to the standard functions for **contract valuation**:

- BADI_RECE_EVALUATION
Used to influence general functions.
- BADI_RECE_EVALUATION_RULE
Used to influence functions in the context of the valuation rule.
- BADI_RECE_EVALUATION_PROCESS
Used to influence functions in the context of the valuation process.
- BADI_RECE_ASSET_ACCOUNTING
Used to influence functions in the context of asset integration.

For more information about enhancements, see:

- Overview of Enhancement Methods for Master Data Objects and the Real Estate Contract
- Overview of the Programming Interfaces for RE-FX
- Information on using BAdIs

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

Note that the implementation of the methods has to be independent of the interface and must not contain **any** COMMIT WORK or ROLLBACK WORK statements. For example, direct output of messages using the MESSAGE statement is **not** allowed.

Methods and their parameters

- BADI_RECE_EVALUATION
- GET_BEHAVIOR_CONTEXT - Returns the behavior context for the valuation
IO_CONTRACT, IS_EVALUATION_RULE, ID_CETYPE, and ID_CERULE
These parameters can be used for the results analysis.
CF_PROBABLEEND_ALLOWED
This allows the Probable End to be entered for the transfer posting valuation type also.
Otherwise, for unlimited contracts, the system proceeds in the same way as for the partner-related cash flow with regard to the generation period.
CD_INTEGRATION_TYPE
This can be used to influence the Integration Type.
CF_EXIT_PROCESSED
The GET_BEHAVIOR_CONTEXT method is called from different places. Only certain parameters are of interest here. Therefore, implementation must always be context based (for performance reasons also). To influence the integration type, for example, perform the implementation as follows:


```

CF_EXIT_PROCESSED = ABAP_FALSE.
IF CD_INTEGRATION_TYPE IS REQUESTED.
*   influence it
    CD_INTEGRATION_TYPE = ...
*   done!
    CF_EXIT_PROCESSED = ABAP_TRUE.  ENDIF.

```
- GET_ACCOUNT_DETERMINATION_KEY - Returns the account determination value
IO_CONTRACT, IS_EVALUATION_RULE, ID_CERULE, ID_CFTYPE,
ID_TERMNO, and ID_KEYDATE
These parameters can be used for the results analysis.
CD_ACCDETKEY
This can be used to influence account determination.
- BADI_RECE_EVALUATION_RULE
- COMPLETE_DEFAULTS - Prefill valuation rule data IO_CONTRACT
This parameter can be used for the results analysis.
CS_EVALUATION_RULE
Valuation rule data, which can be changed.
- COMPLETE_DEFAULTS_CONDITION - Prefill data for condition-specific valuation rule
IO_CONTRACT, IS_EVALUATION_RULE, and IS_CONDITION
These parameters can be used for the results analysis.

CS_EVALUATION_COND_RULE

Data for condition-specific valuation rule, which can be changed.

- **CHANGE_STATUSREASON** - Change status reason
IO_CONTRACT, IS_EVALUATION_RULE, and IS_EVALUATION_RULE_OLD
These parameters can be used for the results analysis.
CD_STATUSREASON
Status reason.
- **CHANGE_EVAL_RULE_FOR_INSERT** - Changes possible valuation rules for insertion
IO_CONTRACT
This parameter can be used for the results analysis.
CT_CERULE
Possible valuation rules for insertion.
- **CHECK_RULE** - Additional checks for valuation rule IO_CONTRACT
This parameter can be used for the results analysis.
IF_CHECK_ALL
If this parameter is set, the standard check logic is used (error messages prevent a contract from being saved). In other cases, the check is called by the execution of the valuation. Therefore, an additional message can be sent as a warning during contract maintenance and as an error during execution of the valuation, whereby the execution is prevented.
IS_EVALUATION_RULE
Valuation rule data.
CT_MESSAGE
List of additional messages.
- **GET_BEHAVIOR_CONTEXT** - Returns the behavior context for the valuation IO_CONTRACT
This parameter can be used for the results analysis.
CF_EXIT_PROCESSED
See above.
CD_MSGTYPE_USEFULLIFEEND
The message type of the messages RECETM, , and can hereby be overridden for the check of the end of usage RoU. By default, none of these messages are sent.
- **CHANGE_COND_PROPERTY** - Changes possible condition valuation property
IO_CONTRACT
This parameter can be used for the results analysis.
IS_EVALUATION_RULE
Valuation rule data.
IS_EVALUATION_COND_RULE
Condition-specific data of valuation rule.
CT_CONDITION_PROP
List of condition properties
- **BADI_RECE_EVALUATION_PROCESS**
- **GET_BEHAVIOR_CONTEXT** - Returns the behavior context for the valuation
IO_CONTRACT and IS_EVALUATION_RULE

These parameters can be used for the results analysis.

CF_REMAINING_CAPITAL_INCR_NPV

If this parameter is set to ABAP_FALSE, the remaining capital (resulting from the present value determination) is not added to the present value.

CF_COMPOUNDED_INTEREST

When this parameter is set to ABAP_FALSE, compound interest is not calculated.

CD_KEEP_STEP_EVALUATION

This parameter applies only to the following valuation types: linearization and transfer posting. It specifies the maximum number of steps (number of valuations) to be kept to provide transparency of valuations for each valuation rule. The value is used by default. Furthermore, an initial value is treated like a . If the maximum number is exceeded in a subsequent valuation, the first step is discarded. The second step becomes the first step, and so on. In special cases where the "First Posting From" date has been used in an initial valuation (two steps are generated in the initial valuation), the maximum number is corrected to (provided a smaller number has been returned after all implementations have been run). In this case, replacement starts only from the third step.

Note: If the number of existing steps is greater than the maximum number of steps, the existing number of steps is kept (in this case, the maximum number of steps is corrected upward to the number of existing steps).

CF_PROCESS_EXECUTION_ALLOWED

When this parameter is set to ABAP_FALSE, execution of the valuation can be prevented (parameter IS_EVALUATION_RULE is not filled in this case). In this way, for example, you can use an implementation to prevent a valuation from being executed for inactive contracts (simulation cannot be prevented).

CF_EXIT_PROCESSED

See above.

- EVALUATION - Performs contract valuation
IO_CONTRACT, ID_EVALUATION_POINT, ID_PROCESSMODE, IT_VICERULE,
IT_VICECONDRULE, IT_VICEPROCESS, and IT_VICECFRULE_PREVIOUS

These parameters can be used for the results analysis.

CT_VICECFRULE

Valuation cash flow.

CS_PROCESS

Valuation process.

CS_PROCESS_ADDITIONAL

Additional valuation process.

CT_MESSAGE

Additional valuation messages.

CF_EXIT_PROCESSED

See above.

Note that the EVALUATION method is currently not fully integrated into the valuation process and therefore can only be used to a limited extent. If you need to manipulate the results, please create a customer message with a detailed description. As a result, integration of the method will be completed step by step.

- BADI_RECE_ASSET_ACCOUNTING

- GET_BEHAVIOR_CONTEXT - Returns the behavior context for asset integration
IO_CONTRACT and IS_EVALUATION_RULE
These parameters can be used for the results analysis.
CF_MESSAGE_DEPRECIATION
When this parameter is set to ABAP_TRUE, messages are displayed during execution of asset accounting functions (that use the depreciation calculation of the valuation functions) to indicate that: valuation rules are incomplete or valuations are still open. In this way, for example, a depreciation run can be prevented if valuations are still open.
CD_MESSAGE_DEPRECIATION_TYPE
You can specify the type of message here. E, W, and I are permitted. Note that the message type has no significance in the Asset Explorer, where a message of type I is always sent (provided that CF_MESSAGE_DEPRECIATION was set).

Enhancements (BAdI) Contract Valuation - Valuation Rule

Use

The following Business Add-Ins (BAdIs) support enhancements to the standard functions for **contract valuation**:

- BADI_RECE_EVALUATION
Used to influence general functions.
- BADI_RECE_EVALUATION_RULE
Used to influence functions in the context of the valuation rule.
- BADI_RECE_EVALUATION_PROCESS
Used to influence functions in the context of the valuation process.
- BADI_RECE_ASSET_ACCOUNTING
Used to influence functions in the context of asset integration.

For more information about enhancements, see:

- Overview of Enhancement Methods for Master Data Objects and the Real Estate Contract
- Overview of the Programming Interfaces for RE-FX
- Information on using BAdIs

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

Note that the implementation of the methods has to be independent of the interface and must not contain **any** COMMIT WORK or ROLLBACK WORK statements. For example, direct output of messages using the MESSAGE statement is **not** allowed.

Methods and their parameters

- BADI_RECE_EVALUATION
- GET_BEHAVIOR_CONTEXT - Returns the behavior context for the valuation
IO_CONTRACT, IS_EVALUATION_RULE, ID_CETYPE, and ID_CERULE
These parameters can be used for the results analysis.
CF_PROBABLEEND_ALLOWED
This allows the Probable End to be entered for the transfer posting valuation type also.
Otherwise, for unlimited contracts, the system proceeds in the same way as for the partner-
related cash flow with regard to the generation period.
CD_INTEGRATION_TYPE
This can be used to influence the Integration Type.
CF_EXIT_PROCESSED
The GET_BEHAVIOR_CONTEXT method is called from different places. Only certain
parameters are of interest here. Therefore, implementation must always be context based (for
performance reasons also). To influence the integration type, for example, perform the
implementation as follows:


```

CF_EXIT_PROCESSED = ABAP_FALSE.
IF CD_INTEGRATION_TYPE IS REQUESTED.
*   influence it
   CD_INTEGRATION_TYPE = ...
*   done!
CF_EXIT_PROCESSED = ABAP_TRUE.  ENDIF.

```
- GET_ACCOUNT_DETERMINATION_KEY - Returns the account determination value
IO_CONTRACT, IS_EVALUATION_RULE, ID_CERULE, ID_CFTYPE,
ID_TERMNO, and ID_KEYDATE
These parameters can be used for the results analysis.
CD_ACCDETKEY
This can be used to influence account determination.
- BADI_RECE_EVALUATION_RULE
- COMPLETE_DEFAULTS - Prefill valuation rule data IO_CONTRACT
This parameter can be used for the results analysis.
CS_EVALUATION_RULE
Valuation rule data, which can be changed.
- COMPLETE_DEFAULTS_CONDITION - Prefill data for condition-specific valuation rule
IO_CONTRACT, IS_EVALUATION_RULE, and IS_CONDITION
These parameters can be used for the results analysis.
CS_EVALUATION_COND_RULE
Data for condition-specific valuation rule, which can be changed.
- CHANGE_STATUSREASON - Change status reason
IO_CONTRACT, IS_EVALUATION_RULE, and IS_EVALUATION_RULE_OLD

These parameters can be used for the results analysis.

CD_STATUSREASON

Status reason.

- CHANGE_EVAL_RULE_FOR_INSERT - Changes possible valuation rules for insertion
IO_CONTRACT
This parameter can be used for the results analysis.
CT_CERULE
Possible valuation rules for insertion.
- CHECK_RULE - Additional checks for valuation rule IO_CONTRACT
This parameter can be used for the results analysis.
IF_CHECK_ALL
If this parameter is set, the standard check logic is used (error messages prevent a contract from being saved). In other cases, the check is called by the execution of the valuation. Therefore, an additional message can be sent as a warning during contract maintenance and as an error during execution of the valuation, whereby the execution is prevented.
IS_EVALUATION_RULE
Valuation rule data.
CT_MESSAGE
List of additional messages.
- GET_BEHAVIOR_CONTEXT - Returns the behavior context for the valuation IO_CONTRACT
This parameter can be used for the results analysis.
CF_EXIT_PROCESSED
See above.
CD_MSGTYPE_USEFULLIFEEND
The message type of the messages RECETM, , and can hereby be overridden for the check of the end of usage RoU. By default, none of these messages are sent.
- CHANGE_COND_PROPERTY - Changes possible condition valuation property
IO_CONTRACT
This parameter can be used for the results analysis.
IS_EVALUATION_RULE
Valuation rule data.
IS_EVALUATION_COND_RULE
Condition-specific data of valuation rule.
CT_CONDITION_PROP
List of condition properties
- BADI_RECE_EVALUATION_PROCESS
- GET_BEHAVIOR_CONTEXT - Returns the behavior context for the valuation
IO_CONTRACT and IS_EVALUATION_RULE
These parameters can be used for the results analysis.
CF_REMAINING_CAPITAL_INCR_NPV
If this parameter is set to ABAP_FALSE, the remaining capital (resulting from the present value determination) is not added to the present value.

CF_COMPOUNDED_INTEREST

When this parameter is set to ABAP_FALSE, compound interest is not calculated.

CD_KEEP_STEP_EVALUATION

This parameter applies only to the following valuation types: linearization and transfer posting. It specifies the maximum number of steps (number of valuations) to be kept to provide transparency of valuations for each valuation rule. The value is used by default. Furthermore, an initial value is treated like a . If the maximum number is exceeded in a subsequent valuation, the first step is discarded. The second step becomes the first step, and so on. In special cases where the "First Posting From" date has been used in an initial valuation (two steps are generated in the initial valuation), the maximum number is corrected to (provided a smaller number has been returned after all implementations have been run). In this case, replacement starts only from the third step.

Note: If the number of existing steps is greater than the maximum number of steps, the existing number of steps is kept (in this case, the maximum number of steps is corrected upward to the number of existing steps).

CF_PROCESS_EXECUTION_ALLOWED

When this parameter is set to ABAP_FALSE, execution of the valuation can be prevented (parameter IS_EVALUATION_RULE is not filled in this case). In this way, for example, you can use an implementation to prevent a valuation from being executed for inactive contracts (simulation cannot be prevented).

CF_EXIT_PROCESSED

See above.

- EVALUATION - Performs contract valuation
IO_CONTRACT, ID_EVALUATION_POINT, ID_PROCESSMODE, IT_VICERULE,
IT_VICECONDRULE, IT_VICEPROCESS, and IT_VICECFRULE_PREVIOUS

These parameters can be used for the results analysis.

CT_VICECFRULE

Valuation cash flow.

CS_PROCESS

Valuation process.

CS_PROCESS_ADDITIONAL

Additional valuation process.

CT_MESSAGE

Additional valuation messages.

CF_EXIT_PROCESSED

See above.

Note that the EVALUATION method is currently not fully integrated into the valuation process and therefore can only be used to a limited extent. If you need to manipulate the results, please create a customer message with a detailed description. As a result, integration of the method will be completed step by step.

- BADI_RECE_ASSET_ACCOUNTING
- GET_BEHAVIOR_CONTEXT - Returns the behavior context for asset integration
IO_CONTRACT and IS_EVALUATION_RULE
These parameters can be used for the results analysis.
CF_MESSAGE_DEPRECIATION

When this parameter is set to ABAP_TRUE, messages are displayed during execution of asset accounting functions (that use the depreciation calculation of the valuation functions) to indicate that: valuation rules are incomplete or valuations are still open. In this way, for example, a depreciation run can be prevented if valuations are still open.

CD_MESSAGE_DEPRECIATION_TYPE

You can specify the type of message here. E, W, and I are permitted. Note that the message type has no significance in the Asset Explorer, where a message of type I is always sent (provided that CF_MESSAGE_DEPRECIATION was set).

Enhancements (BAdI) Contract Valuation - Valuation Process

Use

The following Business Add-Ins (BAdIs) support enhancements to the standard functions for **contract valuation**:

- BADI_RECE_EVALUATION
Used to influence general functions.
- BADI_RECE_EVALUATION_RULE
Used to influence functions in the context of the valuation rule.
- BADI_RECE_EVALUATION_PROCESS
Used to influence functions in the context of the valuation process.
- BADI_RECE_ASSET_ACCOUNTING
Used to influence functions in the context of asset integration.

For more information about enhancements, see:

- Overview of Enhancement Methods for Master Data Objects and the Real Estate Contract
- Overview of the Programming Interfaces for RE-FX
- Information on using BAdIs

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

Note that the implementation of the methods has to be independent of the interface and must not contain **any** COMMIT WORK or ROLLBACK WORK statements. For example, direct output of messages using the MESSAGE statement is **not** allowed.

Methods and their parameters

- BADI_RECE_EVALUATION

- GET_BEHAVIOR_CONTEXT - Returns the behavior context for the valuation
IO_CONTRACT, IS_EVALUATION_RULE, ID_CETYPE, and ID_CERULE
These parameters can be used for the results analysis.
CF_PROBABLEEND_ALLOWED
This allows the Probable End to be entered for the transfer posting valuation type also.
Otherwise, for unlimited contracts, the system proceeds in the same way as for the partner-
related cash flow with regard to the generation period.
CD_INTEGRATION_TYPE
This can be used to influence the Integration Type.
CF_EXIT_PROCESSED
The GET_BEHAVIOR_CONTEXT method is called from different places. Only certain
parameters are of interest here. Therefore, implementation must always be context based (for
performance reasons also). To influence the integration type, for example, perform the
implementation as follows:


```

CF_EXIT_PROCESSED = ABAP_FALSE.
IF CD_INTEGRATION_TYPE IS REQUESTED.
*   influence it
    CD_INTEGRATION_TYPE = ...
*   done!
    CF_EXIT_PROCESSED = ABAP_TRUE.  ENDIF.

```
- GET_ACCOUNT_DETERMINATION_KEY - Returns the account determination value
IO_CONTRACT, IS_EVALUATION_RULE, ID_CERULE, ID_CFTYPE,
ID_TERMNO, and ID_KEYDATE
These parameters can be used for the results analysis.
CD_ACCDETKEY
This can be used to influence account determination.
- BADI_RECE_EVALUATION_RULE
- COMPLETE_DEFAULTS - Prefill valuation rule data IO_CONTRACT
This parameter can be used for the results analysis.
CS_EVALUATION_RULE
Valuation rule data, which can be changed.
- COMPLETE_DEFAULTS_CONDITION - Prefill data for condition-specific valuation rule
IO_CONTRACT, IS_EVALUATION_RULE, and IS_CONDITION
These parameters can be used for the results analysis.
CS_EVALUATION_COND_RULE
Data for condition-specific valuation rule, which can be changed.
- CHANGE_STATUSREASON - Change status reason
IO_CONTRACT, IS_EVALUATION_RULE, and IS_EVALUATION_RULE_OLD
These parameters can be used for the results analysis.
CD_STATUSREASON
Status reason.

- CHANGE_EVAL_RULE_FOR_INSERT - Changes possible valuation rules for insertion IO_CONTRACT
This parameter can be used for the results analysis.
CT_CERULE
Possible valuation rules for insertion.
- CHECK_RULE - Additional checks for valuation rule IO_CONTRACT
This parameter can be used for the results analysis.
IF_CHECK_ALL
If this parameter is set, the standard check logic is used (error messages prevent a contract from being saved). In other cases, the check is called by the execution of the valuation. Therefore, an additional message can be sent as a warning during contract maintenance and as an error during execution of the valuation, whereby the execution is prevented.
IS_EVALUATION_RULE
Valuation rule data.
CT_MESSAGE
List of additional messages.
- GET_BEHAVIOR_CONTEXT - Returns the behavior context for the valuation IO_CONTRACT
This parameter can be used for the results analysis.
CF_EXIT_PROCESSED
See above.
CD_MSGTYPE_USEFULLIFEEND
The message type of the messages RECETM, , and can hereby be overridden for the check of the end of usage RoU. By default, none of these messages are sent.
- CHANGE_COND_PROPERTY - Changes possible condition valuation property IO_CONTRACT
This parameter can be used for the results analysis.
IS_EVALUATION_RULE
Valuation rule data.
IS_EVALUATION_COND_RULE
Condition-specific data of valuation rule.
CT_CONDITION_PROP
List of condition properties
- BADI_RECE_EVALUATION_PROCESS
- GET_BEHAVIOR_CONTEXT - Returns the behavior context for the valuation IO_CONTRACT and IS_EVALUATION_RULE
These parameters can be used for the results analysis.
CF_REMAINING_CAPITAL_INCR_NPV
If this parameter is set to ABAP_FALSE, the remaining capital (resulting from the present value determination) is not added to the present value.
CF_COMPOUNDED_INTEREST
When this parameter is set to ABAP_FALSE, compound interest is not calculated.
CD_KEEP_STEP_EVALUATION

This parameter applies only to the following valuation types: linearization and transfer posting. It specifies the maximum number of steps (number of valuations) to be kept to provide transparency of valuations for each valuation rule. The value is used by default. Furthermore, an initial value is treated like a . If the maximum number is exceeded in a subsequent valuation, the first step is discarded. The second step becomes the first step, and so on. In special cases where the "First Posting From" date has been used in an initial valuation (two steps are generated in the initial valuation), the maximum number is corrected to (provided a smaller number has been returned after all implementations have been run). In this case, replacement starts only from the third step.

Note: If the number of existing steps is greater than the maximum number of steps, the existing number of steps is kept (in this case, the maximum number of steps is corrected upward to the number of existing steps).

CF_PROCESS_EXECUTION_ALLOWED

When this parameter is set to ABAP_FALSE, execution of the valuation can be prevented (parameter IS_EVALUATION_RULE is not filled in this case). In this way, for example, you can use an implementation to prevent a valuation from being executed for inactive contracts (simulation cannot be prevented).

CF_EXIT_PROCESSED

See above.

- EVALUATION - Performs contract valuation
IO_CONTRACT, ID_EVALUATION_POINT, ID_PROCESSMODE, IT_VICERULE,
IT_VICECONDRULE, IT_VICEPROCESS, and IT_VICECFRULE_PREVIOUS

These parameters can be used for the results analysis.

CT_VICECFRULE

Valuation cash flow.

CS_PROCESS

Valuation process.

CS_PROCESS_ADDITIONAL

Additional valuation process.

CT_MESSAGE

Additional valuation messages.

CF_EXIT_PROCESSED

See above.

Note that the EVALUATION method is currently not fully integrated into the valuation process and therefore can only be used to a limited extent. If you need to manipulate the results, please create a customer message with a detailed description. As a result, integration of the method will be completed step by step.

- BADI_RECE_ASSET_ACCOUNTING
- GET_BEHAVIOR_CONTEXT - Returns the behavior context for asset integration
IO_CONTRACT and IS_EVALUATION_RULE
These parameters can be used for the results analysis.
CF_MESSAGE_DEPRECIATION
When this parameter is set to ABAP_TRUE, messages are displayed during execution of asset accounting functions (that use the depreciation calculation of the valuation functions) to

indicate that: valuation rules are incomplete or valuations are still open. In this way, for example, a depreciation run can be prevented if valuations are still open.

CD_MESSAGE_DEPRECIATION_TYPE

You can specify the type of message here. E, W, and I are permitted. Note that the message type has no significance in the Asset Explorer, where a message of type I is always sent (provided that CF_MESSAGE_DEPRECIATION was set).

Enhancements (BAdI) Asset Integration

Use

The following Business Add-Ins (BAdIs) support enhancements to the standard functions for **contract valuation**:

- BADI_RECE_EVALUATION
Used to influence general functions.
- BADI_RECE_EVALUATION_RULE
Used to influence functions in the context of the valuation rule.
- BADI_RECE_EVALUATION_PROCESS
Used to influence functions in the context of the valuation process.
- BADI_RECE_ASSET_ACCOUNTING
Used to influence functions in the context of asset integration.

For more information about enhancements, see:

- Overview of Enhancement Methods for Master Data Objects and the Real Estate Contract
- Overview of the Programming Interfaces for RE-FX
- Information on using BAdIs

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

Note that the implementation of the methods has to be independent of the interface and must not contain **any** COMMIT WORK or ROLLBACK WORK statements. For example, direct output of messages using the MESSAGE statement is **not** allowed.

Methods and their parameters

- BADI_RECE_EVALUATION
- GET_BEHAVIOR_CONTEXT - Returns the behavior context for the valuation

IO_CONTRACT, IS_EVALUATION_RULE, ID_CETYPE, and ID_CERULE

These parameters can be used for the results analysis.

CF_PROBABLEEND_ALLOWED

This allows the Probable End to be entered for the transfer posting valuation type also.

Otherwise, for unlimited contracts, the system proceeds in the same way as for the partner-related cash flow with regard to the generation period.

CD_INTEGRATION_TYPE

This can be used to influence the Integration Type.

CF_EXIT_PROCESSED

The GET_BEHAVIOR_CONTEXT method is called from different places. Only certain parameters are of interest here. Therefore, implementation must always be context based (for performance reasons also). To influence the integration type, for example, perform the implementation as follows:

```

CF_EXIT_PROCESSED = ABAP_FALSE.
IF CD_INTEGRATION_TYPE IS REQUESTED.
*   influence it
    CD_INTEGRATION_TYPE = ...
*   done!
    CF_EXIT_PROCESSED = ABAP_TRUE. ENDIF.

```

- GET_ACCOUNT_DETERMINATION_KEY - Returns the account determination value
IO_CONTRACT, IS_EVALUATION_RULE, ID_CERULE, ID_CFTYPE,
ID_TERMNO, and ID_KEYDATE
These parameters can be used for the results analysis.
CD_ACCDETKEY
This can be used to influence account determination.
- BADI_RECE_EVALUATION_RULE
- COMPLETE_DEFAULTS - Prefill valuation rule data IO_CONTRACT
This parameter can be used for the results analysis.
CS_EVALUATION_RULE
Valuation rule data, which can be changed.
- COMPLETE_DEFAULTS_CONDITION - Prefill data for condition-specific valuation rule
IO_CONTRACT, IS_EVALUATION_RULE, and IS_CONDITION
These parameters can be used for the results analysis.
CS_EVALUATION_COND_RULE
Data for condition-specific valuation rule, which can be changed.
- CHANGE_STATUSREASON - Change status reason
IO_CONTRACT, IS_EVALUATION_RULE, and IS_EVALUATION_RULE_OLD
These parameters can be used for the results analysis.
CD_STATUSREASON
Status reason.

- CHANGE_EVAL_RULE_FOR_INSERT - Changes possible valuation rules for insertion
IO_CONTRACT
This parameter can be used for the results analysis.
CT_CERULE
Possible valuation rules for insertion.
- CHECK_RULE - Additional checks for valuation rule IO_CONTRACT
This parameter can be used for the results analysis.
IF_CHECK_ALL
If this parameter is set, the standard check logic is used (error messages prevent a contract from being saved). In other cases, the check is called by the execution of the valuation. Therefore, an additional message can be sent as a warning during contract maintenance and as an error during execution of the valuation, whereby the execution is prevented.
IS_EVALUATION_RULE
Valuation rule data.
CT_MESSAGE
List of additional messages.
- GET_BEHAVIOR_CONTEXT - Returns the behavior context for the valuation IO_CONTRACT
This parameter can be used for the results analysis.
CF_EXIT_PROCESSED
See above.
CD_MSGTYPE_USEFULLIFEEND
The message type of the messages RECETM, , and can hereby be overridden for the check of the end of usage RoU. By default, none of these messages are sent.
- CHANGE_COND_PROPERTY - Changes possible condition valuation property
IO_CONTRACT
This parameter can be used for the results analysis.
IS_EVALUATION_RULE
Valuation rule data.
IS_EVALUATION_COND_RULE
Condition-specific data of valuation rule.
CT_CONDITION_PROP
List of condition properties
- BADI_RECE_EVALUATION_PROCESS
- GET_BEHAVIOR_CONTEXT - Returns the behavior context for the valuation
IO_CONTRACT and IS_EVALUATION_RULE
These parameters can be used for the results analysis.
CF_REMAINING_CAPITAL_INCR_NPV
If this parameter is set to ABAP_FALSE, the remaining capital (resulting from the present value determination) is not added to the present value.
CF_COMPOUNDED_INTEREST
When this parameter is set to ABAP_FALSE, compound interest is not calculated.
CD_KEEP_STEP_EVALUATION

This parameter applies only to the following valuation types: linearization and transfer posting. It specifies the maximum number of steps (number of valuations) to be kept to provide transparency of valuations for each valuation rule. The value is used by default. Furthermore, an initial value is treated like a . If the maximum number is exceeded in a subsequent valuation, the first step is discarded. The second step becomes the first step, and so on. In special cases where the "First Posting From" date has been used in an initial valuation (two steps are generated in the initial valuation), the maximum number is corrected to (provided a smaller number has been returned after all implementations have been run). In this case, replacement starts only from the third step.

Note: If the number of existing steps is greater than the maximum number of steps, the existing number of steps is kept (in this case, the maximum number of steps is corrected upward to the number of existing steps).

CF_PROCESS_EXECUTION_ALLOWED

When this parameter is set to ABAP_FALSE, execution of the valuation can be prevented (parameter IS_EVALUATION_RULE is not filled in this case). In this way, for example, you can use an implementation to prevent a valuation from being executed for inactive contracts (simulation cannot be prevented).

CF_EXIT_PROCESSED

See above.

- EVALUATION - Performs contract valuation
IO_CONTRACT, ID_EVALUATION_POINT, ID_PROCESSMODE, IT_VICERULE,
IT_VICECONDRULE, IT_VICEPROCESS, and IT_VICECFRULE_PREVIOUS

These parameters can be used for the results analysis.

CT_VICECFRULE

Valuation cash flow.

CS_PROCESS

Valuation process.

CS_PROCESS_ADDITIONAL

Additional valuation process.

CT_MESSAGE

Additional valuation messages.

CF_EXIT_PROCESSED

See above.

Note that the EVALUATION method is currently not fully integrated into the valuation process and therefore can only be used to a limited extent. If you need to manipulate the results, please create a customer message with a detailed description. As a result, integration of the method will be completed step by step.

- BADI_RECE_ASSET_ACCOUNTING
- GET_BEHAVIOR_CONTEXT - Returns the behavior context for asset integration
IO_CONTRACT and IS_EVALUATION_RULE
These parameters can be used for the results analysis.
CF_MESSAGE_DEPRECIATION
When this parameter is set to ABAP_TRUE, messages are displayed during execution of asset accounting functions (that use the depreciation calculation of the valuation functions) to

indicate that: valuation rules are incomplete or valuations are still open. In this way, for example, a depreciation run can be prevented if valuations are still open.

CD_MESSAGE_DEPRECIATION_TYPE

You can specify the type of message here. E, W, and I are permitted. Note that the message type has no significance in the Asset Explorer, where a message of type I is always sent (provided that CF_MESSAGE_DEPRECIATION was set).

Adjustment of Conditions

Adjustment Rules - Cross-Method

Define Adjustment Rules

Use

In this activity, you define adjustment rules for each adjustment method that you would like to use.

Standard settings

The following adjustment rules are provided by SAP in the standard system and are fixed:

- Free
- Index
- Service charge settlement
- Representative list of rents
- Comparative group of apartments
- Adjustment measure/modernization

Together with specific contract or rental data, as well as data entered in the adjustment process (such as the specification of percentage or absolute adjustment), the adjustment rules define which algorithm is used to calculate the adjustment amount.

Activities

1. Create at least one rule for each adjustment method.
2. Give the rule a name that allows it to be easily identified.
3. If you want to create a rule consisting of several rules, set the Combined Rule indicator. Any rule that is not identified as a combined rule can be used as a subrule. If you want to create a rule that should be used exclusively as part of a combined rule, set the Part of Comb.Rule indicator. You then have to assign it to the combined rule in the Combined Adjustment Rules activity.
4. Enter the required parameters for each rule. For more information, refer to the information contained in the F Help for each field.

5. For each parameter, define how it appears on the on the contract or rental object. The options are:
- Hidden
 - Displayed only
 - Can be modified
 - Required entry **Recommendation:**

To simplify processing, create rules with completed parameters for the most important and most frequently used adjustment rules. The rules you create should allow only a few or no individual settings to be made on the contract or rental agreement. In the case of more complicated or seldom used processes, you should create some rules with parameters that can then be specified on the contract or rental object.

For some methods (such as, INDX or TASK) there are method-independent parameters in addition to the method-dependent parameters. You can set these parameters in the Implementation Guide in the section for the given method.

Customizing Relationship - Contract/Rental Object

If no parameters are changed in the contract/rental object, then the system uses the rule parameters from Customizing for the adjustment process. Then changes to the rule parameters in Customizing apply to **all** contracts/rental objects that use this rule.

However, you can sever the relationship to Customizing by choosing @G@ with quick info *Unlink from Customizing*. The prerequisite for this is that the adjustment rule that has Modifiable in Contract/Rental Object entry status.

Once you unlink Customizing, the modifiable fields are then ready for input, and you can make your own modifications to the adjustment rule. Any changes you make the rule parameters in Customizing then no longer affect these contracts/rental objects. When you save an object that has an adjustment rule you modified yourself, an icon (@H@ with quick info *Modified*), appears next to the changed fields. You can choose this icon to compare the rule parameters from Customizing with the modified value of the field.

You can establish the relationship with Customizing again by choosing @H@ with quick info *Link to Customizing*. The modifiable fields are then no longer available for input, and the system fills them again with the rule parameters from Customizing.

Define Combined Adjustment Rules

Use

In this activity you can assign multiple subrules to an adjustment rule.

Requirements

First create the following rules in the Create Adjustment Rule IMG activity:

1. The adjustment rule that will be used as the combined rule
2. All adjustment rules that will be used as subrules

The Combined Rule indicator has to be set for the combined rule. For subrules, you can use **all** adjustment rules that are not designated as combined rules. If you want an adjustment rule to be available *only* as a subrule, set the Part. Comb. Rule indicator. Then you are not allowed to assign the rule directly to a contract or a rental object.

Activities

Choose a combined adjustment rule and assign subrules to it.

Define Adjustment Reason

Use

In the application, you have to enter a reason you define here for the adjustment run. This adjustment reason controls which capping provisions apply to the capping, and which conditions are also taken into account.

Activities

- For each adjustment rule, specify which adjustments can be made using which adjustment reasons.

Make the settings you need for capping and for the conditions that are considered in addition. This is done in the detail screens of the following IMG activities:

- Define Adjustment Parameters Dependent on Term
- Define Rounding, Change Reason and Surcharges per Adjustment Rule

Define Adjustment Lock

Use

If you do not want a condition to be adjusted during a given time period, you can assign a lock reason to the adjustment rule.

Activities

For each adjustment method, define the reasons for allowing an adjustment to be prevented, and enter a text for the reasons. This text is displayed in the contract when you process the adjustment rule.

Note: You can only select the reason for the adjustment lock if one of the following is selected for the adjustment rule in *Customizing: To Be Fixed in Contract/Rental Object* (recommended setting) or *Modifiable in Contract/Rental Object*.

Example

For adjustment method "RLRA" you defined these lock reasons:

- Legal dispute
- Other lock reason

For adjustment rule RERACN, the field is set to *Modifiable in Contract/Rental Object*.

If you assign adjustment rule RERACN to a contract, the Lock Reason field then appears.

Define Adjustment Parameters (Capping Provisions) Dependent on Term

Use

In this activity, you can specify for each adjustment rule, if a maximum limit is set for an increase. You also specify the how high this maximum is, and the period for which it is effective. When an adjustment is made, the system checks the rules separately for each time period. If the adjustment amount is larger than the smallest amount resulting from the application of all the rules, then the system reduces the adjustment amount accordingly.

The maximum increase is usually set by law.

The maximum increase can be entered using one of the following parameters:

- Absolute per Measurement (*Maximum Increase per Measurement*)
- Absolute per Condition Amount (*Maximum per Condition Increase*)
- Percentage (*Maximum Increase in %*)
If you choose a percentage, then you have to enter the capping basis for it. (Is the percentage multiplied by the unit price or by the condition amount that results from the calculation?)

In addition, you can set an upper limit for the resulting new rent. You also have the option here of entering either the absolute upper limit per measurement or the absolute upper limit for the entire condition amount. If more than one upper limit was entered, then the system satisfies all of the upper limits when the condition amount in the adjustment is reduced.

You can also specify minimum increases. You can use one of the above parameters for a minimum increase as well.

It is also possible to specify minimum increases. The following applies to minimum increases:

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- If you enter a value in one (or more) of the minimum increase fields, then the system makes the adjustment only if the increase amount that is determined is **at least** the same as the value entered in this field. You can make use of this to prevent an adjustment being made for a trivial amount.
- Above and beyond that, you can also use the Increase to Minimum Increase? indicator. This allows you to ensure that the increase is at least the minimum amount that was set, even if the result of the calculation is a smaller value. The increase is then performed as if you had used a free adjustment method (normally useful only if there is at least a minimum interval between two adjustments).
If the minimum amount calculated in this case is smaller than the maximum amount determined based on the upper limit, then the system ignores the minimum amount.

Example

For adjustment rule A, you define that the maximum increase within months can be %, within months %.

The condition history for contract for **rent** is below. Adjustment rule A is assigned to this condition.

January ,
January ,
January ,

Adjustment rule A calculates a condition amount of for January , . For a maximum increase within months this amount is correct, since the rent was euros months before the adjustment date. An adjustment amount of up to euros would be allowed given the maximum allowed increase of %.

However, on January , , months before the adjustment date, the rent was . The maximum allowed increase within months is %, which means the maximum amount allowed is . The system reduces the original adjustment amount of to .

Define Rounding, Change Reason, and Classification (Surcharges)**Use**

You define here how and which conditions are to be taken into account during adjustment using a specific rule.

In some cases it can be necessary to also take into account other conditions during calculation, for example, if an appreciation surcharge defined as a separate condition is to be included in the basic rent.

Standard settings

If no entries exist for an adjustment rule in this table, then the new condition amount is determined for the conditions to which the adjustment rule is assigned, according to the procedure defined by the rule.

Activities

The settings here are dependent on the adjustment rule (see the Define Adjustment ReasonIMG activity). Since the adjustment rule is specified in the application in the adjustment run, you can overwrite the conditions of the adjustment rule that are normally valid by entering another adjustment reason.

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Set the following for each **condition type** to be taken into account:

- Whether and how it is to be rounded: Make the necessary settings for:
 - The rounding category
 - The number of decimal places - The unit (you find examples here)
- The adjustment basis:
You define which amount (unit price or condition amount) is used for rounding.
- The indicator *Round Difference*:
Set this indicator if you want to round the difference (difference between new and old amount). If you do not set the indicator, then the new amount that results from the adjustment is rounded.
- The classification
Here you define whether the condition is a main condition, a surcharge, or a waiver condition.
- The reason for change that is set with this rule when adjusting the condition: For example, if a surcharge is changed when adjusting the main condition, you can specify the reason **inclusion in basic rent** for the surcharge condition type.

Set the following for **surcharges**:

- The computable indicator
- The term in months for not being counted
- The cancellable indicator
- The term in months, according to which the cancellation is possible at the earliest

If the adjustment rule is able to create this condition, then you also have to enter the condition purpose to be used for the new condition. The condition purpose is particularly important for waiver conditions, since they should have a statistical condition purpose (showing the rent increase that was waived in reporting and correspondence).

If no condition type is entered, then the entry for the adjustment rule and adjustment reason is relevant for all condition types for which no separate setting was made (default setting for adjustment rule and adjustment reason).

Index Adjustment

Enter Parameters for Index Rule

Use

In this activity, you create additional parameters for adjustment rules that are based on the *Index* adjustment method. Also refer to the F documentation for the fields and for the input status.

Prerequisites

You have created the index rules that you need in the Adjustment Rules IMG activity.

Customizing Relationship - Contract/Rental Object

If no parameters are changed in the contract/rental object, then the system uses the rule parameters from Customizing for the adjustment process. Then changes to the rule parameters in Customizing apply to **all** contracts/rental objects that use this rule.

However, you can sever the relationship to Customizing by choosing @G@ with quick info *Unlink from Customizing*. The prerequisite for this is that the adjustment rule that has Modifiable in Contract/Rental Object entry status.

Once you unlink Customizing, the modifiable fields are then ready for input, and you can make your own modifications to the adjustment rule. Any changes you make the rule parameters in Customizing then no longer affect these contracts/rental objects. When you save an object that has an adjustment rule you modified yourself, an icon (@H@ with quick info *Modified*), appears next to the changed fields. You can choose this icon to compare the rule parameters from Customizing with the modified value of the field.

You can establish the relationship with Customizing again by choosing @H@ with quick info *Link to Customizing*. The modifiable fields are then no longer available for input, and the system fills them again with the rule parameters from Customizing.

Enter Index Rebasing Factors**Use**

Due to the introduction of a new base year for the consumer price index in Germany, SAP has standardized all existing consumer price indexes. As a result, certain indexes that can be linked to rent changes are no longer available. Therefore, SAP recommends that, over the longterm, you convert contracts that are linked to now invalid index series.

In the interim, SAP provides this conversion table for updating outdated index series with the new consumer price index (also called rebasing).

Activities

For the target series, enter an index series for which you want to convert the index values to those of the target year, but for which index values are no longer reported. For the target year, enter the base year that you want to convert the index values to.

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As source series, enter the index series, for which index values are provided for the source year. For the source year, enter the base year for which index values are reported.

Assign the chaining date (month and year on which the index levels for the rebasing are entered).

Currently valid index series in Germany per //: *Consumer Price Index for Germany (VPI)*

Currently valid base year per //:

Currently valid chaining date per //: //

Enter Index Levels

Use

In this section, you create:

1. Index class as the basis for further defining indexes for rent adjustments
2. Index series used in your organization for rent adjustments, including index series with base year
3. Index points for the index series

Standard settings

SAP supplies the index classes for real estate objects and for maintenance and operating costs index (Switzerland).

Recommendation

It is recommended that you do not change the standard settings.

Changes may at best be necessary if you have already entered these index classes (with other characteristic values) in Asset Accounting (Asset Accounting uses the same table). In case of uncertainties, please also refer to the Asset Accounting System Administration Guide.

Activities

1. Check whether you have to make changes to the standard setting. The Real Estate component requires the following index classes:
 - a) An index class for rent adjustment with the following settings:
Details on indexing frequency (monthly: entry) Details on base year

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- b) Applies only for Switzerland: a class for maintenance and operating costs index with the following settings:
 - Details of an indexing frequency (monthly: entry) - No base year: Check if changes to the standard setting are necessary.
- 2. Index series

First maintain per index class the required index series and, for index series with base year, the required base years for the respective index series.
- 3. Index data

Create the required index data for the index series.

To do so, navigate over the required entry (index series with or without base year.

Representative List of Rents
Define Fixt./Fittings Characteristics for Buildings, ROs, and Parcels
Use

You specify here which fixtures and fittings characteristics are to be available when processing the rental object, building, parcel, and architectural object. The fixtures and fittings characteristics that you define here can be assigned to a representative list of rents (see Define Representative List of Rents: *Characteristic Categories --> Surcharge/Reduction Characteristics*).

For fixtures and fittings characteristics that are **not** relevant for the representative list of rents, you can define a structure using the Specify Structure of Fixtures and Fittings Characteristics Independent of Representative List of Rents IMG activity.

Activities

- Define all required fixtures and fittings characteristics.
- For each fixtures and fittings characteristic, specify the objects on which the characteristic is visible: rental object, building, and/or parcel. You can then process these fixtures and fittings characteristics on the rental object or building by choosing the Fixtures/Fittings tab page. For parcels, you see the fixtures and fittings characteristics by choosing the Development tab page.

If you need fixtures and fittings characteristics in architectural objects, you define them here. Then you assign them to architectural objects in the Specify Fixt/Fittings Characteristics for Architectural Objects IMG activity.

When adjusting conditions using the representative list of rents procedure (according to the representative list of rents), you can use fixtures and fittings characteristics and their evaluations for the calculation of the comparative rent.

The fixtures and fittings characteristics of the rental object and those of the assigned building (provided that this is defined for the representative list of rents) are used in this calculation of the comparative rent. If you indicate that a fixtures and fittings characteristic is permitted for both object types, you can define the general validity of this characteristic at the building. For the rental objects

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to which the building attribute does not apply, you can then make a different setting in the application (see example).

- Also define for each fixtures and fittings characteristic whether it is relevant for the representative list of rents, that is, whether it should be included in the rent adjustment according to the representative list of rents.
- You can define that a specific fixtures and fittings characteristic should only be visible for objects of this category (derived from the usage type of the rental object) using the *usage category*. If you do not enter anything here, the fixtures and fittings characteristic can be selected regardless of the usage type of the rental object.

Example

For example, if all apartments of a house are equipped with oil central heating, you could define the fixtures and fittings characteristic **Oil Central Heating** for the building instead of separately for each apartment. If electric heating is installed in the top-floor apartment (that was subsequently added), then when you process this apartment, you can select the **Oil Central Heating** characteristic as *not appropriate* and instead specify a fixtures and fittings characteristic **Electric Heating**.

Define Representative List of Rents

Use

Here you define the representative lists of rents that you need. Since representative lists of rent differ from city to city, there are some menu options here that you only need for specific representative rent lists. Representative lists of rents are used primarily in Germany and the Netherlands. The information here reflects mainly the German usage for residential rents in cities. However, since you can flexibly define the representative list of rents, and since the customer exits offered allow even more room for making your own changes, the representative list of rents method can be used on a more general basis to handle other types of rent adjustments that are based on rules. This is especially true if the rent (or other condition) being adjusted is dependent mainly on the size, location, fittings and fixtures, age, and possibly other attributes of the rental object.

Use this guide for defining new representative lists of rent. You can use the settings for the sample representative list of rents that is provided in Customizing as a reference.

For some representative lists of rents, there are various means of representing them in the system. If you are unsure about which means to use, choose the way that is the least complicated for the end user, and therefore leads to fewer errors.

Note

SAP does not guarantee the correctness of the values in the example. The data provided is intended only as an example.

Requirements

You entered an adjustment rule for the representative list of rents in the Define Adjustment Rules IMG activity.

Activities

- To create a **new representative list of rents**, choose *New Entries*. Enter the ID for the representative list of rents in the *Repr.rent list* field. The system uses this ID to address the representative list of rents in the adjustment rule.

If the structure, or even just the values, of the representative list of rents of a city change, then create a new representative list of rents (or copy the old one). Link the two representative lists of rents by choosing the *References* dialog structure node. In this case, you do not have to change the representative list of rents that is referenced in the master data. The system automatically determines from the assignment data that the new representative list of rents is used. However, keep in mind that changes to the structure of the representative list of rents can also bring changes of master data along with them.

- On the **detail screen of the representative list of rents**, you enter the structure and basic data for this representative list of rents in the *Basic Data* screen area. Basic data includes:
 - Validity period
 - Currency for the values in the dependent tables
 - The for determining the base value for the representative list of rents
 - Area type, that is used for the measurements in the representative list of rents table (this is not allowed to be a total measurement type for area)
 - Area unit for these values
- If the individual cells of the value tables in your representative list of rents have names, and you want to process these names, then set the Rep. List of Rents Uses Rent Label indicator. This can simplify communication with tenants.
- Using the Rep. List of Rents Uses Characteristic Categories indicator, you specify if fixtures and fittings characteristics for surcharges and reductions are considered in the calculation of rent using the representative list of rents.
- You also specify the structure of the representative list of rents here (*Dimensions for Calculating Basic Rent*). This structure specifies the parameters on which the table of base values for the representative list of rents is dependent (key fields of the value table, which you edit in the Specify Basic Values for Representative List of Rents IMG activity). These values can be dependent on the following classes or categories:
 - The Location Class and
 - The Fixtures and Fittings CategoryYou enter both of these on the rental object, and evaluate the location or fixtures and fittings in relation to a specified representative list of rents.

Some representative lists of rents contain concrete specifications about which sections of the city can be placed in which location classes, or which fixtures and fittings an apartment is allowed to have or not have to be assigned to a given fixtures and fittings category.

You might not want to leave the implementation of these specifications to the employee who handles the data of the rental object. Instead, you might want to have this take place automatically. In that case, you can use the BAdIs for rental object maintenance to make the necessary validations or substitutions. For more information, refer to the Define Number Assignment, Validation Substitution IMG activity. However, in many cases it is sufficient for your employees to refer to the concrete, plaintext representative list of rents that is provided as an example. The file stored here in Customizing can be accessed as read-only in the master data of the rental object. Use the link to the *Business Document Navigator* by choosing *Documents for RLR (PDF or similar.)*.

- The Size Class and the Building Age Class
These are determined automatically from the size and construction year of the rental object.

- Enter all other data to complete the basic data of the representative list of rents:
- *References* (as described above, used if the structure of the representative list of rents in the master data has changed)
- *Building age classes*
If the representative list of rents uses building age classes, then define a building age class for each time period defined in the representative list of rents. If the representative list of rents does not set time limits for the beginning and end of the categories, then leave the *From Date* in the oldest building age category and the *To Date* in the most recent building age category blank.
- *Location Classes*
If the representative list of rents uses location classes and you specified that in the basic data, then you define these location classes here. Enter a text for the location class (this is also displayed when you process the rental object).
- *Size Classes*
If the representative list of rents uses size classes, and you specified that in the basic data, then you define these size classes here. Enter the size margin for each class. If the representative list of rents does not specify an overall upper and lower limit, then omit these values in the smallest and largest size class.
- *Fixtures and Fittings Categories*
If the representative list of rents uses fixtures and fittings categories, and you specified that in the basic data, then you define these fixtures and fittings categories here. Enter a text for the fixtures and fittings category (this is also displayed when you process the rental object).
- *Representative List of Rent Labels*
If the representative list of rents uses representative list of rents labels, and you specified that in the basic data, then you define these representative list of rents labels here. Enter the assigned text for the representative list of rents label. The representative list of rents label is

not maintained on the rental object. Instead, it is determined from the value table during the adjustment.

- *Characteristic Categories*
If the representative list of rents uses characteristic categories for surcharge and reduction categories, and you specified that in the basic data, then you define these characteristic categories here. Enter the assigned text for the characteristic category. Enter the divisor that should be used for dividing the total point value of the assessment. Also specify how often characteristics in this characteristic category can be designated as "applicable" during processing of the rental object. For each characteristic category, you can assign weighting factors that are used for calculating rent based on the amenities level sign. For informational purposes, you can enter the number of the table of the representative list of rents that should be used for this characteristic category.
- *Characteristic groups*
If you use characteristic categories, you can group the characteristics of a characteristic category together into characteristic groups. Here you define the groups, and specify for each group how often characteristics in this characteristic category can be designated as "applicable" during processing of the rental object.
- *Surcharge Characteristics/Reduction Characteristics*
If you use characteristic categories, then you can define all characteristics of the characteristic category more exactly here. You assign the characteristics to characteristic groups here. You enter default values for assessment on the rental object here, as well as the point spreads that can be selected for each characteristic. You can also enter values for interpolation, if applicable, and specify how and if each characteristic is used for assessment using the amenities level sign.
- *Surcharges/Reduction per Characteristic and Area Interval*
If you use characteristic categories, you can enter an area price per area interval here for each characteristic. This price is then determined as the surcharge or reduction.

Specify Basic Values for Representative List of Rents

Use

In this table you enter the base values for a specific representative list of rents.

Requirements

You specified the structure of the representative list of rents in the Define Representative List of Rents IMG activity. The following fields in the definition of the basic data of the representative list of rents determine its structure: - Rep. List of Rents Uses Characteristic Categories

- Dimension for calculating the base rent:
Building Age Category

P System

- Location Class
- Size Class
- Fixtures and Fittings Category
- Rep. List of Rents Uses Rep. List of Rents Labels

These indicators determine the structure (key fields) of the value table you process here.

Activities

Depending on how the representative list of rents is structured, you can specify base values here for each:

- Building age category
- Location class
- Fixtures and fittings category
- Size class

If the setting was made that allows it, you can also enter the representative list of rents label that is assigned to the given entry.

The key entries are automatically defined by the system. You are not allowed to change them here. If you need different key entries, then you have to change the structure of the representative list of rents (see Requirements).

Define Special Rules for Adjustment Using Rep. List of Rents**Use**

Here you can specify, per adjustment rule, that the construction year of the building is always used for determining the building age category. You do this by setting the Construction Year of Building indicator.

If this indicator is not set or no settings were made for a rule, then the construction year of the building is used only if a date of reconstruction or extensive modernization is **not** entered on the rental object.

Make Own Changes to Standard Calculation Rules for Adjustment**Create Adjustment Control Rule****Definition**

For special calculations in condition adjustments, you can define an adjustment control using a formula editor. (Refer to the Define Adjustment Control Differing from Standard IMG activity.) For example, you could make the rent dependent on parameters that do not influence rent in the standard system.

In order to be able to use a set of rules for adjustment control with more than one adjustment rule, you store the set of rules with a key as an *adjustment control rule*. Then you assign this adjustment control rule to the actual adjustment rule that is used for adjusting the condition (see Assign Adjustment Control Rule to Adjustment Rule/Rep. List of Rents).

Activities

Specify the following for the adjustment control rules you need:

- Name
- Language for the language-dependent ID of the variables.
- If you first want to assign a default comment to each row of the control table.
- If you only want to assign default comments for fulfilled block conditions.
- If you also want to assign a block info to the default comment (the block and row number) in the comment.
Here you can also see how the default comment will be output.

Assign Adjustment Control Rule to Adjustment Rule/Rep. List of Rents

Use

For each adjustment rule, in which the calculation of the adjustment amount should be different from the standard, you have to assign an adjustment control rule. The adjustment control rule is then executed in addition to the adjustment rule.

- You can use the representative list of rents as a differentiation characteristic. Entering a representative list of rents only makes sense for a *representative list of rents* method. The adjustment control rule is only applied if the entered representative list of rents is used.
- If you do not enter a representative list of rents for an adjustment rule, then the system uses the adjustment control rule for **all** adjustments that use that adjustment rule.

Define Variables for Adjustment Control

Use

The calculation formulas of the representative list of rents are found in the system in the form of conditions and actions. These conditions and actions work with variables that you define here.

Activities

1. Choose a technical name that uniquely identifies the variable (also refer to the example below).
Note: Make sure you use the customer name space for your own variables.
2. Choose the variable type, for example:
 - Character string (for example, name of representative list of rents) -
 - Boolean value (true or false)...
3. Enter the number of decimal places and specify if the variable can be changed.
4. Specify if the variable is indexed. This means that a block that uses this kind of variable can be called more than once by the system.
5. Specify if the variable can be used for interpolation
6. Enter the variable name for the formula (also refer to the example below). **Note:** Make sure you use the customer name space here as well.
7. Assign the variable to the adjustment method in which you want it to be used.
8. Assign the variable to a variable class.

Example for Adjustment Control:

According to the definition in the representative list of rents, all fixtures and fittings characteristics that were assessed with less than EUR/m are to be ignored. The number of these characteristics should be counted (for later calculations).

Meaning of the variables:

<u>Technical Var. Name</u>	<u>Formula Name</u>	<u>Description</u>
FFCHRLRAAMTAR	AUSMERKMALBFE	Value that is considered for characteristic (area price (surcharge/reduction))
FFCHFIFITCHNOTUSEAUSMERKMALNBER	calculation	Ignore characteristic during
XNUMC	XN	Numerical auxiliary variable

This could be achieved using the following block:

<u>BlockNo</u>	<u>RowNo</u>	<u>Variable (Formula Name)</u>	<u>Formula</u>
		AUSMERKMALBFE <	
		AUSMERKMALNBER	TRUE
		XN XN +	

Define Adjustment Control Differing from Standard

Use

You represent the calculation formulas of the representative list of rents, without using ABAP program code, in the form of conditions and activities.

A condition describes when a specific situation exists and an activity describes how as a result of this, the system proceeds with the values of the variables. A condition and the following activities are combined in blocks.

Condition:

A condition is a **mathematical formula** in which the arithmetic and logical operators can be linked to variables provided by the system. They must be formed so that they always return a Boolean result (that is, true or false).

For example, if the building age class is defined in the variable BAUALTKLA and the building year in the variable BAUJAHR, then a condition could be `BAUALTKLA = ' ' AND BAUJAHR > .` This would then be fulfilled if the building age class of the apartment equals and the building year is greater than .

Activity:

An activity is a **pair of a variable and a mathematical formula** (or constants). The formula can have any value (number, character string, Boolean value), that is allocated when you execute the respective variable.

Thus, the activity `RENT_NEW , RENT_NEW + (< variable, formula for variable>)` would increase the new rent per area unit by one.

The simplest case of a formula is the allocation of a constant to a variable. The activity `RENT_NEW ,` would set the new rent per area unit to the value .

Block:

You combine a condition with as many activities as required in a block. When the condition of the block is fulfilled, then all its activities are executed one after the other. The sequence of the blocks is defined by a block number, which can be freely allocated. The sequence of activities within a block are also defined by a row number, which can be freely allocated and is block internal. The condition is independent of the row number. It is always checked first.

Any number of blocks can be assigned to each adjustment control rule. These are processed sequentially during an adjustment (the adjustment control rule is assigned to an adjustment rule) for each rental object or contract to be adjusted.

Requirements

You have created an Adjustment Control Rule.

Activities

- Allocate a block and row number.
- Specify whether the following should apply to the row:
- The row is a comment row (row is not used for evaluation)
- The default for comments, which has possibly been set on the adjustment control rule, should be switched off
- You normally formulate a condition first. The condition is always checked first, even if this has a higher row number than the activities.
- For a condition in the *Formula* field, define a mathematical formula, which should be applicable or not applicable for the condition, for example, `BAUALTKLA = ' ' AND BAUJAHR > .`
- For an activity, you specify the formula name of the variable, which you want to use in the calculation, in the Variable column. All existing variables are described in the Define Variables for Adjustment Control IMG activity.
- For the variable, specify the mathematical formula that should be executed.
If certain partial expressions are used a lot in a formula, functions (macros) that can be parameterized can be defined for this. They are either stored in the TFKT table or in a table that the user created, which has the same structure. For more information, see Macros.
- Enter a user-defined text for the variable in the field variable number and . This text should be used in the default comment.
- Specify a message ID, type, and number for this block.

For more information, special features, and tips & tricks on jumps, typing, and character strings, see Special Features on Control Table.

Example for Adjustment Control:

According to the definition in the representative list of rents, all fixtures and fittings characteristics that were assessed with less than EUR/m are to be ignored. The number of these characteristics should be counted (for later calculations).

Meaning of the variables:

<u>Technical Var. Name</u>	<u>Formula Name</u>	<u>Description</u>
FFCHRLRAAMTAR	AUSMERKMALBFE	Value that is considered for characteristic (area price (surcharge/reduction))
FFCHFIFITCHNOTUSEAUSMERKMALNBER	calculation	Ignore characteristic during

P System

XNUMC XN

Numerical auxiliary variable

This could be achieved using the following block:

<u>BlockNo</u>	<u>RowNo</u>	<u>Variable (Formula Name)</u>	<u>Formula</u>
		AUSMERKMALBFE <	
		AUSMERKMALNBER	TRUE
		XN	XN +

Implement Enhancements for Rent Adjustment Using Rep. List of Rents (BAdI)**Use**

The Business Add-In supports enhancements to the standard functions of **adjustment of conditions using the representative list of rents procedure**. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

The following methods exist:

- **GET_BASE_RENT** - gets the base rent
- **GET_COMPARATIVE_RENT** - gets the comparative rent

These methods are called automatically during standard processing of the adjustment of conditions. If an implementation exists, the methods are always called in addition to standard system behavior. This does not mean that it is possible to replace the standard behavior of the basic actions.

The implementation of the methods has to be independent of the interface. It must not contain any COMMIT WORK or ROLLBACK WORK statements.

For example, direct output of messages using the MESSAGE statement is not allowed.

Method description

- **GET_BASE_RENT**
This method gets the base rent. The IO_CONTRACT parameter receives a value when the condition to be adjusted is a contract condition. Otherwise the IO_RENTAL_OBJECT parameter has a value.

The IS_CONDITION parameter contains the values of the condition to be adjusted. The base rent is changed using the CD_BASE_RENT parameter. Returned messages (CT_MESSAGE parameter) are displayed in the same list with the messages from standard processing.

- **GET_COMPARATIVE_RENT**

This method gets the comparative rent. The IO_CONTRACT parameter receives a value when the condition to be adjusted is a contract condition. Otherwise the IO_RENTAL_OBJECT parameter has a value. The IS_CONDITION parameter contains the values of the condition to be adjusted. The comparative rent is changed using the CD_COMPARATIVE_RENT parameter. Returned messages (CT_MESSAGE parameter) are displayed in the same list with the messages from standard processing. Notes for Developers

Comparative Apartments

Define Rules for Determining Comparative Rent

Use

Here you define which rules are to be valid for rent adjustment using comparative apartments.

Activities

Enter the following for each adjustment rule:

- Comparative group with which you want to carry out the adjustment (consisting of company code and comparative group number).
It is only useful to make entries for these fields if you have defined a standard comparative group that can be used for many rental objects in your portfolio. Then you only need to assign the rule to these rental objects.
However, you will normally not define the comparative group here but specify it on every rental object.
- Number of Comparative Apartments from which the comparative rent is to be determined.
- Whether the average rent of the rental object of the comparative group is to be determined (not permitted for apartments in Germany)
- Whether internally leased-out rental objects are to be considered when determining the comparative rent.
You do not normally set this indicator since rent can be set arbitrarily for internal contracts.

P System

- Measurement type for the space used to determine the comparative rent. You must specify a value for this measurement type for all rental objects in the comparative group and for the rental object to be adjusted. The comparative rent is calculated based on this measurement type and multiplied by the measurement value of the rental object to be adjusted.
You usually use the same measurement type here that you also used to apportion the space-related service charges.
- Condition purpose to be used to determine the comparative rent of external comparative apartments.

Comparative Group of Apartments Dialog

Change Screen Layout

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout

Field Groups

Field Groups

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

P System

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status**Use**

Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
2. Select the row and choose *Field Modification*.
The system displays all field groups that know the given application. In order to display the fields of a field group, position the cursor on the field group and choose *Environment -> Field check*.
3. Now you can, for example, suppress field groups that are not needed or define other field groups as "Required entry" fields. If you choose the "Not specified" setting, then the system itself determines how the field is treated. (Usually these fields are optional entry fields in create and change mode, and display fields in display mode.) If it is not possible to make a setting for a field group, then the system determines how the field is treated (usually dependent on the situation, or on the contents of other fields).

Note

Before you suppress multiple field groups of a view, a section or a screen sequence, you should consider if it makes more sense to remove the view, section or screen completely from the screen sequence.

Views**Use**

P System

Here you specify which field groups are grouped together into a view (part of a screen, technically a subscreen). You should group together the field groups that necessarily belong together during a check.

Example

If you have a field group with a valid-from date and a field group with a valid-to date, and these should be checked against each other in a module, then you should group them together into a view.

The check module is in the detailed data under "Function Module After Entry".

Standard settings

SAP recommends that you not change the standard settings. It is only necessary to make changes if you want to add your own new fields to the master data dialog.

In that case, copy an existing view to the customer namespace (Y* or Z*) and modify the properties of the view accordingly (consider the detail screen). Then assign the field groups to the view. You can assign your own field groups, as well as those delivered by SAP.

Sections**Use**

Here you specify which views are grouped together into sections. You can recognize a section because it is surrounded by a frame. Fields that logically belong together should be grouped together in sections.

Standard settings

SAP recommends that you not change the standard settings.

It could be necessary to define new sections, either to arrange views delivered by SAP differently or to add your own fields to the master data dialog.

In that case, copy an existing section to the customer namespace (Y* or Z*) and assign the views you want to this section. The item number specifies the sequence in which the views are arranged in the section. For technical reasons, if you make your own assignments from sections to views, the item numbers have to be in the customer namespace (that is, they are not allowed to end in ").

This makes it possible for you to also include your own views in SAP sections. Select a section, and choose *Section -> Views* in the dialog tree, and assign the view to a section using a corresponding item number.

Screens

Use

Here you specify which tab pages appear in the dialog, and which sections make up these tab pages.

Standard settings

SAP recommends that you do not change the standard tab pages.

If you want to change a tab page, copy the standard tab page that is closest to the tab page you have in mind, and give it a name in the customer name range (Y* or Z*). Then assign the sections you want. The position number for user-specific entries also has to be other than here.

Screen Sequences

Use

Here you specify which screen sequences should appear in dialog. A screen sequence consists of different screens, and each screen is equivalent to a tab page.

Standard settings

SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories** or **Screen Sequence Category** -> **Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):
Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.
- Rental object:

P System

You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).

- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
- RE search request:
For normal entry, you use the standard screen sequence. For fast entry (ad hoc search) the RERRFE screen sequence is used. (This cannot be changed.)
For comparative groups of apartments, the system always uses the screen sequence category that is defined as *Standard*.

Events

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Tables

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Implement Enhancements (BAdI)**Comparative Group of Apartments: Validation, Substitution****Use**

The Business Add-In supports enhancements to the standard functions of comparative groups. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications Notes for Developers

Influence Determination of Comparative Apartments and Comparative Rent

Use

This BAdI is run for rent adjustment using comparative apartments.

- Method **CHANGE_COMP_OBJECTS**
This method is called after the comparative objects are determined. The objects are transferred in table CT_COMP_OBJECTS. You can edit the objects, for example by deleting objects that are not suitable.
- Method **CALCULATE_PRICE**
In this method, you can determine the calculated price differently to the way it is done in the standard system. The method is called before the standard calculation (and after the method CHANGE_COMP_OBJECTS). So that the standard code is no longer run, you have to set the flag EF_ADJUSTED to ABAP_TRUE. There is an example implementation for this method in the class CL_EXM_REAJ_ADJUSTMENT_COMP.
- Method **CHANGE_CONDTYPE**
In the standard system, the condition type of the condition to be adjusted is used to read the conditions in the comparative objects. This means that conditions with this condition type must exist in the comparative objects. If this is not the case, the condition type used to read the comparative conditions can be changed using this method. Notes for Developers

Adjustment Measure (Such as, Modernization, Expert Opinion)

Adjustment Measure

Use

An adjustment measure groups together data that forms the basis for adjusting conditions.

Activities

Adjustment measures are used for adjusting rent for specific rental objects and their contracts.

The rental objects and contracts are explicitly assigned to the adjustment measure. Depending on your Customizing settings, an adjustment using an adjustment measure is possible even if a rule that allows the adjustment is not explicitly assigned to the concrete rental object or contract.

The adjustment measure is always assigned to an adjustment rule of the TASK method. You assign this rule to an adjustment measure type in the Define Parameters for Adjustment Rule IMG activity. The adjustment measure type specifies how the system calculates the condition values for the assigned objects.

These are the adjustment measure types in the system:

- **MO - Modernization**

There is a rule (TASKMO) defined for this adjustment measure type in standard Customizing. This rule makes it possible for you enter the costs of modernization and the affected rental objects in the adjustment measure. Eleven percent of these costs (based on residential/usable space) are passed on to tenants in the form of an annual rent increase. This applies to all rental objects and lease-outs that are included in the adjustment measure. You can change the percentage rate and measurement type for the distribution in Customizing.

You can also use this adjustment measure type for other adjustments that require distributing a base amount using a measurement type. Therefore, standard Customizing also includes another adjustment rule (TASKSA), which makes it possible to adjust the condition for maintenance reserves for assessment contracts for condominium assessments.

- **EO - Expert Opinion**

There is a rule (TASKEO) defined for this adjustment measure type in standard Customizing. This rule makes it possible to individually set a new rent amount for each rental object and each contract that is assigned to the adjustment measure.

- **FR - Custom Measure**

There is a rule (TASKFR) defined for this adjustment measure type in standard Customizing. You can use this rule, for instance, to copy externally calculated rents for rental objects and contracts to the system, and then to adjust the values using a rent adjustment.

- Adjustment based on **cost efficiency analysis**:

P System

- **MC - Main cost efficiency analysis**
- **PC - Partial cost efficiency analysis**
- **AC - Additional cost efficiency analysis**

These adjustment measure types are used to comply with German tenancy law and are only applicable in Germany. They make it possible to adjust rent for publicly subsidized apartments using the cost efficiency analysis method. The main cost efficiency analysis is optional, since it only groups together several partial and additional cost efficiency analyses. The partial cost efficiency analysis defines the total costs and the financing plan for all objects involved. The additional cost efficiency analysis is used for handling subsequent changes, for example, those due to modernization or renovations.

These adjustment measure types are specifically designed to meet the requirements of German tenancy law, and are **not** suited for other types of measures.

Master Data**Settings per Adjustment Measure Type****Define Possible Statuses of Adjustment Measure for Each Measure Type****Use**

Here you specify the possible statuses for the following parts of the cost efficiency analysis:

- Main cost efficiency analysis
- Partial cost efficiency analysis
- Additional cost efficiency analysis The status is informational only.

Example

For a main cost efficiency analysis, you could enter approval statuses, such as *Not Approved* or *Approved*. For a partial cost efficiency analysis, you could define processing statuses, such as *Requested* or *Deactivated*.

Define Possible Earmarking of Measure for Each Measure Type**Use**

P System

For your own information, you can specify here the purpose that a rental object is supposed to fulfill within various cost efficiency analyses.

Example

You could define these purposes: *Public Housing for Seniors* or *General Public Housing*.

Specify Field Status Variants**Use**

Here you specify the field status variants that should be available when you create an adjustment measure. You assign the field status variant to the adjustment rule. This determines which fields are ready for input in dialog processing for the adjustment measure.

Activities

- Enter a name for the field status variant.
- In addition, specify the following:
- Enter the adjustment measure type that you want to use this field status variant for. You have to define at least one field status variant for each adjustment measure type that you need.
- Enter the BDT screen sequence that you want to use this field status variant for.
- Enter the text you want to appear when you assign the field status variant to an adjustment rule in Customizing.

In the Define Field Status IMG activity, define the field status of the individual fields.

Define Field Status**Use**

For field status variants that have already been defined, you specify which fields are ready for input and which fields are **not** needed.

The settings you make here reduce unneeded data on the dialog screens and help to improve clarity.

Requirements

You defined the field status variants.

Standard settings

In the standard system, there are predefined field status variants for modernization measures and for adjustment based on expert opinion.

Settings per Adjustment Rule of Measure

Assign Measurement Types to Adjustment Rule

Use

In the previous IMG activity Define Parameters for Adjustment Rule, you assigned measurements for cost distribution and the amenities level factor to adjustment rules. In addition to those assignments, here you can assign additional measurements to the adjustment rules for the calculation of expenses.

You need this additional measurement in this case: For calculating an expense item, you do not want to use the standard measurement value for cost distribution of an object or object group, but instead you want to use only the measurement value that is assigned to the adjustment measure for this object or object group.

Example:

For certain objects, you want an expense item to be calculated based on the number of persons in the household. The number of persons in the household is entered on the adjustment measure (independent of the object).

Requirements

You defined measurement types.

Activities

For each measurement type and adjustment rule, enter if the object is allowed for contracts and what the object reference is.

Usage Group

Define Usage Groups

Use

Certain adjustment methods are only allowed to be used for certain rental objects. For example, rent adjustments based on cost efficiency analysis are only intended to be used for publicly subsidized housing.

You have to define a usage group here for each grouping of rental objects that you need. In the next IMG activity, Assign Usage Types to Usage Group, you then assign the criteria (usage type and/or fixtures and fittings characteristic) that are used for selecting the affected rental objects.

Example

Publicly subsidized apartments

Privately financed apartments

Parking spaces

Assign Usage Types to Usage Group

Use

Here you assign criteria to your usage groups. These criteria can be used for selecting rental objects. The criterion can be one or both of the following:

- The usage type of the rental object
- A (fixtures and fittings) characteristic that has to be entered on the rental object

Requirements

If you want to select rental objects by fixtures and fittings characteristics, then you have to have created at least one fixtures and fittings characteristic that expresses both the existence of the public subsidy and its duration.

Activities

If the usage group is characterized by several usage types or several characteristics, then you have to define one record for the usage group for each usage type or characteristic. Assign the fittings and fixtures characteristics that are used for the public subsidy criteria.

Example

For example, if you want to allow all usage types or all characteristics, then enter them here.

Define Parameters for Adjustment Rule**Use**

You can specify here how the values entered in the actual adjustment method are included in the calculation of the new rent. This applies to adjustment rules using the *Adjustment Measure* method.

Requirements

You defined an adjustment rule that is based on the *Adjustment Measure* method, and set up all cross-method parameters for it. Create an entry here for each adjustment rule that you assigned to the *Adjustment Measure* (TASK) method. Specify the values for the parameters explained below.

Activities

Specify the following parameters for the adjustment rule:

- Enter the adjustment measure type.
The adjustment measure type determines which field status variants are possible. In addition, the method implemented for the calculation of the new condition amount can be dependent on this adjustment type.
- Enter the field status variant that you want to use for this adjustment measure.
- Enter the *Percentage Surcharge*, and the *Time in Months* that this percentage relates to. For example, in the case of a modernization, only part of the value entered on the adjustment measure might be used for calculating the new condition amount. If that is the case, then you enter the percentage rate to be used here.
- Enter the *Measurement Type* that you want to use for distributing an overall total amount to all rental objects involved in the adjustment measure. You do not need to enter a measurement type unless you want to distribute an overall value. If you do want to distribute, then you also need to enter the unit of measurement. The system may have to convert to this unit of measurement.
- Specify the *Rule for Limit* that the system uses when calculating the amount that acts as the basis for determining an upper limit for the new condition amount. For example, you could specify that a rent

is calculated based on the representative list of rents. Using the *Factor for Limiting Amount*, you can specify that the upper limit that is calculated is weighted with this factor.

For example, you choose the *Representative List of Rents* rule and a factor of for an adjustment due to modernization. This ensures that the new rent is no more than % above the standard local rent as defined by the representative list of rents.

- You use the *Adjustment Type* to specify what objects are adjusted. Usually you enter only rental objects on the adjustment measure. The system can, for example, then perform the adjustment for the valid lease-out contract and the object (or for the assessment contract and the object).
- In the *Currency* field, you specify the default value for the currency of the amounts that are entered on the adjustment measure.
- Set any other indicators that you want to apply for this adjustment rule. For information on these indicators, see the F Help.

Structuring of Costs

Define Costs Item Groups

Use

You can break down costs of an adjustment measure further into costs items. This also applies to individual costs for each object affected by the adjustment. This breakdown can be helpful in correspondence, allowing you to provide a more detailed account of which costs are considered.

You assign each costs item to only one costs item group. The costs item group is used to group costs items together when you enter them. The costs item group is also output in correspondence. You can also have the system output subtotals for each costs item group.

In addition, by assigning costs item groups to an adjustment rule, you can specify which costs items are allowed to be used for breakdowns for that adjustment rule.

Activities

If you want to use further breakdown by costs items, then specify your costs item groups here. Then assign costs items to the costs item group in the Define Costs Items and Assign Them to a Group IMG activity.

Define Costs Items and Assign Them to a Group

Use

Here you define the costs items that you want to use to break down an adjustment measure further. And you assign each costs item to only one costs item group.

Requirements

You defined the costs item group.

Activities

Define costs items and assign them to a costs item group.

Assign Costs Item Group to Adjustment Rule**Use**

Here you define which adjustment rules are allowed to use which costs items.

Requirements

. You defined an adjustment rule that uses the *Adjustment Measure* (TASK) method. . You defined costs item groups and costs items, and assigned them to each other.

Activities

If you have adjustment rules, and you want to be able to break down their adjustment measures based on costs items, then assign them the necessary costs item groups.

If you want a costs item group to apply for all adjustment measures of an adjustment measure type, then leave the adjustment rule blank, and enter only the adjustment measure type and the costs item group.

For the adjustment measures, you can assign all costs items that belong to groups that are assigned to the adjustment measure by means of the adjustment rule or adjustment measure type.

Cost Efficiency Analysis

Adjustment Reason for Cost Efficiency Analysis

Use

Example

There are three expense item changes planned for January , after the time period restricted by law (due to public funding) expires on December , :

1. Adjustment of flat payments for maintenance
2. Adjustment of flat payments for management costs
3. Adjustment of borrowing costs
 - For adjustments after the expiration of the restricted time period, you **can not** count the expense item change (), whereas you would be **required** to count the flat payments (and). Therefore, you have to create a statistical condition type with a condition type that is **not** countable. The condition amount should be the same as the increase of the conditions that result from the adjustment of the borrowing costs ().
 - In addition, the earliest the adjustment can be performed is twelve months after the adjustment of the flat payments takes effect (from and). Therefore, you have to ensure that the subsequent adjustment for the corresponding condition is not made before the expiration of the twelve months after the adjustment of the flat payments (from und).
 - In this case, you would create two adjustment reasons for the cost efficiency analysis.
 - You assign the flat payment expenses (and) to the first reason and the expenses of type to the second reason. By doing so, you can then group and total the adjustment amounts resulting from the expenses separately in reports.

Note:

Currently there are no automatic functions in the system for the transition from "publicly subsidized accommodation" (adjustment using cost efficiency analysis) to "privately-financed accommodation" (adjustment, for example, using comparative rent).

Financing Items

Define Financing Item Groups

Use

Here you set up the structure for the financing of your total costs. To do so, you define groups that are used to categorize your individual financing items.

The following groups are possible:

- Outside funds
- Construction subsidies
- Owner contribution
- Substitute for owner contribution

You have to assign one of the predefined financing types to the appropriate group.

The financing type specifies the relationship between the financing items of the financing plan and the expense items of the current expenses. The possible values are:

- *External Financing*
The financing items in this category can be transferred to the borrowing costs under current expenses.
- *Owner Financing*
The financing items in this category can be transferred to the costs of equity under current expenses.
- *Other*
This data is informational only and is not related to the current expenses by any system functions.

You can also specify the sequence in which the financing item groups with their individual financing items are displayed in the cost efficiency analysis.

Define Financing Items and Assign to Financing Item Group

Use

The financing items define the various forms of financing. The following financing items are possible:

- Loans
- Mortgages
- Construction subsidies
- Owner contributions
- Tenant loans

Requirements

You defined the financing item group.

Activities

To structure the data, you assign each individual financing item to only one financing item group.

You can also specify the sequence in which the individual financing items are listed in the financing item group.

Assign Financing Item Group to Adjustment Rule

Use

The assignment you make here specifies the adjustment measures for cost efficiency analysis for which you want to allow financing data to be entered. You specify this by assigning a financing item group to a measure type in conjunction with an adjustment rule.

If you want a financing item group to apply for all adjustment measures of an adjustment measure type, then leave the adjustment rule blank, and enter only the adjustment measure type and the financing item group.

In this way you can exclude individual financing groups from being included in certain types of cost efficiency analysis. (This is useful, for example, if you do **not** want certain subsidies to be included in the additional cost efficiency analysis.)

Requirements

1. You defined an adjustment rule that uses the adjustment measure (TASK) method.
2. You defined financing item groups and financing items, and assigned them to each other.

Expense Items

Define Expense Item Groups

Use

You use expense item groups to structure your current expenses.

Activities

Keep in mind that it is possible to link current expenses to items of the financing plan. You establish this link by assigning financing item groups, or by assigning a financing type to an expense item group.

You thereby have two options. You can assign a financing item group to one expense item group, or you can make the assignment of several financing item groups to an expense item group by assigning a financing type.

Establishing this link is only allowed for the financing types *Owner Financing* and *External Financing*, since the link is only helpful in these two cases. Any other assignments are **not** allowed.

For each expense group, you can also specify whether the system adds a surcharge to the expense amount to cover risk of rent loss as a standard setting. In the cost efficiency analysis, you can still decide on an individual basis whether a risk of rent loss surcharge should be applied or not.

You can also specify the sequence in which the expense groups with their individual expense items are displayed in the cost efficiency analysis.

Example

The expense item groups that are most commonly used are:

- External Financing Costs
- Owner Financing Costs
- Depreciation
- Management Costs
- Maintenance Costs

Define Expense Items and Assign Them to Expense Item Groups

Use

You can use expense items to define all the types of expense necessary for cost efficiency analysis. To classify and structure them, you assign the expense items to expense item groups.

For each expense item, you can also specify if the item is defaulted in the cost efficiency analysis under *current expenses*.

You can also specify the sequence in which the individual expense items are listed in the expense item group.

Assign Expense Item Group to Adjustment Rule

Use

The assignment you make here specifies the adjustment measures for cost efficiency analysis for which you want current expenses to be entered. You specify this by assigning an expense item group to a measure type in conjunction with an adjustment rule.

Requirements

1. You defined an adjustment rule that uses the Adjustment Measure (TASK) method.
2. You defined expense item groups and expense items, and assigned them to each other.

Activities

If you want an expense item group to apply for all adjustment measures of an adjustment measure type, then leave the adjustment rule blank, and enter only the adjustment measure type and the expense item group.

In this way you can exclude individual expense groups from being included in certain types of cost efficiency analysis.

Assign Costs Item to Expense Item

Use

P System

This assignment makes it possible for you to determine current expenses based on certain costs related to construction.

Requirements

You specified costs items and expense items.

Activities

To each expense item, assign all costs items that are necessary for calculating the particular expense. You then use these items in the calculation algorithm of a calculation rule that you define in a separate step.

Example

You want the system to calculate expense for depreciation as % of building costs. To enable the system to determine the total costs for the building, assign all costs items for building costs to the "Building Depreciation" expense item.

Specify Calculation Formula for Expense Items

Use

You can use a calculation formula to define how the individual expense items are determined within a cost efficiency analysis.

Important: Since, according to German law, the flat fees for management costs and maintenance costs have to be adjusted at regular intervals, we recommend that you specify the calculation formulas for expense items on a time-dependent basis. You can do so in the IMG-Aktivität Specify Time-Dependent Calculation Formula for Expense Items IMG activity. However, it is **not** necessary to make a general changeover using this activity.

The calculation formula specifies how the system calculates the amount per year and the amount per area and month of the current expenses.

A blank calculation formula is automatically assigned to each expense item. You then have to modify the calculation formula to meet your needs. However, you do not have to enter a special calculation formula for expenses that are derived from financing items.

You can also specify if expenses are always entered manually, or if they are based on a price per area, a price per object, or a percentage rate (for instance, for depreciation). In addition, there is a rule that can be

P System

used for determining the risk of rent loss for an expense item. You can also enter your own calculation methods using a BAdI implementation.

The following calculation methods are available:

- **MEAS** - *Annual value per measurement*
The amount per year is calculated by multiplying the nominal amount by the object area of all objects that were assigned to the given expense item. (You can assign one of the following to the expense items: *all rental objects of the measure, an object group or one rental object.*)
- **MEAM** - *Monthly value per measurement*
The amount per year is calculated by multiplying the nominal amount by the object area of all objects that were assigned to the given expense item, and then multiplying this product by twelve.
- **COUN** - *Number of objects*
The amount per year is calculated by multiplying the nominal amount by the number of all the objects that were assigned to the given expense item. This number is: for a measure, all rental objects of the measure; for an object group, all rental objects in the object group; and for a rental object, the number is one.
- **COOB** - *Object number parameter*
The amount per year is calculated by multiplying the nominal amount by the by the number of all objects that were assigned to the calculation rule in the first parameter. For a measure, this is all rental objects of the measure; for an object group it is all rental objects of the object group; and for a rental object the number is .
- **PERC** - *Percentage*
The amount per year equals the percentage share of the nominal amount you enter. However, if a costs item is assigned to the expense item, then the system uses the total of the costs item as the basis for the calculation.
- **RORL** - *Risk of rent loss*
The amount per year equals the percentage of the risk of rent loss (RRL) applied to the total of all relevant expenses. The relevant expense items are those for which the *Risk of Rent Loss* indicator was set for the expense item group.
Keep in mind that the system calculates the risk of rent loss using a particular type of percentage calculation. For a risk of rent loss of %, this means that the total cost rent is %. The total of current expenses therefore equals % and the risk of rent loss equals %. This also means: If the risk of rent loss is considered, then the current expenses increase by %.
The amount of the risk of rent loss is not entered in the calculation formula. Instead, it is entered directly in the parameters of the adjustment measure.
- **MANU** - *Manual*
The amount per year equals the nominal amount.
- **CUST** - *Custom*
The calculation is made using a BAdI implementation.

You can also specify (in the detail screen) if the values determined by the calculation formula are allowed to be changed in the given cost efficiency analysis.

Example

To calculate flat payments for management costs of per apartment, enter the following:
Choose the expense item and assign a calculation formula for *Number of Objects*. Confirm your entries.
Enter a price per object of .
If this expense item is used in a cost efficiency analysis, then the system automatically determines the amount of the expense by multiplying the number of objects assigned to this expense item by .

Specify Time-Dependent Calculation Formula for Expense Items

Use

You can use a calculation formula to define how the individual expense items are determined within a cost efficiency analysis.

Since, according to German law, the flat fees for management costs and maintenance costs have to be adjusted at regular intervals, you can assign the calculation formula on a time-dependent basis. This enables you to reflect changes that are due on a key date.

Important: If you do not make any settings for key date and expense items in this IMG activity, the settings from the Specify Calculation Formula for Expense Items IMG activity remain in effect. However, we recommend that you make time-dependent settings here for the calculation formula.

The calculation formula specifies how the system calculates the amount per year and the amount per area and month of the current expenses.

A blank calculation formula is automatically assigned to each expense item. You then have to modify the calculation formula to meet your needs. However, you do not have to enter a special calculation formula for expenses that are derived from financing items.

You can also specify if expenses are always entered manually, or if they are based on a price per area, a price per object, or a percentage rate (for instance, for depreciation). In addition, there is a rule that can be used for determining the risk of rent loss for an expense item. You can also enter your own calculation methods using a BAdI implementation.

The following calculation methods are available:

- **MEAS** - *Annual value per measurement*
The amount per year is calculated by multiplying the nominal amount by the object area of all objects that were assigned to the given expense item. (You can assign one of the following to the expense items: *all rental objects of the measure, an object group* or *one rental object*.)
- **MEAM** - *Monthly value per measurement*
The amount per year is calculated by multiplying the nominal amount by the object area of all objects that were assigned to the given expense item, and then multiplying this product by twelve.
- **COUN** - *Number of objects*

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The amount per year is calculated by multiplying the nominal amount by the number of all the objects that were assigned to the given expense item. This number is: for a measure, all rental objects of the measure; for an object group, all rental objects in the object group; and for a rental object, the number is one.

- **COOB** - *Object number parameter*

The amount per year is calculated by multiplying the nominal amount by the by the number of all objects that were assigned to the calculation rule in the first parameter. For a measure, this is all rental objects of the measure; for an object group it is all rental objects of the object group; and for a rental object the number is .

- **PERC** - *Percentage*

The amount per year equals the percentage share of the nominal amount you enter. However, if a costs item is assigned to the expense item, then the system uses the total of the costs item as the basis for the calculation.

- **RORL** - *Risk of rent loss*

The amount per year equals the percentage of the risk of rent loss (RRL) applied to the total of all relevant expenses. The relevant expense items are those for which the *Risk of Rent Loss* indicator was set for the expense item group.

Keep in mind that the system calculates the risk of rent loss using a particular type of percentage calculation. For a risk of rent loss of %, this means that the total cost rent is %. The total of current expenses therefore equals % and the risk of rent loss equals %. This also means: If the risk of rent loss is considered, then the current expenses increase by %.

The amount of the risk of rent loss is not entered in the calculation formula. Instead, it is entered directly in the parameters of the adjustment measure.

- **MANU** - *Manual*

The amount per year equals the nominal amount.

- **CUST** - *Custom*

The calculation is made using a BAdI implementation.

You can also specify (in the detail screen) if the values determined by the calculation formula are allowed to be changed in the given cost efficiency analysis.

Assign Expense Items to Years Ready for Occupancy

Use

German law (Second Rent Calculation Ordinance) specifies how much can be charged for maintenance costs in relation to the number of years the real estate object has been ready for occupancy.

In this IMG activity, you assign the number of years ready for occupancy to the appropriate expense items.

Requirements

You defined the necessary expense items according the requirements of German law under Define Expense Items and Assign Them to Expense Item Groups. And you assigned them to calculation formulas under Specify Time-Dependent Calculation Formula for Expense Items.

Assign Condition Types to Expense Item Group

Use

For the cost efficiency analysis, just as for all RE-FX adjustment rules, you enter the conditions to be adjusted in Customizing in the Define Rounding, Change Reason, and Classification (Surcharges) IMG activity. However, it is also possible to enter a different condition for each expense item group.

Activities

For more information:

For information on passing on the expense item, see message REAJBD . For information on checking assignments of expense items and financing items, see message REAJBD .

Implement Enhancement (BAdI)

Calculation Formula

Use

The Business Add-In supports enhancements to the standard functions of calculations for current expenses of a cost efficiency analysis. Notes for Developers

Dialog**Change Screen Layout**

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout**Field Groups****Field Groups****Use**

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status

Use

Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
2. Select the row and choose *Field Modification*.
The system displays all field groups that know the given application. In order to display the fields of a field group, position the cursor on the field group and choose *Environment -> Field check*.
3. Now you can, for example, suppress field groups that are not needed or define other field groups as "Required entry" fields. If you choose the "Not specified" setting, then the system itself determines how the field is treated. (Usually these fields are optional entry fields in create and change mode, and display fields in display mode.) If it is not possible to make a setting for a field group, then the system determines how the field is treated (usually dependent on the situation, or on the contents of other fields).

Note

Before you suppress multiple field groups of a view, a section or a screen sequence, you should consider if it makes more sense to remove the view, section or screen completely from the screen sequence.

Sections

Verwendung

Hier legen Sie fest, welche Sichten zu einem **Abschnitt** zusammengefasst werden sollen. Ein Abschnitt wird auf dem Bildschirm durch einen Rahmen gekennzeichnet. Felder, die logisch zusammengehören, sollten zu einem Abschnitt zusammengefasst werden.

Standardeinstellungen

Lassen Sie die Standardeinstellung unverändert. Sie können neue Abschnitte definieren, um entweder von SAP ausgelieferte Sichten anders zusammenzufassen oder um eigene Felder im Stammdatendialog einzubinden.

Kopieren Sie dazu einen vorhandenen Abschnitt in den Kundennamensraum (Y* bzw. Z*) und ordnen Sie dann die gewünschten Sichten dem Abschnitt zu. Die Positionsnummer gibt dabei an, in welcher Reihenfolge die Sichten in dem Rahmen angeordnet werden. Aus technischen Gründen muss die Positionsnummer für kundeneigene Zuordnungen vom Abschnitt zur Sicht im Kundennamensraum liegen (sie darf nicht auf -enden).

Dies ermöglicht Ihnen, auch in SAP-Abschnitten Ihre eigenen Sichten einzubinden. Wählen Sie einen Abschnitt aus, wählen Sie im Navigationsbaum *Abschnitt -> Sichten* und ordnen Sie die gewünschte Sicht unter einer entsprechenden Positionsnummer dem Abschnitt zu.

Views

Verwendung

Hier legen Sie fest, welche Feldgruppen zu einer Sicht (entspricht einem Teilbildschirm, technisch ein Subscreen) zusammengefasst werden sollen. Fassen Sie hier die Feldgruppen zusammen, die bei einer Prüfung zusammengehören.

Beispiel

Eine Feldgruppe mit einem Gültig-Ab-Datum und eine Feldgruppe mit einem Gültig-Bis-Datum, die in einem Modul gegeneinander geprüft werden sollen.

Das Prüfmodul steht in den Detaildaten bei "Funktionsbaustein - Nach der Ausgabe".

Standardeinstellungen

Ändern Sie die Standardeinstellung nicht. Nehmen Sie nur Änderungen vor, wenn Sie neue eigene Felder im Stammdatendialog einbinden möchten.

Kopieren Sie dazu eine vorhandene Sicht in den Kundennamensraum (Y* bzw. Z*) und passen Sie die Eigenschaften der Sicht (Detailscreen beachten) entsprechend an. Ordnen Sie dann die gewünschten Feldgruppen der Sicht zu. Sie können sowohl eigene Feldgruppen als auch von SAP ausgelieferte Feldgruppen Ihrer Sicht zuordnen.

Screens

Use

Here you specify which tab pages appear in the dialog, and which sections make up these tab pages.

Standard settings

SAP recommends that you do not change the standard tab pages.

If you want to change a tab page, copy the standard tab page that is closest to the tab page you have in mind, and give it a name in the customer name range (Y* or Z*). Then assign the sections you want. The position number for user-specific entries also has to be other than here.

Screen Sequences

Use

Here you specify which screen sequences should appear in dialog. A screen sequence consists of different screens, and each screen is equivalent to a tab page.

Standard settings

SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories or Screen Sequence Category -> Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):
Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.
- Rental object:
You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).
- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
- RE search request:
For normal entry, you use the standard screen sequence. For fast entry (ad hoc search) the RERRFE screen sequence is used. (This cannot be changed.)

Events

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Tables

You need this dialog only if you want to make complex modifications to the standard dialog. SAP recommends that you leave the settings delivered here unchanged.

Implement Enhancements (BAdI)

Validation, Substitution

Use

The Business Add-In supports enhancements to the standard functions of adjustment measures. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications Notes for Developers

Modify Standard Calculation Rules for Adjustment

Create Adjustment Control Rule

Definition

For special calculations in condition adjustments, you can define an adjustment control using a formula editor. (Refer to the Define Adjustment Control Differing from Standard IMG activity.) For example, you could make the rent dependent on parameters that do not influence rent in the standard system.

In order to be able to use a set of rules for adjustment control with more than one adjustment rule, you store the set of rules with a key as an *adjustment control rule*. Then you assign this adjustment control rule to the actual adjustment rule that is used for adjusting the condition (see Assign Adjustment Control Rule to Adjustment Rule/Rep. List of Rents).

Activities

Specify the following for the adjustment control rules you need:

- Name
- Language for the language-dependent ID of the variables.
- If you first want to assign a default comment to each row of the control table.
- If you only want to assign default comments for fulfilled block conditions.
- If you also want to assign a block info to the default comment (the block and row number) in the comment.
Here you can also see how the default comment will be output.

Assign Adjustment Control Rule to Adjustment Rule/Rep. List of Rents

Use

For each adjustment rule, in which the calculation of the adjustment amount should be different from the standard, you have to assign an adjustment control rule. The adjustment control rule is then executed in addition to the adjustment rule.

- You can use the representative list of rents as a differentiation characteristic. Entering a representative list of rents only makes sense for a *representative list of rents* method. The adjustment control rule is only applied if the entered representative list of rents is used.

P System

- If you do not enter a representative list of rents for an adjustment rule, then the system uses the adjustment control rule for **all** adjustments that use that adjustment rule.

Define Variables for Adjustment Control
Use

The calculation formulas of the representative list of rents are found in the system in the form of conditions and actions. These conditions and actions work with variables that you define here.

Activities

1. Choose a technical name that uniquely identifies the variable (also refer to the example below).
Note: Make sure you use the customer name space for your own variables.
2. Choose the variable type, for example:
 - Character string (for example, name of representative list of rents) -
Boolean value (true or false)...
3. Enter the number of decimal places and specify if the variable can be changed.
4. Specify if the variable is indexed. This means that a block that uses this kind of variable can be called more than once by the system.
5. Specify if the variable can be used for interpolation
6. Enter the variable name for the formula (also refer to the example below). **Note:** Make sure you use the customer name space here as well.
7. Assign the variable to the adjustment method in which you want it to be used.
8. Assign the variable to a variable class.

Example for Adjustment Control:

According to the definition in the representative list of rents, all fixtures and fittings characteristics that were assessed with less than EUR/m are to be ignored. The number of these characteristics should be counted (for later calculations).

Meaning of the variables:

<u>Technical Var. Name</u>	<u>Formula Name</u>	<u>Description</u>
FFCHRLRAAMTAR	AUSMERKMALBFE	Value that is considered for characteristic (area price (surcharge/reduction))
FFCHFIFITCHNOTUSEAUSMERKMALNBER	calculation	Ignore characteristic during

P System

XNUMC XN

Numerical auxiliary variable

This could be achieved using the following block:

<u>BlockNo</u>	<u>RowNo</u>	<u>Variable (Formula Name)</u>	<u>Formula</u>
		AUSMERKMALBFE	<
		AUSMERKMALNBER	TRUE
		XN	XN +

Define Adjustment Control Differing from Standard

Use

You represent the calculation formulas of the representative list of rents, without using ABAP program code, in the form of conditions and activities.

A condition describes when a specific situation exists and an activity describes how as a result of this, the system proceeds with the values of the variables. A condition and the following activities are combined in blocks.

Condition:

A condition is a **mathematical formula** in which the arithmetic and logical operators can be linked to variables provided by the system. They must be formed so that they always return a Boolean result (that is, true or false).

For example, if the building age class is defined in the variable BAUALTKLA and the building year in the variable BAUJAHR, then a condition could be `BAUALTKLA = ' ' AND BAUJAHR > .` This would then be fulfilled if the building age class of the apartment equals and the building year is greater than .

Activity:

An activity is a **pair of a variable and a mathematical formula** (or constants). The formula can have any value (number, character string, Boolean value), that is allocated when you execute the respective variable.

Thus, the activity `RENT_NEW , RENT_NEW + (< variable, formula for variable>)` would increase the new rent per area unit by one.

The simplest case of a formula is the allocation of a constant to a variable. The activity `RENT_NEW ,` would set the new rent per area unit to the value .

Block:

You combine a condition with as many activities as required in a block. When the condition of the block is fulfilled, then all its activities are executed one after the other. The sequence of the blocks is defined by a block number, which can be freely allocated. The sequence of activities within a block are also defined by a row number, which can be freely allocated and is block internal. The condition is independent of the row number. It is always checked first.

Any number of blocks can be assigned to each adjustment control rule. These are processed sequentially during an adjustment (the adjustment control rule is assigned to an adjustment rule) for each rental object or contract to be adjusted.

Requirements

You have created an Adjustment Control Rule.

Activities

- Allocate a block and row number.
- Specify whether the following should apply to the row:
 - The row is a comment row (row is not used for evaluation)
 - The default for comments, which has possibly been set on the adjustment control rule, should be switched off
 - You normally formulate a condition first. The condition is always checked first, even if this has a higher row number than the activities.
 - For a condition in the *Formula* field, define a mathematical formula, which should be applicable or not applicable for the condition, for example, `BAUALTKLA = ' ' AND BAUJAHR > .`
 - For an activity, you specify the formula name of the variable, which you want to use in the calculation, in the Variable column. All existing variables are described in the Define Variables for Adjustment Control IMG activity.
 - For the variable, specify the mathematical formula that should be executed. If certain partial expressions are used a lot in a formula, functions (macros) that can be parameterized can be defined for this. They are either stored in the TFKT table or in a table that the user created, which has the same structure. For more information, see Macros.
- Enter a user-defined text for the variable in the field variable number and . This text should be used in the default comment.
- Specify a message ID, type, and number for this block.

For more information, special features, and tips & tricks on jumps, typing, and character strings, see Special Features on Control Table.

Example for Adjustment Control:

According to the definition in the representative list of rents, all fixtures and fittings characteristics that were assessed with less than EUR/m are to be ignored. The number of these characteristics should be counted (for later calculations).

Meaning of the variables:

<u>Technical Var. Name</u>	<u>Formula Name</u>	<u>Description</u>
FFCHRLRAAMTAR	AUSMERKMALBFE	Value that is considered for characteristic (area price (surcharge/reduction))

FFCHFIXFITCHNOTUSEAUSMERKMALNBER calculation Ignore characteristic during

XNUMC XN Numerical auxiliary variable

This could be achieved using the following block:

<u>BlockNo</u>	<u>RowNo</u>	<u>Variable (Formula Name)</u>	<u>Formula</u>
		AUSMERKMALBFE <	
		AUSMERKMALNBER	TRUE
		XN	XN +

Implement Enhancements for Condition Adjustment (BAdI)

General Rent Adjustment

Use

The Business Add-In (BAdI) supports enhancements to the standard functions of **adjustments of conditions** without your writing program code.

For information about possible enhancement scenarios, see the Overview of Enhancement Methods for Master Data Objects and the Real Estate Contract.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

For information on using BAdIs, see this documentation.

The following methods exist:

- **GET_ADJUSTMENT_VALUE**
Gets the value of a variable in the control table
- **CAPPING**
Performs capping
- **ADJUSTMENT**
Performs the adjustment
- **MODIFY_ADJUSTMENT**
Modifies the adjustment
- **MODIFY_ADJUSTMENT_CEA**
Modifies an adjustment of a cost efficiency analysis (Germany)
- **AFTER_STORE**
Performs additional actions after saving
- **GET_ADJMRULE_FOR_INSERT**
Gets the possible adjustment methods to be added

- **GET_FIELDCATALOG**
Gets the field catalog for the adjustment transactions
- **GET_FIELDCATALOG_VALUE**
Gets the value for a field catalog entry
- **HIDE_FIELDCATALOG**
Hides certain field catalog columns (for improved performance)
- **MODIFY_TCODE**
During an indirect call of the adjustment, serves to put the transaction code into effect
- **GET_BEHAVIOR_SUBSEQ_COND**
Serves to control the adjustment frequency for adjustments of subsequent conditions. Using this method, you can specify using the `CF_NO_RHYTHM` parameter, if the system should redetermine the adjustment date (standard behavior) or not (`CF_NO_RHYTHM = abap_true`) when the subsequent condition becomes the condition to be adjusted.
- **AFTER_ACTIVATION**
Makes it possible to execute follow-up actions on an object after activation of an adjustment
- **AFTER_REVERSAL**
Makes it possible to execute follow-up actions on an object after reversal of an adjustment

These methods are called automatically during standard processing of the adjustment of conditions. If an implementation exists, the methods are always called in addition to standard system behavior. The standard behavior of the basic actions is **not** replaced.

Warning

The implementation of the methods has to be independent of the interface. It must not contain **any** COMMIT WORK or ROLLBACK WORK statements. For example, direct output of messages using the MESSAGE statement is **not** allowed.

Method description

- **GET_ADJUSTMENT_VALUE**
This method gets the value of a variable in the control table. The following parameters are used with this method:
 - *IO_CONTRACT* and *IO_RENTAL_OBJECT*
These parameters specify whether or not the condition to be adjusted is a contract condition. If the condition is a contract condition, then the parameter *IO_CONTRACT* is filled. Otherwise the *IO_RENTAL_OBJECT* parameter has a value.
 - *IS_CONDITION*
This parameter contains the values of the condition to be adjusted.
 - *IF_FIRST_CALL*

This parameter indicates whether the method is being called for the first time. If the parameter has a value, then this is the first call of the method.

- *ID_VALIDFROM_NEW*
The parameter contains the newly calculated *Valid-From* date of the condition.
- *ID_VARIABLE* and *CD_ADJUSTMENT_VALUE*
The *ID_VARIABLE* parameter contains the names of the variables from which the *CD_ADJUSTMENT_VALUE* parameter requested the value.
- *IT_ADJUSTMENT_VALUE*
This parameter transfers all variables of the method as well as their current values. Then the returned messages (*CT_MESSAGE* parameter) are displayed in the same list with the messages from standard processing.

- **CAPPING**

This method performs standard rent capping. The following parameters are used with this method:

- *IO_CONTRACT*
This parameter contains the contract object to be adjusted.
- *IS_CONDITION*
This parameter contains the values of the condition to be adjusted.
- *IF_BEFORE_STANDARD*
The parameter has a value before standard capping is performed.
- *IF_AFTER_STANDARD*
This parameter has a value after standard capping was performed.
- *CS_RECORD*
The parameter modifies the adjustment.
- *CF_EXIT_PROCESSED*
This parameter contains the information that the capping was executed by the method. Then the returned messages (*CT_MESSAGE* parameter) are displayed in the same list with the messages from standard processing.
- *ID_ADJMRULE* and *ID_ADJMSUBRULE*
The *ID_ADJMRULE* (combined adjustment rule) and *ID_ADJMSUBRULE* (adjustment rule) parameters contain the adjustment rules that the implementation is dependent on.

- **ADJUSTMENT**

This method performs the standard adjustment. The following parameters are used with this method:

- *IO_CONTRACT* and *IO_RENTAL_OBJECT*
These parameters specify whether or not the condition to be adjusted is a contract condition. If the condition is a contract condition, then the parameter *IO_CONTRACT* is filled. Otherwise the *IO_RENTAL_OBJECT* parameter has a value.
- *IS_CONDITION*
This parameter contains the values of the condition to be adjusted.

- *IS_RHYTHM*
This parameter contains the frequency data of the condition being adjusted.
- *ID_VALIDFROM_NEW*
The parameter contains the newly calculated *Valid-From* date of the condition.
- *CD_UNITPRICE_NEW*
This parameter influences the new unit price.
- *CD_METHREFGUID*, *CF_ERROR* and *CF_NO_ADJUSTMENT*
This parameter is used to store a link from the adjustment to specific data (see *AFTER_STORE*).
Then the returned messages (*CT_MESSAGE* parameter) are displayed in the same list with the messages from standard processing.
If the *CF_ERROR* parameter is set, then there were errors during execution of the adjustment.
If the *CF_NO_ADJUSTMENT* parameter is set, then the system could not find an adjustment.
- *CF_EXIT_PROCESSED*
This parameter contains the information that the adjustment was executed by the method.
- *ID_ADJMRULE* and *ID_ADJMSUBRULE*
The *ID_ADJMRULE* (combined adjustment rule) and *ID_ADJMSUBRULE* (adjustment rule) parameters contain the adjustment rules that the implementation is dependent on.
- **MODIFY_ADJUSTMENT**
This method modifies the standard adjustment. The following parameters are used with this method:
 - *CS_RECORD_MODIFY*
This parameter modifies the values of the standard adjustment.
 - *IS_RECORD*
This parameter returns the adjustment record calculated by the standard adjustment.
- **MODIFY_ADJUSTMENT_CEA**
This method modifies the values of the standard adjustment that were determined using a cost efficiency analysis. The following parameters are used with this method:
 - *IO_RENTAL_OBJECT*
This parameter contains the rental object to be adjusted.
 - *IS_CONDITION*
This parameter contains the values of the condition to be adjusted.
 - *IT_RECORD_METH_ALL*, *IT_RECORD_TASK*, *IT_RECORD_TASK_OBJECT*
These parameters return the method-specific adjustment values.
 - *CS_RECORD_METH*
This parameter influences the adjustment results.
Then the returned messages (*CT_MESSAGE* parameter) are displayed in the same list with the messages from standard processing.
- **GET_ADJMRULE_FOR_INSERT**

This method influences the number of adjustment rules for assignment within a contract object or rental object.

- *IO_CONTRACT* and *IO_RENTAL_OBJECT*

These parameters specify whether or not the condition to be adjusted is a contract condition. If the condition is a contract condition, then the parameter *IO_CONTRACT* is filled. Otherwise the *IO_RENTAL_OBJECT* parameter has a value.

- *CT_ADJMRULE*

This parameter influences the number of adjustment rules.

- **GET_FIELDCATALOG**

This method specifies additional output columns for the adjustment transactions, thereby determining the field catalog.

The parameters *IF_REVERSAL*, *IF_SIMULATION*, *IF_CONTINUATION*, *IF_DISPLAY* tell you which transaction you are in.

Using the *CT_FIELDCATALOG* parameter, you can specify the following additional output columns:

- *GRIDROLL*: Data element in customer namespace that contains the documentation
- *GRIDTEXT*: Column header
- *GRIDJUST*: Setting of column values (R = right aligned, L = left aligned, C= centered)
- *GRIDCHECK*: Specification of whether the column values are displayed as checkboxes
- *GRIDPOS*: Position of the column
- *GRIDSUM*: Specification of whether a column total is output for the given column
- *GRIDTYPE*: Data type of the column value (A = amount, D = date field, < blank > = Other)
- *GRIDCOLOR*: Color of the column
- **GET_FIELDCATALOG_VALUE**

This method returns values for the field catalog mentioned above.

- *IO_CONTRACT* and *IO_RENTAL_OBJECT*

These parameters specify whether or not the condition to be adjusted is a contract condition. If the condition is a contract condition, then the parameter *IO_CONTRACT* is filled. Otherwise the *IO_RENTAL_OBJECT* parameter has a value.

- *IS_CONDITION*

This parameter contains the values of the condition to be adjusted.

- *IS_RECORD*

This parameter contains the current adjustment record.

- *ID_GRIDROLL*

This parameter indicates the output column for which the value was requested. Note that the additional output columns are defined as type CHAR with a maximum length of characters.

- **HIDE_FIELDCATALOG**

This method hides certain columns in the adjustment overview. For example, you can hide the partner name or address, since determining them is very demanding on performance.

- **AFTER_ACTIVATION and AFTER_REVERSAL**

These methods make it possible to perform follow-up actions on the adjusted object after the activation or reversal of an adjustment.

- *IO_OBJECT*

This parameter contains the adjusted object.

- *IS_RECORD*

This parameter contains the current adjustment record.

- *CT_MESSAGE, CF_ERROR, CF_EXIT_PROCESSED*

Using the parameter *CF_EXIT_PROCESSED* you can specify if the exit was executed. If the activation or reversal should be prevented, set the parameter *CF_ERROR*. The returned messages (parameter *CT_MESSAGE*) are output in the activation log or the reversal log.

- **AFTER_STORE**

Using this method, you can update your own additional, user-defined data. At this point, all checks were performed without any errors occurring. No more changes can be made to the data of the standard object.

Only internal errors are now possible here (such as, data inconsistency, errors in the technical infrastructure, programming errors). For these exceptional situations, you can output termination messages. This is implicitly linked to a resetting of the last database changes (ROLLBACK WORK).

Warning

You are not allowed under **any** circumstances to use a COMMIT WORK or ROLLBACK WORK statement within this method, since this can cause internal errors. If you use them, data inconsistencies can occur.

Notes for Developers

Customer Fields (Editable)

Use

The Business Add-In (BAI) makes it possible to add customer-specific input fields and output fields to the processing of adjustments. These fields can be displayed for input or output on a detail dialog box for the adjustment record on a customer-specific subscreen (maximum size x).

Requirements

- You must add the customer fields to table VIAJRECORD and structure REAJ_RECORD_MODIFY using append.
- For you to be able to display the customer-specific fields in the adjustment list, you also have to implement the BAdI BADI_REAJ_ADJUSTMENT. Direct output of the append fields in the adjustment list is not supported, since the system is not able to determine which fields belong to which adjustment method.

Description of Methods

- Method **GET_EDIT_CONTEXT**
It returns the context for editability.
- Import IF_CREATE
This parameter is set, if the adjustment is in create mode (within transactions that can generate an adjustment run, such as REAJPR or REAJPRCEA).
- Import IF_CONTINUE
This parameter is set, if the adjustment is in continuation mode (within transactions that can continue an adjustment run, such as REAJCH or REAJCHCEA).
- Import IF_REVERSAL
This parameter is set, if the adjustment is in reversal mode (within transactions that can reverse an adjustment run, such as REAJRV or REAJRVCEA).
- Import IF_DISPLAY
This parameter is set, if the adjustment is in display mode (within transactions that can display an adjustment run, such as REAJSH or REAJSHCEA).
- Import IF_SIMULATION
This parameter is set if the adjustment was not yet converted to an update run.
- Import IS_RECORD
It contains the relevant process parameters.
- Changing CD_GUI_PBO and CD_GUI_PAI
These parameters are used to communicate the PBO/PAI function modules to the adjustment. These modules are called either before or after the customer-specific screen is output. They supply the relevant data to the adjustment. You can use function group REAJ_GUI_ADJM_EDT_TEMPLATE as a template and adjust your copy to suit your needs.
- Method **MODIFY_RECORD**
This method is used to modify the adjustment data at various events. In contrast to the method MODIFY_ADJUSTMENT of the BAdI definition BADI_REAJ_ADJUSTMENT, you can use MODIFY_RECORD to also modify data during the continuation of adjustments.
- Import IF_CREATE and IF_CONTINUE
They indicate if the adjustment run is in create mode or in continuation mode.
- Import IF_AFTER_PREASSIGNMENT
This parameter is set, if the call takes place after preassignment is made (immediately before the output of the adjustment list).
- Import IF_BEFORE_STORE
This parameter is set, if the call takes place before saving.
- Import IS_RECORD
It contains the data of the relevant adjustment record.

- Changing CS_RECORD_MODIFY
It is used to return the changed data.
- Method **AFTER_STORE**
It is called after saving to perform additional actions. Using this method, you can update your own additional data, which was possibly created during processing and needs to be saved (in addition to the append fields mentioned above).

Parameters of Method:

- Import ID_PROCESSGUID
It contains the GUID under which the adjustment run is stored in the tables VICAPROCESSID and VIAJRECORD.
- Import IF_CREATE and IF_CONTINUE
They indicate if the adjustment run is in create mode or in continuation mode.

At this point, make sure all checks were already performed without any errors occurring. No more changes can be made to the data. Only internal errors are now possible here (such as, data inconsistency, errors in the technical infrastructure, or programming errors). For these exceptional situations, you can output termination messages. This is implicitly linked to a resetting of the last database changes (ROLLBACK WORK). **You are not allowed under any circumstances to use a COMMIT WORK or ROLLBACK WORK statement within this method, since this can cause internal errors.**

- Method **IS_ACTIVATE_DISABLED**
It is used to deactivate the activation function.
- Import IS_RECORD
It contains the data of the relevant adjustment record.
- Changing CF_DISABLED
The function is deactivated if ABAP_TRUE or 'X' is returned.
- Method **IS_ANNOUNCE_DISABLED**
It is used to deactivate the notification function. The parameter is analogous to IS_ACTIVATE_DISABLED.
- Method **IS_APPROVAL_DISABLED**
It is used to deactivate the approval function.

Note that the methods MODIFY_RECORD, IS_ACTIVATE_DISABLED, IS_ANNOUNCE_DISABLED, IS_APPROVAL_DISABLED and IS_DECLINE_DISABLED can only be called for adjustment records with the status 'No Errors in Calculation' or 'Warnings Exist for Calculation'. They are not called for records that are already complete, reversed, or have errors.

The methods IS_ACTIVATE_DISABLED, IS_ANNOUNCE_DISABLED, IS_APPROVAL_DISABLED and IS_DECLINE_DISABLED are only called if the corresponding function would be active in the standard system. For example, the activation function is deactivated, if there was no approval yet for adjustments requiring approval. In that case, the method IS_ACTIVATE_DISABLED is not called. Notes for Developers

Rounding During Adjustment

Use

The Business Add-In (BAI) supports the control of some rounding settings when you execute the standard functions for **adjustments of conditions** without your writing program code.

Activities

Create a BAI implementation and implement the method **GET_ROUNDING_CONTEXT**. Then activate the BAI implementation.

For information on using BAIs, see this documentation.

Caution: The implementation of the method has to be independent of the interface. It must not contain **any** COMMIT WORK or ROLLBACK WORK statements. For example, direct output of messages using the MESSAGE statement is **not** allowed.

Parameter Description

- **ID_ADJMRULE and ID_ADJMSUBRULE**
The *ID_ADJMRULE* (combined adjustment rule) and *ID_ADJMSUBRULE* (adjustment rule) parameters contain the adjustment rules that the implementation is dependent on.
- **IF_INDX_THRESHOLD_PERCENTAGE and IF_INDX_PROPORTION_POINTS**
Using these parameters, the rounding times are reported to the method:
 - **IF_INDX_THRESHOLD_PERCENTAGE**
The percentage difference in conjunction with the minimum change in percent is calculated in the standard system with decimal places as follows: $\text{Percentage change} = (\text{new index level} / \text{last index level}) * 100$. The system can round this value if you set the parameters *CD_ROUNDTYPE*, *CD_ROUNDDECIMAL* and *CD_ROUNDUNIT*.
 - **IF_INDX_PROPORTION_POINTS**
In the standard system, the new unit price is calculated to decimal places as follows:
 $\text{New unit price} = \text{last unit price} * (\text{new index level} / \text{last index level})$. However, you might sometimes want to round the quotient ($\text{new index level} / \text{last index level}$) before multiplying. You can achieve this by settings the *CD_ROUNDTYPE*, *CD_ROUNDDECIMAL* and *CD_ROUNDUNIT* parameters.
- **CD_ROUNDTYPE**
Returns the rounding type. Possible values are:
 - No rounding =

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There is no rounding.

- Round down =
The relevant number is rounded downward. For this option, you also have to enter the number of decimal places or the rounding unit.
- Round up =
The relevant number is rounded upward. For this option, you also have to enter the number of decimal places or the rounding unit.
- Arithmetic =
The relevant number is rounded using arithmetic rounding. For this option, you also have to enter the number of decimal places or the rounding unit.
- **CD_ROUNDDECIMAL**
Defines the number of decimal places to which the system rounds.
- **CD_ROUNDUNIT**
Defines the unit to which the system rounds.

Notes for Developers

Sales-Based Settlement

Sales Rule

Type of Sales Rule

Use

For conditions related to sales-based rent, you can specify the type of sales rule.

Reporting Rule

Sales Types

Use

In this activity, you create the sales types you need for reporting sales for sales-based rent.

Activities

Enter a unique key and name for each sales type. When the sales type is for sales-based rent settlement based on quantitative sales, then you have to enter the unit of measurement for the quantity (such as gallons).

For sales-based rent settlement based on monetary sales, you do not have to enter a unit of measure in this activity. The system automatically defaults the company code currency in the sales rule.

Example

Complete Assortment

Clothing

Tobacco products

Foodstuffs

Beverages GAL

...

Sales ID

Use

Here you can define the sales IDs you want to use in processing sales reports.

Settlement Process

Parameters of Sales-Based Rent Settlement

Use

In this section, you can predefine the necessary parameters for the settlement run. This makes parameter blocks available to users when they start settlement, so they do not need to define the parameters individually.

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Activities**Active:** .

Parameter blocks are offered for selection during settlement only if they were set to active.

Standard: .

Set this indicator if you want this parameter block to be proposed as the default when you start settlement.

Tax Calculation: .

In this field you specify the procedure that is used for calculating output tax (such as when the tax rate changes within the settlement period). Currently only the standard procedure is supported.

Open AP: .

This indicator determines how open advance payments (advance payments that were agreed on and posted, but not yet paid) are treated during settlement.

Enhancements**Implement Enhancements (BAI): Calculation of Sales-Based Rent****Use**

The Business Add-In (BAI)

- Makes it possible to change the sales-based rent of a sales rule that was calculated in the standard system
- Gets the behavior context for the calculation of sales-based rent

The following methods are available. They are executed by the system during sales-based settlement.

- **CALCULATE** - change the standard calculation of sales-based rent The transfer parameters are:
- IO_CONTRACT - object reference on the contract. You use this parameter for calling the API_RE_CN_GET_DETAIL function module, if you need additional data from the contract.
- ID_RPTERMNO - number of the reporting rule
- ID_RHYTHMTYPE - frequency type of the reporting rule (sales report or certified sales)
- IS_SETTLPERIOD - settlement period
- IS_CALCINCOMPLETE - attributes for pro rata calculations (shortened settlement periods)
- IT_SALESREPORT - sales reports within the settlement period
- IS_CALCBASE - attributes of sales rule
- IT_SALESGRADING - sales grading

Parameters that can be changed are:

- CD_SALESRENTNET - calculated net amount of sales-based rent
- CT_CALCDETAIL - details of the calculation. The details are stored as part of the sales-based rent settlement. They can be printed later in correspondence.
- CT_MESSAGES - additional messages for the log

Net sales-based rent and the details for the calculation contain the values determined using the standard procedure.

If there is an error message among the messages returned, the system marks the calculation as incorrect. When the BAdI method is called, the CT_MESSAGES parameter is always blank.

- **GET_BEHAVIOR_CONTEXT** - gets the behavior context for the calculation of sales-based rent

The transfer parameters are:

- IO_OBJECT- Generic object reference
- IS_SRSEPERIOD - List with settlement periods
- IS_CALCRULE - calculation rule for sales rule
- IS_SETTLRHYTHM - Assignment of a frequency rule to the sales rule
- ID_RHYTHMTYPE - Frequency type

Parameters that can be changed are:

- CF_PRORATE_AT_BEGIN - Prorated calculation at contract start

If you want the gradings to be considered on a prorated basis at the start of the contract within the first settlement period, then create a Business Add-In implementation for this, and set the changing parameter to CF_PRORATE_AT_BEGIN = 'X' in the method GET_BEHAVIOR_CONTEXT.

Note:

If the amounts were already defined as prorated when the gradings were created, you are not allowed to set CF_PRORATE_AT_BEGIN to 'X'.

The BAdI method is only called if the frequency start of the sales rule is not INITIAL and the 'Frequency Start' date is before the rental start date.

- **GET_SALES** - Change the sales to be included by default The transfer parameters are:
- IO_OBJECT- Generic object reference
- ID_RPTERMNO - Term number of reporting rule
- ID_RPFROM - Reporting interval start for sales-based lease-out
- ID_RPTO - End of reporting interval for sales-based lease-out
- ID_REPORTINTERVAL - Type of frequency

Parameters that can be changed:

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- CT_LIST - Sales reports and additional fields (VISRREPORT)
- CT_MESSAGES - Additional messages for the log

The CT_LIST parameter contains the sales reports determined by default.

When the BAdI method is called, the CT_MESSAGES parameter is always blank.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

Note that when implementing the BAdI you are not allowed to use statements that affect the interface, such as direct output of messages using MESSAGE. Notes for Developers

Implement Enhancements (BAdI): Prevent the Posting of Sales-Based Rent**Use****Example**

The BAdI makes it possible for you to prevent the posting of the results of a sales-based settlement. This is required especially when legacy data for sales-based settlements is to be transferred to the system. In this case, it is necessary that you execute sales-based settlements, which were posted in the legacy system, again in the SAP system. The results are needed, for example, to be able to post accumulated settlements or corrections due to certified sales at the end of the year. However, you do not want to post to financial accounting, since these postings were already made in the legacy system before the go-live date.

If, in the case that the end of the settlement period is before the date of the first posting, you do not want create any postings in the sales-based settlement, create an implementation for BADI_RESR_POSTING. You can use the example class CL_EXM_RESR_NO_POSTING as an example (take note of the comments in the sample code). Do not forget to activate the implementation.

Example

You have designated a real estate contract as 'relevant for sales'. The calculation object and possibly the distribution object are not valid in the entire period of the sales-based rent condition, but sales were also reported for this period. During the sales-based settlement, no distribution postings are made after the validity of the object assignment, but a receivables posting is made.

If you do both of the following, no receivable posting is made:

- Issue the message RESRBC (control using transaction OBA)
- Implement the method NO_POSTING so that the RETURNING parameter

EF_DO_NOT_POST = 'X' is set . The log contains a corresponding message.

If you issue the message as a warning, the step is designated as 'incomplete'. If you issue the message as a status or information message, then the posting step is designated as 'not required'. In that case, the settlement is also complete without the posting being executed.

There is an example implementation for this example situation in the class CL_EXM_IM_RESR_POSTING.

Notes for Developers

Service Charge Settlement

Service Charge Settlement

Use

In this section you make settings for service charge settlement. Carry out the following steps:

1. Enter the attributes for settlement participation (for example, usage types, measurement types, and condition types specific to service charge settlement).
2. Define the master data of the settlement units (for example, characteristics of service charge keys, settlement variants, heating days) and of participation groups.
3. Make settings for generating service charge settlement participation.
4. Make settings for the settlement process (settlement schemas, account settings in accounting specifically for service charge settlement).
5. Enter the attributes for external settlement.
6. Make settings related to service charge settlement for adjustment of conditions.

Master Data of Settlement Unit

Define Service Charge Keys

Use

In this section, you define service charge keys you need for settlement.

Requirements

The required measurement types are defined.

Activities

Check the standard settings and change them if necessary. Delete all service charge keys that you do not need.

If you want to add service charge keys to those already defined, choose *New Entries*, or copy an entry and use it as a template.

- Enter an internal key and a name for the service charge key.
- Specify the settlement processes for which settlement units with this service charge key are taken into account. If you use the standard settings, then the settlement units are considered during normal service charge settlement and in the COA company code, both for COA settlement and for tenant settlement. You have to make other settings for costs that can only be assigned to owners (such as management costs). The same applies to costs that can only be assigned to tenants of condominiums (for example, property tax).
- Set the *Operating Costs* indicator if you want the service charge key to be used for operating costs. Do **not** set that indicator if you want the service charge key to be used for heating costs.
- If you want to classify service charges using different service charge groups, then enter the service charge group that the service charge key belongs to. If you did not yet define service charge groups, then you can make this assignment in Customizing later in the *Accrual/Deferral of Service Charges/Display Costs Not Settled* section.
- If you want to be able to apportion costs using the service charge key, then set the *Can be Apport.* indicator. You can also designate that an apportionable service charge key is commercially apportionable. Neither of these indicators influence the selection of settlement units. They only specify whether or not the costs calculated for a rental object can be passed on to the tenant.
- If you want to take heating days into account for settlement of heating expenses, set the *Use Heating Value Days* indicator. If you want to be able to use the service charge key for directly assignable costs, choose the appropriate real estate object in the *Direct Cost Posting* field.
- Specify if the service charge key is for costs directly assigned to the rental object or to both the rental object and contract. The default value is *SU Assignable to Account* for all service charge keys. It

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means you want to post costs to the settlement unit and then apportion them to the settlement participants.

- If you want to use the service charge key for external settlement, then enter the account symbol to be used for finding the reconciliation accounts for the settlement in the account determination.

You can also define default values that can be used when you create settlement units:

- Enter the measurement type that is normally used for apportioning the service charges for the key.
- For master settlement units, you can specify for each service charge key whether the apportionment is by measurement type, equivalence number, percent, or meter.
- You can assign default values for the settlement variant that are dependent on the service charge key. The default value entered here is then adopted when a value was not specified on the business entity.
- If you normally want to apportion a service charge key to more than one measurement type (such as % by floor area and % by consumption), you can specify a default value for this as well. The value you specify here overrides any value entered directly on the service charge key.

Default Values for Distribution Rule of Settlement Unit

Use

In the attributes of the service charge key, you can specify the measurement type that this key normally uses for distributing service charges. However, for some service charge keys that is not enough, since they need to settle, for instance, % by consumption and % by residential/usable space.

In this step you can specify these more complex rules as defaults. When you create a settlement unit, the system first checks if an entry was made here for the given service charge key. If there is no entry here, then the system defaults the measurement type that was entered in the characteristics of the service charge key.

Activities

For the service charge key that should have a more complex rule, enter the default values for the relevant apportionment purposes.

Settlement Variants

In this section, you maintain the settlement periods for heating expenses settlement and operating costs settlements as well as the sales-based rent settlement.

An accounting variant generally consists of various settlement periods covering a total of months. You can transfer an accounting variant by period (into the following years).

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Accounting variants can consist of any number of individual settlement periods. You can transfer in the following years only if the total of the settlement periods is months.

As a special case, you can also determine accounting variants that are valid only for a certain period. These accounting variants are then not updated into the following years. The duration of a year-dependent accounting variant can be between day and 'years - day'.

- You can create accounting variants: the accounting variant is used to determine the period to be settled.
- You can change accounting variants:
You can change the accounting variant only if no settlements have yet been carried out with the variant.
- You can display or delete accounting variants:
You can delete accounting variants only if the accounting variants are not yet assigned to settlement units.

Example

In the following example, you want to define an accounting variant, whose assignment begins on / of the current year and is settled monthly.

<i>Reference</i>	<i>Reference</i>	<i>Year shift</i>	<i>Period</i>	month	day
(...)	(...)	(...)		(...)	
		-			
(...)	(...)	(...)		(...)	
		-			

Here, the 'Year shift' field is used to refer from the current year to the reference year during processing.

- 0 - the current year is the reference year
- 1 - the previous year is the reference year

You can also limit the validity of a settlement period to one year.

Activities

1. Create accounting variant
 - a) Create a four-digit key for the accounting variant and choose the 'Settlement periods' function:
 - Refer to the variant.
 - *Year-dependent*: Set the indicator only in cases where the accounting variant should have a limited validity.

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- *Settlement year*: Provided that you set the *year-dependent* indicator, specify the reference year at this point.
 - *RM*: Specify reference month of first settlement period.
 - *RD*: Specify reference day of first settlement period.
 - *YS*: Specify relative year shift of first settlement period.
 - *Settlement period*: Number the settlement period sequentially.
 - Repeat the entries *RM*, *RD*, *YS*, *settlement period* for all of the settlement periods required.
- b) Save your entries.
2. Change settlement period
 - a) Choose the accounting variant.
 - b) Change the entries, if necessary.
 - c) Save your entries.
 3. Delete accounting variant
 - a) Choose the required accounting variant.
 - b) To display the accounting variant, choose the 'Settlement periods' function.
 - To delete the settlement period, choose the 'Delete' function.
 - Confirm your specifications.

Settings Dependent on Tenancy Law: Apportion Vacancy and Reg. Location Key

Use

The settings you make here are dependent on the tenancy law used. Here you make settings for:

- Do you want to allow a part of vacancy costs to be passed on to tenants?
In master data maintenance for the settlement unit (assuming that a tenancy law is assigned to the settlement unit), entering a vacancy percentage rate (< %, that is, the owners do not bear the full costs) is only allowed if the *Vacancy Percentage Rate* indicator is set here.

You also have the option of specifying if a vacancy percentage, which was entered in the master data, is ignored during settlement. You specify this in the Define Settlement Parameters IMG activity.

- In the case of a settlement based on consumption, when there are no meter readings, do you want to allow the system to interpolate consumption using the regional location key? The system does not consider this indicator until settlement. If this indicator is **not** set, then the system does not

interpolate consumption, even if you entered a regional location key. Instead you receive an error message if the meter reading is missing.

Standard settings

In most countries, it is uncommon to assign vacancy costs to tenants. Therefore the indicator is not set in standard Customizing.

Entering a regional location key for determining costs based on consumption is allowed by standard Customizing. Therefore, whether the system interpolates or not depends on the concrete settlement unit.

Heating Days

In this section you determine the settings for weighting heating expenses depending on regional location by

- assigning heating value days
- to different regional location keys. This process is specific to Switzerland, but it can be used in other cases as well.

Example

Background (Switzerland-specific)

In order to avoid having to carry out interim meter readings when a tenant moves out, it is common practice in Switzerland

- to weight the costs incurred in a settlement period
- depending on the heating value days, by using related heating value percentage rates.

Other uses

You may also use this process in cases when you want to settle the heating expenses using percentage rates specially defined for the purpose, for instance

- % according to the heating area
- % according to the regional location key with monthly graded heating value percentage rates.

Activities

Check your Customizing standard settings and change them, if required.

Further notes

To use this process, you have to make additional Customizing settings:

Service Charge Settlement -> Make Basic Settings -> Data Specific to Tenancy Law. Set the following indicators:

- Regional location key can be maintained
- Apportionment factors per settlement unit

Define Default Values for Current Occupancy Principle**Use**

Here you define for each service charge key which **default settings** should be valid for new settlement units based on the current occupancy principle. You can still overwrite the settings made here when you process the settlement unit.

Activities

At present, only defaults for *tenant settlement* are implemented. The current occupancy principle is only used if service charge keys that are not specified if the appropriate indicator is set on the rental object.

Example

In Austria, settlement according to the current occupancy principle is common for older buildings. Certain costs (for example, heating expenses according to consumption) cannot be apportioned based on the current occupancy principle.

In this case, set *Never settle according to current occupancy principle* for the relevant service charge key.

By implementing a BAoI you can make sure that the *current occupancy principle* indicator is automatically set for buildings based on the construction year (this indicator is copied to the rental unit when creating new rental units).

Note

Service charge keys that are settled based on the current occupancy principle **cannot** be settled using the same condition type for service charge keys to which the current occupancy principle does not apply.

The *Current Occupancy Principle* indicator can only be set for rental units and rental spaces, *not* for pooled spaces. Note that using it for rental spaces is not recommended if the rental space is returned to the pooled space after the end of the contract or if it is extracted in a completely different form for a new

rental. If the rental space is returned to the pooled space, the settlement treats it as vacant at the time of settlement, even if there is another rental space for the physically and architecturally identical space at the time of settlement.

Dialog

Change Screen Layout

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout

Field Groups

Field Groups

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status

Use

Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
2. Select the row and choose *Field Modification*.
The system displays all field groups that know the given application. In order to display the fields of a field group, position the cursor on the field group and choose *Environment -> Field check*.
3. Now you can, for example, suppress field groups that are not needed or define other field groups as "Required entry" fields. If you choose the "Not specified" setting, then the system itself determines how the field is treated. (Usually these fields are optional entry fields in create and change mode, and display fields in display mode.) If it is not possible to make a setting for a field group, then the system determines how the field is treated (usually dependent on the situation, or on the contents of other fields).

Note

Before you suppress multiple field groups of a view, a section or a screen sequence, you should consider if it makes more sense to remove the view, section or screen completely from the screen sequence.

Views

Use

Here you specify which field groups are grouped together into a view (part of a screen, technically a subscreen). You should group together the field groups that necessarily belong together during a check.

Example

If you have a field group with a valid-from date and a field group with a valid-to date, and these should be checked against each other in a module, then you should group them together into a view.

The check module is in the detailed data under "Function Module After Entry".

Standard settings

SAP recommends that you not change the standard settings. It is only necessary to make changes if you want to add your own new fields to the master data dialog.

In that case, copy an existing view to the customer namespace (Y* or Z*) and modify the properties of the view accordingly (consider the detail screen). Then assign the field groups to the view. You can assign your own field groups, as well as those delivered by SAP.

Sections

Use

Here you specify which views are grouped together into sections. You can recognize a section because it is surrounded by a frame. Fields that logically belong together should be grouped together in sections.

Standard settings

SAP recommends that you not change the standard settings.

It could be necessary to define new sections, either to arrange views delivered by SAP differently or to add your own fields to the master data dialog.

In that case, copy an existing section to the customer namespace (Y* or Z*) and assign the views you want to this section. The item number specifies the sequence in which the views are arranged in the section. For technical reasons, if you make your own assignments from sections to views, the item numbers have to be in the customer namespace (that is, they are not allowed to end in ").

This makes it possible for you to also include your own views in SAP sections. Select a section, and choose *Section -> Views* in the dialog tree, and assign the view to a section using a corresponding item number.

Screens

Use

Here you specify which tab pages appear in the dialog, and which sections make up these tab pages.

Standard settings

SAP recommends that you do not change the standard tab pages.

If you want to change a tab page, copy the standard tab page that is closest to the tab page you have in mind, and give it a name in the customer name range (Y* or Z*). Then assign the sections you want.

The position number for user-specific entries also has to be other than here.

Screen Sequences

Use

Here you specify which screen sequences should appear in dialog. A screen sequence consists of different screens, and each screen is equivalent to a tab page.

Standard settings

SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories or Screen Sequence Category** -> **Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):
Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.
- Rental object:
You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).
- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
- RE search request:
For normal entry, you use the standard screen sequence. For fast entry (ad hoc search) the RERRFE screen sequence is used. (This cannot be changed.)

For business entities, the system always uses the screen sequence category that is defined as "Standard."

Events

You need this dialog only if you want to make complex modifications to the standard dialog.

P System

SAP recommends that you leave the settings delivered here unchanged.

Tables

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Implement Enhancements (BAdI)**Number Assignment, Validation, Substitution****Use**

The Business Add-In supports enhancements to the standard functions of settlement units. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications Notes

for Developers

Master Settlement Unit

Use

In this BAdI, you can enter your own formulas for calculating heating costs distribution.

Standard settings

In the standard system, the following keys of the domain VVHKVOTYP (data element VVHKVOTYP) are reserved for customer implementations: **R,S,T,U,V,W,X,Y,Z**.

Activities

Implement the following methods:

- **SHAREOUT_HEAT_F (Input help for heating costs distribution)**
The transferred table CT_HKVOTYP contains all domain fixed values for domain VVHKVOTYP. Delete values that are not needed from the table. Change the text of the values you use.
- **SHAREOUT_HEAT_CALC (Calculation of heating costs distribution)** The changing parameter CS_HOTWATERVALUES contains the values necessary for the calculation. Perform the calculation and fill the necessary fields.

Example

For an example implementation, see the class CL_EXM_IM_RESC_MSU. Notes for Developers

Implement Enhancements (BAdI): "Overviews" - Own Evaluations

Use

There is an *Overviews* tab page on the processing screen for contracts and real estate object master data. Some overview lists are predefined in the system. You can enhance the existing lists for each object type to suit your needs or add your own lists. The procedure is described here using an example.

Settings for Rental Objects and Contracts Participating in Settlement

Usage Types for Service Charge Settlement

Use

P System

Here you can define the rental objects for which service charge settlement can be performed. All usage types, for which you set the indicator, can participate in service charge settlement. Usage types, for which you do not set the indicator, are not allowed to participate in service charge settlement. Rental objects with these usage types cannot be included in a participation group.

Activities

Set the *Sett.* (Settlement) indicator for usage types that are relevant for settlement.

Define Measurement Types**Use**

In this section, you define measurement types for:

Architectural objects.

Usage objects (business . entity, building, property, rental object)

Contracts (for service .charge settlement)

Measurements are used to record measurable traits of objects. The measurement type indicates the type of trait that is being measured. Area measurements are also recorded as measurements. There is a special indicator that identifies area measurements. This makes it possible to run special reports on areas and for the system to check the unit of measurement for area.

The measurements of a rental object are used for example in service charge settlement for determining apportionment, and in option rate determination for determining the option rate. You specify the measurement type that plays a role in these calculations in the settlement unit or in the option rate method. Measurements are also the basis for the calculation of condition amounts.

Activities

Choose *New Entries*.

On the detail screen, you can specify the Real Estate object for which the measurement type is allowed. If you want a measurement type to be proposed as the default in the application, choose *Criterion is default for object (on screen)* for the object type. To ensure that the measurement type is not deleted, choose *Criterion for object is required entry (on screen)* . The settings *Default* or *required entry* are recommended for measurements that are needed for subsequent processes.

- For rental objects, you can also specify per usage type if a measurement type is allowed or not. For measurement types that you want to allow for all rental objects, you enter the following in the *Allowed for RO* field:
 - Criterion permitted for object
 - Required entry, or

P System

- Default
Set the No Exception indicator. The system then ignores the differentiation by usage type.
- The same procedure applies for architectural objects. You can also specify per architectural object type if a measurement type is allowed or not. If you set the No Exception indicator, the system also ignores the differentiation by architectural object type.

For contracts you specify in addition the contract reference. You can also define per contract type whether a measurement type is allowed or not and whether there is to be an object reference. If you set the No Exception indicator, the system also ignores the differentiation by contract type.

Properties of service charge settlement

The system applies these settings only if the *For Apport.* (for apportionment) indicator is set. For more information on the individual indicators, refer to the help documentation for these indicators.

If you use external heating expense settlement, then you have to assign either no or one basic component for heating to exactly one measurement type. (You may have to do the same for the basic components for Hot water and for Other.)

Measurement types in Customizing:

- A = Area: such as floor area
- M = Measurement: other measurements, such as number of parking spaces
- U = Usage: consumption, such as water consumption

Apport. by Consumption: Define Characteristics and Measuring Point Categ.

Apportionment by Consumption: Define Characteristics and Measuring Point Categories

In this section, you determine the characteristics for meters and the measuring point categories.

To measure consumption-dependent apportionment units meters are created on the rental units.

The value to be measured is the characteristic (for example, water consumption).

The characteristics can be created in characteristic classes. For information on this, see the subchapter "Characteristics" in the chapter "Classification System" under "Cross-Application Components" in the standard Implementation Guide.

The characteristics cannot be transported but have to be manually created in the target system.

Example

Characteristic name: HOTWATERCONSUMPTION

Base data:

Name of the characteristic HOTWATERCONSUMPTION

P System

Language key E
 Characteristic description Hot water consumption
 Characteristics group IMMO Characteristics for measurement
 documents Real Estate
 Status released
 Data type NUM
 Number of positions
 Decimal places
 Unit of measurement m
 Template __.____.____. _ Heading
 Hot Water
 Heading Consumption

Activities

1. Create your required characteristics. To receive additional help, choose 'Help -> Extended help' within the menu path you are processing.
2. Check the measuring point categories. A measuring point category "Consumption" is needed. For details on the measuring point categories, see the Plant Maintenance Implementation Guide.

Settlement by Consumption/Meter Reading: Measurement Type Characteristics**Use**

In this step, you assign characteristics from the *Plant Maintenance (PM)* component to the measurement types.

To make measurements that are related to consumption, you have to create meters on the rental objects. The factor to be measured is the characteristic (such as water consumption).

Requirements

In the Measurement Types activity, you have set the *Rel. for Apport.* indicator for the measurement types required for service charge settlement and have entered the necessary characteristics for them.

In the Apport. by Consumption: Define Characteristics and Measuring Point Categ. activity, you have created the characteristics and measuring point categories required.

Condition Types for Advance Payments and Flat Rates

Use

In this step you define condition groups and assign condition types to them.

@S@ Condition groups are mandatory. The only condition types available in the contract or rental object (dependent on the contract or usage type) are those that you have assigned to the given condition group for the object type.

You also need condition groups if you want to use proposed conditions. In this case, the condition groups define the condition types for which automatic values should be proposed (Define Proposed Conditions). You may:

- a) Use the same condition groups that you assign to usage types of rental objects or contract types
- b) Define other condition groups

Before the condition types can be adopted, the system automatically compares the resulting condition types with the condition types that are actually allowed on the object.

You can also use condition groups to show totals for multiple condition types in one column in reporting. To do so, you assign a condition group to a report profile using a condition profile. You should also define special condition groups for reporting, such as, net rent before service charges, or advance payments for operating costs.

Requirements

You have specified the condition types you need in the Condition Types IMG activity.

Activities

Check the existing condition groups.

Create additional condition groups if you need them, and define which condition types are allowed in which condition groups. You can add condition types to a condition group at any time. However, you are not allowed to remove condition types if they were already used in rental objects or contracts of the usage type or contract type.

.Assign condition groups in the Assign Condition Group to Rental Object per Usage Type step and the Assign Condition Group to Contract per Contract Type step.

Keep in mind that you no longer distinguish between condition types for flat rates and advance payments using the condition group (as was the case in Classic RE). Instead you make this distinction in the attribute of the condition type.

Example

You create a condition group for vendor contracts (commercial) with conditions that generate postings to the vendor account (for example, basic office rent, basic warehouse rent, advance payment for operating costs, advance payment for heating costs, and so on).

Note

You can also use condition groups when you define report profiles; see Configure Condition Profiles.

If you want to calculate surcharges from the settlement result from the service charge settlement, which you relate to basic rent, you can also work with condition groups. For more information, see Define Calculation of Surcharges.

Assign Default Condition Type to Service Charge Key**Use**

In this activity you assign a condition type to a service charge key. The system uses this condition type to determine the (reference) flow type (for account determination, for example) in the following cases:

- You have not defined an explicit settlement participation for the contract, and the system cannot find a unique condition type when it generates the settlement participation.
- There is no condition defined for the settlement unit in a contract (for example, participation type *final settlement*).
- A settlement unit contains one or more vacant rental objects.

Standard Settings

SAP assigns the condition types *AP Operating Costs* and *AP Heating Expense* to the corresponding service charge key.

Example

The *final settlement* participation type is defined on a contract. Then there is no *Advance Payment* condition on the contract for the settlement unit. In this case, the system uses the condition type that you assigned here to the service charge key.

Note

Account determination for the receivable posting takes place as follows (for costs on the contract that have to be passed on to the tenant):

You assigned an *Advance Payment* condition to the settlement unit in the settlement participation. This condition is assigned to a flow type that has a reference flow type of the category : *Receivable from Settlement*. This flow type is the crucial factor in the account determination.

Generating of Settlement Participation (for Contract)

Assign Condition Type to Service Charge Key/Group

Use

Here you specify which conditions for service charge advance payments and which conditions for flat payments are cleared against each other.

Activities

The various control options are described below. Make an entry in the table for each condition for advance payments and each condition for flat-rate payments. Specify the following for each entry:

- Whether the condition type is only allowed to be cleared by costs of certain service charge keys
- Whether the condition type can be cleared by all costs on the settlement units of a certain service charge group
- Whether the condition type can be cleared by all costs in the categories "Operating Costs"/"Heating Costs" or "Operating and Heating Costs"

Use

For the system to be able to check or generate the settlement participation, the condition types, which play a role in service charge settlement (advance payments and flat payments), must be linked to the service charge key. This can be done as follows:

- The advance payment condition type is assigned **directly** to the relevant service charge key Example:
Condition type: Elevator advance payment
Service charge key: Elevator
Service charge category: No general costs (SCK-specific)
Service charge group: < blank >
- A service charge group is assigned to the advance payment condition type:
Example:
Condition type: Caretaker services advance payment
Service charge key: < blank >
Service charge category: <anything>
Service charge group: Caretaker services
(The service charge group is assigned in Customizing, for example, to the service charge keys Gardening
Caretaker
House cleaning
)
- The **service charge category** "operating costs" or "heating expenses" is assigned to the advance payment condition type:
Example:

P System

Condition type: Operating costs advance payment

Service charge key: < blank >

Service charge category: Operating costs

Service charge group: < blank >

The service charge key is settled, for which in Customizing in the definition of the service charge key, you set the *operating costs* indicator.

Advance payment condition types valid for operating costs and heating expenses have service charge category - general service charges.

Example:

Condition type: operating costs/heating expenses advance payment

Service charge key: < blank >

Service charge category: - General service charges

Service charge group: < blank >

The settlement participation is generated/checked when you create/change an occupancy contract and during service charge settlement. The system determines the settlement units, to which the rental objects are assigned, and which are leased out in this contract. It also attempts to assign the advance payment and flat payment condition types that are assigned here. To do this, proceed as follows:

- First the system searches for an advance payment condition type that is defined exactly for this service charge key (see first point above).
- Then it searches for an advance payment condition type that belongs to the service charge group of the service charge key (see the second point above).
- Finally, it searches for an advance payment condition type that belongs to the category "operating costs" or "heating expenses" (depending on whether the *operating costs* or *heating expenses* indicator is set for the service charge key).
- If it still cannot assign any condition type, the system searches whether the contract has a condition type that is specified in Customizing with the service charge category " General Service Charge."
- If this condition type also does not exist, the system assumes, depending on the setting in Customizing for the Defaults for Settlement Participation per Service Charge Key that it is a final settlement (for which no condition type is required) or that the contract does **not** participate in this settlement unit.

Example

The advance payment conditions and service charge key are set up as specified in the examples above. There are settlement units for the following service charge keys:

Property damage and liability insurance

Water supply

Elevator

Street cleaning

Garbage removal/disposal

P System

Broad band cable network
 Caretaker
 House cleaning
 Heating expenses

They are all marked as "operating expenses" except for service charge key .

- For contract , it is listed explicitly which advance payments have been made for which costs. The following conditions are defined:
 - operating costs advance payment
 - Elevator advance payment
 - Caretaker services advance payment

In the settlement participation, the advance payments for this contract are assigned to the advance payment condition types as follows:

- | | |
|---|---------------------------------------|
| Property damage and liability insurance | -> operating costs advance payment |
| Water supply | -> operating costs advance payment |
| Elevator | -> Elevator advance payment |
| Street cleaning | -> operating costs advance payment |
| Garbage removal/disposal | -> operating costs advance payment |
| Broad band cable network | -> operating costs advance payment |
| Caretaker | -> Caretaker services advance payment |
| House cleaning | -> Caretaker services advance payment |
| Heating expenses | -> No assignment |
- Contract only has the condition " operating costs advance payment". For this contract, all service charge keys except for are assigned to the condition type -> operating costs advance payment.

No condition type can be assigned for both contracts for the settlement unit with the service charge key . It would be designated as a final settlement if this has been set up in Customizing.

Define Default Values for Settlement Participation per Service Charge Key

You can create a default for how a service charge key that has no condition type assigned to it is settled.

For your service charge keys, you can specify either

- The costs incurred in the respective contract are not to be settled.
- The costs are to be settled in the form of a final settlement for the contract.

Example**Requirements****Standard settings**

The table is empty in the standard delivery; this means that service charge keys without condition types do not participate in service charge settlement.

Recommendation**Activities****Further notes**

You can change the default value when you process the contract.

If you leave key fields blank, the system considers the entry while ignoring the concrete contents of the field.

The system searches in the following sequence, moving from specific to general:

1. Company code, usage type of rental object and service charge key (complete key)
2. Company code, "usage type blank" and service charge key
3. Company code, "usage type blank," "service charge key blank"
4. "Company code blank," usage type and service charge key
5. "Company code blank," "usage type blank" and service charge key
6. All key fields blank

For example, if you want the standard in your system to be that service charge keys, for which there is no advance payment, should participate in final settlement, then you simply need to make an entry with blank key fields and enter final settlement in the table.

Master Data of Participation Group

Dialog

Change Screen Layout

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout

Field Groups

Field Groups

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status

Use

Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
2. Select the row and choose *Field Modification*.
The system displays all field groups that know the given application. In order to display the fields of a field group, position the cursor on the field group and choose *Environment -> Field check*.
3. Now you can, for example, suppress field groups that are not needed or define other field groups as "Required entry" fields. If you choose the "Not specified" setting, then the system itself determines how the field is treated. (Usually these fields are optional entry fields in create and change mode, and display fields in display mode.) If it is not possible to make a setting for a field group, then the system determines how the field is treated (usually dependent on the situation, or on the contents of other fields).

Note

Before you suppress multiple field groups of a view, a section or a screen sequence, you should consider if it makes more sense to remove the view, section or screen completely from the screen sequence.

Views

Use

Here you specify which field groups are grouped together into a view (part of a screen, technically a subscreen). You should group together the field groups that necessarily belong together during a check.

Example

If you have a field group with a valid-from date and a field group with a valid-to date, and these should be checked against each other in a module, then you should group them together into a view.
The check module is in the detailed data under "Function Module After Entry".

Standard settings

SAP recommends that you not change the standard settings. It is only necessary to make changes if you want to add your own new fields to the master data dialog.

In that case, copy an existing view to the customer namespace (Y* or Z*) and modify the properties of the view accordingly (consider the detail screen). Then assign the field groups to the view. You can assign your own field groups, as well as those delivered by SAP.

Sections

Use

Here you specify which views are grouped together into sections. You can recognize a section because it is surrounded by a frame. Fields that logically belong together should be grouped together in sections.

Standard settings

SAP recommends that you not change the standard settings.

It could be necessary to define new sections, either to arrange views delivered by SAP differently or to add your own fields to the master data dialog.

In that case, copy an existing section to the customer namespace (Y* or Z*) and assign the views you want to this section. The item number specifies the sequence in which the views are arranged in the section. For technical reasons, if you make your own assignments from sections to views, the item numbers have to be in the customer namespace (that is, they are not allowed to end in ").

This makes it possible for you to also include your own views in SAP sections. Select a section, and choose *Section -> Views* in the dialog tree, and assign the view to a section using a corresponding item number.

Screens

Use

Here you specify which tab pages appear in the dialog, and which sections make up these tab pages.

Standard settings

SAP recommends that you do not change the standard tab pages.

If you want to change a tab page, copy the standard tab page that is closest to the tab page you have in mind, and give it a name in the customer name range (Y* or Z*). Then assign the sections you want. The position number for user-specific entries also has to be other than here.

Screen Sequences

Use

Here you specify which screen sequences should appear in dialog. A screen sequence consists of different screens, and each screen is equivalent to a tab page.

Standard settings

SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories or Screen Sequence Category -> Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):
Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.
- Rental object:
You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).
- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
- RE search request:
For normal entry, you use the standard screen sequence. For fast entry (ad hoc search) the RERRFE screen sequence is used. (This cannot be changed.)

For business entities, the system always uses the screen sequence category that is defined as "Standard."

Events

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Tables

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Implement Enhancements (BAdI)

Number Assignment, Validation, Substitution

Use

The Business Add-In supports enhancements to the standard functions of participation groups. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications Notes for Developers

Settlement Process

Define Settlement Parameters

Use

In this activity, you can predefine the necessary parameters for the settlement run. This makes parameter blocks available to users for selection when they start settlement. As a result, the user does **not** need to enter the parameters individually.

Activities

Set the values for the individual indicators:

- *Active:*
Parameter blocks are offered for selection during settlement only if they were set to active. This enables you to leave parameter blocks in the system that you have tested but do **not** want to offer in the application. You can then activate them later if you need them. You have to set the *Active* indicator separately for each of the following: "normal" service charge settlement, COA settlement (for condominium owners in the COA company code) and tenant settlement (for tenants renting condominiums). For accruals and deferrals, there is a similar indicator in the *Parameters for Accrual/Deferral* group box. If you need the current occupancy principle for COA settlement, but do **not** need it for tenant settlement, you can also set the indicator differently for each of them.
- *Standard:*
Set this indicator if you want this parameter block to be proposed as the default when you start settlement.
For this setting there is also a separate indicator for "normal" service charge settlement, COA settlement, tenant settlement, and accrual/deferral.
- *Split Receivable If Tax Changes*
This indicator specifies that you want the receivable posting to be split based on time when the tax rate changes within the settlement period.
- *Post Balance:*
Set this indicator if you want to balance the receivable with the advance payment. This function is currently only available when the Leave Open APs (Planned Principle) indicator is set.
- *Leave Open APs (Planned Principle)*
Set this indicator if you do not want the settlement to automatically clear open advance payments (advance payments that were agreed on and posted, but **not** yet paid). This is advisable in certain cases (see long text).
- *Current Occupancy Principle:*
Austria only: Set this indicator to settle rental agreements and rental units with the current occupancy principle indicator in service charge settlement based on the current occupancy principle.
- *Print Separately:*
If you set this indicator, correspondence is **not** printed automatically as part of settlement. Instead, you must print it separately. We recommend that you set this indicator for the standard procedure so that correspondence is not printed automatically each time a complete settlement run is simulated.
- *Consider Vacancy Percentage*
This indicator must be set if you want to include a vacancy percentage rate (percentage at which the cost share of the vacant rental object can be transferred to the other tenants) that can be specified on the settlement unit.
In most countries this is **not** allowed or is not usual.
- *Use Other Apport. Factor (Sim./Accr.)*

This indicator applies during simulation of service charge settlement or during accrual/deferral of service charges. If this indicator is set, then, for all settlement units that have an alternative apportionment factor (to be used *if it is not possible to determine the measurement*), the system uses this alternative apportionment factor. This is particularly relevant for settlement units that are normally apportioned based on consumption (alternatively based on residential/usable space). If this indicator is set, then the system does not base the apportionment on consumption but distributes instead immediately using the residential/usable space. The system ignores this indicator during an actual settlement.

- **Elimination of Internal Business Volume**
It is possible that a settlement unit could contain rental objects and contracts with different profit centers. If that is the case and you want to perform elimination of internal business volume, then set this indicator. The system then ensures that posting is always two-sided.
- **Distribute Remainder**
Small differences can arise when costs are distributed from the settlement unit to the rental objects. Here you specify if differences are distributed, and if so, how.
- **Surcharge Schema**
The surcharge schema specifies if the system calculates a surcharge on the settlement result, and, if so, how this surcharge is calculated. You can define the surcharge schema in the Define Calculation of Surcharges IMG activity.
- ***Default Values for Data Medium Exchange for External Settlement***
You can make settings here that appear as defaults for settlement but can be overwritten. These settings define where files are imported from or exported to for data medium exchange, and the names of the files.
- ***Parameters for Accrual/Deferral***
First specify if the parameters are allowed to be used for accrual/deferral and whether these are the standard parameters (see above).
If there are no settlement parameters designated as allowed, then the system proposes the parameters that are allowed for "normal" service charge settlement.
- **AP Needed for Accrual/Deferral**
Set this indicator for parameters that are used for accrual/deferral, if you want the system to read advance payments during the accrual/deferral. Then the system either displays the advance payments for information only, or reposts them, depending on whether flow types are set up for this.

Restrictions related to whether individual parameters can be combined.

If you select the option "Charge Input Tax to Tenant", then the following options are not allowed to be selected:

- "Post Balance"
- "Split Receivable If Tax Changes"

- "Consider Current Occupancy Principle"

Define Calculation of Surcharges

Use

Here you specify if (and possibly how) surcharges are calculated during service charge settlement. To do so, you define a surcharge schema. The surcharge schema determines how high the surcharge percentage is, while allowing you to have different surcharges for different service charge keys, usage types, and contract types.

You specify the surcharge schema that is used during settlement in the Define Settlement Parameters IMG activity.

Make settings here only if you plan to calculate surcharges.

Standard settings

Standard Customizing is set up so that a surcharge of % is imposed on publicly subsidized apartments (for apportionment loss risk) when the *DE - Germany* surcharge schema is used. There is also a second surcharge schema *CH- Switzerland* for Switzerland. It calculates surcharges for all rental objects, but the amount of the surcharge varies depending on whether the contract is internal or external.

Activities

Define all surcharge schemas you need.

At the level of the surcharge schema, you specify the normal amount of the surcharge. You can choose to make the amount of the surcharge dependent on the service charge key, the usage type of the rental object, and the contract type. In addition, you can specify that the system calculated a surcharge only for certain service charge keys, usage types, or contract types. You can also decide how this surcharge is posted.

For more detailed information, see the F documentation for the given fields. Then you assign the surcharge schema to settlement parameters.

Accounting: Account Determination and Accounts for Apportionable Costs

Accounts for Service Charge Settlement

Use

Here you specify which accounts can be used for posting apportionable costs (on the settlement unit, or directly posted to the contract and/or rental object). You also specify how follow-up postings should look dependent on the account to which they are posted (credit account for settlement unit, debit of rental object and contract, input tax correction, and so on). **Requirements**

The accounts used have to exist already as G/L accounts in FI or as cost elements.

For more information, refer to Account Determination for Service Charge Settlement.

Define RE-Specific Account Properties

Use

In Customizing for your accounting system, you can specify that particular accounts can be used for real estate objects. This is dependent on the account group.

In this step, you can make detailed settings for these accounts. Accounts for which you make no further settings can be used for all real estate objects. However, you cannot use such accounts to directly post service charges to rental objects and contracts.

Activities

Define the account properties as follows:

Choose *New Entries*.

Enter an internal key and a name for the account property.

Example

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You want certain accounts to be available only for certain object types.

You create the account property *NAC - Non-Appportionable Costs*. This account property is only allowed for the object types business entity, property, building, rental object, and contract (but not settlement unit).

Select the corresponding object types. Account assignment to settlement units is then not possible for accounts that have this property.

.

You want to be able to assign costs directly to rental objects or contracts, and these costs should be charged to the corresponding rental object/tenant of the contract.

Select the **rental object** and **contract** fields, and specify a service charge key with the property RO - Directly Posted or RO/Contract Directly Posted. In the IMG activity Accounts Allowed for Individual Service Charge Keys you can also assign more than one service charge key to the account property.

@AH@ Account properties for directly posted accounts should be allowed only for rental objects and possibly contracts, and not be permitted for any other object type.

.

You want certain accounts to be used only for a particular service charge key.

Enter "Permitted for Certain Service Charge Keys" in the SU field. In the activity Accounts Allowed for Individual Service Charge Keys, enter the service charge keys for which the accounts are to be posted with this property. If you are using only one service charge key, you can also enter it directly.

If you want to post settlement units independently of the service charge key, enter "Generally Permitted" in the SU field.

Define Accounts Allowed for Individual Service Charge Keys

Use

In the RE-Specific Account Properties IMG activity, you can specify that certain accounts can only be used for settlement units with specific service charge keys. To do so, you choose the entry "Permitted for Certain Service Charge Keys" in the SU (settlement unit) field.

In this activity, assign all service charge keys, for which you want to allow posting, to an account property. If you assigned any service charge keys that are for "directly postable costs," then the account properties have to be set up so that they are allowed for rental objects, or for both rental object and contract.

Requirements

First maintain the account properties

Note

For directly posted costs, the system makes checks during posting to see which settlement unit or settlement period the posting belongs to. In addition, the system uses the account property and the account to determine the service charge keys that are compatible with them. Then it tries to find the posted rental object in a settlement unit that has one of these service charge keys. This indirect assignment between the rental object and the directly postable settlement unit therefore has to be unique. In order to ensure that settlement master data is not created incorrectly, set up the system so that for each account exactly one service charge key can be used for a directly postable rental object. You may also want to allow exactly one service charge key to be used for a directly postable rental object/contract. The same account can also be used for other settlement units.

Assign RE-Specific Properties to G/L Account**Use**

In this activity, you assign the RE-specific account properties, which you already defined, to the G/L accounts to which they apply.

Assign Clearing Accounts to Cost Account

For all postings, service charge settlement uses accounts that are dependent on the account of the original cost posting. The only exception is receivable postings for the tenant. These are posted dependent on the advance payment condition type.

In this activity, you specify which clearing accounts and credit accounts are to be used for the cost accounts (apportionable service charges).

The accounts have to have been created as cost elements.

For information on which account is used for what purpose, refer to the F documentation of the given field.

Note for third party management:

P System

The cost accounts entered here are automatically excluded from the selection of cost elements for the annual budget of the condominium owners' association. For more information, see the documentation of the Specify Cost Elements to Be Excluded from Annual Budget IMG activity.

Assign Default Condition Type to Service Charge Key

Use

In this activity you assign a condition type to a service charge key. The system uses this condition type to determine the (reference) flow type (for account determination, for example) in the following cases:

- You have not defined an explicit settlement participation for the contract, and the system cannot find a unique condition type when it generates the settlement participation.
- There is no condition defined for the settlement unit in a contract (for example, participation type *final settlement*).
- A settlement unit contains one or more vacant rental objects.

Standard Settings

SAP assigns the condition types *AP Operating Costs* and *AP Heating Expense* to the corresponding service charge key.

Example

The *final settlement* participation type is defined on a contract. Then there is no *Advance Payment* condition on the contract for the settlement unit. In this case, the system uses the condition type that you assigned here to the service charge key.

Note

Account determination for the receivable posting takes place as follows (for costs on the contract that have to be passed on to the tenant):

You assigned an *Advance Payment* condition to the settlement unit in the settlement participation. This condition is assigned to a flow type that has a reference flow type of the category : *Receivable from Settlement*. This flow type is the crucial factor in the account determination.

Assign Reference Flow Types for Receivables/Credit from SCS

Use

Here you assign the reference flow types that you require for settling service charges.

Activities

P System

For all flow types that are assigned to condition types with the attribute *advance payment*, check whether the reference flow types are correctly set up for the following relationships:

- *SCS: Receivable from Settlements*

This reference flow type is used to invoice the tenant for the total receivable for a contract. If the advance payments were posted as revenue, this flow type is used to post the outstanding receivable (settlement amount less advance payments, if the settlement calculated a higher amount than the advance payments).

The flow type should be based on account determination with the following posting specification:

Dr Customer Cr Revenue (Contract)

For own-use contracts with advance payment, account determination should be set for the reference flow type with key . Example:

AP Operating Costs AP Operating Costs Own Use AP Operating Costs Own Use
Re from sett: Own use OC AP The posting specification for flow type is then:

Dr Costs (Cost Center/Order/Project) Cr Revenue (Contract)

The relationship is also used to offset the object transfer made during periodic posting. For this reason you should specify a reference flow type for the flow types for object transfer as well:

AP Operating Costs AP oper. costs transfer AP oper. costs transfer Neutraliz.
Repost. AP Oper. Costs

The posting specification for flow type is then:

Dr Costs Passed On (Contract) Cr Revenue (Rental Object)

The posting specification for flow type :

Dr Neutralization of Costs (Rental Object) Cr Revenue Dist. (Contract)

- *SCS: Credit from Settlements*

This reference flow type is used post a credit memo for the tenant for the credit calculated for a contract.

Service charge settlement can calculate a credit for the tenant in the following two cases:

- a) The settlement unit has a credit balance for the settlement period (for example, when the revenue for a coin-operated washing machine is higher than the costs).
- b) The advance payments were posted as revenue and the outstanding receivable is less than the advance payments.

Posting specification for customer contracts is then:

Dr Costs (Contract) Cr Credit Customer

For own use and object transfers, see relationship key *SCS: Receivable from Settlements (above)*.

- *SCS: Legacy Data Transfer of Service Charges* Not yet supported.

- *SCS: Receivable from Non-Deductible Input Tax*

Flow type used to post the receivable of the proportional non-deductible input tax. SAP recommends the same flow type here as for relationship .

P System

- *SCS: Credit Memo from Non-Deductible Input Tax*
Flow type used to post the credit of the proportional non-deductible input tax. SAP recommends the same flow type here as for relationship .
- *SCS: Advance Payments Transfer Credit Balance*
This flow type is used to make a transfer posting for the advance payments. It is only needed when the advance payment is **not** posted as revenue, or when settlement is based on the actual principle. If the advance payment is **not** posted as revenue, the posting specification for this flow type is then:
Dr K Customer Cr Credit Customer

If the advance payment is posted as revenue, the posting specification is then:
Dr Allocated Costs (Contract) Cr Credit Customer
- *SCS: Transfer Posting Advance Payments Debit Balance*
This flow type is used when the advance payments to be transferred are larger on the debit side than on the credit side, such as when condition adjustments on advance payments originally posted for the contract resulted in credit memos for the renter. The posting specification is then:
Dr Customer receivable Cr J Customer
- *SCS: Transfer Posting Advance Payment to G/L Account*
This flow type is used when advance payments are to be transfer posted to a G/L account. In this case, the tenant is **not** invoiced for the total receivable of the settlement, but only the balance. The posting specification is then:
Dr K Customer Cr G/L account
The receivable is posted with the reference flow type for the relationship key or , depending on whether the balance produces a credit memo or a receivable.
- *SCS: Transfer Posting Advance Payments TSC Principle*
This flow type is used if the tenant service charge settlement is applied when transfer posting the advance payments, in other words, the payments made by one tenant are credited to the subsequent tenant (or the rental object when the object remains unoccupied). The posting schedule is similar to the relationship category .

Enhancements**Implement Enhancements (BAdI): Suppress Clearing****Use**

You use this Business Add-In (BAdI) if you want to suppress clearing in the context of service charge settlement, sales-based settlement, COA settlement, and so on, for example because clearing should take place outside of the settlement using your own programs.

You can also influence the selection of items for clearing with respect to rental contracts (transaction RERACL).

Requirements

The advance payment items posted by the service charge settlement then remain open. You have to clear them manually, for example using transaction FB, or using your own customer-specific program.

To be able to clear non-payable special G/L indicators, you have to set message REEXFI to a warning in transaction OBA.

If it afterwards becomes necessary to reverse the service charge settlement, you first have to reset manually made clearings using transaction FBRA.

Activities

Implement the method SUPPRESS_CLEARING and set the parameter cf_suppress_clearing there to 'X'.

Implement the method MODIFY_CLEARING_ITEM_LIST if you want to change the list of open items that are intended for automatic clearing (Clearing for RE Contracts RERACL). This makes it possible, for example, to exclude certain contracts from clearing.

Also see the example implementation.

Notes for Developers

Implement Enhancements (BAI): Prevent Object Transfers

Use

You can use this BAI if you want to suppress object transfers (transfer from the contract to assigned rental objects) during periodic posting and service charge settlement. In that case the real estate contract remains the object to which account assignment is made in the revenue posting.

Activities

Implement the method SUPPRESS_TRANSFER_POSTING and set the parameter cf_suppress_transfer there to 'X'.

Also see the example implementation in class CL_EXM_IM_RERA_TRANSFER_POST.

Example

In the example, the distribution postings are controlled dependent on the contract type of the contract.
For contracts with customer accounts, the distributions are suppressed, but not for other contract types.

Notes for Developers

External Settlement

Characteristics of External Settlement Companies

Use

In this step, you enter information for your external settlement companies.

Activities

Enter an internal key .of your choice for each settlement company.

Enter a long and a .short name.

Enter the company-code-dependent . customer number for the settlement company.

Specify whether or .not advance payments for heating and service charges are
cleared by the settlement company.

CRLF: Set this indicator . if a line break should be introduced when tapes are created.

Define Cost Elements of Settlement Company

Use

In this section, you assign the cost elements of the settlement company the corresponding service charge key of your company.

- Entry of the cost elements for each settlement company
Please take the cost elements from the documents your settlement company provides.

- Assignment of your service charge key to the external cost elements
In the SAP System, the costs are posted with the service charge key (account assignment settlement unit) and are evaluated under the cost elements assigned here at the settlement company.

Activities

1. Choose the settlement company.
2. Create cost elements of the settlement company
Create the cost elements and assign cost element groups (predefined by the system) to them.
3. Assign service charge key
 - a) Assign the corresponding service charge key to each cost element
 - b) To do this, position the cursor on a cost element and choose the 'Assign service charge key' level.

Fuel Types**Use**

In this section, you determine

1. the names of the fuel types in your system (internal fuel types) as well as which service charges keys are to be used to enter the costs of these fuel types.
2. the name of the fuel types of the settlement company as well as the assignment of your fuel types.
These objects are needed for the data medium exchange of the fuel costs incurred. Take the fuel types from the documents of your settlement company.

Requirements

Service charges keys are created for each internal fuel type.

Activities

1. Fuel types for real estate management - assignment SCK
 - a) Check the standard settings and change them, if necessary
 - b) Assign the service charges key corresponding to new fuel types.
2. Fuel types of the settlement company
 - a) Choose the settlement company.

- b) Define fuel types settlement company Enter the fuel types of the settlement company.
- c) Assignment of fuel types to real estate management
 - Position the cursor on an external fuel type and choose the 'Assignment of fuel types to real estate management' level.
 - Assign the corresponding internal fuel type.

Adjustment of Conditions

Different Calculation of Service Charge Condition

Use

Normally, the advance payments are determined on the basis of the measurement amount resulting from settlement for a lease-out with reference to a rental object.

However, this sometimes results in inaccurate advance payments if the settlement factor is usage-based (or also on the number of people in the apartment) and the tenant moved into the object only shortly before the end of the settlement period. In this case, the tenant may have used significantly more or less than average during this short time, and extrapolating the consumption to the entire settlement period would lead to disproportionately high or low advance payments.

For this reason, for individual service charge keys you can specify a certain length of participation in settlement ("number of months"). For the period up to this amount of time, the the advance payment adjustment for these service charge keys is determined based on the measurement type entered here, instead of the measurement type of the SU.

For service charge keys for which the consumption varies according to the season, a value for the "regional location heating value days" can be defined. This key is based on the heating days table which specifies how the months are weighted.

The "regional location heating value days" is independent of the number of months and the measurement type. It is always applied when the tenant occupied the rental object during only part of the settlement period.

It is recommended that you create a heating days table to adjust the usage-dependent service charges that vary with the season, even if you don't want to use a heating days table for settlement.

P System
Example

For the service charge keys " Water" and " Heating" you want to use the method described above for tenants who occupied the apartment for a maximum of months of the old settlement period. You are using heating days table HEAT.

The following entries were made:

Water A residential/usable space HEAT
 Heating A residential/usable space

The tenant of RO occupied the object in the last three months of the settlement period // - //. A total cost of euros was incurred for the settlement unit "water," and the total area of the SU is m². The heating settlement unit contains the same objects. The cost incurred here is euros. The residential/usable space of RO is m².

The yearly advance payment for water is calculated independently of the actual costs on the rental object as follows:

euros / m² * m² = euros

For heating, the heating day table "HEAT" is used. A total value of % was entered for the time period // to //. The total heating oil consumed is , liters. The interim meter reading shows that liters of this were attributed to rental object in the last three months of the settlement period. The yearly advance payment is calculated as follows: (euros / 1) * (1 /) = euros/liter * liters = euros

Calculation of Adjustment Date**Use**

Here you specify how the default date for adjustment of advance payments is determined. The default date is dependent on the adjustment rule that is assigned to the advance payment on the contract.

Activities

For each adjustment rule, specify how long after the adjustment run you want the adjustment condition to be set. You enter the number of months, weeks and days that should follow after the system date of the adjustment run (see adjustment key date). The system then determines the valid-from date of the new advance payment condition from this information. If you set the Next First indicator, then the system uses the next occurring first day of the month after the originally determined date.

The due date of the new advance payment condition is not affected by the settings you make here. The due date is determined using the same rule that was used on the previously existing advance payment condition.

Implement Enhancements for SCS Adjustment (BAdI)

Use

You can use this BAdI to influence the adjustment process that takes place during

- Service charge settlement
- Assessment adjustment (annual budget settlement)
- Tenant settlement

The following methods are available in the interface:

- **CHECK_CONDTYPE** Checks if the condition type is allowed for adjustments
You can use the method to extend the adjustment by service charge settlement for rental objects to also include conditions, which were not used in the service charge settlement, but are to be adjusted in the same way as the condition types used in the settlement. Using an appropriate enhancement implementation, you can decide on an individual basis which condition type is equivalent to one contained in the settlement, and should therefore be adjusted in the same way.

Example:

A contract was settled using the condition type "Operating costs advance payment" *id_condtype_scsresult*. However, the affected rental object contains the condition type "Operating costs flat rate". In this case, the condition type "Operating costs flat rate" is not adjusted in the standard system. Using an enhancement implementation by means of the BAdI, however, you can have the system also adjust this condition, if you set changing parameter *cf_adjust_condition* to *abap_true* for this condition type (parameter *id_condtype_foradjm*).

If the changing parameter *cf_adjust_condition* is set to 'P', the equivalent condition to be adjusted is determined for the adjustment object by regenerating the settlement participation.

- **MODIFY_ADJUSTMENT** Modifies the adjustment
This method is called when the standard adjustment already calculated the new condition amount. The new condition amount is transferred to the BADI method using the parameter *cd_unitprice_new*. The calculated adjustment date is found in *cd_validfrom_new*. Both values can be changed in the BADI method. In addition, there is the parameter (table) *ct_depend*, which can be used to return additional adjustment amounts (subsequent adjustments). The returned values are only considered during the further processing of the program for the adjustment if the parameter *cf_exit_processed* is also set to *abap_true*. Using the parameter *ct_message*, you can also return messages that are then also displayed in the adjustment log.

The generated, method-specific adjustment records are contained in tables *it_scajro*, *it_scajrosu* and *it_scajsettlref*. Table *it_scajrosu* contains the proportional costs per settlement unit for the rental object/contract. Using this information, you can determine which settlement units are relevant for the special condition.

- **CHANGE_LOC_KEY** Changes the regional location key for heating days. You use a regional location key in the service charge settlement to take heating days into account for cost distribution. You have entered this regional location key in the allocation rules of the settlement unit. In this case, the system uses the regional location key also for the annual extrapolation of costs in the adjustment.

Using this method, you can change the regional location key (parameter *cd_loc_key*) determined by the program. If an initial value is returned, then no regional location key is considered during the further run of the program. The import parameters have the following meanings:

- *io_bus_object* - Adjustment object (either contract or rental object)
- *id_nksl* - Service charge key
- *it_list_shareout* - Allocation rules of settlement unit
- *it_adjmksl* - Adjustment parameter per service charge key that is passed on when the adjustment is executed
- *id_loc_key* - Regional location key that is entered in Customizing for the service charge key

- **INCLUDE_LEAPYEAR** Consider leap year?

With regard to the handling of leap years, the standard adjustment works as follows: First the system determines the costs of the settlement period that forms the basis for the adjustment of the advance payment condition. From these values, the system calculates the new values for the conditions, taking the lengths of the periods into account.

Assessment adjustment based on annual budget: Since the adjustment is based on the planned costs at the time of the adjustment, the leap year is not considered here. This means that the planned costs in a leap year, which are based on days, are used as the calculation base for the new advance payment amount. Adjustment of advance payments based on **service charge settlement or tenant settlement:** The new advance payments relate to the costs of a previous settlement period. Therefore, the leap year is considered in these cases. This means that the settled costs of a leap year (days) are converted to days, and this converted amount is used as the basis for the new advance payment amount. Using the method **INCLUDE_LEAPYEAR**, you can override this standard behavior as best suits your needs. This method is called only when the settlement period is a leap year. The method has the following import parameters:

- *io_bus_object*: Returns the adjustment object (contract or rental object)
- *io_settl_unit*: Returns the settlement unit, the costs of which are currently under consideration
- *is_condition*: Returns the condition that is adjusted
- *id_process* : Returns the process ID (REAA for assessment adjustment, RECO for COA settlement, RESC for service charge settlement, RETN for tenant settlement of COA)

Using the changing parameter *cf_include_leapyear*, you can control how a leap year is taken into account. There is a default value for the parameter based on the system behavior. If the field contains an 'X', then the costs that are based on days should be converted to .

P System

- **CHANGE_PERIOD_PARTICIPATION** Changes the period used for settlement participation. For an adjustment, the system considers special agreements in the settlement participation (maximum costs and tenant share) that are effective at the time of the adjustment. Using this method, you can change the time period determined by the program for determining the relevant settlement participation (parameters CD_DATE_FROM and CD_DATE_TO). The import parameters have the following meanings:
 - *IO_CONTRACT* - Contract to be adjusted
 - *IO_RENTAL_OBJECT* - Assigned rental object - *IO_SETTL_UNIT* - Relevant settlement unit

Example

For an example implementation, see the class CL_EXM_IM_RESC_SETTLSTEP_AJ. Notes for Developers

Accrual/Deferral of Service Charges/Display Costs Not Settled**Accrual/Deferral of Service Charges****Use**

The service charges that come due during the course of the year are collected on settlement units and are thereby recorded as costs in the profit and loss statement.

Depending on how the contract conditions for advance payments for service charges are defined, these advance payments either appear in the balance sheet (posted as advance payments to a special G/L account) or in the profit and loss statement as revenue.

Using the function for accrual/deferral of service charges, you can have the system list costs and advance payments that are due totaled by business entity and service charge group. (This groups together different settlement units based on their service charge keys.) This evaluation is based on a simulation of service charge settlement.

During this process, the system determines the following for each business entity and service charge group:

- External apportionable costs
- Costs that arise on vacant rental objects
- Costs that arise on your own contracts for internal use - Costs that **cannot** be apportioned due to settlement participation and

P System

- Advance payments that were already made for these costs, and which are recorded in the balance sheet
- Advance payments that were already made for these costs, and which are recorded in the profit and loss statement ("Advance Payments as Revenue")
- Advance payments that were posted for vacant rental objects

In Customizing, you specify if any of these cost groups are transferred during accrual/deferral. The user can still change the amounts before the transfer (for example, because the result of the simulation does not correspond to the actually expected rental situation).

Standard Customizing is set up so that external apportionable costs and advance payments as revenue (with inverse posting to the costs) are accrued/deferred. This means that those costs are accrued/deferred that can be apportioned externally and for which the advance payments are recorded in the balance sheet.

Activities

In this section, you define the service charge groups and assign flow types to them for accrual/deferral. You also specify which service charge keys belong to which service charge group. You assign the flow types themselves and the resulting account determination in the IMG activities of these sections: *Condition Types and Flow Types* and *Accounting*. You assign service charge groups to advance payments for settlement participation in the IMG activities of this section: *Service Charge Settlement -> Settings for Rental Objects and Contracts Participating in Settlement*.

The relevant sections are linked in the IMG documentation for defining service charge groups.

If you want to use different settlement schemas for accrual/deferral, you need to make additional settings for the settlement schema by choosing *Service Charge Settlement -> Settlement Process -> Define Settlement Parameters*. Specify there which settlement schemas are active for accrual/deferral.

Assign Condition Type to Service Charge Key/Group

Use

Here you specify which conditions for service charge advance payments and which conditions for flat payments are cleared against each other.

Activities

The various control options are described below. Make an entry in the table for each condition for advance payments and each condition for flat-rate payments. Specify the following for each entry:

- Whether the condition type is only allowed to be cleared by costs of certain service charge keys

P System

- Whether the condition type can be cleared by all costs on the settlement units of a certain service charge group
- Whether the condition type can be cleared by all costs in the categories "Operating Costs"/"Heating Costs" or "Operating and Heating Costs"

Use

For the system to be able to check or generate the settlement participation, the condition types, which play a role in service charge settlement (advance payments and flat payments), must be linked to the service charge key. This can be done as follows:

- The advance payment condition type is assigned **directly** to the relevant service charge key Example:
Condition type: Elevator advance payment
Service charge key: Elevator
Service charge category: No general costs (SCK-specific)
Service charge group: < blank >
- A service charge group is assigned to the advance payment condition type:
Example:
Condition type: Caretaker services advance payment
Service charge key: < blank >
Service charge category: <anything>
Service charge group: Caretaker services
(The service charge group is assigned in Customizing, for example, to the service charge keys Gardening
Caretaker
House cleaning
)
- The **service charge category** "operating costs" or "heating expenses" is assigned to the advance payment condition type:
Example:
Condition type: Operating costs advance payment
Service charge key: < blank >
Service charge category: Operating costs
Service charge group: < blank >

The service charge key is settled, for which in Customizing in the definition of the service charge key, you set the *operating costs* indicator.

Advance payment condition types valid for operating costs and heating expenses have service charge category - general service charges.

Example:

Condition type: operating costs/heating expenses advance payment
Service charge key: < blank >
Service charge category: - General service charges
Service charge group: < blank >

P System

The settlement participation is generated/checked when you create/change an occupancy contract and during service charge settlement. The system determines the settlement units, to which the rental objects are assigned, and which are leased out in this contract. It also attempts to assign the advance payment and flat payment condition types that are assigned here. To do this, proceed as follows:

- First the system searches for an advance payment condition type that is defined exactly for this service charge key (see first point above).
- Then it searches for an advance payment condition type that belongs to the service charge group of the service charge key (see the second point above).
- Finally, it searches for an advance payment condition type that belongs to the category "operating costs" or "heating expenses" (depending on whether the *operating costs* or *heating expenses* indicator is set for the service charge key).
- If it still cannot assign any condition type, the system searches whether the contract has a condition type that is specified in Customizing with the service charge category " General Service Charge."
- If this condition type also does not exist, the system assumes, depending on the setting in Customizing for the Defaults for Settlement Participation per Service Charge Key that it is a final settlement (for which no condition type is required) or that the contract does **not** participate in this settlement unit.

Example

The advance payment conditions and service charge key are set up as specified in the examples above. There are settlement units for the following service charge keys:

Property damage and liability insurance
 Water supply
 Elevator
 Street cleaning
 Garbage removal/disposal
 Broad band cable network
 Caretaker
 House cleaning
 Heating expenses

They are all marked as "operating expenses" except for service charge key .

- For contract , it is listed explicitly which advance payments have been made for which costs. The following conditions are defined:
 operating costs advance payment
 Elevator advance payment
 Caretaker services advance payment

In the settlement participation, the advance payments for this contract are assigned to the advance payment condition types as follows:

P System

- Property damage and liability insurance -> operating costs advance payment
 - Water supply -> operating costs advance payment
 - Elevator -> Elevator advance payment
 - Street cleaning -> operating costs advance payment
 - Garbage removal/disposal -> operating costs advance payment
 - Broad band cable network -> operating costs advance payment
 - Caretaker -> Caretaker services advance payment
 - House cleaning -> Caretaker services advance payment
 - Heating expenses -> No assignment
- Contract only has the condition " operating costs advance payment". For this contract, all service charge keys except for are assigned to the condition type -> operating costs advance payment.

No condition type can be assigned for both contracts for the settlement unit with the service charge key . It would be designated as a final settlement if this has been set up in Customizing.

Define Service Charge Groups and Accrual/Deferral of Service Charges

Use

You define service charge groups here. These are used for the following purposes:

- If you want to use functions for accrual and deferral of service charges, then it is **mandatory** that you define at least one service charge group. You can leave the key of this service charge group blank. Then all service charge keys are automatically assigned to this service charge group.
- You can choose to use service charge groups as a means of controlling settlement participation. Using service charge groups can be beneficial if you have an advance payment condition which, although it is not assignable to a particular service charge key, is also not valid for all service charge keys that are designated for operating or heating costs.
- When you start a settlement, you can select only those service charge keys belonging to a particular service charge group.
- Certain reports for service charge settlement use the service charge group; so if you use appropriate layouts, you can display subtotals for each service charge group.

Standard settings

Three service charge groups are provided in standard Customizing. The third of these service charge groups is used only to identify advance payments that are **not** clearly classified as heating costs or operating costs.

According to standard Customizing, only those costs are transferred that are cleared against advance payments, and those which, as long as settlement did **not** take place, are posted on reconciliation accounts of the special general ledger. Therefore, the standard system provides flow type ACC for *external apportionable costs* and flow type ACP for advance payments posted as revenue. These flow types are set up so that a value posted using ACC is offset by a value posted using ACP. This means that external apportionable costs are accrued/deferred after the deduction of advance payments posted as revenue.

Activities

- Create the service charge groups that you need in order to generate settlement participation and/or to post accrual or deferral of service charges.
- Assign flow types to the service charge groups. If you want to transfer only costs during accrual/deferral, then enter only values for the flow types that are within the context of *costs*. Standard Customizing is set up so that the system generates accrual/deferral postings for those costs from advance payments that are posted on the special general ledger reconciliation account as long as settlement did **not** yet take place. All other costs are **not** accrued/deferred, according to the settings in standard Customizing. To improve performance, the system only determines advance payments when this is set up in Customizing for the settlement parameters (which you also have to enter during settlement). If this is set up, but no flow types are defined, then the system determines the advance payments and displays them as information, but they are **not** transferred.
- The flow types you assign here have to have been defined already in Customizing for flow types.
- Then assign account symbols to all your newly created flow types in the Assign Account Symbol to Flow Type IMG activity.
- Assign your newly created account symbols to FI accounts in the Replace Account Symbols IMG activity. Make sure that the account for the accrual/deferral amount is on the debit side and the account for offsetting the accrual/deferral is on the credit side.
- Then, when you define the service charge key, assign the service charge group that you want the service charge key to belong to.
- If your settlement participation definition is currently set up so that the same advance payment condition type is used for different service charge keys, then it can be helpful to group these service charge keys together in a service charge group. If you also use the predefined service charge groups "operating costs" and "heating costs" then you should also define a service charge group, to which you assign these advance payments in settlement participation. No service charge keys are then explicitly assigned to this group. In reporting for accruals/deferrals, while the advance payments in this group are displayed, they are not shown in relation to the corresponding costs.

If you do **not** need service charge groups for generating settlement participation or for reporting, but only for accruals and deferrals, you have two options:

- You can create just one service charge group but leave the key blank. In that case, the system treats all service charge keys and all advance payment condition types the same during accrual/deferral. You do not need to make any other assignments.

P System

- You can create two service charge groups: "operating costs" and "heating costs." In this case, you have to assign these groups in the IMG activities for defining your service charge keys and defining settlement participation. The advantage here is that since you use different flow types for the accrual/deferral of operating costs and for the accrual/deferral of heating costs, you can use different accounts for them.

Assign Service Charge Group to Service Charge Keys

Use

Here you assign service charge keys you already defined to service charge groups. This is the same IMG activity as the one for defining the service charge keys.

Activities

Select the service charge keys you want to assign to a service charge group and choose *Details*. On the detail screen, you can assign the service charge group.

For the meanings of the other settings, see the Define Service Charge Keys IMG activity.

Define Accrual/Deferral Reporting

Use

You maintain the indicator for controlling the list output for service charge settlement and settlements in COA (condominium owners' association).

Controlling

Planning

Maintain Planning Layouts for Cost Element Planning

Use

To be able to plan for cost elements, you first need to define the planning layout. In the planning layout, you specify the format of the planning screens.

Requirements

In the standard SAP System, planning layouts are found only in client . To use them as models for user-defined planning layouts, they must be taken from client and imported to your production client. Use the IMG *General Controlling* under the section *Prepare Production Startup -> Transport System Settings -> Transport Planning Settings -> Import Standard Planning Layouts*.

Recommendation

After installing a new release or update, you should repeat the import of standard planning layouts from client in order to access the latest layouts.

Activities

1. Create planning layouts for cost element planning based on your requirements.
2. Change an existing planning layout. **Further**

notes

Procedure for Creating Planning Layouts

Notes on transport

For the transport of planning layouts, an individual function is available in Customizing under *Controlling -> General Controlling -> Production Startup Preparation -> Transport System Settings -> Transport System Settings -> Transport Planning Layouts*.

**Example
Requirements****Standard settings****Recommendation****Activities****Further notes**

Maintain Planning Layouts for Statistical Key Figures

Use

To be able to plan statistical key figures, you first need to define planning layouts for planning statistical key figures. You specify the layout of the planning screens in these planning layouts.

Requirements

In the standard SAP System, planning layouts are found only in client . To use them as models for user-defined planning layouts, they must be taken from client and imported to your production client. Use the IMG *General Controlling* under the section *Prepare Production Startup -> Transport System Settings -> Transport Planning Settings -> Import Standard Planning Layouts*.

Recommendation

After installing a new release or update, you should repeat the import of standard planning layouts from client in order to access the latest layouts.

Activities

1. Create planning layouts according to your requirements for the planning of statistical key figures.
2. Change an existing planning layout.

Additional Notes

Procedure for Creating Planning Layouts

Note on transport

For the transport of planning layouts, an separate function is available in Customizing for *Controlling -> General Controlling -> Production Start-Up Preparation -> Transport System Settings -> Transport Settings for Planning -> Transport Planning Layouts*.

Example

Requirements

Standard settings

Recommendation

Activities**Further notes****Import Planning Layouts****Use**

In this step you import standard planning layouts from client to the clients in which you are logged on. This import can either be carried out online or in the background.

After a new release or update of the SAP System, the import from client should be repeated in order to access the current standard planning layouts.

Standard SAP planning layouts

SAP offers the following standard planning layouts:

Cost Center Accounting

Cost Element/Activity Input Planning

- - CCtr: Cost elements, activity-dependent/-independent
- - CCtr: Activity inputs, activity-dependent/-independent
- - CCtr: Costs/revenues/consumption
- - CCtr: Primary/secondary order costs
- - CCtr: Cost elements, simplified
- - CCtr: Cost element central planning, simplified
- - CCtr: Cost elements in transaction currency
- - CCtr: Cost element comparison, quarters
- - CCtr: Cost element planning, versions
- - CCtr: Cost elements with display of previous year
- - CCtr: Activity output from sender viewpoint
- - CCtr: Cost element central planning
- - CCtr: Cost element plan/actual comparison

Activity/Activity Price Planning

P System

- - CCtr: Activity types/prices, standard
- -C CCtrs: Activity types/prices, central planning
- - PP planning: Activity types/prices
- - ATyp: Actual activity price indicator and switch structure
- - CCtr: Activity types/prices, attributes
- - CCtr: Activity price, simplified
- - CCtr: Activity price, centralized

Manual Actual Prices

- -N CCtr: Manual actual prices, cost centers

Resource Planning

- -R CCtr: Resource planning
- -R Orders: Resource planning
- -R WBS elements: Resource planning

Dependency planning

-R: Cctr: Value-based recipe planning

-R: KoStellen: Quantity-based recipe planning

Statistical Key Figure Planning

- - Cctr: Statistical key figures, standard
- - Cctr: Statistical key figures, activity-dependent
- -C Cctr: Statistical key figures, central
- - Cctr: Statistical key figures, simplified
- - Cctr: Statistical key figures, centralized

Internal Orders

Cost/Revenue Element Planning

- - Orders: Cost elements, standard
- - Orders: Activity inputs, standard
- -P: Orders: Process inputs
- - Orders: Primary/secondary order costs

Cost Planning/Activity Input Planning

- - Cost elements: Simplified layout
- - Cost elements: Simplified layout, central

Statistical Key Figure Planning

- - Orders: Statistical key figures, standard
- -C: Orders: Statistical key figures, central
- - Statistical key figures, simplified
- - Statistical key figures, simplified, central

Project Cost Controlling

Cost Element/Activity Input Planning

- - WBS elements: Cost element planning
- - WBS elements: Activity inputs
- -P: WBS elements: Process inputs
- - WBS elements: Revenues, revenue cost elements
- -: WBS elements: Primary/secondary order costs

Statistical Key Figure Planning

- - WBS elements: Statistical key figures, standard --C WBS elements: Statistical key figures, central
- -C Networks: Statistical key figures
- -C Networks: Statistical key figures
- -CC Networks: Statistical key figures, central

Activity-Based Costing

Cost Planning/Activity Input Planning

- -P Processes: Primary/secondary order costs, processes
- -P Processes: Activity-dependent/-independent process inputs
- -D Processes: Cost elements
- -D Processes: Activity inputs
- -DP Processes: Process inputs

Quantities and Prices

- E Processes: Quantity planning/price planning
- E Processes: Tax codes

Statistical Key Figure Planning

- -F Processes: Statistical key figures, standard - -FC Processes: Statistical key figures, central

Manual Actual Prices

- -Q Processes: Manual actual prices, business processes

Cost Object Accounting

Cost/Activity Input Planning

- -G Cost object: Primary costs
- -G Cost object: Activity inputs, standard
- -GP Cost object: Process inputs

Statistical Key Figure Planning

- -I Cost objects: Statistical key figures, standard
- -IC Cost objects: Statistical key figures, central

Real Estate

Cost element allocation/activity allocation

- -J- Business entity: Cost elements, standard
- -J- Buildings: Cost elements, standard
- -J- Property: Cost elements, standard
- -J- Rental unit: Cost elements, standard
- -J- Rental agreement: Cost elements, standard
- -J- Management contract: Cost elements, standard
- J- Business entity: Activity inputs, standard
- J- Buildings: Activity inputs, standard
- -J- Property: Activity inputs, standard
- -J- Rental unit: Activity inputs, standard
- -J- Rental agreement: Activity inputs, standard
- -J- Management contract: Activity inputs, standard

Note

You **cannot** change standard planning layouts.
The names of these standard planning layouts begin with a numeral.

Standard settings

The standard R/ System stores planning layouts in client only. To use the layouts, they must be transported from client to the production client.

Activities

- . Check which planning layouts you require .
Choose the corresponding layouts in the list
- . Import the layouts either:
 - a) Online, with *Execute or*
 - b) In background, with *Execute in background*.

Note

If possible, you should use background jobs and import during times of low system usage.

Transport Planning Layouts

Use

In this step you import standard planning layouts from client to the clients in which you are logged on. This import can either be carried out online or in the background.

After a new release or update of the SAP System, the import from client should be repeated in order to access the current standard planning layouts.

Standard SAP planning layouts

SAP offers the following standard planning layouts:

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- - CCtr: Cost elements, activity-dependent/-independent
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- - CCtr: Primary/secondary order costs
- - CCtr: Cost elements, simplified
- - CCtr: Cost element central planning, simplified
- - CCtr: Cost elements in transaction currency
- - CCtr: Cost element comparison, quarters
- - CCtr: Cost element planning, versions
- - CCtr: Cost elements with display of previous year
- - CCtr: Activity output from sender viewpoint
- - CCtr: Cost element central planning
- - CCtr: Cost element plan/actual comparison

Activity/Activity Price Planning

- - CCtr: Activity types/prices, standard
- -C CCtrs: Activity types/prices, central planning
- - PP planning: Activity types/prices

- - ATyp: Actual activity price indicator and switch structure
- - CCtr: Activity types/prices, attributes
- - CCtr: Activity price, simplified
- - CCtr: Activity price, centralized

Manual Actual Prices

- -N CCtr: Manual actual prices, cost centers

Resource Planning

- -R CCtr: Resource planning
- -R Orders: Resource planning
- -R WBS elements: Resource planning

Dependency planning

- -R: CCtr: Value-based recipe planning
- -R: KoStellen: Quantity-based recipe planning

Statistical Key Figure Planning

- 1-301 CCtr: Statistical key figures, standard
- 1-302 CCtr: Statistical key figures, activity-dependent
- -C CCtr: Statistical key figures, central
- - CCtr: Statistical key figures, simplified
- - CCtr: Statistical key figures, centralized

Internal Orders

Cost/Revenue Element Planning

- - Orders: Cost elements, standard
- - Orders: Activity inputs, standard
- -P: Orders: Process inputs
- - Orders: Primary/secondary order costs

Cost Planning/Activity Input Planning

- - Cost elements: Simplified layout
- - Cost elements: Simplified layout, central

Statistical Key Figure Planning

- - Orders: Statistical key figures, standard

- -C: Orders: Statistical key figures, central
- - Statistical key figures, simplified
- - Statistical key figures, simplified, central

Project Cost Controlling

Cost Element/Activity Input Planning

- - WBS elements: Cost element planning
- - WBS elements: Activity inputs
- -P: WBS elements: Process inputs
- - WBS elements: Revenues, revenue cost elements
- -: WBS elements: Primary/secondary order costs

Statistical Key Figure Planning

- - WBS elements: Statistical key figures, standard --C WBS elements: Statistical key figures, central
- -C Networks: Statistical key figures - -C Networks: Statistical key figures
- -CC Networks:Statistical key figures, central

Activity-Based Costing

Cost Planning/Activity Input Planning

- -P Processes: Primary/secondary order costs, processes
- -P Processes: Activity-dependent/-independent process inputs
- -D Processes: Cost elements
- -D Processes: Activity inputs
- -DP Processes: Process inputs

Quantities and Prices

- E Processes: Quantity planning/price planning
- E Processes: Tax codes

Statistical Key Figure Planning

- -F Processes: Statistical key figures, standard - -FC Processes: Statistical key figures, central

Manual Actual Prices

- -Q Processes: Manual actual prices, business processes

Cost Object Accounting

Cost/Activity Input Planning

- -G Cost object: Primary costs
- -G Cost object: Activity inputs, standard
- -GP Cost object: Process inputs

Statistical Key Figure Planning

- -I Cost objects: Statistical key figures, standard
- -IC Cost objects: Statistical key figures, central

Real Estate

Cost element allocation/activity allocation

- -J- Business entity: Cost elements, standard
- -J- Buildings: Cost elements, standard
- -J- Property: Cost elements, standard
- -J- Rental unit: Cost elements, standard
- -J- Rental agreement: Cost elements, standard
- -J- Management contract: Cost elements, standard
- -J- Business entity: Activity inputs, standard
- -J- Buildings: Activity inputs, standard
- -J- Property: Activity inputs, standard
- -J- Rental unit: Activity inputs, standard
- -J- Rental agreement: Activity inputs, standard
- -J- Management contract: Activity inputs, standard

Note

You **cannot** change standard planning layouts.

The names of these standard planning layouts begin with a numeral.

Standard settings

The standard R/ System stores planning layouts in client only. To use the layouts, they must be transported from client to the production client.

Activities

- . Check which planning layouts you require .
Choose the corresponding layouts in the list
- . Import the layouts either:
 - a) Online, with *Execute or*
 - b) In background, with *Execute in background*.

Note

If possible, you should use background jobs and import during times of low system usage.

Define User-Defined Planner Profiles

Use

You use planner profiles to control the way planning is carried out. In a planner profile, you specify per planning area which planning layout is to be used with which default values. Per planning area, you can create as many planning layouts as you require. The profile item determines the order of the planning layouts within a planning area and can be used to assign the same planning layout to a planner profile in multiple areas, but with a different default setting each time.

Planner profiles are hierarchically structured as follows:

- Planner Profile
- General Controlling
- Layouts Controlling
- Default Parameters
- Planner Profile
You can assign an authorization group to every standard profile and every planner profile that you create in the *Profile planning overview*.

The combination of authorization groups and locked default settings (see *Default layout*) results in highly detailed authorization assignments for entering planning data. All the planner profiles in the system are defaulted. This is regardless of the component in which you wish to call up planner profile processing. This enables you to define allowed entries of planner profiles from other components, for each component chosen.

- General Controlling

For each planner profile, the system recommends different planning areas, depending on the application component. You can create additional planning areas.

In *CuDK* you can enter a default value for a distribution key for currency amounts.

In *QtDK* you can enter a default value for a distribution key for quantities. The system uses these default values for combinations that have not yet been planned, even if you have not selected a distribution key in the definition of the planning layout.

- Layout Controlling

In each planning area, you determine which planning layouts appear in which sequence. For each planning area, you must define at least one profile item and assign a planning layout.

The *Deflt* indicator shows whether settings already exist (see: *Default settings layout*). If you deactivate the *Over*. (=Default settings not protected) indicator, the user must use the entries given in planning and may use only the defaulted variables. If the indicator is active, the entries are default values which can be overwritten when entering planning. The *Excel integration* indicator gives you the option of entering planning data in an Excel worksheet. If the indicator is active, you can use Excel to make your entries. The file description influences the layout of the worksheet. If you move the planning data (that you entered in the system) within the worksheet, the file description creates the link between the old data and the new location.

You can also find further information on preparation for planning with Excel in the *SAP Library* under *Financials -> CO Controlling -> Cost Center Accounting -> Cost Center Planning -> Manual Planning -> Techniques for Supporting Manual Planning -> Integrated Excel in Planning*.

- Default parameters

You can enter default parameters for the selection of planning data of each item in the assigned planning layout.

All variables defined in a layout are referenced during planning as parameters, which you can set with values per profile item.

If you undertake decentralized planning in your organization, the planner profiles assist the organizational aspects of the planning process. You can assign particular user groups to profiles in which objects have already been preset and precisely delimited.

Example

You set general selection criteria (fiscal year, version, periods and transaction currency) in your planning layout PRIMARY.

From an organizational perspective, it was decided that the cost center managers decentrally plan the material expenses first, followed by the personnel expenses.

- In the *Planning profile overview* create the planning profile "PLAN".
- Choose the planning profile "PLAN" and *CO General Settings*.
- Choose the planning area "Cost centers: Cost elements/acty inputs" and *Layouts CO general*.
- Enter the planning layout "PRIMARY" with both item number and item number .
- Choose the item "" and *Default parameters* and enter the cost element group for material expenses.
- Choose the item "" and *Default parameters* and enter the cost element group for personnel expenses.

Also assign the cost center managers in the user parameters to planner profile PLAN via the parameter ID "PPP". To do so, choose *System -> User profile -> User parameters*.

When the cost center manager calls up planning by choosing "Planning -> CElems/Actvty input -> Change", the system suggests profile PLAN and branches to planning layout PRIMARY with the plan costs for material expenses. The cost center manager can now enter the plan data and, after it is saved, can go to other planning by choosing *Next layout*.

Requirements

To create entire planner profiles, the planning layouts used must be available. Complete the IMG activity Create Planning Layout.

Standard settings

The standard system includes several defined planner profiles. The names of the profiles begin with SAP. These are protected, meaning you cannot create custom profiles beginning with "SAP".

Note

Note that as of Release A, the planner profile SAP, SAP, SAP, and SAP and the planning layouts - to - contained in these profiles are no longer maintained by SAP.

Activities

To assign planner profiles to authorization groups, create the necessary groups in the IMG activity *Create Custom Authorization Groups*. You can use the authorization groups to control which users have access to which planner profiles. Assign authorizations with the authorization object "CO: Planner Profiles" (K_TKA).

To create planner profiles, proceed as follows

1. CO Planner Profile Overview
 - a) To create a new planner profile, choose *New entries*.
To copy an existing profile, select a reference and choose *Edit -> Copy as*.
 - b) Enter a name and explanatory short text for the object.
 - c) If necessary, assign an authorization group to the planner profile.
2. General Controlling
 - a) Select the suggested planning area for which you want to make settings and choose *Settings for General Controlling*.
 - b) To create a new planning area, choose *New entries*.
3. Layouts for Controlling
 - a) Select a planning area for which you want to make settings and choose *Layouts for General Controlling*.
 - b) Choose *New entries* and enter an item and previously defined layout.
 - c) Activate the indicator *Default settings not protected* if users may overwrite the defaulted variables.
 - d) Activate *Excel integration* if you want to enter your planning data in an excel worksheet.
 - e) Enter a name for the file description.
If you do not enter a name, the system automatically assigns a name when you save the file.
 - f) Save your entries and return to the layout overview screen.
4. Layout Default Settings
 - a) Select a planning area for which you want to make settings and choose *Layout Controlling*.
 - b) Set the parameters of the defined variables per profile item for the planning layout.
Notes
To define the excel worksheet, at least one row must exist on the screen. For this reason, you need to enter example data as dummy data in the SAP System using the planning layout.
To be able to plan directly using the corresponding planning layout, you may need to reset any planner profile that has been set under *Planning -> Set planner profile*.
5. Optional steps:
 - Authorizations
In the IMG activity *Authorization Management*, set authorizations as required for object K_TKA and assign the authorizations to the authorization profiles of the appropriate users.
 - User parameters
Assign parameter ID PPP to the users who are to work with the profile in the user parameters (choose *System -> User profile -> User parameters*).
 - Deleting planner profiles

When you delete a planner profile, the system checks whether the profile is also used in other components. If it is, you first need to delete the dependent entries for the planner profile in all components, before you can delete the planner profile itself.

Note on transport

To transport planner profiles, see the *General Controlling Customizing -> Production Start-Up Preparation -> System Configuration Transport -> Planning Configuration Transport -> Transport Other Planning Configurations*. You can use this function to transport the complete set of planner profiles from a test to a productive client.

Planner profile maintenance is connected to the automatic recording of transport data.

This also includes the settings for integrated Excel. The system includes file descriptions and Excel sheet templates in the transport request, provided you have created them in Customizing.

The system also transports the settings for integrated Excel if you have manually included a planner profile in - or manually deleted a planner profile from - a transport request (you do both by choosing *Table View -> Transport*).

Warning

- When performing the transport, ensure that you have not manually created any *integrated Excel* settings in the target system.
Only supply the target system by means of transports, otherwise inconsistencies could arise. When importing the Excel sheet templates from the source system, the system does **not** overwrite the settings already made in the target system.
- If, however, planner profiles with corresponding Excel sheet templates already exist in the target system, you have to delete them before performing any imports. In planner profile maintenance, you can delete these Excel sheet templates for specific planner profiles or profile items.

Further notes

You can find more information on planner profiles in the *SAP Library* under *Financials -> CO Controlling -> Cost Center Accounting -> Cost Center Planning -> Manual Planning -> Planning Techniques -> Planning Screen Layout -> Planner Profiles*.

Example

Requirements Standard settings

Recommendation

Activities

Further notes

Actual Postings

Assign Measurement Types to Statistical Key Figures

Use

To use measurement types in Controlling (CO) as statistical key figures, you can use a function to automatically transfer measurement types to statistical key figures.

Here you define which measurement types you want to change into which statistical key figures.

Activities

- For each statistical key figure that you want to derive from measurement values, specify for which object type this should be valid. You can choose the following object types (= target object type) for this:
- Business entity
- Building - Property - Settlement unit

- Specify from which level the measurement types should come (= source object type). This can either be the same object type as the target object type (if the measurement values are defined on the same object) or a hierarchically lower level. Therefore, it is possible to determine the statistical key figure *AREA* of a business entity from measurement type *A* of the rental objects. If there is no entry in the field on the source object, then the system uses the target object type to determine the measurement values. You can also use total measurement types.

Example

You want to transfer the measurement *residential space* for business entities to a statistical key figure. For the measurement amount, you want to use the residential space of rental objects subordinate to a business entity.

To achieve this, you specify the following:

Target object type: Business entity
Source object type: Rental object

CO Settlement

Edit Settlement Structure

During settlement, costs incurred under the primary and secondary cost elements by a sender are allocated to one or more receivers. When you settle by cost element, you settle using the appropriate original cost element.

An allocation structure comprises one or several settlement assignments. An assignment shows which costs (origin: cost element groups from debit cost elements) are to be settled to which receiver type (for example, cost center, order, and so on).

You have two alternatives in settlement assignment:

- You assign the debit cost element groups to a settlement cost element.
- You settle by cost element - that is, the debit cost element is the settlement cost element. This is a good idea, for example, if the required capital spending for an asset you are building yourself is to be monitored. These costs are settled by cost element to an inventory account in Asset Accounting at the end of the year, or when the measure is complete.

Each allocation structure must fulfil the following criteria:

- **Completeness**
An allocation structure is assigned to each object to be settled. All cost elements in which costs are incurred, must be represented in the appropriate allocation structure.
- **Uniqueness**
Each cost element in which costs are incurred may only appear once in an allocation structure. Only one settlement cost element may be assigned to a source within a particular allocation structure.

If you require additional debit- or settlement cost elements, you can create these using the function Maintain Settlement Cost Elements.

Note

When you settle to materials you do not need to create settlement cost elements.

Activities

You create an allocation structure as follows:

1. Choose **New entries** and issue identification code and a description for your allocation structure.
2. Choose **Assignments** to create a settlement assignment.
3. Choose **New entries** and create one or more settlement assignments for your settlement structure.
4. Highlight the settlement assignment required and choose **source**.
Specify the cost elements or the cost element group that are to be settled to particular senders using the same settlement cost element.
If you specify cost element groups assigned to your controlling area, but not yet in the account plan, you can use this opportunity to create them.
5. By choosing **settlement cost element** you have two alternatives:
 - You assign an account assignment category to the source by receiver category.
 - Choose "By cost element" for the receiver categories that you wish to settle by cost element (debit cost element = settlement cost element).
To improve performance, use as few differing settlement cost elements as possible. You should try to use settlement by cost element as sparingly as possible.

To obtain a hierarchy listing of an allocation structure from the system, choose "Extras -> Overview list" in the allocation structures overview.

Edit Source Structure

In this IMG activity, you define the source structures used when settling and costing joint products.

A source structure contains several source assignments, each of which contains the individual cost elements or cost element intervals to be settled using the same distribution rules.

In the settlement rule for the sender you can define one distribution rule, in which you specify the distribution and receivers for the costs for each source assignment.

Example

The object in question has incurred both direct and overhead costs. The direct costs are to be divided % each between a fixed asset and a cost center, while the overhead is to be settled in full to an administration cost center in CO.

To do this, you would create a source structure with two source assignments:

1. Direct cost elements
2. Overhead cost elements

Activities

Check whether you need to use source structures in your settlement procedures. If you are settling to cost elements, you do not need a source structure. Otherwise, create a source structure as follows:

1. Choose **New entries**, then enter a key and an explanatory text.
2. Choose **assignments**.
3. Choose **source data** and if requested, set the controlling area.
4. Choose **New entries** and store individual cost elements, cost element intervals or cost element groups. Save your entries.

Edit PA Transfer Structure

In the PA transfer structure, you determine which cost element groups are assigned to which value fields in Profitability Analysis (CO-PA). You make these assignments within so-called "assignment lines".

Settlement lets you transfer costs, revenues, sales deductions and production variances to costing-based Profitability Analysis. The PA transfer structure defines which quantities or values of a sender are to be transferred to which value fields in CO-PA as part of settlement. For example, in the case of a marketing order, you can assign the cost element group "Personnel costs" to value field VTRGK (= Sales overhead).

Assigning to Value Fields

You assign value fields in a PA transfer structure in the individual assignment lines. Values and quantities must be transferred to different value fields. Values can be assigned separately according to the fixed and variable portions (fixed/variable indicator "" and "", respectively) or in total (fixed/variable indicator "").

You can assign the **fixed and variable** costs that are incurred by a cost element group to different value fields.

PA tran. structure	Assignment line	Qty/ value	Fixed/ var.	Value field
GK	Personnel costs			VTRGK
GK	Material costs			VTRGK
GK	Other costs			VTRGK
KD	Personnel costs			FERTF
KD	Personnel costs			FERTP
KD	Material costs			ROHST
KD	Revenues			ERLOS
FA	Material price var.			ABWRP

Uniqueness and completeness of assignment

For settlement to Profitability Analysis to proceed smoothly, the assignments you enter must be unique and complete:

A cost element group or cost element group/variance category combination can be assigned only **once** to a PA transfer structure and will thus only appear once in the structure. You may not assign a cost element group or cost element group variance category to more than one field in the operating concern. However, you can assign the fixed and variable costs which have been incurred under one cost element group to different value fields. (The following example is for PA transfer structure "OH" (Overhead).

<u>Assignment line</u>	<u>Origin</u>	<u>Group</u>	<u>Value field</u>
Personnel costs	COSTELEM	BAB-PERS	VTRPS
Material costs	COSTELEM	BAB-MATE	VTRGK
Other costs	COSTELEM	BAB-SONST	VTRGK

The PA transfer structure must be complete, meaning it must contain all cost elements under which revenues and costs have been incurred.

Settling of senders with revenues

When you settle senders with revenues, you can settle the following to profitability segments:

- Costs
You can settle costs that have been incurred by primary and secondary cost elements.
- Revenues, Sales deductions
You settle the revenues and sales deductions that have been incurred.
- Results analysis data
You settle the results analysis data that has been calculated under the results analysis cost elements (cost of sales, reserves for imminent losses).

Assignment of actual costs, actual revenues, and actual sales deductions to the value fields in CO-PA is made via the cost elements or revenue elements that were originally posted to the sender.

You use the results analysis cost elements to assign the results analysis data. This data is recorded in the order or project via these cost elements:

Example: PA transfer structure "CD" (Cardinality)

<u>Assignment line</u>	<u>Origin</u>	<u>Group</u>	<u>Value field</u>
Personnel costs	COSTELEM	BAB-KDUPE	FERTF
Material costs	COSTELEM	BAB-KDUMA	ROHST
Other costs	COSTELEM	BAB-KDUSO	SONST
Revenues	COSTELEM	BAB-ERLO	ERLOS
Discounts	COSTELEM	BAB-ERLS	RABAT
IL reserves	COSTELEM	BAB-RUEDV	RUEDV

Settlement of Production Orders (CO,PP)

You can settle the variances that have occurred for a cost element or cost element group (differences between planned costs and actual costs) to CO-PA separately. To do this, you need to specify a variance category for the cost element or cost element group (see cost element group BAB-ROH in the example below). If you do not specify a variance category, all the variances occurring under the cost element/cost

element group are settled to the value field assigned to the cost element group (in the example, cost element group BAB-HILF).

The system distinguishes between the following variance categories:

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

Note that, in particular, the settlement of Production variances provides you with useful analysis possibilities in CO-PA.

Example: PA settlement structure "PO" (Production Order)

		<u>Assignment line</u>	<u>Origin</u>	<u>Group</u>	<u>Value field</u>
	PricevarRaw	COSTELEM	BAB-ROH		ABWRP
		VAR:CATEG.	PRICE		
QtyVarRaw	COSTELEM	BAB-ROH	ABWRM		
		VAR:CATEG.	QUANT		
ResVarRaw	COSTELEM	BAB-ROH	ABWRS		
		VAR:CATEG.	REST		
VarAux.mat.	COSTELEM	BAB-HILF	ABWHS		
VarProdCost.	COSTELEM	BAB-FERT	ABWFK		
VarMiscCost.	COSTELEM	BAB-SONST	ABWSO		

Requirements

- First create the operating concern to which you want to settle, and then create its value fields.

- Either the revenue elements or cost elements you want to use must be combined in cost element groups or you have already used the Cost Center Accounting IMG activity Create Cost Element Groups.

Activities

1. Use **New entries** to enter a short ID and a name for your PA transfer structure, then save your entries and goto the overview screen for the PA transfer structure.
2. Use **Detail** to create assignment lines.
3. Use **New entries** to create one or more assignment lines.
If you want to copy the invoiced quantity when settling from customer orders or projects, set the indicator "Invoiced quantity".
Save your entries and go to the overview screen for changing the assignment lines.
4. Use **Assign origin** to create a cost element group for your operating concern or **New entries** for the assignment line under which the costs or revenues can be posted to the sender (if necessary, with a variance category). To do this, you can
 - Use the F key, as origin "COST ELEMENT" or "VARIANCE CATEGORY" or
 - Under "Setname" select an existing cost element group or variance category. Choose a cost element group defined in the chart of accounts and which is assigned to the controlling area for the sender object.
For each assignment line in a cost element group you can assign only one variance category.
Save your entries and goto the overview screen for changing the PA transfer structure.
5. Define the value field assignment you want to use when settling orders and projects in the operating concern.
Assign the value fields.

Further notes

For more information on determining variances, refer to the "Cost Object Accounting" documentation and the IMG under "Product Cost Accounting".

Edit Settlement Profile

In the settlement profile, you define a range of control parameters for settlement. You must define the settlement profile before you can enter a settlement rule for a sender.

If you want to settle the costs each time to just one cost center or just one G/L account, you need a settlement profile. As you cannot maintain the settlement parameters during settlement to a receiver, you must save the settlement profile either in the order type or in the model order or reference order.

Recommendation

The settlement profile includes, among other things, the retention period for the settlement documents. You should bear in mind the following when you determine the retention period.

The settlement documents take up additional storage capacity. When a posting period is finally locked against further postings in Financial Accounting and Controlling, you can clear the settlement documents. However, you should build in a safety margin, as you will need the settlement documents if you have to cancel any settlements or repeat the period end close.

Activities

1. Create a settlement profile.
2. Save the profile in the order type.

Additional Information

For more information on this subject, go to the SAP Library and choose AC - Financials -> CO - Controlling -> Internal Orders -> CO Settlement.

Default Values for Settlement Profile

Define Default Value for Settlement Profile per Contract Type

Use

Here you can define a settlement profile as a default for contract types. When you create a settlement rule for a contract, the system automatically proposes the settlement profile entered here, dependent on the contract type. You can overwrite this default manually at any time.

Requirements

The settlement profiles used were entered in the Maintain Settlement Profile IMG activity.

Define Default Value for Settlement Profile by Usage Type

Use

Here you can enter a default settlement profile for usage types. When you create a settlement rule for a rental object, then the profile entered here is proposed as a default, dependent on the usage type. You can overwrite this default at any time by making a manual entry.

Requirements

The settlement profiles you want to use have to already be created in the Maintain Settlement Profile IMG activity.

Define Default Settlement Profile per Object Type

Use

Here you can define a settlement profile as a default for object types. When you create a settlement rule for a business entity, building or property the system automatically proposes the settlement profile entered here, dependent on the usage type. You can overwrite this default manually at any time.

Requirements

The settlement profiles used were entered in the Maintain Settlement Profile IMG activity.

Apportionment

Create Actual Apportionment

In the IMG activity "Define Assessment" you set rules in the form of cycles to allocate primary and secondary costs in the actual.

Requirements

You must already have completed the IMG activity Create Assessment Cost Elements.

If you are using an allocation structure, you must have completed the IMG activity Define Allocation Structure.

Recommendation

When using assessment, distribution, and periodic reposting, note the following:

- You can use assessment if the origin of the primary costs is not important. If required, you can use multiple assessment cost elements for differentiation.
- Periodic reposting is recommended if the origin of primary costs is important, but the partner object does not need to be displayed directly. The partner information, however, is not lost. Proof of origin is always possible via the line item document.

- If you do need to show the partner object directly in the report, you must use distribution. The data volume will grow significantly for the proof of the partner objects, particularly in large distributions.

Note that the data volume generated for past periods will grow with increased numbers of periods. Especially in reporting and for data backups, it is important to keep the data volume generated by allocation to a minimum. For this reason, assessment or periodic reposting are to be recommended.

For performance reasons, you should not use more than segments in one cycle. If necessary, define multiple cycles. A larger number of segments per cycle is only necessary for extensive iterations.

Also: For performance reasons, never use more than , relationships in an allocation cycle. If you require more than that, you must plan a mass test of the allocations beforehand.

Example

From a sender cost center with sender cost elements, allocations are made with one segment to receiver cost centers.

The following numbers of sender and receiver totals records result from the different allocations that must be written in the processed period:

<u>Allocation</u>	<u>Sender totals recds</u>	<u>Receiver totals recds</u>
Assessment		
Periodic reposting	x	
Distribution	x	x

This simple example already demonstrates that

- far more sender totals records are written for distribution than for periodic reposting
- far more receiver totals records are written for periodic reposting than for assessment

In practice, because of the far higher number of senders and receivers, the advantages of assessment and periodic posting are even more apparent.

Activities

Create an actual assessment cycle as follows:

1. Enter a name for the cycle
2. Enter a validity timeframe for the cycle
3. Maintain the header data for the cycle by entering the following:
 - a) In which currencies the costs should be allocated

- b) Whether the cycle is to be processed iteratively and/or cumulatively.
4. Create segments for the cycle that contain the following information:
 - a) The cost element to be assessed or the cost element of the sender allocation structure
5. Criteria for the distribution of costs among the receivers
 - a) Whether negative tracing factors are to be scaled
 - b) Criteria for determining the sender values
 - c) The sender objects and the receiver objects
 - d) The selection criteria for the receiver tracing factors
 - e) The selection criteria for the sender values
 - f) Receiver weighting factors for receiver rule (variable portions):
6. Save the cycle.

Notes for Transport

If, in your client, you have not selected the automatic recording of changes for client-specific objects (in Customizing under *Basis Components -> System Administration -> Change and Transport System -> Configure Clients*), you can transport your settings to the target system in a user-defined activity.

To do this, in Customizing, choose *Controlling -> General Controlling -> Production Start-Up Preparation -> Transport System Settings* and then process the relevant activity.

Additional information

Notes for working with a delta version

Please note the following during cycle definition:

If you select a delta version, the following **additional** allocation characteristics are available for segment definition:

- Business processes and/or groups
 - External value added
 - Internal value added
 - Type
- The receiver objects "order" and "WBS element" become invalid.

For more information on defining an assessment, see the SAP Library under *Financials -> CO Controlling -> Cost Center Accounting -> Period-End Closing -> Periodic Allocations or Periodic Repostings*.

Change Actual Apportionment

Use

Here you can edit existing actual apportionment cycles.

For more information, refer to Create Actual Apportionment.

Distribution

Create Distribution

In this activity, you define distributions in the form of cycles by specifying rules for the settlement of primary costs on a cost center.

Recommendation

Check whether distribution can be replaced here by periodic reposting or assessment in order to achieve better system performance.

- You can use assessment if the origin of the primary costs is not important. If required, you can use multiple assessment cost elements for differentiation.
- Periodic reposting is recommended if the origin of primary costs is important, but the partner object does not need to be displayed directly. The partner information, however, is not lost. Proof of origin is always possible via the line item document.
- If you do need to show the partner object directly in the report, you must use distribution. The data volume will grow significantly for the proof of the partner objects, particularly in large distributions.

Note that the data volume generated for past periods will grow with increased numbers of periods. Especially in reporting and for data backups, it is important to keep the data volume generated by allocation to a minimum. For this reason, assessment or periodic reposting are to be recommended.

For performance reasons, you should not use more than segments in one cycle. If necessary, define multiple cycles. A larger number of segments per cycle is only necessary for extensive iterations.

Also: For performance reasons, never use more than , relationships in an allocation cycle. If you require more than that, you must plan a mass test of the allocations beforehand.

Example

From a sender cost center with sender cost elements, allocations are made with one segment to receiver cost centers.

The following numbers of sender and receiver totals records result from the different allocations that must be written in the processed period:

<u>Allocation</u>	<u>Sender totals recds</u>	<u>Receiver totals recds</u>
Assessment		
Periodic reposting	x	
Distribution	x	x

This simple example already demonstrates that

- far more sender totals records are written for distribution than for periodic reposting
- far more receiver totals records are written for periodic reposting than for assessment

In practice, because of the far higher number of senders and receivers, the advantages of assessment and periodic posting are even more apparent.

Activities

Create a plan distribution cycle by proceeding as follows:

1. Determine a name for the cycle.
2. Determine a validity period for the cycle.
3. Maintain the header data for the cycle by entering the following.
 - a) Which currencies are to be used in the allocations
 - b) Whether consumption is to be allocated or not
 - c) Whether negative tracing factors are scaled or not
 - d) Whether cycle processing is to be iterative
 - e) In which version the allocation is to take place
4. Define cycle segments in which you store the following information.
 - a) Sender cost element to be distributed
 - b) Criteria for cost distribution to the receiver
 - c) Sender objects
 - d) Receiver objects

5. Save the cycle.

Notes for Transport

If, in your client, you have not selected the automatic recording of changes for client-specific objects (in Customizing under *Basis Components -> System Administration -> Change and Transport System -> Configure Clients*), you can transport your settings to the target system in a user-defined activity.

To do this, in Customizing, choose *Controlling -> General Controlling -> Production Start-Up Preparation -> Transport System Settings* and then process the relevant activity.

Further notes

Distribution

During distribution, the following information remains:

- Original primary cost element.
- Information on the sender cost center is noted in the receiver cost center or receiver order.
- Information on the receiver cost center or order is noted in the sender cost center.

For more information, see the "SAP Library" under *Financials -> CO Controlling -> Cost Center Accounting -> Period-End Closing -> Defining Periodic Repostings or Periodic Allocations*.

Change Distribution

Use

Here you can edit existing actual distribution cycles.

For more information, refer to Create Distribution.

Periodic Reposting

Create Periodic Reposting

Periodic reposting reduces the number of postings in Financial Accounting for document entry.

The assignment of costs to cost centers in line with the source of these costs occurs in Controlling. The complete amount is first assigned to an allocation cost center (such as telephone costs).

Periodic reposting		x
Distribution	x	x

This simple example already demonstrates that

- far more sender totals records are written for distribution than for periodic reposting
- far more receiver totals records are written for periodic reposting than for assessment

In practice, because of the far higher number of senders and receivers, the advantages of assessment and periodic posting are even more apparent.

Activities

Create a cycle for periodic reposting by proceeding as follows:

1. Enter a name for the cycle.
2. Enter a validity period for the cycle.
3. Maintain the header data for the cycle by determining the following:
 - a) Which currencies are used for allocation
 - b) Whether consumption is to be allocated
 - c) Whether negative tracing factors are scaled or not
 - d) Whether cycle processing takes place iteratively
 - e) The version from which plan data is to be taken
4. Define the cycle segments, where the following information is stored:
 - a) The sender cost element to be reposted
 - b) The criteria for distributing the costs onto the receiver
 - c) The sender objects
 - d) The receiver objects
5. Save the cycle.

Notes for Transport

If, in your client, you have not selected the automatic recording of changes for client-specific objects (in Customizing under *Basis Components -> System Administration -> Change and Transport System -> Configure Clients*), you can transport your settings to the target system in a user-defined activity.

To do this, in Customizing, choose *Controlling -> General Controlling -> Production Start-Up Preparation -> Transport System Settings* and then process the relevant activity.

Further notes

Periodic reposting

Periodic reposting is a cost controlling aid equivalent to manually- posted cost transfer. Periodic reposting can be used for plan or actual postings.

- To simplify cost center planning, you can enter plan values for one center and repost them to other CO objects.
- For actual postings, you can enter controlling-relevant postings in Financial Accounting which the system collects on an allocation cost center, which minimizes account assignments during document entry. At the end of a period, you can repost the collected costs to other CO objects.

Reposting uses keys (fixed values or calculated tracing factors) for allocation to the corresponding receiver objects (cost centers, internal orders, and so on).

The original primary cost element remains intact in periodic reposting. The line items do not receive updated information about senders and receivers.

For more information on periodic reposting, see the SAP Library under *Financials -> CO Controlling -> Cost Center Accounting -> Period-End Closing -> Periodic Allocations -> Defining Periodic Repostings or Periodic Allocations*.

Change Periodic Reposting

Use

Here you can edit existing cycles for periodic reposting.

For more information, refer to Create Periodic Reposting.

Indirect Activity Allocation

Create Indirect Activity Allocation You determine rules for indirect activity allocation in the form of cycles.

For cost centers with activities that cannot be measured or measured only with great difficulty, the activity quantities can be determined indirectly.

In indirect activity allocation, the usage of sender activities (cost center/activity type) is determined via tracing factors from the viewpoint of the activity receivers.

The tracing factors are defined as in assessment or distribution.

Requirements

- You must maintain activity types for indirect allocation in actual and plan.
- The requirement for indirect activity allocation in actual and planning data is that all senders and all receivers of the cost object cost center/activity type are included in activity type planning for activity type category .
- You enter activity quantities for activity type category ("Manual entry, automatic allocation") for **planning data** with activity type planning.

Note:

Planning activity quantities with the aid of activity type planning is only possible for activity type category . For activity type category the SAP system automatically creates a cost center/activity type record. Sender activity quantities are indirectly determined from the receiver tracing factors and through fixed quantities.

- For **actual data**, a posted sender activity quantity can be created by entering non-allocatable activities.

Note:

Entering posted activity quantities for activity type category is not possible, since the activity quantities are indirectly determined.

- The requirement for indirect activity allocation in actual and planning data for activity type category is that a value NOT equal to zero is entered in the segment definition for the sender-specific weighting factors with the function *Sender values*. Only then will the corresponding record be included in the activity allocation. Examples for Indirect Activity Allocation

- *Activity types of category , "Manual entry, indirect allocation"*

The cost center "Quality control" produces hours of activity type "Test". Activities go to cost centers "Goods receipt" and "Finished products". The allocation is made on the basis of the tracing factor "Number of test items" (NI). For "Goods receipt" these are items, for "Finished products" . Price per activity unit for "Quality control" equals USD/hr. The resulting costs of activity production equal USD ,.

The receiver centers are debited **according to the tracing factor** with the following costs:

Goods receipt: $(, X NI) / , NI = \$,$

Finished products: $(, X NI) / , NI = \$,$

- *Activity types of category, "Indirect entry, indirect allocation"*

Activity determination for the sender takes place via receiver tracing factors and weighting factors defined for each sender. The sender rule here is usually "Indirectly determined quantities"; receiver rule can be any rule.

Using the example above, the receiver tracing factors are:

"Goods receipt" NI
 "Finished products" NI
 Total , NI

The sender is credited with , test items. This amount can be valued with weighting factors defined per sender activity type. Weighting factor, activity type "Test":

Debiting of the sender and the activity type "Test" are thus equal to

(, / , NI) X , NI X , = \$,

Activities

Create a cycle for indirect activity allocation as follows:

1. Determine a name for the cycle.
2. Determine a date as of which the cycle is to be valid.
3. Maintain the header data of the cycle by specifying the following:
 - a) an explanatory text
 - b) the date to which the cycle is to be valid
 - c) whether negative tracing factors are to be standardized
4. Define cycle segments in which you store the following information:
 - a) a name and text for each segment
 - b) the sender values
 - c) the tracing factor
 - d) the selection criteria (sender objects and receiver objects)
5. Save the cycle.

Notes for Transport

If, in your client, you have not selected the automatic recording of changes for client-specific objects (in Customizing under *Basis Components -> System Administration -> Change and Transport System -> Configure Clients*), you can transport your settings to the target system in a user-defined activity.

To do this, in Customizing, choose *Controlling -> General Controlling -> Production Start-Up Preparation -> Transport System Settings* and then process the relevant activity.

Further notes

For more information, see the *SAP Library* under *Financials -> CO Controlling -> Cost Center Accounting -> Cost Center Planning -> Periodic Allocations -> Indirect Activity Allocation* or in *Period-End Closing -> Defining Periodic Repostings or Periodic Allocations*.

Conceptional Information for Indirect Activity Allocation

Indirect activity allocation consists of two subfunctions which you can enter as required in a cycle. However, one segment can cover only one subfunction in each case:

1. Sender activity quantities are known and can be entered as totals. Using indirect activity allocation, the posted activity quantities are distributed from senders to receivers according to the tracing factors defined in the segment.
A segment uses this method if *Posted quantities* (rule) is the sender rule and *Fixed quantities* (rule) is NOT a receiver rule.

In a segment to distribute posted sender amounts, you can use activity types of category *manual entry, indirect allocation* only.

2. Sender activity quantities are not known because measurement is either impossible or not feasible (for example, a joint office working for several cost centers). However, the SAP system can derive sender activity quantities indirectly, based on receiver tracing factors adjusted with a sender-specific weighting factor.
A segment uses this method if *Indirectly determined quantities* (rule) is the sender rule, or if *Fixed quantities* (rule) is a sender or receiver rule. Using the *Sender values* function, you can determine sender-specific weighting factors for the sender rule *Indirectly determined quantities*. The default value is "".
In segments for indirect calculation of sender activity quantities you can only use activity types of category *indirect entry, indirect allocation*.

Senders and receivers in indirect activity allocation

- In indirect activity allocation for actual and plan data, **senders** can be objects of the category *cost center/activity type* or **business processes**.
In a given segment, you can use category or category activity types only.
- In indirect activity allocation for **plan data**, all usual CO objects are possible (cost center, cost center/activity type, orders, projects, etc.) as **receivers**
All of these receiver categories can appear in a cycle. However, cost objects of the category cost center/activity type may not be combined with other receiver categories.

In indirect activity allocation for **actual data**, you can use the same cost objects as receivers as in manual activity allocation, meaning **no** cost centers/activity types.

Fixed and variable activity references; evaluating activity quantities

- In indirect activity allocation for **actual data**, all quantities are posted as total quantities. The division into fixed and variable quantity parts is carried out through actual cost splitting.

- In indirect activity allocation for **plan data**, the determination of fixed and variable quantity quotas depends on the receiver category:
- Receivers of the category cost center/activity type post all activity quantities as variable quantities, with tracing factors dividing actual and plan activity into fixed and variable quantity parts.
- For all other receivers the receiver quantities are posted as fixed.
- If an activity price is available for a sender object, the activity quantities of the sender and the corresponding receivers are valued using this activity price.

Updating the databases

The activity quantity updated on the senders is determined either from read/posted sender quantities (subfunction) or from indirectly calculated activity quantities based on receiver tracing factors or predefined sender quantities/receiver quantities (subfunction). The activity quantity thus determined is posted to the respective sender as activity output (quantity credit) and to the respective receiver as activity-dependent or activity-independent activity input in relation to their tracing factors (quantity debit). The indefinite credit rate is updated for plan data as well (with activity type category).

Additionally, the following activity postings are based on the sender activity quantities:

If available quantities are distributed (subfunction), the scheduled quantity are updated. If the sender activity quantities are indirectly determined or fixed, the activity quantity is also updated in addition to the scheduled quantity.

In actual indirect activity allocation, all quantities are treated as fixed quantities.

You use indirect activity allocation in activity price calculation.

Change Indirect Activity Allocation

Use

Here you can process existing cycles for indirect activity allocation.

For more information, see Create Indirect Activity Allocation.

Option Rate Determination and Input Tax Distribution

Option Rate Determination

Option rate

The option rate of an object specifies the percentage of input tax, which was originally posted as fully deductible for this object, that is really deductible.

The option rate is determined monthly based on the option rate method that is specified for this object at the time of the calculation. The option rate method either specifies a fixed option rate, or it triggers an automatic calculation.

For rental contracts, only fixed option rates can be used.

The option rates of rental objects depend on the option rate of the occupancy contract on the key date of the option rate determination. If the object is occupied by a contract that has an option rate of %, then the option rate of the rental object is also %. In the case of vacancy, the option rate is determined by the option rate of the rental object or of the follow-on contract.

In the case of automatic determination of the option rate of a superordinate object, the option rate corresponds to the proportion of the object that is leased commercially. This proportion can be based, for example, on the ratio of area or volume (ratio of commercial space to non-commercial space). The option rate is then % if the object is used completely for commercial purposes, that is, when all rental objects of the object have an option rate of %. Other values result from the option rates of the affected rental objects, weighted by the ratio of area or volume.

Requirements

The prerequisite for input tax distribution is that opting is set to active in the company code. For company codes in which the indicator is not set, the system can determine and save the option rates using the option rate methods entered, but it is not able to distribute input tax.

Option Rate Methods

Use

In this step, you can specify how an option record is specified or calculated for an object.

You can specify option rate methods for the following objects:

- Business entity -
- Property -
- Building -
- Rental object -
- Occupancy contract -
- Non-occupancy contract - (such as a maintenance service contract)
- Settlement unit -

Activities

Here you specify how the option rate for this method should be determined. For each option rate method, specify if the option rate should be

1. Predfined
2. Freely defined
3. Automatic

In regard to : The option rate method specifies the option rate for this object directly.

In regard to : You can also set up the option rate you want in master data maintenance for the object. It is also possible to make the option rate and the option rate method time-dependent, and use different ones at different times.

In regard to : The option record is specified using an automatic procedure during the option rate determination run. If you enter a measurement type for the *Automatic* setting, then during the option rate determination run, the system searches for all subordinate rental objects belonging to the object, for which the option rate is to be determined. The measurement type you entered here has to be specified on these rental objects. @S@ Choose a measurement type that is derived, or a mandatory measurement for rental objects.

To determine the option rate of the superordinate object, the system determines the option rates of the rental object (or of the contract containing the rental object or of the renewal contract) and multiplies them with the measurement of the measurement type specified. The option rate is the ratio of the total of these products to the overall measurement of all rental objects of the superordinate object.

In the *Permitted for Object Types* group box, you specify the objects for which an object method can be used:

- (Superordinate) Objects
- Non-Occupancy Contracts
- Settlement Units

- Rental Objects
- Occupancy Contracts

For rental objects and occupancy contracts, keep in mind that option rate methods here only make sense if the option rate is specified independently of the subordinate objects. For determining the option rate of pooled spaces, you can specify a separate option rate method.

In order to have the system propose an option rate method when you create a business entity, you have to designate just one allowed method as the default method. Buildings and property adopt the option rate method of the business entity as a default value.

You can set up default methods for rental objects and contracts in the Default Option Rate Method for Rental Objects per Usage Type and Default Option Rate Method for Contracts per Contract Type IMG activities.

Example

Business entity with option rate method , automatic per measurement type A:
Residential/Usable Space. It consists of rental objects:

- RO A = m²
- RO A = m²
- RO A = m²

RO has option rate method Y with fixed option rate %. RO and RO have option rate method N with fixed option rate %.

RO and RO are vacant; for RO there is an occupancy contract with option rate method (manual). An option rate of % is specified on the contract.

The option rate of the business entity is calculated using the following formula:

$$\begin{aligned}
 & (\% * + \% * + \% *) / (+ +) \\
 & = (+ +) / \\
 & = \%
 \end{aligned}$$

Default Option Rate Method for Rental Obj. per Usage Type

Use

In this section you can specify separate default methods for the rental object that are dependent on the usage type.

Default Option Rate Method for Contract per Contract Type

Use

In this section you can specify which option rate methods the system should default for a given contract type.

For contract types, for which no tax-relevant postings are made, you can set the No Option Rate Method indicator.

Input Tax Distribution

Use

During input tax distribution, the originally posted input tax is divided into deductible and non-deductible tax shares, using the option rate determined for each object by option rate determination. The non-deductible share is transferred (costs with account assignment to the original object).

Input tax distribution is not only for real estate objects. It can also be used for cost centers, orders, and projects, if the system is set up for it. The cost center, order, or project inherits the option rate from the real estate object they are assigned to.

Activities

Here you specify the objects for which input tax distribution is performed, and which accounts are used for the transfer.

Specify Objects for Which Input Tax Distribution Is Performed

Use

Here you specify, dependent on the company code, whether the system should perform input tax distribution. If it should, you also specify the objects for which the distribution is performed.

You could have already made these settings in the Make Basic Settings in Company Code IMG activity.

The view here is limited only to the fields that are relevant for input tax distribution.

On the left side of the detail screen, you can specify whether multiple assignment is allowed for the given object type. If multiple assignment is allowed, then the input tax distribution may not be able to uniquely determine the object that supplies the option rate. In that case, the user has to explicitly specify the object that supplies the option rate during master data processing.

Normally it is better not to allow multiple assignment.

On the right side of the screen, you specify the objects, for which input tax distribution is performed:

- First specify whether the company code opts to pay input tax. If this indicator is set, then, when a document is posted for one of these objects, the system updates the input tax, and the input tax can then be distributed. This affects the following real estate objects: -
 - Business entity
 - Building
 - Land
 - Rental object
 - Settlement unit
 - Real estate contract

When a document is posted for one of these objects, then the system updates the input tax and the input tax can then be distributed.

For company codes that do *not* opt, the contents of the other fields do *not* have any significance.

- Specify the object types for which you want input tax distribution to be made. If the company code opts, you should select all object types here that are related to real estate. For internal orders, you can distinguish between maintenance orders and other internal orders.
- Using the message type, you can specify whether there always has to be a relationship between the object type and the real estate object, or if the assignment (and thereby the input tax distribution) is optional. For more information, see the message type.

Account Determination for Non-Deductible Input Tax per Cost Element

Use

In this activity, you specify the account to which the non-deductible input tax for an object should be transferred.

The account depends on the cost element to which the original posting was made.

Activities

You can enter the accounts as follows:

1. You enter an explicit cost element for non-deductible input tax for a cost element.

Example:

Original Account	Non-Ded. Input Tax Acct
------------------	-------------------------

2. You specify that a certain fixed account for non-deductible input tax should be used for all accounts, for which an explicit account is not specified. Example:

Original Account	Non-Ded. Input Tax Acct
------------------	-------------------------

<Blank>

3. You specify that non-deductible input tax is posted to the original account for all accounts. In this case, leave the table empty.

Notes:

If you want input tax distribution to be possible only for accounts that you entered here explicitly (see point), then there are not allowed to be **any entries where the original account is blank**.

- During input tax distribution, the system first checks if an explicit non-deductible input tax account is entered for the original account.
- If none is entered, then the system checks if there is an entry where the original account is blank. If an entry is found, then the system posts the input tax distribution to the account entered for non-deductible input tax.
- If there is **no** entry with a blank original account, then the system checks if the table is empty (see point). If the table is empty, then the non-deductible input tax is posted to the original account.
- Otherwise, the document is **not** distributed and the system writes an error message to the log.

Input Tax Distribution with Multilevel Tax Code

Use

Line items with real estate account assignment that are posted with a multi-level tax code are **not** taken into account during input tax distribution. If you nonetheless want the system to take the deductible input tax portion of this posting into account, then you need to specify the multilevel tax code and the distribution here.

Requirements

The multilevel tax code can only have one input tax account key. You assign this key to the tax code in the basic settings of Financial Accounting in the Define Tax Codes for Sales and Purchases IMG activity.

Standard settings

If there is no entry in this table for a multilevel tax code, then the system does **not** process the input tax amounts in input tax distribution.

Activities

1. In the *Tax Code* field, enter the multilevel tax code, for which you want the input tax portion to be processed in input tax distribution of Flexible Real Estate Management.
2. Set the *Distribute* indicator for the tax code.
3. Enter an input tax code in the *Input Tax* field.
Since input tax distribution posting **cannot** process multilevel tax codes, these are replaced temporarily by input tax codes for the purpose of input tax distribution only. Assign an input tax code to each multilevel tax code here. Note that you have to define the same tax rate for the input tax portion of the multilevel tax code and for the input tax code assigned to it in the system (see Define Tax Code for Sales and Purchases).

Example

You defined multilevel tax code **E** as follows:

Tax Type	Acct Key	Tax Rate	Level	CondType
From Level				
Acquisition tax, credit	ESA -			NLXA
Acquisition tax, debit	ESE -			NLXV

You defined input tax code **V** as follows:

AP System

Tax Type From Level	Acct Key	Tax Rate	Level	CondType
Input tax	VST			MWVS

Then you would enter the following here:

Tax Code	Meaning	Distr	Input Tax	Meaning
E	Acquisition tax	X	V	Input tax

Note

If you use the function Tax Transfer in Service Charge Settlement and you use multilevel tax codes for cost postings, you also have to make entries here.

Implement Enhancements (BAdI)**Option Rate Determination****Use**

The Business Add-In (BAdI) supports enhancements to the standard functions of **option rate determination**.

For information about possible enhancement scenarios, see the Overview of Enhancement Methods for Master Data Objects and the Real Estate Contract.

Standard settings

In the standard system, there is no activated BAdI implementation.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

For information on using BAdIs, see this documentation.

The following methods exist:

- **CALCULATE_OPTION_RATE**
Calculates the option rate
- **CHECK_FOLLOW_ON_CONTRACT**
Is used for controlling whether a follow-on contract should be considered or not during the determination of the option rate
- **CHANGE_PROPOSED_OPTMETH**
Is used to change the default method determined during the creation of new master data

Warning

The implementation of the methods has to be independent of the interface. It must not contain any COMMIT WORK or ROLLBACK WORK statements. For example, direct output of messages using the MESSAGE statement is not allowed.

Method description

- CALCULATE_OPTION_RATE

This method is used for calculating the individual option rate.

The prerequisite for this is that you defined an option rate method with automatic determination and set the *Customer Exit* indicator in Customizing for *Flexible Real Estate Management* under *Option Rate Determination and Input Tax Distribution* -> Option Rate Methods. For more information, refer to the documentation for the indicator.

You can use the following input parameters:

- **ID_INTRENO**: Internal key of the real estate object for which you want to determine the option rate. The data for the object can be read using the API modules for the individual object types (name pattern API_RE_*_GET_DETAIL).
- **ID_KEYDATE**: Key date for which you want to determine the option rate.
- **ID_OPTMETH**: Option rate method. If several methods have been defined with the *Customer Exit* indicator, this value must be queried in the implementation.

The option rate is output using the **CD_OPTRATE** parameter. If there are warning or error messages during option rate determination, the messages can be passed on to the application using the **CT_MESSAGE** parameter. Information for determining the option rates of subobjects can be transferred using the parameter **CT_VIITORCSUBOBJ**.

- CHECK_FOLLOW_ON_CONTRACT

If you want the system to determine the option rate of a rental object dependent on a follow-on contract, you can use this method to control whether the system actually uses the follow-on contract that is determined. If you do not want to use the follow-on contract, the system determines the option rate of the rental object as in the case of a vacancy without a follow-on contract.

You can use the following input parameters:

- **IO_CONTRACT**: This parameter contains the follow-on contract determined by the system.
- **IO_RENTAL_OBJECT**: This parameter contains the rental object.
- **ID_ORDATE**: This parameter contains the key date for the option rate determination.
- **CF_CN_NOT_BE_USED**: Using this indicator, you inform the system if the determined follow-on contract should actually be used. Set the indicator to **TRUE** if you do **not** want the follow-on contract to be considered.

- CHANGE_PROPOSED_OPTMETH

Based on the Customizing settings or through inheritance, an option rate method is determined that is used as the default when new master data objects are created. You can change the default method using this BAdI method.

You can use the following parameters:

- **IO_BUSOBJ**: This parameter contains the current master data object.
- **IT_VALID_METHOD**: This table contains the option rate methods permitted for the object type.
- **CS_PROPOSED_OPTRATE**: This structure contains the data for the default method determined by the system. The individually determined default method must be returned in this structure. The option rate method has to be an option rate method that is contained in the table IT_VALID_METHOD. Otherwise, the default method determined by the system is used.

Example

Example implementations are provided for the corresponding methods.

- CALCULATE_OPTION_RATE

Example class CL_EXM_IM_REIT_OPTION_RATE for determining the option rate using the revenue of the subobjects.

- CHECK_FOLLOW_ON_CONTRACT

Example class CL_EXM_IM_REIT_OR_FOLLOW_ON_CN for considering the follow-on contract during option rate determination, if the date the contract was signed (RECNDAT) is before the key date of option rate determination.

- CHANGE_PROPOSED_OPTMETH

Example class CL_EXM_IM_REIT_OR_PROPOSE_METH for replacing the default method for settlement units (based on apportionment factors in the system, now based on area ratio)

See also

This BAdI uses the interface *IF_EX_REIT_OPTION_RATE*. For more information, display the interface in the Class Builder. Notes for Developers

Enter Default Value for Date of Service**Use**

In Customizing Relevant Obj. for Input Tax Dist./Corr., Default Date of Service, you can specify, for example, that the document date is used as the date of service. This BAdI makes it possible to use

additional dates from the fields of the document header and document item for determining the date of service and to implement your own logic.

Notes for Developers

Exclude Document Items from Input Tax Distribution

Use

Using this Business Add-In (BAI), you can exclude individual items in original documents from input tax distribution. To do so, implement the EXCLUDE_FROM_DISTRIBUTION method.

The BAI is called during input tax distribution (transaction REITDS) for each individual line item that is to be distributed.

Standard settings

If you do not implement this BAI, then the system performs the distribution for all line items determined by the selection.

Activities

Implement the EXCLUDE_FROM_DISTRIBUTION method using transaction SE.

The following parameters are used:

IS_BASE: Data of the distribution item being processed

ID_MODE: Mode of the posting run (E: update run, S: simulation)

CF_EXCLUDE

Set this indicator if you do not want to distribute the item specified in IS_BASE.

Example

You defined tax code Z, which you do not want to be considered during input tax distribution. Using the EXCLUDE_FROM_DISTRIBUTION method, you can exclude distribution items from the distribution if they were posted with tax code Z.

Have a look at the sample code (Goto -> Sample Code -> Display).

Notes for Developers

Account Determination for Input Tax Distribution

Use

The Business Add-In (BAI) supports the enhancement of the standard functions of account determination for input tax distribution.

For an overview of the possible enhancement methods, see this text.

Activities

Create a BAI implementation and implement the methods you require for your enhancement. Then activate the BAI implementation.

For information on using BAIs, see this documentation.

The following methods exist:

- **GET_POSTING_RULE - Gets the account for non-deductible input tax**

These methods are called automatically during standard processing of the account determination for input tax distribution and during input tax adjustment posting for service charge settlement. If an implementation exists, it is also executed in addition to standard system behavior. This does not mean that it is possible to replace the standard behavior of the basic actions.

Caution:

The implementation of the methods has to be independent of the interface. It must not contain any COMMIT WORK or ROLLBACK WORK statements. For example, direct output of messages using the MESSAGE statement is not allowed.

Method description

- **GET_POSTING_RULE**

This method gets the account that is to be used for non-deductible input tax. The following parameters are transferred to the method:

- ID_BUKRS - Company code of the input tax distribution posting
- ID_COSTACCOUNT - Original cost account
- ID_CHARTOFACC - Chart of accounts for the company code
- ID_OBJNR - Object number of the account assignment object to which the line item is assigned
- ID_REFDATE - Settlement reference date for the account assignment object (if filled)

Using the parameter CD_NONDEDACCOUNT, the account for non-deductible input tax is returned. If this parameter is returned empty, the standard coding is run.
Notes for Developers

Room Reservations and Long-Term Seating Arrangements

Define RE Search Request Type for Reservations and Seating Arrangements

Use

To make use of the functions for **room reservations and seating arrangements**, you need objects in the system that can be reserved or that can be continuously occupied. Most commonly, these are rooms. These rooms are represented in the system by reservation objects. From a technical viewpoint, a reservation object is an offered object, as used in the real estate search.

If you want to reserve a room, you can have the system search for the room (= the reservation object) using an RE search request. To be able to distinguish between this search and the search for rental objects as part of the usual real estate search, you have to create a suitable RE search request type for the reservation object type of the reservation object. It is mandatory that this RE search request type and the reservation object type have the same name.

When making settings for reservation objects, consider the following:

- The first measurement type that you define has a special function. This measurement type defines the capacity of the room. Normally this would be the number of seats in the room. For example, if you search for available rooms, then this first measurement appears immediately in the date list, while other measurements that are defined for the room only appear when you display the detailed data for the room.
- You use essentially the same procedure for making settings for RE search requests for reservations and continuous occupancy as you do for the real estate search. However, there are the following important differences in the case of reservations and continuous occupancy:
- You do not need to assign usage types.
- Rather than defining condition groups, you define condition types directly.
- You define the price basis for RE search request types for continuous occupancy.

Define Reservation Object Type

Use

You define the object types here that you want to use for room reservations and for continuous occupancy of rooms.

Requirements

You defined an RE search request type for each reservation object type in the Define RE Search Request Type for Reservations and Seating Arrangements IMG activity. It is mandatory that these RE search request types have the same keys as the corresponding reservation object types you define here.

Activities

For each RE search request type that is for reservation and occupancy functions, create a reservation object type and make the following settings:

- Enter a name for the reservation object type. This name is displayed in master data processing and when you search for rooms.
- To group reservation objects together based on their location, use the three location fields (location levels to). Enter the text here that you want to appear for these location fields when reservations are made.

Example:

Reservation object type: - Meeting Room

Loc. Level : City

Loc. Level : Building

This setting is helpful if you have meeting rooms located in different cities. On the first level, the user can enter the city where the room should be located, and then on the second level the building. In this example, the third level would not be displayed.

You can also have the system generate reservation objects automatically from the architectural view. In that case, instead of making entries in the location fields, you enter the name of the architectural object type in the three architectural object type fields.

Example:

Arch. Obj. Type: AR - Locality

Arch. Obj. Type: BU - Building

During the search the system displays the texts for these objects. In addition, when the object is generated, the system copies the object ID to the correct field. It is also possible to override this behavior using a BAdI.

If the reservation object is copied from a rental object, then the system enters the number of the business entity and the number of the building or land in these fields. You can also override this behavior.

- Enter the following in the *Availability* field:
 - *Can Be Reserved*
Reservations can be placed for the object (such as meeting rooms) to reserve it on an hourly or a daily basis, for example.
 - *Can Be Continuously Occupied*
Using the functions for continuous occupancy, you can specify for the object who its occupants are on a long-term basis. You can use the functions of move planning to plan changes in the occupancy of such objects.

- The smallest unit of time that can be reserved
Enter the intervals in which the reservation can be changed, such as hours or minutes.
- External/Internal
Specify here if the object can be reserved internally only, externally only, or if it can be reserved both internally and externally. For objects that can be continuously occupied internally, the setting *Internal* would be correct. The system does not reject other settings, but they are ignored.
When an external partner tries to reserve reservation objects that are for short-term reservations, the system first checks if there is a framework agreement with this partner. The system searches for any contract for the reservation object (direct, or indirect based on the architectural hierarchy) and this partner. This contract for the reservation object must have a condition with the calculation formula *Reservation with Immediate Billing* or *Reservation with Periodic Billing*. The system uses this condition to bill for the reservation.
- *Billing* indicator

Specifies that the reservation or continuous occupancy is subject to a fee.
For internal reservations or occupancy, the system determines the costs and you can post them to Controlling. For external reservations, you can post the costs using one-time postings.

- Specify the role of the host and the reservation requester.

Assign Master Data Object Types to Reservation Object Type

Use

You specify here whether the objects for reservation and continuous occupancy are generated from architectural objects.

Requirements

You made settings for the architectural view in Customizing.

You defined reservation object types.

Activities

If you want to create reservation objects without any connection to objects of the architectural view, then you do not need to make any settings here.

But if you want to have the system automatically derive reservation objects from architectural objects, then you have to specify here which reservation objects are derived from which architectural objects. You can trigger the derivation and update initially using transaction

REORRSOBJCREATEUPD. If you then create new architectural objects afterward, and you have made the appropriate settings in this IMG activity, the then system automatically creates reservation objects for them.

To have the system automatically create reservation objects for architectural objects, assign the reservation object type (of the reservation object to be created) to the architectural object type, and possibly to the function.

If you leave the *Function* field blank, then the system generates a reservation object with the entered reservation object type for all architectural objects of this object type, regardless of their function.

Define Reservation Area

Use

The reservation area can be used to control the following parameters:

- What the costs are for temporary or continuous occupancy, and what costs, if any, you choose to charge for reversing a reservation
- At what times of day an object can be reserved
- What services can be booked along with a temporary reservation
- Who is authorized to reserve the object

Activities

Define the reservation areas you need in your company.

Example

A company has three different locations where there are rooms that can be reserved:

- Department FM-A is responsible for locations and . The prices for rooms at these locations have been specified using one standard, based on the furnishings of the rooms.
- Department FM-B is responsible for location . This location is in a different country and the reservation times and prices differ from those of locations and .

In this case, the most logical approach is to define two reservation areas:

- Reservation area A for all reservation objects at locations and - Reservation area B for all reservation objects at location

Room Reservations

Basic Settings for Price Calculation

Activities

- **Smallest Unit That Can Be Reserved**
Specify here the intervals at which the reservation can be changed (such as hours or minutes).
- **Billing indicator**
Specifies that the reservation is subject to a fee.
Information on Posting Costs
- **Can Be Reserved Externally/Internally**
Specify here whether the object can be reserved internally only, externally only, or both internally and externally.
- **Frequency and Frequency Unit**
Specify with which frequency the settlements are to be posted.

Define Reservation Type

Use

You enter the reservation type when you create a reservation.

The reservation type, with the settings you make for it in Customizing, controls the following:

- What the costs are for a reservation, and what costs, if any, you charge for canceling a reservation
- At what times of day a reservation is possible
- What services can be booked along with the reservation
- Whether a user is authorized to make a reservation

Activities

Define the reservation types you need in your company.

Example

It should be possible to request certain services (such as lunch) for external meetings when making the reservation.

In this case, the most logical approach is to define two reservation types:

- I for internal meetings (If this is the default value, you can use reservation type " " instead.)
- E for external meetings

By making this distinction, you can, for example, make the authorizations for external reservations more restrictive than those for internal reservations. You can also specify different prices for external and internal reservations.

Number Ranges for Reservations

Use

When you create reservations and recurring reservations, internal numbers are needed that are drawn from the number ranges you set up here.

Standard settings

SAP provides the number range interval with the number '1'. Generally you do not need to change this setting.

Activities

If there is no number range interval " yet, create it. Choose internal number assignment by deselecting Ext. Choose the number range from - .

Make General Settings for Reservations

Use

Here you make the following general settings for reservations:

- Cancellation schemas for internal and external reservations
- Posting activities for billing using one-time postings

- Default value for whether a user or business partner should be saved for the reservation (see User or Business Partner)

Activities

The settings you make are dependent on the following parameters:

- Reservation area
- Reservation object type
- Reservation type

If the cancellation schema is not dependent on the reservation area or the reservation type (or both), then you can leave these fields blank as applicable.

Implement Enhancements (BAdI)

Reservations Use

The Business Add-In supports enhancements to the standard functions of room reservations without the need for writing program code.

For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications Notes for Developers

RE Search: Offered Objects and Meeting Rooms

Use

This BAdI is called when you search for

- Offered objects
- Meeting rooms

It allows you to influence the conditions for selection and the results of the search.

Offered objects

Meeting rooms

- Method **WHERE_CLAUSE_MODIFY**
You can use the CHANGING parameters to influence the WHERE conditions for the selection of meeting rooms. Notes for Developers

Reservation Periods

Define Recurrence Rule

Use

You use the recurrence rule to define the times during which a reservation object is allowed to be reserved.

Activities

You can create more than one row for each recurrence rule. The system then interprets the times in these rows additively.

If you set the *Exceptions* indicator for a row, then the times defined by these rows are excluded from the others. Make the following entries:

- **Row**
Sequence number of the row You have to assign a unique number to each recurrence rule.

- **Start/Series End (Date)**

Specifies the time period during which the reservation object can be reserved. If you do not want to place a limit on the time period, then you can leave both of these fields empty.

- **Start/End (Time)** See the example below.

Specifies the time during which the reservation object can be reserved. This time period is also needed in order for the system to be able to convert prices to an hourly price if the prices were entered for a whole day or longer period.

For example: To convert a daily price to an hourly price, the system determines how many hours the reservation object can be reserved on that day, and divides by that number.

- **Frequency**
Here you can select the frequency with which the times should be valid.
- **Interval**
- **Indicators: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday**

Set these indicators if you want to limit the reservation of a reservation object to certain days of the week or if you want to exclude certain days from being reserved. For excluding days, you also have to set the *Exceptions* indicator.

In this way, you can specify, for example, that a reservation object can only be reserved from Monday through Friday, or only on Sundays.

The system ignores these indicators if you set the frequency to *Daily*.

- **Indicator: Public Holiday**
Set this indicator if you want it to be possible to reserve the reservation object on public holidays. If you do **not** want reservations on public holidays, set this indicator together with the *Exceptions* indicator.
If no holiday calendar is entered for the row and no holiday calendar is entered for the reservation area of the room being reserved, then the system ignores the *Public Holiday* indicator .
- **Holiday Calendar**
If you want a specific holiday calendar to be used for the rule, enter it here.
- **Day of Month**

- Month
When the frequency is *Monthly* , you can specify the month to which this row of the recurrence rule relates.
- Occurrence/Number
These fields are used for special recurrences.
Normally there are no entries in these two fields.

Example

Your company has tennis courts. You want to allow internal reservations from Monday through Friday from A.M. to A.M. and from P.M. to P.M. On Saturdays, Sundays, and holidays, you want to allow external reservations from A.M. to P.M.

You define two recurrence rules in Customizing:

- **Rule :** "Tennis, internal, workdays" has three rows:
 - Row
Start: :
End: :
Indicator is set for Monday, Tuesday, Wednesday, Thursday, Friday. Frequency:
Weekly
 - Row
The same as row , but with Start: :, End: :
 - Row
Indicator for exceptions is set. Indicator
for Friday is set.
- **Rule :** "Tennis, external, Saturday, Sunday, holidays" has row:
 - Row
Start: :
End: :
Indicators are set for Saturday, Sunday, and public holidays. Frequency:
Weekly

You then assign these rules as follows in the next IMG activity, Define Reservation Periods:

- You assign rule to the reservation object type "Tennis Court" and to the appropriate reservation areas with reservation type "internal."
- You assign rule to the reservation type "external."

Define Reservation Periods

Use

You assign the times that you defined in the recurrence rule to the reservation object type, the reservation area, and the reservation type.

Requirements

You defined the times, during which an object can be reserved, in recurrence rules.

Activities

If a reservation object can be reserved regardless of the time, then you do not have to make any settings in this IMG activity.

However, you have to specify times here in these two cases: You want to limit the times an object can be reserved; or you want the system to automatically calculate hourly prices based on daily prices, and therefore need to specify how many hours in the day the object can be reserved.

- Choose *New Entries* and enter the reservation object type for which the specification applies.
- If you want the specification to apply only to a certain reservation area, enter the reservation area. If you do not enter a reservation area, then the specification applies for all reservation areas, for which nothing else was defined.
- If you want the specification to apply only to a certain reservation type, enter the reservation type. If you do not enter a reservation type, then the specification applies for all reservation types, for which nothing else was defined.
- Assign the recurrence rule that you created in a previous step. In this way, you specify the days and times that an object can be reserved. You can go directly to processing of recurrence rules by choosing *Recurrence Rule*.

Services for Reservation

Services for Reservation

Use

When reserving individual rooms, you can place an order for certain services that are related to the reservation.

To make this possible, you need to define service types in Customizing. Each service type represents a service that can be requested along with the room reservation. You can group service

types together into service groups. For each reservation type and reservation area, you specify which service groups can be offered.

Activities

If you want users to be able to request services along with a reservation, then define service types and service groups in the following IMG activities.

Define Service Types

Use

The service type is used to designate a service that you can request individually along with a reservation. Dependent on other criteria, such as the reservation type and type of meeting, you can define in Customizing that the system calculates costs for a particular service type. You can also specify the amount of these costs.

You can group service types together into service groups in Customizing. For each service group, you specify the service types that are available for each reservation object (dependent on the reservation area).

Activities

Define the service types that you need.

Example

You want to offer the following **service types**:

- LNCH - lunch in visitors' cafeteria
- SWCH - Sandwiches
- BEAM - Portable beamer

You want to set up BEAM and SWCH so they can be ordered for all reservations, but you want LNCH (lunch in the cafeteria) to be available only for external reservations and only for certain reservation areas.

You therefore define the following **service groups**:

- TECH - "Technical Equipment" with service type BEAM
- MLEX - "Lunch for External Partners" with service types LNCH and SWCH
- MLIN - "Lunch for Internal Employees" with service type SWCH **Assignment:**
- You assign service groups MLEX and TECH to reservation areas and reservation types that are for "External Partners."
- You assign service groups MLIN and TECH to reservation areas for internal reservations.

Assign Service Types to Service Groups

Use

Here you define service groups and assign them to service types you already defined.

Various service types can be grouped together into a service group. The service group is assigned to the reservation area and the type of meeting. In this way, the services that you can select and request for a given reservation all belong to the appropriate service group for that reservation.

Activities

In addition, for each service group, you can overwrite the standard price and other parameters that you previously defined for the service type. To do so, go to the *Service Types for Service Group* group box. If you do not make any entries in the fields in this group box, then the settings made in the service type apply.

Example

You want to offer the following **service types**:

- LNCH - lunch in visitors' cafeteria
- SWCH - Sandwiches
- BEAM - Portable beamer

You want to set up BEAM and SWCH so they can be ordered for all reservations, but you want LNCH (lunch in the cafeteria) to be available only for external reservations and only for certain reservation areas.

You therefore define the following **service groups**:

- TECH - "Technical Equipment" with service type BEAM
- MLEX - "Lunch for External Partners" with service types LNCH and SWCH
- MLIN - "Lunch for Internal Employees" with service type SWCH **Assignment:**
- You assign service groups MLEX and TECH to reservation areas and reservation types that are for "External Partners."
- You assign service groups MLIN and TECH to reservation areas for internal reservations.

Specify Possible Services for Reservation

Use

You can assign the following criteria to a service group here:

- Reservation area
- Reservation object type
- Reservation type

When a reservation is made, the user can choose to enter the reservation type, for instance "Meeting with External Partners." The system then derives the reservation area and the reservation object type from the reservation object.

Depending on the assignments you make here for these three criteria, the system determines which services can be booked for the given reservation. If you want to allow a service to be used independently of one of these criteria, then do not make an entry for that criterion in the table.

Example

You want to offer the following **service types**:

- LNCH - lunch in visitors' cafeteria
- SWCH - Sandwiches
- BEAM - Portable beamer

You want to set up BEAM and SWCH so they can be ordered for all reservations, but you want LNCH (lunch in the cafeteria) to be available only for external reservations and only for certain reservation areas.

You therefore define the following **service groups**:

- TECH - "Technical Equipment" with service type BEAM
- MLEX - "Lunch for External Partners" with service types LNCH and SWCH
- MLIN - "Lunch for Internal Employees" with service type SWCH **Assignment:**
- You assign service groups MLEX and TECH to reservation areas and reservation types that are for "External Partners."
- You assign service groups MLIN and TECH to reservation areas for internal reservations.

You can make this assignment as follows.

You have the following **Reservation Types**:

- I - Meeting with Internal Employees
- E - Meeting with External Partners You have the following **Reservation Areas:** - - Location
(Only location with food - company cafeteria)
- - Location
- - Location

In a row where the reservation area, reservation type, and reservation object type are blank, you assign the service groups MLIN and TECH.

You assign service group MLEX to reservation area and to reservation type E. This assignment means that it is only possible to book lunch at the company cafeteria at one location and only for meetings with external partners.

If you also have reservation objects of a completely different nature, such as tennis courts, then you can also use the reservation object type to limit the kind of services that can be requested for these objects.

Derive Price of Service Dependent on Price Code and Other Information

Use

In some cases, a price is not entered directly for a service, but is instead stored in the form of a price code. Here you specify how the system determines the price using this price code.

Activities

The system derives the price in several steps. Normally you enter a derivation rule for each of these steps. The system processes the individual steps in the sequence that you specify. Create at least one derivation rule.

- Enter a name for the rule that makes it clear what is being evaluated in this step. If the derivation is a conditional derivation, then name the condition in the text.
- If the derivation specified in this step should only be performed if certain prerequisites are met, then you should specify these prerequisites first. Choose the *Condition* tab page and enter the prerequisites. Then the system performs this step only if all prerequisites contained in the table are met.
- Then choose the *Definition* tab page to specify the actual derivation. In the *Source Fields* table, you can choose the fields on which the price depends. The following fields are available:

DAYS	Duration of the appointment in days
HOURS	Duration of the appointment in hours
ISALLDAY	This is an all day appointment
ISHOLIDAY	The appointment falls (wholly or in part) on a public holiday
ISWEEKEND	The appointment falls (wholly or in part) on a Sunday
NEIGHBORH	First location field of reservation object
NEIGHBORH	Second location field of reservation object
NEIGHBORH	Third location field of reservation object
PRICECODE	.Price code
RECURCOUNT	Number of appointments (for a recurring appointment)
RSAREA	.Reservation area
RSOBJID	Object key of reservation object
RSOBJTYPE	Type of reservation object
RSTYPE	Reservation type
TIMEFROM	Starting time
TIMETO	Ending time
WEEKDAYFROM	Weekday (start, = Monday, ..., = Sunday)
WEEKDAYTO	Weekday (end, = Monday, ..., = Sunday)
- When you want to find the price for a service, then the system determines the values for these fields from the data currently entered for the service. Choose fields in your system that could influence the price of a service. Avoid using fields that do not contain relevant information.
- For example, if twenty different locations are defined in your system, but only two service areas, then specify if there is a different price for each location, or only for each service area. If you want to have three different price zones, then you could add a third service area, rather than entering the same rule many times for a large number of locations.
- Once you have specified the source fields, choose *Maintain Rule Values*. For each possible combination of source fields that are used in this rule or step, enter the values for the source fields.

For each combination of source fields, enter the values to be derived for the target fields. The fields have the following meanings:

FLOWTYPE	Flow type that is used for the account determination
PRICE	The derived price
CURRKEY	Currency for the price
TIMEUNIT	.Time unit that the price relates to
ISPERMEAS	Is the price per measurement?
MEAS	Measurement unit
SRVTYPE	Service type
SRVGROUP	Service group

Depending on the value of the ISPERMEAS and TIMEUNIT indicators, the system multiplies the price with the measurement value and/or the duration of the appointment. The price that the system determines in this way is then billed during periodic settlement of costs or posted to an account assignment object in CO.

As soon as the system finds a price for the current service in a given step, the process stops there and the system does not make any further derivations.

Calculation of Costs

Cancellation Costs

Define Cancellation Schema and Cancellation Costs

Use

To prevent objects from being reserved unnecessarily, you can specify that when a reservation is canceled, the system determines the price and charges the cancellation costs to the reservation requester or to his or her cost center.

Activities

- Choose *New Entries* and specify the key and name of the first cancellation schema.
- Select the cancellation schema. In the navigation area, choose *Rule for Calculating Cancellation Costs*. Choose *New Entries*.

You can enter any number of rules for each cancellation schema. Each rule specifies how the system determines the cancellation costs when the time interval between the cancellation and the appointment being cancelled is at least a certain number (x) of units of time away. Always begin with the largest unit of time (smallest sequence number). The largest sequence number must always

be for the smallest unit of time. There is an example below that demonstrates how you could set up rules.

- For each rule of the cancellation schema, enter a different *Time Until Reservation* and a unit of time. The rule takes effect when the time interval between the time of the cancellation and the start of the appointment is, at a minimum, within the set time period. The first rule should contain the largest time period. The time period should become smaller and smaller from the first to the last rule of the cancellation schema.
- In the *Rule* field, choose the type of price, that is, one of the following: a price per time (time here being the duration of the original appointment), a fixed amount, or a percentage of the original costs. Depending on your choice, you also have to make the following additional entries:
 - *Percentage of Original Costs:*
Here you also have to enter the percentage in the *Percentage* field.
 - *Price per Time:*
In the *Cancellation Amount* field, enter the basic price. In the *Time Unit* field, specify the time unit that the price applies to.
 - *Fixed Amount:*
In the *Cancellation Amount* field, enter the price for cancellation. If you do not want to charge for cancellation, then do not make any entry in this field.
- If you entered an amount in the *Cancellation Amount* field, then enter the currency for this amount in the *Currency* field.
- You can also enter a minimum and/or a maximum amount that is to be charged regardless of the rule. You enter these amounts in the *Minimum Amount* or *Maximum Amount* fields. You do not have to make any entries in these fields if you use the *Fixed Amount* rule.

Example

You want to specify that an internal cancellation made up to seven days before the appointment date does not incur any costs. Cancellations up to three days before the appointment are charged euros. Cancellations with notice of less than three days are charged % of the costs of the reservation, with a minimum charge of and a maximum of .

Create a cancellation schema with the following three rules:

- Rule : Time period: days; rule: Fixed Amount; Cancellation Amount:
- Rule : Time period: days; rule: Fixed Amount; Cancellation Amount: EUR
- Rule : Time period hours; Rule: Percentage; Percentage ; Minimum EUR, Maximum EUR

You also want to charge for external cancellations if there are less than seven days between the cancellation date and the start of the appointment. In that case, create a second cancellation schema. In the first rule, enter the fixed amount you want to charge for the cancellation.

Assign Cancellation Schema

Use

Here you make the following general settings for reservations:

- Cancellation schemas for internal and external reservations
- Posting activities for billing using one-time postings
- Default value for whether a user or business partner should be saved for the reservation (see User or Business Partner)

Activities

The settings you make are dependent on the following parameters:

- Reservation area
- Reservation object type
- Reservation type

If the cancellation schema is not dependent on the reservation area or the reservation type (or both), then you can leave these fields blank as applicable.

Long-Term Seating Arrangements and Move Planning

Basic Settings for Price Calculation

Activities

- **Smallest Unit That Can Be Reserved**
Specify here the intervals at which the reservation can be changed (such as hours or minutes).
- **Can Be Reserved Externally/Internally**
For objects that can be continuously occupied internally, the setting *Internal* is correct.
- **Billing indicator**
Specifies that the continuous occupancy is subject to a fee.

The costs are posted directly to CO using transaction REORCOSTPOSTPO. This requires the occupant to be specified in the seating arrangements and the service provider in the reservation object. The posting is made manually as a manual cost allocation (transaction KAMV).

- **Frequency and Frequency Unit**

Specify with which frequency the settlements are to be posted.

Assign Desk Assignments to Reservation Object Type

Use

In this activity, you can assign an architectural object type with a certain architectural function to each reservation object type. This architectural object type and function represent the actual desk assignments in a room.

When you create or update a reservation object, the system adopts the capacity from the architectural object belonging to the reservation object. (Capacity means, for example, the number of desk assignments in an office.) When planning occupancy or planning moves, the user can enter a sequence number for each individual desk assignment. However, it is not possible to specify a particular desk assignment here.

By implementing the BADI_REOR_POSITIONS BAdI, you can also change the selection of existing desk assignments, or make your own custom implementation. Or you could, for example, evaluate locks on the individual desk assignments. For more information, see the documentation for the BADI_REOR_POSITIONS BAdI.

Requirements

You set up architectural object types.

You defined the architectural functions.

Activities

- For each reservation object type, enter an architectural object type and its function, to be used for deriving a reservation object.
- Implement the methods of BAdI BADI_REOR_POSITIONS, if needed.

Example

You have a reservation object type *Office*. You want to assign the architectural object type *Workplace* with the function *Office desk* to it as a means of representing the available desk assignments in the office, so that the capacity can be transferred to the reservation object.

Specify Default Date for First Posting

Use

Here you make basic settings for continuous occupancy and/or move planning.

Activities

Specify the following:

- In the *Posting From* field, enter the date starting from which you want to be able to allocate costs for the use of rooms for continuous occupancy.

Define Lock Reasons for Occupancy

Use

You can assign a lock, with its lock reason, to reservation objects that are for continuous occupancy. The lock applies for a specified period of time. You can also specify that the system does not invoice any costs for time periods that are locked. The system also does not allow planning of move-ins for the object during the period that is locked.

Activities

Define all lock reasons that you need. If you want to use locks, but do not need to distinguish between various reasons for the lock, then define just one lock reason (for instance, X Locked).

Define Number Range for Move Planning

Use

You specify the number range intervals here that you want to use for move planning.

Activities

- If you always want the number for move planning to be assigned externally - meaning by the user - then define the intervals in which these numbers can be found.
- You might also want to make it possible for internal numbers to be assigned. In that case, specify that one number range interval is internal, and enter the upper and lower limit for the numbers to be assigned by the system.

The system then follows this logic when a move plan is saved:

- If the user entered a number or ID for the move plan, then the system checks if this number is within a number range interval that was entered here and defined as *External*. If these criteria are met, and the number was not yet assigned, then the system stores the move plan under this number.
- If an external number range is not defined, or the user did not enter a number or ID before saving, then the system checks if an internal number range is defined. (If more than one internal number range is defined, the system uses the first one.) If such a number range interval exists, then the system uses the next number from this interval. If it does not exist, the system issues an error message.

Define Move Types

Use

You can choose to assign a move type to a move. The move type is used only for classification, and you can use it as a selection criterion in reports and search helps. The move type does not have any control function in the system.

Activities

Define the move types that you want to have in your company.

Example

INT - internal move

EXT - move with external moving company

Implement Enhancements (BAdI)

Desk Assignments on Reservation Object

Use

The BAdI is called in long-term seating arrangements, and serves to provide default values for the items that are available for the occupancy of rooms. Notes for Developers

Determine Possible Available Desk Assignments

Use

Using this business add-in, you can do the following during move planning:

- Have the system propose desk assignment numbers for target rooms (move plan - target rooms - button: Propose Desk Assignments)
- Set own desk assignment numbers for target rooms in the appropriate fields (automatically)

Standard settings

The standard system behavior for default values is as follows:

- The system searches for historic (old) entries for desk assignments.
- Then the system searches these entries for any desk assignment numbers that are not yet assigned.

Example

There is a default implementation, CL_DEF_IM_REOR_PO_SUGGEST_POS, for this BAdI.

There desk assignment numbers are proposed in ascending order, beginning with the number .

It ignores desk assignments that are already assigned or which are already planned for the future.

Notes for Developers

Complex Price Determination for Reservations and Seating Arrangements

Define Price Code

Use

Specifies the significant criteria for determining a price.

If it is not possible to enter the price as an amount per unit of time because the method of determining the price is more complex, then you can enter a price code, rather than a price, on the reservation object.

To make this possible, enter all price codes, which the system views as separate entities, in Customizing. In addition, you enter rules in Customizing for how the system determines the price dependent on the price code.

Requirements

You need price codes only in the following cases:

- The costs for a reservation or for services related to a reservation for a continuously occupied room in your company are allocated to Controlling (CO) or to an external party.
- The price per unit of time is **not** entered on the reservation object (for instance, because there is a graduated price list based on the reservation type, length of the reservation, or other criteria).

Activities

Process the price codes you need in your company, and then enter the prices for them.

Example

In your company, you decide to calculate prices differently for external bookings than for internal bookings:

- For internal bookings, the price is euros per hour per room, regardless of the location.
- For external bookings at Location , the same price is charged as for internal bookings.
- For external bookings at Location , the charges are as follows: For reservations lasting more than four days, the charge is euros per day. For a reservation for at least one day, the charge is euros per day. For reservations by the hour, the charge is euros per hour.

In this case, you define two price codes:

- CODE (entered for rooms of Location)
- CODE (entered for rooms of Location)

In the set of rules for determining the price, you then enter the rules described above so that the price can be derived.

Aside from the price code, the price can also be dependent on other factors, such as:

- The reservation type
- The duration of the reservation

- The reservation object type
- Attributes of the reservation object
- And more

Derive Price Based on Price Code and Other Criteria

Use

In some cases, a price is not entered directly on the reservation object or the service, but is instead stored in the form of a price code. Here you specify how the system determines the price using this price code.

Activities

The system derives the price in several steps. Normally you enter a derivation rule for each of these steps. The system processes the individual steps in the sequence that you specify.

- Create at least one derivation rule. Enter a name for the rule that makes it clear what is being evaluated in this step. If the derivation is a conditional derivation, then name the condition in the text.
- If the derivation specified in this step should only be performed if certain prerequisites are met, then you should specify these prerequisites first. Choose the *Condition* tab page and enter the prerequisites. Then the system performs this step only if all prerequisites contained in the table are met.
- Then choose the *Definition* tab page to specify the actual derivation.
In the *Source Fields* table, you can choose the fields on which the price depends. The following fields are available:

DAYS	Duration of the appointment in days
HOURS	Duration of the appointment in hours
ISALLDAY	This is an all day appointment
ISHOLIDAY	The appointment falls (wholly or in part) on a public holiday
ISWEEKEND	The appointment falls (wholly or in part) on a Sunday
NEIGHBORH	First location field of reservation object
NEIGHBORH	Second location field of reservation object
NEIGHBORH	Second location field of reservation object
PRICECODE	Price code
RECURCOUNT	Number of appointments (for a recurring appointment)
RSAREA	Reservation area
RSOBJID	Object key of reservation object
RSOBJTYPE	Type of reservation object

RSTYPE Reservation type
 TIMEFROM Starting time
 TIMETO Ending time
 WEEKDAYFROM Weekday (start, = Monday, ..., = Sunday)
 WEEKDAYTO Weekday (end, = Monday, ..., = Sunday)

If you want to determine a price for a reservation, then the system specifies the values for these fields from the data currently entered for the reservation. Choose fields in your system that could influence the price of a reservation. Avoid using fields that do not contain relevant information.

For example, if twenty different locations are defined in your system, but only two reservation areas, then specify if there is a different price for each location, or only for each reservation area. If you want to have three different price zones, then you can add a third reservation area, rather than entering the same rule many times for a large number of locations.

- Once you have specified the source fields, choose *Maintain Rule Values*. For each possible combination of source fields that are used in this rule or step, enter the values for the source fields. For each combination of source fields, enter the values to be derived for the target fields. The fields have the following meanings:

FLOWTYPE Flow type that is used for the account determination
 PRICE The derived price
 CURRKEY Currency for the price
 TIMEUNIT Time unit that the price refers to
 ISPERMEAS Is the price per measurement?
 MEAS Measurement unit

Depending on the value of the ISPERMEAS and TIMEUNIT indicators, the system multiplies the price with the measurement value and/or the duration of the appointment. The price that the system determines in this way is then billed during periodic settlement of costs or posted to an account assignment object in CO.

As soon as the system finds a price for the current reservation in a given step, the process stops there and the system does not make any further derivations.

Derive Price of Service Dependent on Price Code and Other Information

Use

In some cases, a price is not entered directly for a service, but is instead stored in the form of a price code. Here you specify how the system determines the price using this price code.

Activities

The system derives the price in several steps. Normally you enter a derivation rule for each of these steps. The system processes the individual steps in the sequence that you specify. Create at least one derivation rule.

- Enter a name for the rule that makes it clear what is being evaluated in this step. If the derivation is a conditional derivation, then name the condition in the text.
- If the derivation specified in this step should only be performed if certain prerequisites are met, then you should specify these prerequisites first. Choose the *Condition* tab page and enter the prerequisites. Then the system performs this step only if all prerequisites contained in the table are met.
- Then choose the *Definition* tab page to specify the actual derivation. In the *Source Fields* table, you can choose the fields on which the price depends. The following fields are available:

DAYS	Duration of the appointment in days
HOURS	Duration of the appointment in hours
ISALLDAY	This is an all day appointment
ISHOLIDAY	The appointment falls (wholly or in part) on a public holiday
ISWEEKEND	The appointment falls (wholly or in part) on a Sunday
NEIGHBORH	First location field of reservation object
NEIGHBORH	Second location field of reservation object
NEIGHBORH	Third location field of reservation object
PRICECODE	.Price code
RECURCOUNT	Number of appointments (for a recurring appointment)
RSAREA	.Reservation area
RSOBJID	Object key of reservation object
RSOBJTYPE	Type of reservation object
RSTYPE	Reservation type
TIMEFROM	Starting time
TIMETO	Ending time
WEEKDAYFROM	Weekday (start, = Monday, ..., = Sunday)
WEEKDAYTO	Weekday (end, = Monday, ..., = Sunday)
- When you want to find the price for a service, then the system determines the values for these fields from the data currently entered for the service. Choose fields in your system that could influence the price of a service. Avoid using fields that do not contain relevant information.
- For example, if twenty different locations are defined in your system, but only two service areas, then specify if there is a different price for each location, or only for each service area. If you want

to have three different price zones, then you could add a third service area, rather than entering the same rule many times for a large number of locations.

- Once you have specified the source fields, choose *Maintain Rule Values*. For each possible combination of source fields that are used in this rule or step, enter the values for the source fields. For each combination of source fields, enter the values to be derived for the target fields. The fields have the following meanings:

FLOWTYPE	Flow type that is used for the account determination
PRICE	The derived price
CURRKEY	Currency for the price
TIMEUNIT	.Time unit that the price relates to
ISPERMEAS	Is the price per measurement?
MEAS	Measurement unit
SRVTYPE	Service type
SRVGROUP	Service group

Depending on the value of the ISPERMEAS and TIMEUNIT indicators, the system multiplies the price with the measurement value and/or the duration of the appointment. The price that the system determines in this way is then billed during periodic settlement of costs or posted to an account assignment object in CO.

As soon as the system finds a price for the current service in a given step, the process stops there and the system does not make any further derivations.

Implement Enhancements (BAdI): Price Derivation

Use

The BAdI is run

- In room reservations
- In long-term seating arrangements

It allows the derivation of the price for the reservation or the long-term seating arrangement. For this the method **GET_DERIVATION** is called. In this method, the price can be determined based on entries for the reserved object and the duration of the reservation, whereby you can specify certain parameters (such as, price applies per measurement, price applies for a certain time unit).

Notes for Developers

Implement Enhancements (BAdI): Price Calculation Outline Agreement

Use

In an outline agreement, you can specify conditions for leasing out rooms to external tenants. The price for a reservation/occupancy is calculated in this case from the unit price in the contract condition and the duration of the reservation/occupancy. The BAdI allows you to determine the price of the room reservation or a continuous occupancy independently of the contract conditions using your own algorithms.

Requirements

This BAdI is only run if the reservation/occupancy contains an outline agreement that has a condition with calculation formula : Reservation with Periodic Billing. In this case, you can use the method CHANGE_PRICE to determine the price using your own algorithms. When you save the reservation/occupancy, a planned record for a posting with the calculated price is set up in the cash flow for the outline agreement. Notes for Developers

Third-Party Management

Master Data of COA Mandate and Object Mandate

Specify Number Range Interval for COA Mandate and Object Mandate

Use

In *Flexible Real Estate Management*, there are two types of mandate: COA mandate or object mandate. For both of these mandate types, the system creates a separate company code that has the number of the mandate.

Here you can specify the number range interval that is used when the mandate is created.

Activities

Enter the number range interval you want to use for the mandate type.

You should use different number range intervals. You should also define the number ranges to that you can immediately see the following in the resulting company code number:

- Whether the company code is a "normal company code" (that is, a company code in which you manage your own objects, or a company code that does not have real estate management)
- Whether the company code is for managing objects for a third party (object mandate)
- Whether the company code is a COA company code (COA mandate) You enter the number ranges for the number range interval in the next IMG activity.

Specify Number Ranges for Mandate

Use

Here you define the concrete number range from which the number for a mandate is assigned (internal number assignment) or that is used for checking the number of a mandate. The number range that is used depends on the mandate type defined in Customizing.

When the system checks the number of a mandate, it also checks if there is already a company code with the same number. If there is a company code with the same number, then the system does **not** create a mandate with this number.

Activate Time-Dependent Mandate Assignment

Dialog

Change Screen Layout

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout

Field Groups

Field Groups

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status

Use

Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
2. Select the row and choose *Field Modification*.

AP System

The system displays all field groups that know the given application. In order to display the fields of a field group, position the cursor on the field group and choose *Environment -> Field check*.

3. Now you can, for example, suppress field groups that are not needed or define other field groups as "Required entry" fields. If you choose the "Not specified" setting, then the system itself determines how the field is treated. (Usually these fields are optional entry fields in create and change mode, and display fields in display mode.) If it is not possible to make a setting for a field group, then the system determines how the field is treated (usually dependent on the situation, or on the contents of other fields).

Note

Before you suppress multiple field groups of a view, a section or a screen sequence, you should consider if it makes more sense to remove the view, section or screen completely from the screen sequence.

Views

Use

Here you specify which field groups are grouped together into a view (part of a screen, technically a subscreen). You should group together the field groups that necessarily belong together during a check.

Example

If you have a field group with a valid-from date and a field group with a valid-to date, and these should be checked against each other in a module, then you should group them together into a view.

The check module is in the detailed data under "Function Module After Entry".

Standard settings

SAP recommends that you not change the standard settings. It is only necessary to make changes if you want to add your own new fields to the master data dialog.

In that case, copy an existing view to the customer namespace (Y* or Z*) and modify the properties of the view accordingly (consider the detail screen). Then assign the field groups to the view. You can assign your own field groups, as well as those delivered by SAP.

Sections

Use

Here you specify which views are grouped together into sections. You can recognize a section because it is surrounded by a frame. Fields that logically belong together should be grouped together in sections.

Standard settings

SAP recommends that you not change the standard settings.

It could be necessary to define new sections, either to arrange views delivered by SAP differently or to add your own fields to the master data dialog.

In that case, copy an existing section to the customer namespace (Y* or Z*) and assign the views you want to this section. The item number specifies the sequence in which the views are arranged in the section. For technical reasons, if you make your own assignments from sections to views, the item numbers have to be in the customer namespace (that is, they are not allowed to end in ").

This makes it possible for you to also include your own views in SAP sections. Select a section, and choose *Section -> Views* in the dialog tree, and assign the view to a section using a corresponding item number.

Screens

Use

Here you specify which tab pages appear in the dialog, and which sections make up these tab pages.

Standard settings

SAP recommends that you do not change the standard tab pages.

If you want to change a tab page, copy the standard tab page that is closest to the tab page you have in mind, and give it a name in the customer name range (Y* or Z*). Then assign the sections you want. The position number for user-specific entries also has to be other than here.

Screen Sequences

Use

Here you specify which screen sequences should appear in dialog. A screen sequence consists of different screens, and each screen is equivalent to a tab page.

Standard settings

SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories or Screen Sequence Category -> Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):
Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.
- Rental object:
You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).
- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
- RE search request:
For normal entry, you use the standard screen sequence. For fast entry (ad hoc search) the RERRFE screen sequence is used. (This cannot be changed.)

Events

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Tables

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Implement Enhancements (BAdI)

Number Assignment, Validation, Substitution

Use

The Business Add-In supports enhancements to the standard functions of mandates. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications

Notes for Developers

Condominium Owner Mandate

Information on the Condominium Owner Company Code

Use

The condominium owner company code is for all processes that relate to managing the rental of condominiums on behalf of the individual condominium owner.

The condominium management contract is a vendor real estate contract. The vendor is the third-party manager to whom the management fees are paid.

The condominium owner is the second main contractual partner. The condominium owner is copied from the assessment contract in the COA company code.

You assign rental objects (of one or more condominium owners associations) to the condominium management contract. All of these condominiums must have the same owner. You create the rental

objects in the condominium owner company code. For the purposes of tenant settlement, these rental objects have to be linked to the related rental objects in the COA company codes.

You enter all bank details of the condominium owner, which are needed for condominium management, in the condominium management contract (real estate contract). At the latest when the contract is activated, these bank details are created as house banks in the condominium owner company code.

In addition, you have to enter a unique profit center for each owner in the condominium management contract. You use this profit center for all postings that do not have a direct reference to a bank account of the owner, so that you can assign these postings to the owner.

The rental objects in the condominium owner company code are leased out using real estate contracts of the *lease-out* category. The tenant is the (customer) main contractual partner of the contract. You can enter the owner as an optional additional contractual partner.

In the real estate contract, you enter the house bank to which the tenant pays the rent. For this house bank, it is mandatory to use a house bank account that is entered in the condominium management contract for the rental object in the bank details of the owner. The bank details of the tenant are, as usual, managed as the partner bank.

Periodic postings for the tenant are made in the condominium owner company code. The rent is charged to the tenant as customer. The tenant pays rent to the house bank account of the owner.

Tenant settlement is performed in the COA company code (usually after COA settlement). The system determines the share owed by the tenant for each rental object that is leased out in the manager company code or condominium owner company code. This amount is invoiced to the tenant. The corresponding receivable or credit memo is posted in the condominium owner company code.

Define Number Range for House Bank

Use

When you activate a condominium management contract, the system automatically creates house banks in the condominium owner company code for the entered bank details.

If the bank does not yet exist at that point, then a new house bank ID has to be assigned to it. Here you specify the number range that this ID is assigned from.

Activities

For interval ', ' specify how you want the number range for house banks in the condominium owner company code to be. If you want the system to assign the ID automatically, choose internal number assignment. If you want the user to assign the number, choose external number assignment. You should choose the number range so that it is different from those used for the house banks in other company codes. In this way, the generated house bank for an owner can be easily distinguished from manually created house bank accounts on the basis of the ID.

Other Settings for Condominium Owner Company Code

Standard settings

Standard Customizing contains company code RECO with controlling area RECO for individual condominium management.

Activities

- Profit center accounting must be activated.
- For document entry, the *House Bank* and *Account ID for Bank Accounts* fields must be active. Both fields become active when "Own Bank" is set as OPTIONAL field in the field status variant for document entry and RE is active.

Example in the standard system:

Field status variant , field status group G, payment transactions, *Own Bank* field Field Status Variants for Document Entry

Annual Budget

Specify Cost Elements to Be Planned for Annual Budget

Use

The annual budget of a condominium owners' association is similar to cost element planning at the level of the settlement unit. Normally the only classification structure that is relevant is one from the viewpoint of settlement units (or of the service charge key).

However, the system also allows a subclassification by cost elements. In this subclassification, you are allowed to use all cost elements with which the given settlement unit can be posted.

Here you enter the cost elements that should be used in addition to the service charge key to classify the annual budget. For example, in the detail screen, you can enter the reconciliation accounts, which will be relevant later for actual settlement, even if these accounts are not yet relevant for creation of the annual budget.

Settlement

COA Settlement and Tenant Settlement

Use

In third-party management, there are two types of settlement processes related to condominium owners:

- During **COA settlement**, the costs on a settlement unit are settled to the owners who are entered in the assessment contracts. In the settlement unit, you specify the apportionment rules that are used. The measurement types are specified on the rental object in the COA company code.
- During **tenant settlement**, the system searches for rental objects that are identical to those in the COA company code. These rental objects can be in the manager company code or in the condominium owner company code. If such rental objects are found, then the system apportions the costs to the tenants of these objects (based on the occupancy contract in the condominium owner company code or manager company code). The apportionment rule used in this case can be the same as the one for the COA settlement.

The process for COA settlement is essentially the same as for normal service charge settlement. However, since the assessment contract usually uses different condition types, you have to make a few additional settings. Make the necessary additional settings for COA settlement in the following IMG activities:

- Assign Condition Type to Service Charge Key/Group
- Define Settlement Parameters

You make settings for the service charge key, and any settings dependent on the service charge key, in the IMG activities under *Settlement*. This applies, regardless of whether or not the service charge key can only be used for apportionment to owners. If you only have object mandates in third-party management, then you do **not** have to make any settings for them in the IMG activities listed here. In object mandates you perform only normal service charge settlement. You make settings for the object mandate in the IMG activities under *Service Charge Settlement*, just as you would for your own rental objects.

Assign Condition Type to Service Charge Key/Group

Use

Here you specify which conditions for service charge advance payments and which conditions for flat payments are cleared against each other.

Activities

The various control options are described below. Make an entry in the table for each condition for advance payments and each condition for flat-rate payments. Specify the following for each entry:

- Whether the condition type is only allowed to be cleared by costs of certain service charge keys
- Whether the condition type can be cleared by all costs on the settlement units of a certain service charge group
- Whether the condition type can be cleared by all costs in the categories "Operating Costs"/"Heating Costs" or "Operating and Heating Costs"

Use

For the system to be able to check or generate the settlement participation, the condition types, which play a role in service charge settlement (advance payments and flat payments), must be linked to the service charge key. This can be done as follows:

- The advance payment condition type is assigned **directly** to the relevant service charge key
Example:
Condition type: Elevator advance payment
Service charge key: Elevator
Service charge category: No general costs (SCK-specific)
Service charge group: < blank >
- A service charge group is assigned to the advance payment condition type:
Example:
Condition type: Caretaker services advance payment
Service charge key: < blank >
Service charge category: <anything>
Service charge group: Caretaker services
(The service charge group is assigned in Customizing, for example, to the service charge keys Gardening
Caretaker
House cleaning
)
- The **service charge category** "operating costs" or "heating expenses" is assigned to the advance payment condition type:
Example:
Condition type: Operating costs advance payment
Service charge key: < blank >
Service charge category: Operating costs
Service charge group: < blank >

The service charge key is settled, for which in Customizing in the definition of the service charge key, you set the *operating costs* indicator.

AP System

Advance payment condition types valid for operating costs and heating expenses have service charge category - general service charges.

Example:

Condition type: operating costs/heating expenses advance payment

Service charge key: < blank >

Service charge category: - General service charges

Service charge group: < blank >

The settlement participation is generated/checked when you create/change an occupancy contract and during service charge settlement. The system determines the settlement units, to which the rental objects are assigned, and which are leased out in this contract. It also attempts to assign the advance payment and flat payment condition types that are assigned here. To do this, proceed as follows:

- First the system searches for an advance payment condition type that is defined exactly for this service charge key (see first point above).
- Then it searches for an advance payment condition type that belongs to the service charge group of the service charge key (see the second point above).
- Finally, it searches for an advance payment condition type that belongs to the category "operating costs" or "heating expenses" (depending on whether the *operating costs* or *heating expenses* indicator is set for the service charge key).
- If it still cannot assign any condition type, the system searches whether the contract has a condition type that is specified in Customizing with the service charge category " General Service Charge."
- If this condition type also does not exist, the system assumes, depending on the setting in Customizing for the Defaults for Settlement Participation per Service Charge Key that it is a final settlement (for which no condition type is required) or that the contract does **not** participate in this settlement unit.

Example

The advance payment conditions and service charge key are set up as specified in the examples above. There are settlement units for the following service charge keys:

Property damage and liability insurance
 Water supply
 Elevator
 Street cleaning
 Garbage removal/disposal
 Broad band cable network
 Caretaker
 House cleaning
 Heating expenses

They are all marked as "operating expenses" except for service charge key .

- For contract , it is listed explicitly which advance payments have been made for which costs. The following conditions are defined:
 operating costs advance payment
 Elevator advance payment
 Caretaker services advance payment

In the settlement participation, the advance payments for this contract are assigned to the advance payment condition types as follows:

- | | | |
|--------------------------|---|---------------------------------------|
| | Property damage and liability insurance | -> operating costs advance payment |
| Water supply | | -> operating costs advance payment |
| Elevator | | -> Elevator advance payment |
| Street cleaning | | -> operating costs advance payment |
| Garbage removal/disposal | | -> operating costs advance payment |
| Broad band cable network | | -> operating costs advance payment |
| Caretaker | | -> Caretaker services advance payment |
| House cleaning | | -> Caretaker services advance payment |
| Heating expenses | | -> No assignment |
- Contract only has the condition " operating costs advance payment". For this contract, all service charge keys except for are assigned to the condition type -> operating costs advance payment.

No condition type can be assigned for both contracts for the settlement unit with the service charge key . It would be designated as a final settlement if this has been set up in Customizing.

Define Settlement Parameters

Use

In this activity, you can predefine the necessary parameters for the settlement run. This makes parameter blocks available to users for selection when they start settlement. As a result, the user does **not** need to enter the parameters individually.

Activities

Set the values for the individual indicators:

- *Active:*

Parameter blocks are offered for selection during settlement only if they were set to active. This enables you to leave parameter blocks in the system that you have tested but do **not** want to offer in the application. You can then activate them later if you need them. You have to set the *Active* indicator separately for each of the following: "normal" service charge settlement, COA settlement (for condominium owners in the COA company code) and tenant settlement (for tenants renting condominiums). For accruals and deferrals, there is a similar indicator in the *Parameters for Accrual/Deferral* group box. If you need the current occupancy principle for COA settlement, but do **not** need it for tenant settlement, you can also set the indicator differently for each of them.

- *Standard:*
Set this indicator if you want this parameter block to be proposed as the default when you start settlement.
For this setting there is also a separate indicator for "normal" service charge settlement, COA settlement, tenant settlement, and accrual/deferral.
- *Split Receivable If Tax Changes*
This indicator specifies that you want the receivable posting to be split based on time when the tax rate changes within the settlement period.
- *Post Balance:*
Set this indicator if you want to balance the receivable with the advance payment. This function is currently only available when the Leave Open APs (Planned Principle) indicator is set.
- *Leave Open APs (Planned Principle)*
Set this indicator if you do not want the settlement to automatically clear open advance payments (advance payments that were agreed on and posted, but **not** yet paid). This is advisable in certain cases (see long text).
- *Current Occupancy Principle:*
Austria only: Set this indicator to settle rental agreements and rental units with the current occupancy principle indicator in service charge settlement based on the current occupancy principle.
- *Print Separately:*
If you set this indicator, correspondence is **not** printed automatically as part of settlement. Instead, you must print it separately. We recommend that you set this indicator for the standard procedure so that correspondence is not printed automatically each time a complete settlement run is simulated.
- *Consider Vacancy Percentage*
This indicator must be set if you want to include a vacancy percentage rate (percentage at which the cost share of the vacant rental object can be transferred to the other tenants) that can be specified on the settlement unit. In most countries this is **not** allowed or is not usual.
- *Use Other Apport. Factor (Sim./Accr.)*
This indicator applies during simulation of service charge settlement or during accrual/deferral of service charges. If this indicator is set, then, for all settlement units that have an alternative apportionment factor (to be used *if it is not possible to determine the measurement*), the system uses this alternative apportionment factor. This is particularly relevant for settlement units that are normally apportioned based on consumption (alternatively based on residential/usable space). If this indicator is set, then the system does not base the apportionment on consumption but distributes instead immediately using the residential/usable space. The system ignores this indicator during an actual settlement.

- Elimination of Internal Business Volume
It is possible that a settlement unit could contain rental objects and contracts with different profit centers. If that is the case and you want to perform elimination of internal business volume, then set this indicator. The system then ensures that posting is always two-sided.
- Distribute Remainder
Small differences can arise when costs are distributed from the settlement unit to the rental objects. Here you specify if differences are distributed, and if so, how.
- Surcharge Schema
The surcharge schema specifies if the system calculates a surcharge on the settlement result, and, if so, how this surcharge is calculated. You can define the surcharge schema in the Define Calculation of Surcharges IMG activity.
- *Default Values for Data Medium Exchange for External Settlement*
You can make settings here that appear as defaults for settlement but can be overwritten. These settings define where files are imported from or exported to for data medium exchange, and the names of the files.
- *Parameters for Accrual/Deferral*
First specify if the parameters are allowed to be used for accrual/deferral and whether these are the standard parameters (see above).
If there are no settlement parameters designated as allowed, then the system proposes the parameters that are allowed for "normal" service charge settlement.
- AP Needed for Accrual/Deferral
Set this indicator for parameters that are used for accrual/deferral, if you want the system to read advance payments during the accrual/deferral. Then the system either displays the advance payments for information only, or reposts them, depending on whether flow types are set up for this.
Restrictions related to whether individual parameters can be combined.

If you select the option "Charge Input Tax to Tenant", then the following options are not allowed to be selected:

- "Post Balance"
- "Split Receivable If Tax Changes"
- "Consider Current Occupancy Principle"

Enhancements

Implement Enhancements (BAI): Report on Reserves and Investments

Use

The BAdI BADI_REEX_FI_MM_CAPITAL makes it possible for you to change the display in the transactions Statement of Reserves and Capital (transaction REISMMCAP) and Detailed Statement of Reserves and Capital (transaction REISMMCAPD). The following methods are available:

- CHANGE_ACCOUNT: You can use this method to edit the selection of accounts that is executed for the report.
- CHANGE_CAPITAL_DATA: In this method, you can change data selected from the accounts (totals values), for instance by adding information.
- CHANGE_CAPITAL_PER_RO: In this method, you can edit or add to values on the individual objects (condominiums) (only for transaction REISMMCAPD). Notes for Developers

Country-Specific Settings

Activate Country-Specifics

Use

To meet certain country-specific needs, program code has been written in Flexible Real Estate Management (RE-FX) that is only relevant for certain countries. For example, certain fields in master data processing only apply to specific countries. In order to keep Customizing as simple as possible, these fields are included in the standard screen sequences of standard Customizing. However, they are only visible when the given country has been activated here. In a similar way, some countries use BAdIs, for example, to help create default settings. These BAdI implementations are delivered as active by SAP, but the system exits the program immediately if the required country is **not** active.

Standard settings

In the standard system, all countries that have their own country-specific program code are **not** active. There is country-specific code for the following countries:

- AT - Austria
- CH - Switzerland
- IT - Italy

- JP - Japan
- PT - Portugal

Activities

If you are using Flexible Real Estate Management (RE-FX) in one of the countries listed above, set the *Active* indicator for your country. Also check the IMG node for your country to see what other settings you need to make.

While it is technically possible to add other countries here, it has no effect, unless you program project-specific BAdIs that query this indicator for the given country.

Note

This IMG activity is the prerequisite for **all** other country-specific settings that you make in the Implementation Guide. Therefore this activity is not listed as a prerequisite in the other country-specific IMG documents.

Germany

Land Use Management

Central Settings for Land Use Management

Activate Subapplication

Use

Some enhancements to the standard system are subapplications of Flexible Real Estate Management (RE-FX) from a technical perspective. One example is land use management (LUM), a country-specific development for Germany.

Activities

Set the *active* indicator for subapplications you need. The system treats any subapplication that is not found in the table as an inactive subapplication.

Make General Settings for Land Use Management

Use

In this section you make general settings for Land Use Management (LUM).

Activities

You enter default values in the *Defaults for Land Registers* and *Defaults for Parcels* group boxes. These default values apply per master data object in dialog processing. You enter values for units of area, units of length and units of time. You can also enter a default currency, if needed.

For parcels, you can also enter default values for the location structure and for overlays for cadastral usage types.

Define Hierarchical Location Structure

Use

In this activity you define various location structures. Location structures are used to uniquely identify parcels or land registers for different purposes.

In Germany, you use these settings to create, at the minimum, the following two hierarchies:

- APR hierarchy for the automated property register of the land registry
- Administrative hierarchy for the survey office

Activities

Enter an ID and a name for your location structure.

Specify the number of levels for the hierarchy and the names of each level.

For each location structure, you also specify the following:

- *Allowed Hierarchical Location Structures per Object Type*
Specify if assignment of the object type to this location structure is mandatory. Specify if this is the standard location structure.
- *Hierarchical Locations in Location Structure*
Here you enter the possible locations for each defined hierarchy level.

Example:

You defined these three levels for the location system:

- 1 - Country
- 2 - Region
- 3 - City

Then you enter all countries, regions and cities that you need in your system.

- *Assignment of Hierarchical Locations in Location Structure*

You assign the already defined hierarchical locations to one another and assign a key for each location. You can then assign only this key to a parcel or a public register in the application.

You are not required to assign the keys systematically, but it is a good idea. The key of the hierarchical location is not allowed to contain any spaces.

If the assignment should change due to restructuring of individual hierarchical locations, it is not a problem to assign new keys (at the level *Assignment of Hierarchical Locations in Location Structure*) or to assign other locations to an existing key. However, if the key itself should change, then you have to change the master data.

Example

You defined the following locations at the given level:

Level - Country:

DE - Germany

CH - Switzerland

US - USA

Level - Region:

D - North Rhine-Westphalia

D - Bavaria

CH - Basel

CH - Tessin

US - Michigan

US - Florida

Level - City:

D-K - Cologne

D-D - Duesseldorf

D-M - Munich

CH-B - Basel

CH-LG - Lugano

US-CH - Chicago

US-M - Miami

US-OL - Orlando

Assignment of Hierarchical Locations in Location Structure:

For the assignment of hierarchical locations in the hierarchy, you have to assign a unique key to each hierarchical location.

A hierarchical location cannot be used in object unless it has a key here.

DE-K Cologne DE D D-K

DE-D Duesseldorf DE D D-D

AP System

DE-M	Munich	DE	D	D-M	CH-B
Basel	CH	CH	CH-B		
CH-LG	Lugano	CH	CH	CH-LG	
US-CH	Chicago	US	US	US-CH	
US-M	Miami	US	US	US-M	
US-OL	Orlando	US	US	US-OL	

In this case, you would assign the location DE-K to a parcel in Cologne. It is then clearly visible, both in master data processing and in reports, that this parcel has the following location:

- Country: Germany
- Region: North Rhine-Westphalia
- City: Cologne

Define Search Strategy for Deriving Hierarchical Location

Use

You can use a search strategy so that an appropriate hierarchical location can be proposed for a given parcel (or piece of land).

Search strategies use search methods, which specify how the hierarchical location is determined from the object data.

In order for the system to be able to determine a default value or possible search help value for the hierarchical location of the parcel, exactly one search strategy must be active for the LOCHIER search field.

Activities

Define the search strategy for the LOCHIER search field as follows.

Set the *Active* indicator for the search system you want the system to use. (All other search strategies are then superfluous and can be deleted. It is only possible in the test phase to define one search strategy for each search method being tested.) Enter a name for the search strategy.

Specify how the search takes place:

- *Name*
Text of search strategy (informational only)
- *Search Method*
This is a method that is predefined in the system. The method describes how the search is performed. The way the system processes the values for the search strategy depends on the method you select here. Choose a method using the input help.
- *Active?*

You can only use search strategies. For example, if you copied the search strategies from standard Customizing, then set the *Active?* indicator for those that you want to actually use in your system.

- *Other Values*

Set this indicator, if you also want the standard search help to be available. The system then displays a *Further Values* row, in addition to the values returned by the search strategy. From there you can navigate to the standard search help.

Only one search method, LOCHIER, is predefined in the system for the hierarchical location.

You can activate it by copying the sample code in the BADI_RECA_SEARCH_METHOD

BAdI:

LOCHIER: Derive hierarchical location from already existing hierarchical location.

This search method assumes that the texts of the hierarchical locations in the different location structures do not differ. For a hierarchical location being derived, the system therefore checks if a hierarchical location was already entered (and if so, which one) and if there is a corresponding hierarchical location with the same text in the other location structures. If there are hierarchical locations that meet these criteria, then the system proposes them.

To be able to use this search method (that is delivered with the system), you have to copy the sample coding of the implementing class CL_EXM_IM_RECA_SEARCH_METHOD of enhancement spot BADI_RE_CA_SH to a customer class. Then you must activate this customer implementation.

Set Up Contract Types for Land Use Management

Use

If you want to manage contracts for land use management (LUM) in your system, then you should set up contract types specifically for land use management here.

Requirements

You defined contract types for land use management.

Standard settings

You should use some of the contract types defined in standard Customizing. According to their naming convention, these all begin with the letter L.

Activities

Check the following settings for contracts related to land use management:

- Set the M.Fee Not. (Municipal Fee Notice) indicator for the contract type that will be used for the municipal fee notice. This setting can only be made here. This indicator is not found in the definition of the contract types.
- *O/U* (Offerer/User)
In this field, choose *Offerer* for contract types in which properties are offered, from the viewpoint of the company code. Usually these are customer contracts. For properties that are offered to you by others for your use, choose *User*. (These contracts are normally vendor contracts.) The system uses the information in this field so that it can correctly display the contract areas on the parcel on the *Contractual Usage* tab page.
- *Influence Holdings*:
Specify how the contract influences your real estate holdings, that is, is it a contract changing holdings (sale, purchase, land lease) or a right of use contract (contract using holdings such as, rent, lease). If the contracts of this contract type (such as, right of way) do not affect holdings, then leave the default value, *No Influence on Holdings*. This field also controls how the areas of parcels are displayed in reports on area.
- *ScnSeq* (Screen Sequence):
Since some screens are irrelevant for land use management contracts, two special screen sequences for land use management are provided in standard Customizing:
 - REGCL LUM: Right of use contracts
 - REGCL LUM: Contracts changing holdings
Enter the appropriate screen sequence for your contract type.
- *BP Role*
Enter the role of the main contractual partner.
Example

Parcel of Land

Define Parcel Map Types

Use

Parcels are measured in terms of cadastral area. The surveying is performed either by the survey office itself or by another recognized and certified surveyor. The results of surveying a tract of land are recorded in parcel maps

Here you define different types of parcel maps.

Define Soil Parent Material

Use

Here you define the geological origin of the soil (parent material) of parcels. The soil parent material is an attribute of the cadastral usage of a parcel and can be used for classifying parcels.

Cadastral usage is based on legal determinations and regulations, and is recorded in the real estate cadaster in the form of overlays.

Define Soil Textures

Use

Here you define the soil texture of parcels. The soil texture is an attribute of the cadastral usage of a parcel and can be used for classifying parcels.

Cadastral usage is based on legal determinations and regulations, and is recorded in the real estate cadaster in the form of overlays.

Define Overlays

Use

Here you define overlay numbers that are independent of the given German federal state.

You then assign the overlay numbers to a hierarchy level of the location structure. You make this assignment in the Specify Relevant Overlay Numbers for Certain Hierarchy Levels IMG activity. This

assignment allows you to structure overlays in accordance with the separate requirements of each given German state.

Specify Relevant Overlay Numbers for Certain Hierarchy Levels

Use

Here you assign overlay numbers to a given hierarchy level of a location structure. This assignment allows you to structure overlays in accordance with the separate requirements of each given German state.

Requirements

You defined overlay numbers.

You defined the hierarchical location structure,

Activities

Enter the overlay number that is relevant for each hierarchy level of a given location structure.

Specify Cadastral Classification

Use

Here you define the cadastral classification of parcels. This classification represents the use of the parcel from the viewpoint of the land survey office.

Cadastral usages of the same type are grouped together by overlay numbers.

Requirements

You defined the overlay numbers

Activities

For each overlay number, enter all cadastral classifications, for which you want to be able to enter measurements.

Enter a key and a text for each cadastral classification.

Specify Usage Types and Usage Subtypes

Use

In this activity, you define the usage types of the parcel from the viewpoint of the owner.

You can also further classify these usage types into usage subtypes. Each usage subtype has to be assigned to a usage type.

You use usage subtypes to group together areas based on actual usage or planned actual usage.

Activities

- Enter a key and a name for the usage type you want to define for the parcel. - Decide if the usage type is an actual (internal) usage and/or an other usage.
- Specify if the usage type should be included in the area analysis .
You also have another option for areas with other usage that are used by contracts that are **not** entered in the system. You can enter here that they are used by contracts and therefore are included in the area analysis.
- If you want to define usage subtypes for actual usages, then proceed as follows:
- Select a usage type for actual usage and choose *Subusage Types*.
- Enter the usage type again, and assign a new key to it and a name for the usage subtype.

Define Function for Parcels

Use

In this activity, you enter the functions allowed for parcels.

Fixtures and Fittings Characteristics

Define Fixt./Fittings Characteristics for Buildings, ROs, and Parcels

Use

You specify here which fixtures and fittings characteristics are to be available when processing the rental object, building, parcel, and architectural object. The fixtures and fittings characteristics that you define

here can be assigned to a representative list of rents (see Define Representative List of Rents: *Characteristic Categories --> Surcharge/Reduction Characteristics*).

For fixtures and fittings characteristics that are **not** relevant for the representative list of rents, you can define a structure using the Specify Structure of Fixtures and Fittings Characteristics Independent of Representative List of Rents IMG activity.

Activities

- Define all required fixtures and fittings characteristics.
- For each fixtures and fittings characteristic, specify the objects on which the characteristic is visible: rental object, building, and/or parcel. You can then process these fixtures and fittings characteristics on the rental object or building by choosing the Fixtures/Fittings tab page. For parcels, you see the fixtures and fittings characteristics by choosing the Development tab page.
If you need fixtures and fittings characteristics in architectural objects, you define them here. Then you assign them to architectural objects in the Specify Fixt/Fittings Characteristics for Architectural Objects IMG activity.
When adjusting conditions using the representative list of rents procedure (according to the representative list of rents), you can use fixtures and fittings characteristics and their evaluations for the calculation of the comparative rent.
The fixtures and fittings characteristics of the rental object and those of the assigned building (provided that this is defined for the representative list of rents) are used in this calculation of the comparative rent. If you indicate that a fixtures and fittings characteristic is permitted for both object types, you can define the general validity of this characteristic at the building. For the rental objects to which the building attribute does not apply, you can then make a different setting in the application (see example).
- Also define for each fixtures and fittings characteristic whether it is relevant for the representative list of rents, that is, whether it should be included in the rent adjustment according to the representative list of rents.
- You can define that a specific fixtures and fittings characteristic should only be visible for objects of this category (derived from the usage type of the rental object) using the *usage category*. If you do not enter anything here, the fixtures and fittings characteristic can be selected regardless of the usage type of the rental object.

Example

For example, if all apartments of a house are equipped with oil central heating, you could define the fixtures and fittings characteristic **Oil Central Heating** for the building instead of separately for each apartment. If electric heating is installed in the top-floor apartment (that was subsequently added), then when you process this apartment, you can select the **Oil Central Heating** characteristic as *not appropriate* and instead specify a fixtures and fittings characteristic **Electric Heating**.

Specify Structure of Fixt./Fittings Characteristics Independent of RLR

Use

For rental objects and buildings for which a representative list of rents is defined, the structure of fixtures and fittings characteristics (hierarchy of characteristic categories, characteristic groups, and the individual characteristics that are displayed in the processing dialog, for example, to define new characteristics for an object) is determined using the representative list of rents structure.

You can also define a structure for characteristics that are not dependent on the representative list of rents in this dialog. This structure has the following effects on the display of characteristics in the processing dialog:

- If **no** representative list of rents is specified for a building or rental object on the relevant business entity, then the characteristics are displayed according to the structure defined here when you add new characteristics. This also applies to parcels, if you are using Land Use Management (country-specific for Germany).
- If a representative list of rents is specified for a building or rental object, then in the processing dialog you can switch to *representative-list-of-rents-independent display* to use the structure defined here.

When you have switched, the system saves this setting and uses the representative-list-of-rents-independent display the next time for processing.

During Maintenance of the Structure of Fixtures and Fittings Characteristics for Individual List of Representative Rents, you can also determine how the individual characteristics are to be evaluated (dependent on the respective representative list of rents).

The structure specified here is stored technically under *Representative list of rents <empty>*.

Activities

- Select the only line of the characteristic structure (*representative list of rents <empty>*) and define which characteristic categories should be distinguished between.
- Define characteristic groups if necessary. Characteristic groups are cross-category. You can use the defined characteristic groups within a category to structure the characteristic assignment further. You can also define how many characteristics of a group can be assigned to a category for each group.
- Assign the characteristics that should appear under this category to each characteristic category. Each characteristic can be assigned to a maximum of one category. Assign the fixtures and fittings characteristics of this category to each characteristic category. Define the characteristic group if necessary. If you select *Superimpose* then this characteristic is superimposed when creating an object and only needs to be selected as *Applicable*. You can only assign characteristics for which the Use Only if Relevant to Representative List of Rents indicator is **not** set.

Infrastructure Characteristics

Define Infrastructure Characteristics

Use

When processing master data, you can specify how far the real estate object is from given geographical points. You define these points using infrastructure characteristics.

Activities

Here you specify the infrastructure characteristics for which entries related to distance are possible. You can also specify the unit of distance and the time (with the basis for the time measurement) that is preferred for entries related to distance. These specifications are optional. The system then proposes this unit as a default value.

Example

You can enter the following infrastructure characteristics for the **real estate search**:

- Kindergarten
- Elementary school
- Supermarket
- Train station
- Airport
- Bus stop
- Recreation area/park

You can enter the following infrastructure characteristics for **Land Use Management**:

- Road/street
- High-tension tower

Specify Basis for Measuring Distance as Time

Use

When processing master data, you can enter the distance to given infrastructure characteristics.

You can specify the distance either in the form of a measurement of distance (such as, miles) or as a time.

If you choose infrastructure characteristics for which the time entry could be based on different assumptions (such as different modes of transportation), then you should specify the basis for the time entry here.

Requirements

You defined infrastructure characteristics infrastructure characteristics.

Example

In your infrastructure characteristics, you defined the distance to the elementary school as a time in minutes. In that case, you should distinguish between "Minutes on foot" and "Minutes by bus."

Default Survey Office/Responsible Agency

Define Search Strategy for Main Contractual Partner for Parcel

Use

You can use a search strategy so that the system proposes an appropriate main contractual partner (usually a survey office or other responsible agency) for a given parcel. Search strategies use search methods, which specify how the main contractual partner is determined from the object data.

In order for the system to be able to determine a default value or possible search help value for the main contractual partner of the parcel, exactly one search strategy must be active for the PARCOFF search field.

Activities

Define the search strategies for the PARCOFF search field as follows. Set the *Active?* indicator for the search strategy you want the system to use. (The other search strategies can then be deleted. It only makes sense during the test phase to define one strategy for each search method you are testing.)

Enter a name for the search strategy.

Specify how the search takes place:

- *Name*
Text of search strategy (informational only)

- *Search Method*
This is a method that is predefined in the system. The method describes how the search is performed. The way the system processes the values for the search strategy depends on the method you select here. Choose a method using the input help.
- *Active?*
You can only use search strategies. For example, if you copied the search strategies from standard Customizing, then set the *Active?* indicator for those that you want to actually use in your system.
- *Other Values*
Set this indicator, if you also want the standard search help to be available. The system then displays a *Further Values* row, in addition to the values returned by the search strategy. From there you can navigate to the standard search help.

The following search methods for the main contractual partner of the parcel are predefined in the system:

ADDR Main contractual partner from postal code
PARTNR Survey office from partner number
VALREG Survey office based on hierarchical location

The ADDR and PARTNR methods assume that the partner numbers are assigned so that their meaning is clearly apparent. The systematic way of doing this is described in the *Define Search Method* IMG activity. You can use your own customer-specific numbering system as a reference for the implementation.

For the VALREG method, you have to enter the possible values for each region in the value table. The region in this case is the hierarchical location of the parcel according to the leading hierarchical location structure. In the *Differentiation Characteristic* column, enter the hierarchical location. You can use the asterisk (*) and plus sign (+) as wildcard characters. Enter the partner number of the responsible agency in the *Value* column.

To be able to use these methods delivered with the system, you have to copy the sample code of the implementing class CL_EXM_IM_RECA_SEARCH_METHOD of the enhancement spot BADI_RE_CA_SH to a customer class. Then you have to activate this customer implementation.

Specify Partners Possible for Search Strategy

Use

You enter the possible values here for a search strategy that was already defined. For search strategies with the VALREG (main contractual partner from hierarchical location) method, enter the hierarchical

location in the *Differentiation Criterion* column, and enter the partner number in the *Field Contents* column.

If your active search strategy uses a method that does not require entering values, then you do not have to have to enter values here.

Activities

For each search strategy, enter the search values that are needed based on the search method:

Where you enter these values is dependent on the search method used by the search strategy. For search methods where the values for the strategy are simply entered, you enter the values directly in the *Differentiation Criterion* field. In that case, you can specify only one value for each search strategy as a default value.

For search methods that recognize a differentiation criterion (such as, the location of the current object), you have to enter the possible values for each differentiation criterion in the *Field Contents* field.

You can use wildcard characters here: An asterisk (*) replaces any number of characters, while a plus sign (+) replaces exactly one character. If more than one value is possible for a differentiation criterion, then enter a number to distinguish the values in the *Seq. Number* (sequence number) field. You are only allowed to designate one value as the default value for each combination of search strategy and differentiation criteria.

To help you select possible values more easily, you can choose *Propose Values*. Position the cursor on the search strategy, for which you want to propose values (or, if there is no entry yet for search strategy, on the search field). Then choose *Propose Values*. The system displays a search help appropriate for the search strategy. You can select the values there that you need for this search strategy.

Note on transport:

Since you enter partner numbers in the table, transporting to another system only makes sense if the partner numbers are the same in both systems!

Dialog

Change Screen Layout

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout

Field Groups

Field Groups

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status

Use

Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
2. Select the row and choose *Field Modification*.

The system displays all field groups that know the given application. In order to display the fields of a field group, position the cursor on the field group and choose *Environment -> Field check*.

3. Now you can, for example, suppress field groups that are not needed or define other field groups as "Required entry" fields. If you choose the "Not specified" setting, then the system itself determines how the field is treated. (Usually these fields are optional entry fields in create and change mode, and display fields in display mode.) If it is not possible to make a setting for a field group, then the system determines how the field is treated (usually dependent on the situation, or on the contents of other fields).

Note

Before you suppress multiple field groups of a view, a section or a screen sequence, you should consider if it makes more sense to remove the view, section or screen completely from the screen sequence.

Views

Use

Here you specify which field groups are grouped together into a view (part of a screen, technically a subscreen). You should group together the field groups that necessarily belong together during a check.

Example

If you have a field group with a valid-from date and a field group with a valid-to date, and these should be checked against each other in a module, then you should group them together into a view.

The check module is in the detailed data under "Function Module After Entry".

Standard settings

SAP recommends that you not change the standard settings. It is only necessary to make changes if you want to add your own new fields to the master data dialog.

In that case, copy an existing view to the customer namespace (Y* or Z*) and modify the properties of the view accordingly (consider the detail screen). Then assign the field groups to the view. You can assign your own field groups, as well as those delivered by SAP.

Sections

Use

Here you specify which views are grouped together into sections. You can recognize a section because it is surrounded by a frame. Fields that logically belong together should be grouped together in sections.

Standard settings

SAP recommends that you not change the standard settings.

It could be necessary to define new sections, either to arrange views delivered by SAP differently or to add your own fields to the master data dialog.

In that case, copy an existing section to the customer namespace (Y* or Z*) and assign the views you want to this section. The item number specifies the sequence in which the views are arranged in the section. For technical reasons, if you make your own assignments from sections to views, the item numbers have to be in the customer namespace (that is, they are not allowed to end in ").

This makes it possible for you to also include your own views in SAP sections. Select a section, and choose *Section -> Views* in the dialog tree, and assign the view to a section using a corresponding item number.

Screen Sequences

Use

Here you specify which screen sequences should appear in dialog. A screen sequence consists of different screens, and each screen is equivalent to a tab page.

Standard settings

SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories or Screen Sequence Category -> Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):

Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.

- Rental object:
You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).
- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
- RE search request:
For normal entry, you use the standard screen sequence. For fast entry (ad hoc search) the RERRFE screen sequence is used. (This cannot be changed.)

Events

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Screens

Use

Here you specify which tab pages appear in the dialog, and which sections make up these tab pages.

Standard settings

SAP recommends that you do not change the standard tab pages.

If you want to change a tab page, copy the standard tab page that is closest to the tab page you have in mind, and give it a name in the customer name range (Y* or Z*). Then assign the sections you want. The position number for user-specific entries also has to be other than here.

Tables

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Implement Enhancements (BAdI)

Validation, Substitution

Use

The Business Add-In supports enhancements to the standard functions of parcels. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications

Notes for Developers

Conversion Exits for Parcel Number

Use

The Business Add-In supports enhancements to the standard functions of parcel numbers. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

The following methods exist:

- **NUMBER_INPUT** - Conversion of the parcel number at the time of entry. The method is called when a parcel number is entered on the screen.
- **NUMBER_OUTPUT** - Conversion of the parcel number at the time of output. The method is called when a parcel number is output on the screen.

The implementation of the methods has to be independent of the interface. It is not allowed to contain any COMMIT WORK or ROLLBACK WORK statements.

For example, direct output of messages using the MESSAGE statement, without using the existing exceptions, is not allowed.

Method description

- **NUMBER_INPUT**
For conversion at the time of input (from the screen to the internal display)
- **NUMBER_OUTPUT**
For conversion at the time of output (from the internal display to the screen)

Example

For a sample implementation that shows the conversion of parcel numbers as in the LUM add-on, see the class `CL_EXM_IM_RELM_NUMBER_PLNO`. Notes for Developers

Define Custom Search Methods for Search Strategies

Use

Here you define your own custom search methods. You can then process the corresponding implementations for them using a BAdI. For more information, see Implement/Activate Search Methods for Search Strategies.

Standard settings

Some methods are predefined in the system. However, they only deliver the expected results when the sample code of the BAdI is activated.

Activities

If the predefined search methods are not sufficient to meet your needs, you can define your own methods. Choose names for your methods that begin with the letter Y or Z.

You can assign one method to several search fields. However, doing so makes sense only if the search fields point to the same domain (for example, the land registry and the agency responsible for the parcel, since both are business partners).

In addition, specify the following for the search method:

- A descriptive name
- The search help for the differentiation criterion (when entering allowed values)
- The type of the method

Then implement the BAdI for the search method.

Implement/Activate Search Methods for Search Strategies

Use

This BAdI can be used to define your own search methods for a search strategy. Search methods are each assigned to a search strategy. The BAdI method that is used depends on the type of search method that is entered for the method in table TIVCASHMETH. The following applies:

Type SPACE - Single Value Method, Values Are in VICASHFVALUES-SHMETHDIFF

There is no BAdI call, the values for the search strategy are entered directly in table VICASHFVALUES.

Type - Search Strategy + Possibly Object Data => (Program) Values The BAdI determines the possible values solely from the name of the search strategy and possibly from the object data.

BAdI method to be implemented: **GET_VALUES**

Type Search Strategy =>SMETHDIFF => (Program) Values

First a differentiation criterion is determined for the search strategy from the value table VICASHFVALUES. The BAdI then determines the possible values from this differentiation criterion, possibly dependent on the object data and the name of the search strategy. BAdI method to be implemented: **GET_VALUES_FOR_SHMETHDIFF**

Type Object Data => (Program) SMETHDIFF => (VICASHFVALUES) Values

The BAdI determines a differentiation criterion from the object data and possibly from the name of the search strategy. The values for this differentiation criterion are then read from table VICASHFVALUES.

BAdI method to be implemented: **GET_SHMETHDIFF** Search

strategies are used in the following contexts:

- One-Time Postings:
Vendor search field (VENDOR) and service charge key (SCSCKEY)

The search strategy is determined from the Customizing settings for the posting activity (VENDOR) or for a specific item of the posting activity (SCSCKEY). An object reference is **not** transferred.

- Master Data of Parcel:
Search fields for main contractual partner (PARCOFF) and for all hierarchical locations (LOCHIER). The object reference of the parcel is transferred.
For the LOCHIER search field, the location structure of the hierarchical location you are searching for is also in the ID_CONTEXT field.
- Master Data of Land Register:
Search fields for land registry (LROFFICE) and for the hierarchical location (LOCHIER). The object reference of the land register is transferred.
For the LOCHIER search field, the location structure of the hierarchical location you are searching for is also in the ID_CONTEXT field.

The following applies to the search fields for the land register and parcel:
For each search field, only one search strategy is allowed to be designated as active.

Activities

Depending on the type of search method, implement one of the methods:

- **GET_VALUES**
- **GET_VALUES_FOR_SHMETHDIFF**
- **GET_SHMETHDIFF**

Description of parameters:

Method **GET_VALUES** and **GET_SHMETHDIFF**:

FLT_VAL

Search method

IO_REF_OBJ

Reference to the real estate object that is currently being processed. The reference is empty when the call is from posting activities. For the land register, the reference contains a reference to the land register master data; and for parcels, a reference to the parcel master data.

The BAdI method can retrieve the current object data using the API that belongs to it.

ID_CONTEXT

For the LOCHIER search field, contains the location key of the hierarchical location being searched for; otherwise it is empty.

IS_SHSTRAT

Contains certain Customizing data for the active search strategy

IS_SHFIELD

Contains the system Customizing data for the current search field

CT_VALUES

The result of the search is to be placed in this table. The KEY field has to be filled with the determined key of the search field. The text for it does not have to be entered. For methods of type , the value of the search field is not entered. Instead the differentiation criterion, which should be used to search in VICASHFVALUES, should be filled. In this case, wildcard characters ('%') are allowed for a search for similar values.

CD_DEFAULT_VALUE

If a default value was determined, it can be returned here. The default value is set when the value of the field, for which the search help was called, was initial at the time of the call.

CF_OTHER_VALUES_ALLOWED

This value should be returned as TRUE, if you want to have an option to choose "Other Values" in the search dialog box, in addition to the search result. If the user chooses this option, then the system calls the standard search help. The value does not influence whether the system checks the result of the search help (normally there is no check).

Method GET_VALUES_FOR_SHMETHDIFF

In addition to the parameters of GET_VALUES, the values that are maintained in the value table for the search strategy are also transferred to table IT_SHVALUES.

Example

Example class **CL_EXM_IM_RECA_SEARCH_METHOD** contains examples for the following search methods:

Type - Search Strategy + Possibly Object Data => (Program) Values**GET_VALUES** for **LOCHIER** search method

The hierarchical location of the parcel is derived from hierarchical locations to other location structures that are already entered in the system. A value is allowed here if the same text is entered for this location in Customizing.

GET_VALUES for **PARTNR** search method

The prerequisite here is that there is external number assignment for land registries (land register) and for the main contractual partner (survey office or responsible agency) of the parcel.

The partner number of the land register corresponds to the land register district; the number of the survey office corresponds to the first characters of the leading hierarchical location. This method might

need to be adjusted to agree with the practices of your company regarding partner numbers. For example, it is possible that the partners could all have a prefix in the number, such as LR for land registry.

GET_VALUES for ADDR search method

The assumption here is that the postal code of the land registry corresponds to the land register district. All land registries, where postal code = land registry, are offered for selection. For the parcel, the system searches for a partner with the "Responsible Agency" role, where the city agrees with the text of the hierarchical location of the parcel.

Type Search Strategy =>SMETHDIFF => (Program) Values

GET_VALUES_FOR_SHMETHDIFF for ROLE search method

This search method is appropriate for the VENDOR search field. The search method returns all vendor numbers of partners for the role that are maintained in the value table for the search strategy.

For example, if you create your own role for insurance, you can assign a search strategy with this search method to a posting activity for "insurance costs".

Type - Object Data => (Program) SMETHDIFF => (VICASHFVALUES) Values

GET_SHMETHDIFF for VALREG search method

You can use this search method when the land registries for the land register district are entered in the value table. The search method determines the land register district for the current land register, or for the first characters of the hierarchical location of the current parcel.

Notes for Developers

Parcel Update

Define Parcel Update Types

Use

You can only define parcel update types for the *Official Record of Change* parcel update category (see parcel update). The parcel update type specifies the purpose of the change made in the real estate cadaster that is documented in the official record of change.

You can enter parcel update types in the master data of the official record of changed on the *Change in Holdings* tab page.

Activities

Enter all purposes that lead to changes of parcels and which are documented using an official record of change.

Example

- Entry of a parcel
- Parcel split due to surveying results

Dialog

Change Screen Layout

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout

Field Groups

Field Groups

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status

Use

Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
2. Select the row and choose *Field Modification*.
The system displays all field groups that know the given application. In order to display the fields of a field group, position the cursor on the field group and choose *Environment -> Field check*.
3. Now you can, for example, suppress field groups that are not needed or define other field groups as "Required entry" fields. If you choose the "Not specified" setting, then the system itself determines how the field is treated. (Usually these fields are optional entry fields in create and change mode, and display fields in display mode.) If it is not possible to make a setting for a field group, then the system determines how the field is treated (usually dependent on the situation, or on the contents of other fields).

Note

Before you suppress multiple field groups of a view, a section or a screen sequence, you should consider if it makes more sense to remove the view, section or screen completely from the screen sequence.

Views

Use

Here you specify which field groups are grouped together into a view (part of a screen, technically a subscreen). You should group together the field groups that necessarily belong together during a check.

Example

If you have a field group with a valid-from date and a field group with a valid-to date, and these should be checked against each other in a module, then you should group them together into a view.

The check module is in the detailed data under "Function Module After Entry".

Standard settings

SAP recommends that you not change the standard settings. It is only necessary to make changes if you want to add your own new fields to the master data dialog.

In that case, copy an existing view to the customer namespace (Y* or Z*) and modify the properties of the view accordingly (consider the detail screen). Then assign the field groups to the view. You can assign your own field groups, as well as those delivered by SAP.

Sections**Use**

Here you specify which views are grouped together into sections. You can recognize a section because it is surrounded by a frame. Fields that logically belong together should be grouped together in sections.

Standard settings

SAP recommends that you not change the standard settings.

It could be necessary to define new sections, either to arrange views delivered by SAP differently or to add your own fields to the master data dialog.

In that case, copy an existing section to the customer namespace (Y* or Z*) and assign the views you want to this section. The item number specifies the sequence in which the views are arranged in the section. For technical reasons, if you make your own assignments from sections to views, the item numbers have to be in the customer namespace (that is, they are not allowed to end in ").

This makes it possible for you to also include your own views in SAP sections. Select a section, and choose *Section -> Views* in the dialog tree, and assign the view to a section using a corresponding item number.

Screens

Use

Here you specify which tab pages appear in the dialog, and which sections make up these tab pages.

Standard settings

SAP recommends that you do not change the standard tab pages.

If you want to change a tab page, copy the standard tab page that is closest to the tab page you have in mind, and give it a name in the customer name range (Y* or Z*). Then assign the sections you want. The position number for user-specific entries also has to be other than here.

Screen Sequences

Use

Here you specify which screen sequences should appear in dialog. A screen sequence consists of different screens, and each screen is equivalent to a tab page.

Standard settings

SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories or Screen Sequence Category** -> **Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):
Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.
- Rental object:

AP System

You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).

- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
- RE search request:
For normal entry, you use the standard screen sequence. For fast entry (ad hoc search) the RERRFE screen sequence is used. (This cannot be changed.)

Events

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Tables

You need this dialog only if you want to make complex modifications to the standard dialog.
SAP recommends that you leave the settings delivered here unchanged.

Implement Enhancements (BAdI)**Validation, Substitution****Use**

The Business Add-In supports enhancements to the standard functions of parcel updates. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications

Notes for Developers

Land Register

Define Land Register Types

Use

Here you define land register types for the land register.

In addition to the "normal" land register, there are other registers, such as:

- Apartments register
- Partial ownership land register

Using the land register type, you specify which data can be entered in the land register.

For the purposes of reporting, you can assign the land register types to internal land register types, either *Ownership* or *Land Lease*.

For more information on the land register, see Information on the Land Register.

Activities

Enter a key for the land register type and a long and short name for it.

Assign the land register type to an internal land register type.

Define Land Register Districts

Use

Separate land registers are maintained by each land registry for each given land register district. One land registry can be responsible for several land register districts.

Activities

Enter the number of the land register district that is entered on the page of the land register, and the name of the land register district.

If you have a large real estate portfolio, you can also enter the state and region.

Define Encumbrance Types

Use

Encumbrance types are used in the land register in section II or III.
Here you define the encumbrance types you need, and specify how they are used.

Activities

Specify the following for each encumbrance type:

- Use in real estate register?
- Use in section II?
- Use in section III?
- Has dominant tenements?
- Has servient tenement?
- Has holder?
- Has obligated party?
- Has contracts?

Depending on how this indicator is set, the corresponding tab pages in master data processing for the land register are either hidden or displayed.

Default Land Registry

Define Search Strategy for Land Registry

Use

You can use a search strategy so that the system proposes an appropriate main contractual partner (usually a land registry) for a given land register page.

Search strategies use search methods, which specify how the main contractual partner is determined from the object data.

In order for the system to be able to determine a default value or possible search help values for the main contractual partner of the land register page, exactly one search strategy must be active for the LROFFICE search field (for the land register).

Activities

Define the search strategies for the LROFFICE search field as follows. Set the active indicator for the search strategy you want the system to use. (The other search strategies can then be deleted. It only makes sense during the test phase to define one strategy for each search method you are testing.)

Enter a name for the search strategy.

Specify how the search takes place:

- *Name*
Text of search strategy (informational only)
- *Search Method*
This is a method that is predefined in the system. The method describes how the search is performed. The way the system processes the values for the search strategy depends on the method you select here. Choose a method using the input help.
- *Active?*
You can only use search strategies. For example, if you copied the search strategies from standard Customizing, then set the *Active?* indicator for those that you want to actually use in your system.
- *Other Values*
Set this indicator, if you also want the standard search help to be available. The system then displays a *Further Values* row, in addition to the values returned by the search strategy. From there you can navigate to the standard search help.

The following search methods for the main contractual partner for the land register are predefined in the system:

ADDRNR	Land register from address
PARTNR	Land register from partner number
VALREG	Land register from district

The ADDR and PARTNER methods assume that the partner numbers are assigned so that their meaning is clear. The system for doing this is described in the "Define Search Method" section. You can use a customer-specific numbering system as an example for the implementation.

For the VALREG method, you have to enter the possible values for each land register district in the value table. In the differentiation criterion column, enter the land register district. You can use the asterisk (*) and plus sign (+) as wildcard characters. Enter the partner number of the land registry in the Value column. You can designate one land registry in each district as a default value.

To be able to use these methods delivered with the system, you have to copy the sample code of the implementing class CL_EXM_IM_RECA_SEARCH_METHOD of the enhancement spot BADI_RE_CA_SH to a customer class. Then you have to activate this customer implementation.

Define Partner Numbers Possible for Search Strategy

Use

You enter the possible values here for a search strategy that was already defined. For search strategies with the VALREG (land register from district) method, enter the land register district in the *Differentiation Criterion* column, and enter the partner number of the land registry in the *Field Contents* column.

If your active search strategy uses a method that does not require entering values, then you do not have to have to enter values here.

Activities

For each search strategy, enter the search values that are needed based on the search method:

Where you enter these values is dependent on the search method used by the search strategy. For search methods where the values for the strategy are simply entered, you enter the values directly in the *Differentiation Criterion* field. In that case, you can specify only one value for each search strategy as a default value.

For search methods that recognize a differentiation criterion (such as, the location of the current object), you have to enter the possible values for each differentiation criterion in the *Field Contents* field.

You can use wildcard characters here: An asterisk (*) replaces any number of characters, while a plus sign (+) replaces exactly one character. If more than one value is possible for a differentiation criterion, then enter a number to distinguish the values in the *Seq. Number* (sequence number) field. You are only allowed to designate one value as the default value for each combination of search strategy and differentiation criteria.

To help you select possible values more easily, you can choose *Propose Values*. Position the cursor on the search strategy, for which you want to propose values (or, if there is no entry yet for search strategy, on the search field). Then choose *Propose Values*. The system displays a search help appropriate for the search strategy. You can select the values there that you need for this search strategy.

Note on transport:

Since you enter partner numbers in the table, transporting to another system only makes sense if the partner numbers are the same in both systems!

Dialog

Change Screen Layout

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout

Field Groups

Field Groups

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status

Use

Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
2. Select the row and choose *Field Modification*.
The system displays all field groups that know the given application. In order to display the fields of a field group, position the cursor on the field group and choose *Environment -> Field check*.
3. Now you can, for example, suppress field groups that are not needed or define other field groups as "Required entry" fields. If you choose the "Not specified" setting, then the system itself determines how the field is treated. (Usually these fields are optional entry fields in create and change mode, and display fields in display mode.) If it is not possible to make a setting for a field group, then the system determines how the field is treated (usually dependent on the situation, or on the contents of other fields).

Note

Before you suppress multiple field groups of a view, a section or a screen sequence, you should consider if it makes more sense to remove the view, section or screen completely from the screen sequence.

Views**Use**

Here you specify which field groups are grouped together into a view (part of a screen, technically a subscreen). You should group together the field groups that necessarily belong together during a check.

Example

If you have a field group with a valid-from date and a field group with a valid-to date, and these should be checked against each other in a module, then you should group them together into a view.

The check module is in the detailed data under "Function Module After Entry".

Standard settings

SAP recommends that you not change the standard settings. It is only necessary to make changes if you want to add your own new fields to the master data dialog.

In that case, copy an existing view to the customer namespace (Y* or Z*) and modify the properties of the view accordingly (consider the detail screen). Then assign the field groups to the view. You can assign your own field groups, as well as those delivered by SAP.

Sections**Use**

Here you specify which views are grouped together into sections. You can recognize a section because it is surrounded by a frame. Fields that logically belong together should be grouped together in sections.

Standard settings

SAP recommends that you not change the standard settings.

It could be necessary to define new sections, either to arrange views delivered by SAP differently or to add your own fields to the master data dialog.

In that case, copy an existing section to the customer namespace (Y* or Z*) and assign the views you want to this section. The item number specifies the sequence in which the views are arranged in the section. For technical reasons, if you make your own assignments from sections to views, the item numbers have to be in the customer namespace (that is, they are not allowed to end in ").

This makes it possible for you to also include your own views in SAP sections. Select a section, and choose *Section -> Views* in the dialog tree, and assign the view to a section using a corresponding item number.

Screens

Use

Here you specify which tab pages appear in the dialog, and which sections make up these tab pages.

Standard settings

SAP recommends that you do not change the standard tab pages.

If you want to change a tab page, copy the standard tab page that is closest to the tab page you have in mind, and give it a name in the customer name range (Y* or Z*). Then assign the sections you want. The position number for user-specific entries also has to be other than here.

Screen Sequences

Use

Here you specify which screen sequences should appear in dialog. A screen sequence consists of different screens, and each screen is equivalent to a tab page.

Standard settings

SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories or Screen Sequence Category -> Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):
Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.
- Rental object:
You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).
- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
- RE search request:
For normal entry, you use the standard screen sequence. For fast entry (ad hoc search) the RERRFE screen sequence is used. (This cannot be changed.)

Events

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Tables

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Implement Enhancements (BAdI)

Validation, Substitution

Use

The Business Add-In supports enhancements to the standard functions of land registers. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications Notes for Developers

Conversion Exits for the Page Number of Land Register

Use

The Business Add-In supports enhancements to the standard functions of land register page numbers. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

The following methods exist:

- **NUMBER_INPUT** - Conversion of the land register page number at the time of entry. The method is called when a land register page number is entered on the screen.
- **NUMBER_OUTPUT** - Conversion of the land register page number at the time of output

The method is called when a land register page number is output on the screen.

The implementation of the methods has to be independent of the interface. It is not allowed to contain any COMMIT WORK or ROLLBACK WORK statements.

For example, direct output of messages using the MESSAGE statement, without using the existing exceptions, is not allowed.

Method description

- **NUMBER_INPUT**
For conversion at the time of input (from the screen to the internal display)
- **NUMBER_OUTPUT**
For conversion at the time of output (from the internal display to the screen)

Example

For a sample implementation that shows the conversion of land register page numbers as in the LUM add-on, see the class **CL_EXM_IM_RELM_NUMBER_LRPAGENO**. Notes for Developers

Conversion Exits for Numbers in the Real Estate Register

Use

The Business Add-In supports enhancements to the standard functions of real estate register numbers. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

The following methods exist:

- **NUMBER_INPUT** - Conversion of the real estate register number at the time of entry. The method is called when a real estate register number is entered on the screen.
- **NUMBER_OUTPUT** - Conversion of the real estate register number at the time of output. The method is called when a real estate register number is output on the screen.

The implementation of the methods has to be independent of the interface. It is not allowed to contain any `COMMIT WORK` or `ROLLBACK WORK` statements.

For example, direct output of messages using the `MESSAGE` statement, without using the existing exceptions, is not allowed.

Method description

- **NUMBER_INPUT**
For conversion at the time of input (from the screen to the internal display)
- **NUMBER_OUTPUT**
For conversion at the time of output (from the internal display to the screen)

Example

For a sample implementation that shows the conversion of real estate register numbers as in the LUM add-on, see the class `CL_EXM_IM_RELM_NUMBER_LRREGNO`. Notes for Developers

Conversion Exits for Numbers in Sections II and III

Use

The Business Add-In supports enhancements to the standard functions of section numbers in sections II and III.

For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

The following methods exist:

- **NUMBER_INPUT** - Conversion of the section number at the time of entry. The method is called when a section number is entered on the screen.
- **NUMBER_OUTPUT** - Conversion of the section number at the time of output (from the internal representation to the screen).
The method is called when a section number is output on the screen.

The implementation of the methods has to be independent of the interface. It is not allowed to contain any `COMMIT WORK` or `ROLLBACK WORK` statements.

For example, direct output of messages using the `MESSAGE` statement, without using the existing exceptions, is not allowed.

Example

For a sample implementation that shows the conversion of section numbers as in the LUM add-on, see the class `CL_EXM_IM_RELM_NUMBER_SECNO`. Notes for Developers

Allow Manual Entry of Ranking Numbers for Sections II and III

Use

In the land register, the system automatically calculates the ranking numbers in Sections II and III. You can only influence the ranking number indirectly by means of the fields 'Rank Before Sequence Number in Section' or 'Add Rank to Current Section Number'. It is not possible for you to enter the ranking number directly.

The BAdI `BADI_RELM_LR_RANKINGNO` makes it possible to enter the ranking number manually. To activate this BAdI, implement the method `IS_RANKINGNO_FILLED_MANUALLY`. The parameters of the method have the following meanings:

- `IO_OBJECT` is an import parameter and contains an object reference to the land register.
- `CF_MANUALLY` is a changing parameter. If it is set to `ABAP_TRUE`, then you can enter the ranking number directly.

The example implementation in class `CL_EXM_IM_RELM_LR_RANKINGNO` shows how you can control the option for manually entering the ranking number dependent on the land register district.

Notes for Developers

Define Custom Search Methods for Search Strategies

Use

Here you define your own custom search methods. You can then process the corresponding implementations for them using a BAdI. For more information, see [Implement/Activate Search Methods for Search Strategies](#).

Standard settings

Some methods are predefined in the system. However, they only deliver the expected results when the sample code of the BAdI is activated.

Activities

If the predefined search methods are not sufficient to meet your needs, you can define your own methods. Choose names for your methods that begin with the letter Y or Z.

You can assign one method to several search fields. However, doing so makes sense only if the search fields point to the same domain (for example, the land registry and the agency responsible for the parcel, since both are business partners).

In addition, specify the following for the search method:

- A descriptive name
- The search help for the differentiation criterion (when entering allowed values)
- The type of the method

Then implement the BAdI for the search method.

Implement/Activate Search Methods for Search Strategies

Use

This BAdI can be used to define your own search methods for a search strategy. Search methods are each assigned to a search strategy. The BAdI method that is used depends on the type of search method that is entered for the method in table TIVCASHMETH. The following applies:

Type SPACE - Single Value Method, Values Are in VICASHFVALUES-SHMETHDIFF

There is no BAdI call, the values for the search strategy are entered directly in table VICASHFVALUES.

Type - Search Strategy + Possibly Object Data => (Program) Values The BAdI determines the possible values solely from the name of the search strategy and possibly from the object data.

BAdI method to be implemented: **GET_VALUES**

Type Search Strategy =>SMETHDIFF => (Program) Values

First a differentiation criterion is determined for the search strategy from the value table VICASHFVALUES. The BAdI then determines the possible values from this differentiation criterion, possibly dependent on the object data and the name of the search strategy.

BAdI method to be implemented: **GET_VALUES_FOR_SHMETHDIFF**

Type Object Data => (Program) SMETHDIFF => (VICASHFVALUES) Values

The BAdI determines a differentiation criterion from the object data and possibly from the name of the search strategy. The values for this differentiation criterion are then read from table VICASHFVALUES.

BAdI method to be implemented: **GET_SHMETHDIFF** Search

strategies are used in the following contexts:

- One-Time Postings:
Vendor search field (VENDOR) and service charge key (SCSCKEY)

The search strategy is determined from the Customizing settings for the posting activity (VENDOR) or for a specific item of the posting activity (SCSCKEY). An object reference is **not** transferred.

- Master Data of Parcel:
Search fields for main contractual partner (PARCOFF) and for all hierarchical locations (LOCHIER). The object reference of the parcel is transferred.
For the LOCHIER search field, the location structure of the hierarchical location you are searching for is also in the ID_CONTEXT field.

- Master Data of Land Register:
Search fields for land registry (LROFFICE) and for the hierarchical location (LOCHIER). The object reference of the land register is transferred.
For the LOCHIER search field, the location structure of the hierarchical location you are searching for is also in the ID_CONTEXT field.

The following applies to the search fields for the land register and parcel:
For each search field, only one search strategy is allowed to be designated as active.

Activities

Depending on the type of search method, implement one of the methods:

- **GET_VALUES**
- **GET_VALUES_FOR_SHMETHDIFF**
- **GET_SHMETHDIFF**

Description of parameters:

Method **GET_VALUES** and **GET_SHMETHDIFF**:

FLT_VAL

Search method

IO_REF_OBJ

Reference to the real estate object that is currently being processed. The reference is empty when the call is from posting activities. For the land register, the reference contains a reference to the land register master data; and for parcels, a reference to the parcel master data.

The BAdI method can retrieve the current object data using the API that belongs to it.

ID_CONTEXT

For the LOCHIER search field, contains the location key of the hierarchical location being searched for; otherwise it is empty.

IS_SHSTRAT

Contains certain Customizing data for the active search strategy

IS_SHFIELD

Contains the system Customizing data for the current search field

CT_VALUES

The result of the search is to be placed in this table. The KEY field has to be filled with the determined key of the search field. The text for it does not have to be entered. For methods of type , the value of the search field is not entered. Instead the differentiation criterion, which should be used to search in VICASHFVALUES, should be filled. In this case, wildcard characters (%) are allowed for a search for similar values.

CD_DEFAULT_VALUE

If a default value was determined, it can be returned here. The default value is set when the value of the field, for which the search help was called, was initial at the time of the call.

CF_OTHER_VALUES_ALLOWED

This value should be returned as TRUE, if you want to have an option to choose "Other Values" in the search dialog box, in addition to the search result. If the user chooses this option, then the system calls the standard search help. The value does not influence whether the system checks the result of the search help (normally there is no check).

Method GET_VALUES_FOR_SHMETHDIFF

In addition to the parameters of GET_VALUES, the values that are maintained in the value table for the search strategy are also transferred to table IT_SHVALUES.

Example

Example class **CL_EXM_IM_RECA_SEARCH_METHOD** contains examples for the following search methods:

Type - Search Strategy + Possibly Object Data => (Program) Values

GET_VALUES for **LOCHIER** search method

The hierarchical location of the parcel is derived from hierarchical locations to other location structures that are already entered in the system. A value is allowed here if the same text is entered for this location in Customizing.

GET_VALUES for PARTNR search method

The prerequisite here is that there is external number assignment for land registries (land register) and for the main contractual partner (survey office or responsible agency) of the parcel.

The partner number of the land register corresponds to the land register district; the number of the survey office corresponds to the first characters of the leading hierarchical location. This method might need to be adjusted to agree with the practices of your company regarding partner numbers. For example, it is possible that the partners could all have a prefix in the number, such as LR for land registry.

GET_VALUES for ADDR search method

The assumption here is that the postal code of the land registry corresponds to the land register district. All land registries, where postal code = land registry, are offered for selection. For the parcel, the system searches for a partner with the "Responsible Agency" role, where the city agrees with the text of the hierarchical location of the parcel.

Type Search Strategy =>SMETHDIFF => (Program) Values

GET_VALUES_FOR_SHMETHDIFF for ROLE search method

This search method is appropriate for the VENDOR search field. The search method returns all vendor numbers of partners for the role that are maintained in the value table for the search strategy.

For example, if you create your own role for insurance, you can assign a search strategy with this search method to a posting activity for "insurance costs".

Type - Object Data => (Program) SMETHDIFF => (VICASHFVALUES) Values

GET_SHMETHDIFF for VALREG search method

You can use this search method when the land registries for the land register district are entered in the value table. The search method determines the land register district for the current land register, or for the first characters of the hierarchical location of the current parcel.

Notes for Developers

Other Public Registers

Contamination/Non-Hazardous Waste

Specify Number Range for Contamination/Non-Hazardous Waste

Use

Here you specify how numbers are assigned for contamination and non-hazardous waste. Note that the system only takes the setting for interval "" into account.

For external number assignment, you can specify the number range that is available when you create master data for contamination or non-hazardous waste.

For internal number assignment, the system assigns numbers ascending sequentially, starting from the number shown in the Current number field.

Define Types of Contamination/Non-Hazardous Waste

Use

In this activity, you define various types of site contamination or non-hazardous waste that might be found on a parcel of land. You assign these to one of the two categories, either *Contamination* or *Non-Hazardous Waste*.

There are two types of waste that can affect parcels and the buildings on them:

- **Contamination:**
This is when the waste on the site is such that it cannot be removed by ordinary measures. The contamination presents a health hazard for users of the land and for the general public, so that use of the parcel is severely limited, or use may even be impossible. Contamination can stem from toxic materials (such as, oils, paints). The owner is obligated to remove the contamination, which is only possible by employing intensive cleanup measures.
Contamination can only affect parcels.
- **Non-hazardous waste:**
This is waste on the parcel or the building on the parcel, such that the problem can be removed by ordinary measures. The use of the parcel is limited only slightly or not at all by non-hazardous waste. There is no obligation to remove the non-hazardous waste. Non-hazardous waste can affect a parcel, a building, or a rental object.

Activities

Choose one of these two categories for each type of contamination or non-hazardous waste.

Site Protection

Define Number Range for Site Protection

Use

Here you specify how numbers are assigned for site protection. Note that the system only takes the setting for interval "" into account.

For external number assignment, you can specify the number range that is available when you create master data for site protection.

For internal number assignment, the system assigns numbers ascending sequentially, starting from the number shown in the Current number field.

Define Types of Site Protection

Use

In this activity, you define the types of site protection.

Site protection can fall into different categories, representing a limit on possible usages on the one hand, or a requirement to take certain action on the other.

Example

- Protection of natural areas
- Water protection
- Protection of historical sites

Easement

Define Easement Types

Use

In this activity, you define types of easements.

Easements are recorded in the easement register that is maintained by the building authorities at the municipal level. The easements register, together with the land register, record essentially all easements, encumbrances and restrictions on a piece of land.

Example

- Easement where one parcel provides necessary area for another
- Easement where one parcel provides necessary distance between buildings to another
- Right of way

Dialog

Change Screen Layout

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout

Field Groups

Field Groups

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status

Use

Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
2. Select the row and choose *Field Modification*.
The system displays all field groups that know the given application. In order to display the fields of a field group, position the cursor on the field group and choose *Environment -> Field check*.
3. Now you can, for example, suppress field groups that are not needed or define other field groups as "Required entry" fields. If you choose the "Not specified" setting, then the system itself determines how the field is treated. (Usually these fields are optional entry fields in create and change mode, and display fields in display mode.) If it is not possible to make a setting for a field group, then the system determines how the field is treated (usually dependent on the situation, or on the contents of other fields).

Note

Before you suppress multiple field groups of a view, a section or a screen sequence, you should consider if it makes more sense to remove the view, section or screen completely from the screen sequence.

Views

Use

Here you specify which field groups are grouped together into a view (part of a screen, technically a subscreen). You should group together the field groups that necessarily belong together during a check.

Example

If you have a field group with a valid-from date and a field group with a valid-to date, and these should be checked against each other in a module, then you should group them together into a view. The check module is in the detailed data under "Function Module After Entry".

Standard settings

SAP recommends that you not change the standard settings. It is only necessary to make changes if you want to add your own new fields to the master data dialog.

In that case, copy an existing view to the customer namespace (Y* or Z*) and modify the properties of the view accordingly (consider the detail screen). Then assign the field groups to the view. You can assign your own field groups, as well as those delivered by SAP.

Sections

Use

Here you specify which views are grouped together into sections. You can recognize a section because it is surrounded by a frame. Fields that logically belong together should be grouped together in sections.

Standard settings

SAP recommends that you not change the standard settings.

It could be necessary to define new sections, either to arrange views delivered by SAP differently or to add your own fields to the master data dialog.

In that case, copy an existing section to the customer namespace (Y* or Z*) and assign the views you want to this section. The item number specifies the sequence in which the views are arranged in the section. For technical reasons, if you make your own assignments from sections to views, the item numbers have to be in the customer namespace (that is, they are not allowed to end in ").

This makes it possible for you to also include your own views in SAP sections. Select a section, and choose *Section -> Views* in the dialog tree, and assign the view to a section using a corresponding item number.

Screens

Use

Here you specify which tab pages appear in the dialog, and which sections make up these tab pages.

Standard settings

SAP recommends that you do not change the standard tab pages.

If you want to change a tab page, copy the standard tab page that is closest to the tab page you have in mind, and give it a name in the customer name range (Y* or Z*). Then assign the sections you want.

The position number for user-specific entries also has to be other than here.

Screen Sequences

Use

Here you specify which screen sequences should appear in dialog. A screen sequence consists of different screens, and each screen is equivalent to a tab page.

Standard settings

SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories or Screen Sequence Category -> Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):
Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you,

for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.

- Rental object:
You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).
- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
- RE search request:
For normal entry, you use the standard screen sequence. For fast entry (ad hoc search) the RERRFE screen sequence is used. (This cannot be changed.)

Events

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Tables

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Implement Enhancements (BAdI)

Validation, Substitution

Use

Das Business Add-In unterstützt die modifikationsfreie Erweiterung der Standardfunktionalität von Weiteren Grundstücksverzeichnissen.

Einen Überblick über die möglichen Erweiterungstechniken finden Sie hier.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications Hinweise

für Entwickler

Notice of Assessment

Define Land Types for Mill Rate

Use

In this activity, you define the land types that the community uses to calculate its mill rates.

Then in the next activity you define the land types that are used in the notice of assessment You assign a land type for the mill rate, which you defined here, to each of those land types. This assignment is the basis for the calculation of property tax in the application for the municipal fee notice.

Example

- Land for construction - full mill rate
- Fallow land - half of mill rate

See also

For more information, see [Information on the Notice of Assessment](#)

Define Land Types in Notice of Assessment

Use

In this activity, you enter the land types that are used in the notice of assessment.

You assign a land type for the mill rate to each land type. This assignment is the basis for the calculation of property tax in the application for the municipal fee notice.

Requirements

You defined the land type for the mill rate.

See also

For more information, see [Information on the Notice of Assessment](#).

Define Determination Types

Use

In this activity, you enter the determination types that are used in the notice of assessment. This assignment is the basis for the calculation of property tax in the application for the municipal fee notice.

See also

For more information, see [Information on the Notice of Assessment](#).

Define Possible Types of Possession

Use

In this activity, you enter the types of possession that are used in the notice of assessment. This assignment is the basis for the calculation of property tax in the application for the municipal fee notice.

Example

- Person in possession
- Owner
- Person holding land lease

See also

For more information, see [Information on the Notice of Assessment](#).

Dialog

Change Screen Layout

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout

Field Groups

Field Groups

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status**Use**

Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
2. Select the row and choose *Field Modification*.
The system displays all field groups that know the given application. In order to display the fields of a field group, position the cursor on the field group and choose *Environment -> Field check*.
3. Now you can, for example, suppress field groups that are not needed or define other field groups as "Required entry" fields. If you choose the "Not specified" setting, then the system itself determines how the field is treated. (Usually these fields are optional entry fields in create and change mode, and display fields in display mode.) If it is not possible to make a setting for a field group, then the system determines how the field is treated (usually dependent on the situation, or on the contents of other fields).

Note

Before you suppress multiple field groups of a view, a section or a screen sequence, you should consider if it makes more sense to remove the view, section or screen completely from the screen sequence.

Views

Use

Here you specify which field groups are grouped together into a view (part of a screen, technically a subscreen). You should group together the field groups that necessarily belong together during a check.

Example

If you have a field group with a valid-from date and a field group with a valid-to date, and these should be checked against each other in a module, then you should group them together into a view.

The check module is in the detailed data under "Function Module After Entry".

Standard settings

SAP recommends that you not change the standard settings. It is only necessary to make changes if you want to add your own new fields to the master data dialog.

In that case, copy an existing view to the customer namespace (Y* or Z*) and modify the properties of the view accordingly (consider the detail screen). Then assign the field groups to the view. You can assign your own field groups, as well as those delivered by SAP.

Sections

Use

Here you specify which views are grouped together into sections. You can recognize a section because it is surrounded by a frame. Fields that logically belong together should be grouped together in sections.

Standard settings

SAP recommends that you not change the standard settings.

It could be necessary to define new sections, either to arrange views delivered by SAP differently or to add your own fields to the master data dialog.

In that case, copy an existing section to the customer namespace (Y* or Z*) and assign the views you want to this section. The item number specifies the sequence in which the views are arranged in the section. For technical reasons, if you make your own assignments from sections to views, the item numbers have to be in the customer namespace (that is, they are not allowed to end in ").

This makes it possible for you to also include your own views in SAP sections. Select a section, and choose *Section -> Views* in the dialog tree, and assign the view to a section using a corresponding item number.

Screens

Use

Here you specify which tab pages appear in the dialog, and which sections make up these tab pages.

Standard settings

SAP recommends that you do not change the standard tab pages.

If you want to change a tab page, copy the standard tab page that is closest to the tab page you have in mind, and give it a name in the customer name range (Y* or Z*). Then assign the sections you want. The position number for user-specific entries also has to be other than here.

Screen Sequences

Use

Here you specify which screen sequences should appear in dialog. A screen sequence consists of different screens, and each screen is equivalent to a tab page.

Standard settings

SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories or Screen Sequence Category -> Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):
Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.
- Rental object:
You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).
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Events

You need this dialog only if you want to make complex modifications to the standard dialog.

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Tables

You need this dialog only if you want to make complex modifications to the standard dialog.

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Implement Enhancements (BAdI)

Validation, Substitution Use

The Business Add-In supports enhancements to the standard functions of notices of assessment. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

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Alternative Currency

Use

This BAdI makes it possible to display the annual values in a second currency.

Example

The example implementation in the class CL_EXM_IM_RELM_NOT_ASS_CURR assumes that the values were entered in DEM and sees to it that they are also displayed in EUR. The conversion in the example implementation takes place using the procedure for notices of assessment.

Notes for Developers

Joint Liability

Dialog

Change Screen Layout

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout

Field Groups

Field Groups

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

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Sections

Use

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It could be necessary to define new sections, either to arrange views delivered by SAP differently or to add your own fields to the master data dialog.

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Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.
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You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).
- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
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Events

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SAP recommends that you leave the settings delivered here unchanged.

Tables

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Implement Enhancements (BAdI)

Validation, Substitution Use

The Business Add-In supports enhancements to the standard functions of joint liabilities. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications Notes for Developers

Input Tax Correction

Master Data

Specify Number Range for Correction Object

Use

Here you specify for each company code how number assignment is handled for the correction object.

- o If you want the system to assign the number automatically, choose **internal number assignment**. For internal number assignment, the system assigns numbers ascending sequentially, starting from the number shown in the **Current number** field.
- o Choose **external number assignment**, if you want to be able to assign the number or alphanumeric ID yourself. For external number assignment, you can specify the number range that is available to be assigned when you create the correction object.

Activities

For information on how to proceed, see **Notes on General Number Assignment**.

You then assign the numbers of the number range intervals defined here to the **type of correction object**.

Relevant Objects for Input Tax Distrib. and Correction, Default DOS

Use

Here you specify the following, dependent on the company code:

- Whether an input tax distribution is to be performed
- The objects for which the distribution is to be performed
- Whether an input tax correction is to be performed

Note that you can only perform an input tax **correction** for objects for which a distribution can also be performed.

You also specify whether and how the date of service is to be derived during document entry.

Activities

On the detail screen, in the *Uniqueness of Object Assignment* area, you specify whether multiple assignment is allowed for the given object type. With multiple assignment, the input tax distribution may **not** be able to uniquely determine the object that supplies the option rate. In that case, the user has to explicitly specify the real estate object that supplies the option rate during master data processing. Normally it is therefore better **not** to allow multiple assignment.

In the *Input Tax Distribution/Correction* area, you specify whether and how an input tax distribution is to be performed:

- First specify whether the company code opts to pay input tax. If this indicator is set, then, when a document is posted for one of these objects, the system updates the input tax and the input tax can then be distributed. This affects the following real estate objects: -
Business entity
- Building
- Land
- Rental object
- Settlement unit
- Real estate contract

For company codes that do **not** opt to pay input tax, the contents of the other fields do **not** have any significance.

- Specify the object types for which you want input tax distribution to be performed. If the company code opts, you should select all object types here that are related to real estate. For internal orders, you can distinguish between maintenance orders and other internal orders.
- Using the message type, you can specify whether there always has to be a relationship between the object type and the real estate object, or whether the assignment (and thereby the input tax distribution) is optional. For more information, see the message type.
- Specify how the default value for the date of service is to be determined. You can decide whether the default date of service is taken from the document date, posting date, or the field ABPER (may be filled through validation).

Define Asset Classes as Relevant for Input Tax Correction

Use

Here you specify the asset classes, for which you want input tax correction to be performed.

Activities

If you want to run input tax correction for asset classes that are not yet listed here, then choose *New Entries* and enter these asset classes here.

Input tax correction **cannot** take into account any postings that were made to assets in these asset classes before you entered the asset class here.

Define Type of Correction Object

Use

Here you define the type of correction object. If you plan to use input tax correction, you have to make entries for at least **one** type of correction object in this table.

The type of the correction object controls the following:

- The length of the correction period (proposal)
- If the correction is (necessarily) a one-time correction
- The number range used for the number of the correction object
- The account determination for correction postings

Standard settings

In standard Customizing, a distinction is made between *Standard* and *One-Time Corrections*. If you want to post input tax corrections differently for fixed assets and current assets, for example, then you should make two different entries here with different flow types.

Activities

- In the first two columns, enter the key for the type of correction objects and an easily-understood name. When creating a correction object, the user has to select the type of correction object. After that, you can no longer change it.
- Length of the correction period in months (default value):

The system determines the default end date of the correction period from the correction period length defined in Customizing. The system calculates this date from the start of the correction period to be specified by the processor or, if this is not specified, from the date of first usage. You can overwrite the *Correction To Date* for the correction in the application. If corrections were already made, then the system corrects them accordingly during the next run.

- *One-Time Correction* indicator

Set this indicator, if you want correction objects of this type to be used only for one-time corrections. For correction objects of this type, the *Correction-To Date* field is **not** ready for input.

- Number of the number range interval
Specify the number range interval from which the number of the correction object is assigned. You thereby also determine if number assignment is internal or external. You have to define the number range intervals first.
- Flow Types
Specify the flow types that should be used for determining the accounts for input tax correction. You can set up the flow types separately for the current year and previous years, and you can also separate them based on these criteria:
 - The correction results in higher input tax.
 - The correction results in lower input tax.

You must have already defined flow types in the Define Flow Types IMG activity. In addition, you have to define the account determination for these flow types in the following IMG activities:

- Define Account Symbols
- Assign Account Symbol to Flow Type
- Replace Account Symbols

Specify Allowed Object Types for Correction Object

Use

Here you specify which real estate objects and which objects from other components can be assigned to a correction object as account assignment objects.

Activities

- Choose *New Entries*.
- In the *Obj. Type* column, enter J for correction object.
- In the *Asgn.Obj.Type* column, enter one of the object types you want to allow as an account assignment, and set the *ObjP* (Object Assignment Permitted) indicator.
- Follow the same procedure for all other object types you want to allow as account assignment objects.

Example

Assume that in your system business entities, buildings, land, and assets are possible account assignments for correction objects. In that case, you enter the following:

<u>Object Type</u>	<u>Asgn. Obj.Type</u>
J (Correction Object)	AN (Asset)
J (Correction Object)	IB (Building)
J (Correction Object)	IG (Land)
J (Correction Object)	IW (Business Entity)

For each row, set the *Object Assignment Permitted* indicator.

Distribution, Posting, and Correction**Define Criteria for Documents Relevant for Input Tax Correction****Use**

Here you specify which items are considered by input tax correction.

Based on current laws in Germany, taxpayers are required to correct input tax even for current assets and other services. This means that even costs that do **not** increase the value of the asset, such as maintenance costs, must be corrected. In cases where land is acquired only to be sold again immediately, you do not create a fixed asset account for the land. Instead the posting is made to current assets. In addition, the law affects comprehensive maintenance measures, like installing replacement windows in a building, even if the measure does **not** increase the value of the asset.

On the other hand, you do **not** need input tax correction for costs that arise at short notice, such as the cost of repairs.

The system is not able to determine on its own if a line item is relevant or not for input tax correction. This decision has to be made by the user who enters the document or who later determines the data for the input tax correction.

In the document entry screen, you can set the document to *Not relevant for correction*. Or you can make this decision later, when assigning the correction object (in transaction REITTCASSIGN - *Assign Original Documents*).

To improve clarity, the items designated as not relevant should not be displayed in transaction REITTCASSIGN.

A line item is **not** relevant for input tax correction if one of the following is the case:

- The *Do not consider* indicator was explicitly set for the item during document entry.
- Settings were made in this IMG activity that do **not** apply to this line item.

For example: If you always post costs for repairs using a certain document type or to a certain account, then you can remove this document type or account from selection in this table. Then it is **not** possible for the item to be proposed for input tax correction.

If an item of this kind should nonetheless need to be considered in the input tax correction, you can set the *Display non-relevant items* indicator in transaction REITTCASSIGN, thereby assigning a correction object to the item.

Activities

In your enterprise, if the account and/or document type are criteria for determining which documents are relevant for input tax distribution (as opposed to those that are **not** relevant), then specify the following in this table:

- If the specification is for an account or document type
- A sequence number, so the entry is unique
- Set the *Inclusive/Exclusive* indicator and the *Option* indicator as though you were searching on the selection screen of a report for these line items.
Note: Multiple rows for the same field (Line Item Attr.) are linked with OR, whereas the prerequisites for different fields are linked using AND.
- From and To Fields
Enter a comparison value or the lower limit for an interval in the *From* field. If necessary, enter an upper limit for the interval in the *To* field (for the option *BT Between* or *NB - Not Between*).

Example

Keep in mind the following with regard to these examples:

The basic prerequisite for input tax **correction** is that the line item is relevant for input tax **distribution**. That means, the item must have been posted to a real estate object, an asset, or a CO object that was defined in Customizing as relevant for input tax distribution.

In addition, input tax distribution must be active for the company code.

Example :

Attr.	No.	I/E	Option	From	To
ACC		I	BT		
ACC		I	EQ		
DOCT		I	CP	S*	

Result: In transaction REITTCASSIGN, the system proposes those line items for assignment to a correction object, where the items have account assignment to an account with account number - or , and have a document type beginning with 'S'.

Example :

Attr.	No.	I/E	Option	From	To
ACC		I	NE		
DOCT		I	CP	S*	

AP System

Result: In transaction REITTCASSIGN, the system proposes those line items for assignment to a correction object, where the items have a document type beginning with 'S' and were **not** posted to account .

Example :

Attr.	No.	I/E	Option	From	To
ACC		I	NE		

Result: In transaction REITTCASSIGN, the system proposes those line items for assignment to a correction object, where the items were **not** posted to account .

Example :

Attr.	No.	I/E	Option	From	To
DOCT		I	CP	S*	

Result: In transaction REITTCASSIGN, the system proposes those line items for assignment to a correction object, where the items have a document type beginning with 'S'.

Define Source Object for Option Rate Determination

Use

Here you specify which option rate should be used for input tax distribution - the option rate of the account assignment object, or the option rate of the correction object.

Activities

For each object type, for which the option rate of the correction object should be used, add a row and set the *OptRate CorrObj.* (option rate from correction object) indicator

- Indicator is set ('X')

The system uses the option rate of the assigned **correction object** for input tax **distribution**.

For these object types, the system checks during the input tax distribution whether a correction object is assigned. If this is not the case, the input tax distribution is **not** performed and the system issues an error message, unless the line item is flagged as *Not to Be Corrected*. The option rate of the account assignment object itself is then used for the input tax distribution.

- Indicator is **not set** (' ')

The system uses the option rate defined on the **account assignment object** for input tax **distribution**.

For these object types, the option rate of the account assignment object itself is used for input tax distribution. If documents that must be corrected are posted for these object types, the option rate of the assigned correction object is always used for input tax distribution.

Object types that are **not** defined in this table behave like object types, for which the *OptRate CorrObj*. (option rate from correction object) indicator is **not** set.

Assign Tax Code for Correction Posting

Use

To be able to list correction postings separately in the advance tax return for sales and purchases using the ELSTER form generated by the system, you have to use your own tax codes for correction postings.

Activities

Here you assign tax codes for correction postings to tax codes for the original posting (tax code of the correction basis record). If there is no entry here for a tax code, then the system uses the original tax code for the correction posting.

Austria

Main Rent Statement

Basic Settings

Set Up Number Range for Schema Item for Cost Element

Use

You need the number range for managing the Customizing entries for defining the calculation basis for schema items (see Set Up Settlement Schema).

The system assigns a unique key for each entry. The system takes these keys from this number range interval.

Activities

Choose *Change Intervals* and create a number range interval with the number . Enter the range from - for the interval. Do not select the *External Number Assignment* field.

Note that a number assigned by the system (*Current Number* field) **cannot** be reset.

Set Up Settlement Schema

Use

In this section, you define the structuring and items of the main rent statement, along with the calculation base.

Requirements

You set up the number range for schema items for cost elements.

Activities

Follow these steps:

. Create schema items

- Enter the ID and description for the individual items of the main rent statement.
- Enter the percentage of the calculated item that should be taken into account in the main rent statement.
- Enter the calculation method used for creating the settlement. You can choose from:
 - Standard calculation
 - Vacancy
 - Own use

- Condominium owner use
- Investment premium
- Tax reimbursement
- BAdI implementation

2. Define settlement schema

Here you can enter the different variants for structuring the main rent statement. You create a settlement schema for each structuring variant.

3. Assign schema items to settlement schemas

Assign those items that will be used for a given settlement to the individual schema.

4. Define calculation rules for derived schema items

Here you can define derived schema items, which are calculated using other items. For each item that you want to derive, assign the item or interval of items that are used in calculating this item.

5. Define calculation basis for schema items

For each schema item that is not derived, enter the cost elements or condition type that is used for the calculation.

You have to assign cost elements if you chose the Standard Calculation calculation method for the schema item. The system determines the value from the costs or revenue posted for the cost elements in the settlement year.

You have to assign a condition type for schema items that have these calculation methods: *Vacancy*, *Own Use* or *Condominium Owner Use* . The system determines the value using the calculation method.

Define Parameters for Vacancy Reason

Use

Here you define the relevant parameters for vacancy reasons for the main rent statement.

For vacant objects, you are not allowed to apply imputed revenue in the main rent statement until after a certain amount of time has passed.

Activities

For each vacancy reason, enter the amount of time in months that you have to wait.

Correspondence

Define List Variants

Use

In this activity, you define list variants for the output of correspondence for main rent statements.

Activities

- *Define the list variant:*

1. Enter the ID and name of the list variant.
2. Choose the form type and assign the forms you want to use.
The form types you can choose from are Smart Forms and PDF-based forms.

- *Specify controls for list variant:*

- . Enter additional control data for the list variant, such as the schema item and hierarchy level.

Implement Enhancements (BAdI)

Enhancements to Main Rent Statement

Use

The Business Add-In (BAdI) supports enhancements to the standard functions of the main rent statement without writing program code.

Activities

You can use the following methods for the implementation:

- `FILL_SELSCREEN`: Selection screen that supplies transaction REXCMS (PAI). You can use it to provide default values for fields, for example.
- `BEFORE_CORRDOC_MODIFY`: For checking or correcting data before changing an adjustment document
- `BEFORE_UPDATE_DB`: Before saving the master data

- AFTER_UPDATE_DB: After saving the master data For information on using BAdIs, see this documentation.

Enhancements to Fictitious Calculations

Use

Using this BAdI, you can calculate fictitious values for the main rent statement. The method CALCULATE is available for this purpose.

Activities

Implement the method of the BAdI.

Caution

You have to program your own processing for each schema item.

Adjustment by Fifteenths

Adjustment by Fifteenths

Use

In this section, you make the necessary settings for adjustment by fifteenths The calculations for adjustment by fifteenths are made within the BAdI for rent adjustment.

Activities

Follow these steps:

- 1. Create adjustment rule**

Create an adjustment rule and in the Method field, choose *BADI (Custom with Badi)*.

- 2. Create BAdI implementation**

Create a BAdI implementation for the BADI_REAJ_ADJUSTMENT BAdI and implement the CALCULATE method. Call the CALC_NEW_UNITPRICE_ method of class CL_REXC_AT_AJ_CALC. Then activate the BAdI implementation.

Example

The current rent of EUR should reach , EUR in years. This is the target rent (reasonable rent). The increase should take effect on January , .

The conditions have the parameters listed below. If you want guarantee stable values for the target rent, you also have to define an index adjustment term and assign it.

Condition: Current Rent Target Rent Stable Value Guarantee (Original Rent)

Condition Purpose: Actual rent (A) Statistical (I) One-time statistical (J)

Amount: EUR EUR EUR

Valid from: // to // (years)

The first adjustment, to EUR, takes place on January , .

The condition purposes you set up for this procedure can also be used in the BAdI implementation.

You create the BADI adjustment rule and assign the *BADI* procedure to it.

METHOD if_ex_reaj_adjustment~adjustment.

```
DATA: ld_cp_static      TYPE recdcondpurposeext,
ld_cp_static_once TYPE recdcondpurposeext,      ld_cp_rent_rec
TYPE recdcondpurposeext.
```

```
CHECK id_adjmrule = 'BADI'.
```

```
* set external condition purposes
```

```
ld_cp_static      = 'I'. ld_cp_static_once =
'J'. ld_cp_rent_rec      = 'A'.
```

```
* call calculation method
```

```
CALL METHOD cl_rexc_at_aj_calc=>calc_new_unitprice_
EXPORTING
```

```
io_contract      = io_contract
io_rental_object      = io_rental_object
is_condition      = is_condition      is_rhythm
= is_rhythm      id_adjmrule      = id_adjmrule
id_adjmsubrle      = id_adjmsubrle
id_condpurp_static      = ld_cp_static
id_condpurp_static_once = ld_cp_static_once
id_condpurp_rent_rec      = ld_cp_rent_rec      changing
cd_validfrom_new      = cd_validfrom_new
cd_unitprice_new      = cd_unitprice_new
cd_methrefguid      = cd_methrefguid      ct_message
= ct_message      cf_error      = cf_error
cf_no_adjustment      = cf_no_adjustment
cf_exit_processed      = cf_exit_processed.
```

ENDMETHOD.

Define Adjustment Rules

Use

In this activity, you define adjustment rules for each adjustment method that you would like to use.

Standard settings

The following adjustment rules are provided by SAP in the standard system and are fixed:

- Free
- Index
- Service charge settlement
- Representative list of rents
- Comparative group of apartments
- Adjustment measure/modernization

Together with specific contract or rental data, as well as data entered in the adjustment process (such as the specification of percentage or absolute adjustment), the adjustment rules define which algorithm is used to calculate the adjustment amount.

Activities

1. Create at least one rule for each adjustment method.
2. Give the rule a name that allows it to be easily identified.
3. If you want to create a rule consisting of several rules, set the Combined Rule indicator. Any rule that is not identified as a combined rule can be used as a subrule. If you want to create a rule that should be used exclusively as part of a combined rule, set the Part of Comb.Rule indicator. You then have to assign it to the combined rule in the Combined Adjustment Rules activity.
4. Enter the required parameters for each rule. For more information, refer to the information contained in the F Help for each field.
5. For each parameter, define how it appears on the on the contract or rental object. The options are:
 - Hidden
 - Displayed only
 - Can be modified
 - Required entry **Recommendation:**

To simplify processing, create rules with completed parameters for the most important and most frequently used adjustment rules. The rules you create should allow only a few or no individual settings to be made on the contract or rental agreement. In the case of more complicated or seldom used processes, you should create some rules with parameters that can then be specified on the contract or rental object.

For some methods (such as, INDX or TASK) there are method-independent parameters in addition to the method-dependent parameters. You can set these parameters in the Implementation Guide in the section for the given method.

Customizing Relationship - Contract/Rental Object

If no parameters are changed in the contract/rental object, then the system uses the rule parameters from Customizing for the adjustment process. Then changes to the rule parameters in Customizing apply to **all** contracts/rental objects that use this rule.

However, you can sever the relationship to Customizing by choosing @G@ with quick info *Unlink from Customizing*. The prerequisite for this is that the adjustment rule that has Modifiable in Contract/Rental Object entry status.

Once you unlink Customizing, the modifiable fields are then ready for input, and you can make your own modifications to the adjustment rule. Any changes you make the rule parameters in Customizing then no longer affect these contracts/rental objects. When you save an object that has an adjustment rule you modified yourself, an icon (@H@ with quick info *Modified*), appears next to the changed fields. You can choose this icon to compare the rule parameters from Customizing with the modified value of the field.

You can establish the relationship with Customizing again by choosing @H@ with quick info *Link to Customizing*. The modifiable fields are then no longer available for input, and the system fills them again with the rule parameters from Customizing.

General Rent Adjustment

Use

The Business Add-In (BAI) supports enhancements to the standard functions of **adjustments of conditions** without your writing program code.

For information about possible enhancement scenarios, see the Overview of Enhancement Methods for Master Data Objects and the Real Estate Contract.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

For information on using BAdIs, see this documentation.

The following methods exist:

- **GET_ADJUSTMENT_VALUE**
Gets the value of a variable in the control table
- **CAPPING**
Performs capping
- **ADJUSTMENT**
Performs the adjustment
- **MODIFY_ADJUSTMENT**
Modifies the adjustment
- **MODIFY_ADJUSTMENT_CEA**
Modifies an adjustment of a cost efficiency analysis (Germany)
- **AFTER_STORE**
Performs additional actions after saving
- **GET_ADJMRULE_FOR_INSERT**
Gets the possible adjustment methods to be added
- **GET_FIELDCATALOG**
Gets the field catalog for the adjustment transactions
- **GET_FIELDCATALOG_VALUE**
Gets the value for a field catalog entry
- **HIDE_FIELDCATALOG**
Hides certain field catalog columns (for improved performance)
- **MODIFY_TCODE**
During an indirect call of the adjustment, serves to put the transaction code into effect
- **GET_BEHAVIOR_SUBSEQ_COND**
Serves to control the adjustment frequency for adjustments of subsequent conditions. Using this method, you can specify using the CF_NO_RHYTHM parameter, if the system should redetermine the adjustment date (standard behavior) or not (CF_NO_RHYTHM = abap_true) when the subsequent condition becomes the condition to be adjusted.
- **AFTER_ACTIVATION**
Makes it possible to execute follow-up actions on an object after activation of an adjustment
- **AFTER_REVERSAL**
Makes it possible to execute follow-up actions on an object after reversal of an adjustment

These methods are called automatically during standard processing of the adjustment of conditions. If an implementation exists, the methods are always called in addition to standard system behavior. The standard behavior of the basic actions is **not** replaced.

Warning

The implementation of the methods has to be independent of the interface. It must not contain **any** COMMIT WORK or ROLLBACK WORK statements. For example, direct output of messages using the MESSAGE statement is **not** allowed.

Method description

- **GET_ADJUSTMENT_VALUE**

This method gets the value of a variable in the control table. The following parameters are used with this method:

- *IO_CONTRACT* and *IO_RENTAL_OBJECT*

These parameters specify whether or not the condition to be adjusted is a contract condition. If the condition is a contract condition, then the parameter *IO_CONTRACT* is filled. Otherwise the *IO_RENTAL_OBJECT* parameter has a value.

- *IS_CONDITION*

This parameter contains the values of the condition to be adjusted.

- *IF_FIRST_CALL*

This parameter indicates whether the method is being called for the first time. If the parameter has a value, then this is the first call of the method.

- *ID_VALIDFROM_NEW*

The parameter contains the newly calculated *Valid-From* date of the condition.

- *ID_VARIABLE* and *CD_ADJUSTMENT_VALUE*

The *ID_VARIABLE* parameter contains the names of the variables from which the *CD_ADJUSTMENT_VALUE* parameter requested the value.

- *IT_ADJUSTMENT_VALUE*

This parameter transfers all variables of the method as well as their current values. Then the returned messages (*CT_MESSAGE* parameter) are displayed in the same list with the messages from standard processing.

- **CAPPING**

This method performs standard rent capping. The following parameters are used with this method:

- *IO_CONTRACT*

This parameter contains the contract object to be adjusted.

- *IS_CONDITION*

This parameter contains the values of the condition to be adjusted.

- *IF_BEFORE_STANDARD*

The parameter has a value before standard capping is performed.

- *IF_AFTER_STANDARD*
This parameter has a value after standard capping was performed.
- *CS_RECORD*
The parameter modifies the adjustment.
- *CF_EXIT_PROCESSED*
This parameter contains the information that the capping was executed by the method. Then the returned messages (*CT_MESSAGE* parameter) are displayed in the same list with the messages from standard processing.
- *ID_ADJMRULE* and *ID_ADJMSUBRULE*
The *ID_ADJMRULE* (combined adjustment rule) and *ID_ADJMSUBRULE* (adjustment rule) parameters contain the adjustment rules that the implementation is dependent on.
- **ADJUSTMENT**
This method performs the standard adjustment. The following parameters are used with this method:
 - *IO_CONTRACT* and *IO_RENTAL_OBJECT*
These parameters specify whether or not the condition to be adjusted is a contract condition. If the condition is a contract condition, then the parameter *IO_CONTRACT* is filled. Otherwise the *IO_RENTAL_OBJECT* parameter has a value.
 - *IS_CONDITION*
This parameter contains the values of the condition to be adjusted.
 - *IS_RHYTHM*
This parameter contains the frequency data of the condition being adjusted.
 - *ID_VALIDFROM_NEW*
The parameter contains the newly calculated *Valid-From* date of the condition.
 - *CD_UNITPRICE_NEW*
This parameter influences the new unit price.
 - *CD_METHREFGUID*, *CF_ERROR* and *CF_NO_ADJUSTMENT*
This parameter is used to store a link from the adjustment to specific data (see *AFTER_STORE*).
Then the returned messages (*CT_MESSAGE* parameter) are displayed in the same list with the messages from standard processing.
If the *CF_ERROR* parameter is set, then there were errors during execution of the adjustment.
If the *CF_NO_ADJUSTMENT* parameter is set, then the system could not find an adjustment.
 - *CF_EXIT_PROCESSED*
This parameter contains the information that the adjustment was executed by the method.
 - *ID_ADJMRULE* and *ID_ADJMSUBRULE*
The *ID_ADJMRULE* (combined adjustment rule) and *ID_ADJMSUBRULE* (adjustment rule) parameters contain the adjustment rules that the implementation is dependent on.
- **MODIFY_ADJUSTMENT**

This method modifies the standard adjustment. The following parameters are used with this method:

- *CS_RECORD_MODIFY*
This parameter modifies the values of the standard adjustment.
- *IS_RECORD*
This parameter returns the adjustment record calculated by the standard adjustment.

- **MODIFY_ADJUSTMENT_CEA**

This method modifies the values of the standard adjustment that were determined using a cost efficiency analysis. The following parameters are used with this method:

- *IO_RENTAL_OBJECT*
This parameter contains the rental object to be adjusted.
- *IS_CONDITION*
This parameter contains the values of the condition to be adjusted.
- *IT_RECORD_METH_ALL, IT_RECORD_TASK, IT_RECORD_TASK_OBJECT*
These parameters return the method-specific adjustment values.
- *CS_RECORD_METH*
This parameter influences the adjustment results.
Then the returned messages (*CT_MESSAGE* parameter) are displayed in the same list with the messages from standard processing.

- **GET_ADJMRULE_FOR_INSERT**

This method influences the number of adjustment rules for assignment within a contract object or rental object.

- *IO_CONTRACT* and *IO_RENTAL_OBJECT*
These parameters specify whether or not the condition to be adjusted is a contract condition. If the condition is a contract condition, then the parameter *IO_CONTRACT* is filled. Otherwise the *IO_RENTAL_OBJECT* parameter has a value.
- *CT_ADJMRULE*
This parameter influences the number of adjustment rules.

- **GET_FIELDCATALOG**

This method specifies additional output columns for the adjustment transactions, thereby determining the field catalog.

The parameters *IF_REVERSAL*, *IF_SIMULATION*, *IF_CONTINUATION*, *IF_DISPLAY* tell you which transaction you are in.

Using the *CT_FIELDCATALOG* parameter, you can specify the following additional output columns:

- *GRIDROLL*: Data element in customer namespace that contains the documentation
- *GRIDTEXT*: Column header
- *GRIDJUST*: Setting of column values (R = right aligned, L = left aligned, C= centered)

- *GRIDCHECK*: Specification of whether the column values are displayed as checkboxes
- *GRIDPOS*: Position of the column
- *GRIDSUM*: Specification of whether a column total is output for the given column
- *GRIDTYPE*: Data type of the column value (A = amount, D = date field, < blank > = Other)
- *GRIDCOLOR*: Color of the column
- **GET_FIELDCATALOG_VALUE**

This method returns values for the field catalog mentioned above.

- *IO_CONTRACT* and *IO_RENTAL_OBJECT*
These parameters specify whether or not the condition to be adjusted is a contract condition. If the condition is a contract condition, then the parameter *IO_CONTRACT* is filled. Otherwise the *IO_RENTAL_OBJECT* parameter has a value.
- *IS_CONDITION*
This parameter contains the values of the condition to be adjusted.
- *IS_RECORD*
This parameter contains the current adjustment record.
- *ID_GRIDROLL*
This parameter indicates the output column for which the value was requested. Note that the additional output columns are defined as type CHAR with a maximum length of characters.
- **HIDE_FIELDCATALOG**
This method hides certain columns in the adjustment overview. For example, you can hide the partner name or address, since determining them is very demanding on performance.
- **AFTER_ACTIVATION and AFTER_REVERSAL**
These methods make it possible to perform follow-up actions on the adjusted object after the activation or reversal of an adjustment.
- *IO_OBJECT*
This parameter contains the adjusted object.
- *IS_RECORD*
This parameter contains the current adjustment record.
- *CT_MESSAGE, CF_ERROR, CF_EXIT_PROCESSED*
Using the parameter *CF_EXIT_PROCESSED* you can specify if the exit was executed. If the activation or reversal should be prevented, set the parameter *CF_ERROR*. The returned messages (parameter *CT_MESSAGE*) are output in the activation log or the reversal log.
- **AFTER_STORE**
Using this method, you can update your own additional, user-defined data. At this point, all checks were performed without any errors occurring. No more changes can be made to the data of the standard object.
Only internal errors are now possible here (such as, data inconsistency, errors in the technical infrastructure, programming errors). For these exceptional situations, you can output termination

messages. This is implicitly linked to a resetting of the last database changes (ROLLBACK WORK).

Warning

You are not allowed under **any** circumstances to use a COMMIT WORK or ROLLBACK WORK statement within this method, since this can cause internal errors. If you use them, data inconsistencies can occur. Notes for Developers

Third-Party Management

Calculation of VAT

Calculation of VAT

Use

The functions for calculating VAT for condominium owners' associations (COA) in Austria can be used for the following:

- To determine and post VAT on expenses paid from the maintenance reserves of rental objects belonging to the COA
- To subsequently allocate these amounts to the individual condominium owners

In Austria, the VAT does not fall due when funds are allocated to the maintenance reserve. Instead, the VAT is not due until the reserve is actually used. For calculating the VAT, the system uses the tax rates that are applicable based on the usage of the individual rental objects in the condominium owners' association. (Currently the tax rate for non-commercial usage is %; for commercial usage it is %.) The calculated VAT is posted and can then be subsequently allocated to the individual condominium owners.

Requirements

You made the following settings in standard Customizing for *Flexible Real Estate Management*:

- You created an external calculation formula and assigned it to the internal formula BAdI Calculation.
- You set up a contract type for a G/L account contract.
- You defined flow types for it and set up the account determination.
- You created condition types for posting the VAT amount and for the subsequent allocation of VAT (for instance, a VAT condition and a subsequent allocation condition). You assigned the necessary flow types to them.
- You assigned condition types or condition groups to the contract types.

In Customizing for *Flexible Real Estate Management*, you activated the country-specific functions for Austria (country code AT).

Activities

You make the settings for calculation of VAT in the following IMG activities:

- You enter the tax parameters for the service charge keys relevant for the calculation and posting of VAT.
- You define tax parameters for the relevant condition types for posting the calculated VAT and the subsequent allocation.
- You check the implementation of the enhancement (BApI) for calculating the condition amounts as well as for posting the VAT.

Specify Parameters for Service Charge Key

Use

In this activity, you specify the service charge keys that are relevant for calculating VAT on expense in Austria. You enter the tax information to be used for these service charge keys.

Requirements

You created service charge keys in standard Customizing.

Activities

Enter all service charge keys that you want to use for calculating VAT.

To calculate the VAT using a fixed tax rate, enter the tax information (tax type, tax group) for the service charge key.

If you do not enter any tax information for a service charge key, then the system calculates the VAT using the tax rate of the tax group on the individual contract.

Specify Parameters for Condition Type

Use

In this activity, you specify the condition types that are relevant for the **calculation** and **subsequent allocation** of value added tax in Austria. You also specify the tax information to be used for these condition types.

Requirements

You created condition types in standard Customizing.

Activities

- **Condition types for the calculation:**
Create a condition type for each tax rate, for which you want a calculation to be made. Enter the tax information for these condition types. Set the Priority indicator for the tax group you want to use for non-commercial usage.
- **Condition types for the subsequent allocation:**
For condition types for subsequent allocation, also enter the calculation method.

Implement Enhancements for Calculation Formula and Posting

Use

Functions for calculating and posting VAT are found in the following BAdI implementations. These are active if you have activated the country-specific functions for Austria.

- BAdI BADI_RECD_CALC_RULE:
- Implementation: BADI_RE_XC_MM_OT: calculation of VAT on expense
- Implementation: BADI_RE_XC_MM_OTOP: calculation of subsequent allocation of VAT on expense
- BAdI BADI_RERA_DOC:
- Implementation: BADI_RE_XC_MM_OT_DOC: posting of VAT on expense - BAdI BADI_REEX_FI_BAPI:
- Implementation: BADI_RE_XC_MM_OT_TAX: setting of indicator for direct tax posting

Switzerland

Rent Adjustment Based on Swiss Law

Location Switzerland: Assign Adjustment Rule to Regional Location

Use

In this activity, you enter the location-specific parameters for rent adjustment based on Swiss law.

Requirements

You defined a regional location.

You defined an adjustment rule.

Activities

Enter the following for each regional location of the business entity:

- Official language
The adjustment letters are printed in this language.
- Adjustment rule that is used for objects of this business entity.
- Correspondence activity for the rent adjustment. This correspondence activity is used for adjustments at this regional location.
- Correspondence activity for notice, when notice is given by the landlord at this regional location.

Define Reference Interest Rate

In this section, you define the reference interest rate for the interest adjustment for cash deposits with a variable interest rate and for the rent adjustment according to Swiss law.

In Switzerland, the change to the mortgage loan rate is a relative factor that is used as a basis for rent adjustment. The mortgage loan rate is stored in a "reference interest rate table".

If the mortgage loan rates differ from region to region, you will need a reference interest rate for each interest series.

Activities

1. Check which reference interest rates you need for the mortgage loan rate. Create one reference interest rate for each interest series.
2. Before each Swiss rent adjustment, make sure that the reference interest rates for the mortgage loan rate series are up-to-date.
3. If necessary, maintain any missing values.

Further notes

The reference interest rates for all of Treasury are stored in the same global table.

Enter Index Levels

Use

In this section, you create:

1. Index class as the basis for further defining indexes for rent adjustments
2. Index series used in your organization for rent adjustments, including index series with base year
3. Index points for the index series

Standard settings

SAP supplies the index classes for real estate objects and for maintenance and operating costs index (Switzerland).

Recommendation

It is recommended that you do not change the standard settings.

Changes may at best be necessary if you have already entered these index classes (with other characteristic values) in Asset Accounting (Asset Accounting uses the same table). In case of uncertainties, please also refer to the Asset Accounting System Administration Guide.

Activities

1. Check whether you have to make changes to the standard setting. The Real Estate component requires the following index classes:
 - a) An index class for rent adjustment with the following settings:
Details on indexing frequency (monthly: entry) Details on base year
 - b) Applies only for Switzerland: a class for maintenance and operating costs index with the following settings:

- Details of an indexing frequency (monthly: entry) - No base year: Check if changes to the standard setting are necessary.

2. Index series
First maintain per index class the required index series and, for index series with base year, the required base years for the respective index series.
3. Index data
Create the required index data for the index series.
To do so, navigate over the required entry (index series with or without base year).

Adjustment Rules Switzerland: Define Parameters for Adjustment Rule

Use

In this activity, you enter the parameters for an adjustment rule for an adjustment based on Swiss law.

Requirements

You defined external condition purposes for the absolute factors.

You defined a condition group for the basic rent.

You defined an interest reference.

You defined an index class.

Activities

Enter the following for each adjustment rule:

- Parameters and entry status in the *Adjustment Parameters for Relative Method* group box:
- Interest reference (for example, from the canton bank)
- The percentage to be used for an adjustment based on maintenance and operating costs
- Default value and pass-on percentage rate for protection of purchasing power
- External condition purposes in the *Adjustment Parameters for Absolute Method* group box -
Condition group for basic rent for the rent adjustment form

Define Pass-On Rates

Use

A change in the mortgage rate can have an influence on the amount of rent. The amount of the pass on rates is based on the level of the mortgage rate and on changes to it. The pass on rates increase incrementally by different amounts based on these figures. A critical factor in these calculations is that when the mortgage rate is lowered, rent is reduced by the amount that it was increased the last time the mortgage rate was increased. In this IMG activity, therefore, you enter only values for mortgage rate **increases**. The system calculates the pass on rates for reductions automatically.

Activities

Enter the interest rates and pass on rates here that are used when the mortgage rate changes by one-fourth of a percent ():

- Mortgage rate level - lower level
- Mortgage rate - upper level
- Resulting pass on rate: This value is the adjustment percentage rate that is used during the adjustment run for a mortgage rate increase.

Accounting

Incoming Payments

Define Clearing Parameter for Incoming Payment

Use

In this IMG activity, you enter the parameters for processing incoming payments for ISR payments.

Activities

For each company code, specify how the system should clear open items during automatic processing of incoming payments.

- Enter the limitations that apply for the reference when clearing.
- Enter the limitations that apply for the due date of the open items.

Dunning

Enter Dunning Area per Process

Use

In this activity, you can define your own dunning area for each company code and process.

Standard settings

In the standard system (not country-specific), dunning takes place using the dunning area in the contract for: net rent, subsequent receivables for heating and service charge settlement, and subsequent receivables from sales-based rent settlement. However, in Switzerland, it has to be possible for the user to select from different dunning procedures from within different processes. You define the dunning areas for the following processes:

- Sales-based rent settlement (RESR) process
- Heating and service charge settlement (RESC) process

These are predefined in the system.

The dunning area is modified in a BAdI of the posting interface. If you make entries for this process here, then the BAdI overwrites the dunning area of the posting record. If no entry is found, then the posting record is not changed.

Service Charge Settlement

Calculation of Fuel Consumption

Define Service Charge Key for Fuel Management

Use

Fuel management takes place at the level of the settlement unit. Here you define the service charge keys for which you want use fuel management. For each company code, you also define the posting parameters that are relevant for additions and removals of fuel, as well as for the initial fuel level.

Requirements

You defined service charge keys for heating expenses in the standard system.

Activities

Enter the posting parameters for each company code and service charge key:

- Flow types
- Parameters for updating corrections to the fuel level in Financial Accounting and Controlling
- Additional parameters, such as rounding, unit of measure, and reason for reversal

Implement Enhancements (BAdI)

Enhancements in Calculation of Fuel Consumption

Use

The Business Add-In (BAdI) makes it possible to change the generated flow data in fuel management.

The following method is available. It is executed by the system within fuel management.

- **BEFORE_POST** Before the posting of the RE document
(change to document data)
- **CHANGE_NONDEDUCT_TAX** Change non-deductible VAT amount
- **CONSUMPTION** FI posting of consumption
- **OPEN_BALANCE** FI posting of initial fuel level
- **CHANGE_STOCKIND_TEXT** Modify name of fuel level indicator
- **CHANGE_SHOWMODE_OB_FIRST_POST** Call Transaction: 'N'=Do not display,
'E'=Display for error

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

Note that when implementing the BAdI you are not allowed to use statements that affect the interface, such as direct output of messages using MESSAGE.

For an overview of the programming interfaces for RE-FX, refer to this text.

Individual Heating Expense Settlement

Define Measuring Point ID

Use

You need measuring points to be able to enter meter readings, and to be able to settle consumption for utilities. A two-character measuring point ID is transferred in the measurement tape. You enter this measuring point ID and a description for it here.

Assign Measuring Point ID to Characteristic

Use

In this activity, you assign a measuring point ID to a characteristic. Using characteristics, you define the purpose for which meters are created (such as for recording the consumption of cold water or electricity) and their unit of measurement. Assign clearly understandable names to the characteristics, such as, ELECTRICITYUSE.

Building and Housing Register

Basic settings for Localization Switzerland GWR

Grundeinstellungen für Gebäude- und Wohnungsregister (GWR)

Diese organisatorische Aktivität beschreibt die grundlegenden Einstellungen, die Sie vornehmen müssen, um die Erweiterungsmöglichkeiten für das Gebäude- und Wohnungsregister (GWR) nutzen zu können. Diese Einstellungen dienen als Voraussetzung, bevor Sie die Aktivitäten zur GWR-Lokalisierung Schweiz ausführen.

1) Rufen Sie über die Transaktion SM die Sicht V_TBZA_RE (RE-FX: BDT-Anwendungen) auf und legen Sie einen neuen Eintrag für die Anwendung **REAO / AOCH** (Bezeichnung **Schweiz: GWR**) an.

2) Nehmen Sie dann folgende Dialog-Einstellungen unter *Stammdaten --> Architektonische Sicht --> Dialog --> Bildaufbau* vor:

- Legen Sie in der Aktivität *Feldgruppen* folgende Einträge an:

- Feldgruppe (GWR-Beschreibung (Schweiz) mit Funktionsbaustein
REXC_AOCH_EVENT_FMOD

- Feldgruppe (Grundbuch (CH)) mit Funktionsbaustein
REXC_PRCH_LR_EVENT_FMOD
- Legen Sie in der Aktivität *Sichten* folgende Einträge an:

- **AOCH:**

Gruppenrahmen *Allgemeine Daten*

- Bezeichnung: **GWR CH (Liegenschaftsbeschreibung)**
- Anwendung: **AOCH (Schweiz: GWR)** - Differenzierungstyp: **Allgemeine Daten**
- Markieren Sie das Ankreuzfeld *Eingabesicht*.

Gruppenrahmen *Subscreen*

- Programmname: **SAPFLREXC_AOCH_AOCH**
- Bildnummer:

Gruppenrahmen *Funktionsbaustein*

- Vor der Ausgabe: **REXC_AOCH_PBO_AOCH**
- Nach der Eingabe: **REXC_AOCH_PAI_AOCH**
- Gruppenrahmen Bildkonfiguration Markieren Sie das Ankreuzfeld *Datenbild*.

Ordnen Sie unter *Sicht --> Feldgruppen* der Sicht die Feldgruppe (GWR-Beschreibung (Schweiz)) zu.

- **AOCH:**

Gruppenrahmen *Allgemeine Daten*

- Bezeichnung: **GWR CH (Objektbeziehung)**
- Anwendung: **AOCH (Schweiz: GWR)** - Differenzierungstyp: **Allgemeine Daten**
- Markieren Sie das Ankreuzfeld *Eingabesicht*. Gruppenrahmen *Subscreen*
- Programmname: **SAPFLREXC_PRCH_PRCH**
- Bildnummer:

Gruppenrahmen *Bildkonfiguration*

- Markieren Sie das Feld *Datenbild*.

Ordnen Sie unter Sicht *Feldgruppen* der Sicht die Feldgruppe (Grundbuch (CH)) zu.

- Legen Sie in der Aktivität *Abteilungen* unter *Dialogstruktur --> Abschnitte* folgende Einträge neu an:

- Abschnitt APOCH, Bezeichnung Liegenschaftsbeschreibung CH
- Abschnitt APOCH, Bezeichnung Grundbuch CH
- Ordnen Sie unter Abschnitt Sichten die Abschnitte folgendermassen neu zu:
- Abschnitt APOCH: Pos , Sicht APOCH, Bezeichnung GWR CH:
Liegenschaftsbeschreibung
- Abschnitt APOCH: Pos , Sicht APOCH, Bezeichnung GWR CH: Objektbeziehung
- Legen Sie in der Aktivität *Bilder* unter *Dialogstruktur* --> *Bilder* folgenden Eintrag an:
- Bild: **APOCH**
- Bezeichnung: **Liegenschaftsbeschreibung CH**
- Bildtitel: **Liegenschaftsbeschreibung (CH)**
- Nehmen Sie unter *Bildfolge* --> *Bilder* die gewünschte Bildfolge entsprechend Ihren Anforderungen vor.

Beispiel:

Legen Sie die neue Bildfolge REAO, Bezeichnung Standard an. Ordnen Sie unter *Bildfolge* --> *Bilder* das Bild APOCH (Bildtitel: Liegenschaftsbeschreibung CH)) der gewünschten Position zu.

Define Energy Sources for Heating/Hot Water

Use

In this Customizing activity, you define energy sources that are used for heating and hot water supply in a building or rental object. You must enter the code and description of the energy sources in accordance with the code list published by the Federal Building and Dwelling Register (GWR).

Example

<u>Energy Source Code</u>	<u>Description of Energy Source</u>
7200	No energy source
7201	Heating oil
7202	Coal

Define Heating Types

Use

In this Customizing activity, you define heating types that are used in a building. You must enter the code and description of the heating types in accordance with the code list published by the Federal Building and Dwelling Register (GWR).

Example

Code of Heating Type

Description of Heating Type

No heating

Individual heating

Central heating for the building

Define Building Categories

Use

In this Customizing activity, you define building categories that are used to classify buildings according to their use. You must enter the code and description of the building category in accordance with the code list published by the Federal Building and Dwelling Register (GWR).

Example

Code of Building Category

Description of Building Category

Temporary accommodation

Residential building

Building without residential use

Define Building Statuses

Use

In this Customizing activity, you define building statuses that are used to define the current condition of a building. You must enter the code and description of the building status in accordance with the code list published by the Federal Building and Dwelling Register (GWR).

Example

Code of Building Status

Description of Building Status

Projected

Under construction

Define Floors

Use

In this Customizing activity, you define floors that you can assign to rental objects. You must enter the code and description of the floor in accordance with the code list published by the Federal Building and Dwelling Register (GWR).

Example

Floor Code Description of Floor

3100

Ground floor including mezzanine

3101

st floor

3102

nd floor

Define Cooking Facilities

Use

In this Customizing activity, you define cooking facilities that you can assign to a rental object. You must enter the code and description of the cooking facilities in accordance with the code list published by the Federal Building and Dwelling Register (GWR).

Example

Code of Cooking Facilities Description of Cooking Facilities

7300

No kitchen

7301

Kitchen (at least square meters)

7302

Kitchen (smaller than square meters)

Define Dwelling Statuses

Use

In this Customizing activity, you define dwelling statuses that are used to define the current condition of a dwelling. You must enter the code and description of the dwelling status in accordance with the code list published by the Federal Building and Dwelling Register (GWR).

Example

Code of Dwelling Status

Description of Dwelling Status

Projected
Under construction

Define Usage Types for Dwelling

Use

In this Customizing activity, you define usage types for rental objects on the basis of the purpose for which a rental object is used. You must enter the code and description of the usage type in accordance with the code list published by the Federal Building and Dwelling Register (GWR).

Example

Code of Usage Type

Description of Usage Type

Dwelling with permanent residents
Dwelling with temporary residents

Swiss Land Register

Central Settings for Land Use Management

Activate Swiss Land Register

Use

In this Customizing activity, you activate the country-specific data in land register for Switzerland. After the activation, all the localized data for Switzerland will be visible in the land register.

Requirements

You have already activated the country code for Switzerland in the Customizing activity Activate Country-Specifics.

Make General Settings for Land Use Management

Use

In this Customizing activity, you make general settings for Land Use Management (LUM).

Activities

You enter default values in the *Defaults for Land Registers* and *Defaults for Parcels* group boxes. These default values apply per master data object in dialog processing. You enter values for units of area, units of length and units of time. You can also enter a default currency, if needed.

For parcels, you can also enter default values for the location structure and for overlays for cadastral usage types.

Define Hierarchical Location Structure

Use

In this Customizing activity, you define various location structures. Location structures are used to uniquely identify parcels or land registers for different purposes.

In Switzerland, you use these settings to create, at the minimum, the following two hierarchies:

- APR hierarchy for the automated property register of the land registry
- Administrative hierarchy for the survey office

Activities

Enter an ID and a name for your location structure.

Specify the number of levels for the hierarchy and the names of each level.

For each location structure, you also specify the following:

- *Allowed Hierarchical Location Structures per Object Type*
Specify if assignment of the object type to this location structure is mandatory. Specify if this is the standard location structure.
- *Hierarchical Locations in Location Structure*
Here you enter the possible locations for each defined hierarchy level.
Example:
You defined these three levels for the location system:
1 - Country
2 - Region
3 - City
Then you enter all countries, regions and cities that you need in your system.
- *Assignment of Hierarchical Locations in Location Structure*
You assign the already defined hierarchical locations to one another and assign a key for each location. You can then assign only this key to a parcel or a public register in the application. You are not required to assign the keys systematically, but it is a good idea. The key of the hierarchical location is not allowed to contain any spaces.
If the assignment should change due to restructuring of individual hierarchical locations, it is not a problem to assign new keys (at the level Assignment of Hierarchical Locations in Location Structure) or to assign other locations to an existing key. However, if the key itself should change, then you have to change the master data.

Example

You defined the following locations at the given level:

Level - Country:

DE - Germany

CH - Switzerland

US - USA

Level - Region:

D - North Rhine-Westphalia

D - Bavaria

CH - Basel

CH - Tessin

US - Michigan

US - Florida

Level - City:

D-K - Cologne

D-D - Duesseldorf

D-M - Munich

CH-B - Basel

CH-LG - Lugano

US-CH - Chicago

US-M - Miami

US-OL - Orlando

Assignment of Hierarchical Locations in Location Structure:

For the assignment of hierarchical locations in the hierarchy, you have to assign a unique key to each hierarchical location.

A hierarchical location cannot be used in object unless it has a key here.

DE-K	Cologne	DE	D	D-K
DE-D	Duesseldorf	DE	D	D-D
DE-M	Munich	DE	D	D-M
CH-B	Basel	CH	CH	CH-B
CH-LG	Lugano	CH	CH	CH-LG
US-CH	Chicago	US	US	US-CH
US-M	Miami	US	US	US-M
US-OL	Orlando	US	US	US-OL

In this case, you would assign the location DE-K to a parcel in Cologne. It is then clearly visible, both in master data processing and in reports, that this parcel has the following location:

- Country: Germany
- Region: North Rhine-Westphalia
- City Cologne

Define Overlays**Use**

Here you define overlay numbers that are independent of the given German federal state.

You then assign the overlay numbers to a hierarchy level of the location structure. You make this assignment in the Specify Relevant Overlay Numbers for Certain Hierarchy Levels IMG activity. This assignment allows you to structure overlays in accordance with the separate requirements of each given German state.

Specify Cadastral Classification

Use

Here you define the cadastral classification of parcels. This classification represents the use of the parcel from the viewpoint of the land survey office.

Cadastral usages of the same type are grouped together by overlay numbers.

Requirements

You defined the overlay numbers

Activities

For each overlay number, enter all cadastral classifications, for which you want to be able to enter measurements.

Enter a key and a text for each cadastral classification.

Define Land Register Types

Use

In this Customizing activity, you define land register types for the land register.

In addition to the "normal" land register, there are other registers, such as:

- Apartments register
- Partial ownership land register

Using the land register type, you specify which data can be entered in the land register.

For the purposes of reporting, you can assign the land register types to internal land register types, either *Ownership* or *Land Lease*.

For more information on the land register, see [Information on the Land Register](#).

Activities

Enter a key for the land register type and a long and short name for it.

Assign the land register type to an internal land register type.

Enter Data for Communes

Use

In this Customizing activity, you must enter all the communes by specifying their official commune number, the canton, and the country in which they are geographically located.

The data will be used in the land register, or in the master data of buildings or land.

Define Encumbrance Types

Use

In this Customizing activity, encumbrance types are used in the land register in section II or III.

Here you define the encumbrance types you need, and specify how they are used.

Activities

Specify the following for each encumbrance type:

- Use in real estate register?
- Use in section II?
- Use in section III?
- Has dominant tenements?
- Has servient tenement?
- Has holder?
- Has obligated party?
- Has contracts?

Depending on how this indicator is set, the corresponding tab pages in master data processing for the land register are either hidden or displayed.

Default Land Registry

Define Search Strategy for Land Registry

Use

In this Customizing activity, you can use a search strategy so that the system proposes an appropriate main contractual partner (usually a land registry) for a given land register page. Search strategies use search methods, which specify how the main contractual partner is determined from the object data.

In order for the system to be able to determine a default value or possible search help value for the main contractual partner of the land register page, exactly one search strategy must be active for the LROFFICE search field (for the land register).

Activities

Define the search strategies for the LROFFICE search field as follows. Set the Active? indicator for the search strategy you want the system to use. (The other search strategies can then be deleted. It only makes sense during the test phase to define one strategy for each search method you are testing.)

Enter a name for the search strategy.

Specify how the search takes place:

- *Name*
Text of search strategy (informational only)
- *Search Method*
This is a method that is predefined in the system. The method describes how the search is performed. The way the system processes the values for the search strategy depends on the method you select here. Choose a method using the input help.
- *Active?*
You can only use search strategies. For example, if you copied the search strategies from standard Customizing, then set the *Active?* indicator for those that you want to actually use in your system.
- *Other Values*
Set this indicator, if you also want the standard search help to be available. The system then displays a *Further Values* row, in addition to the values returned by the search strategy. From there you can navigate to the standard search help.

The following search methods for the main contractual partner are predefined in the system:

```
ADDRNR      Land register from address
PARTNR      Land register from partner number
VALREG      Land register from district
```

The ADDR and PARTNER methods assume that the partner numbers are assigned so that their meaning is clearly apparant. The systematic way of doing this is described in the *Define Search Method IMG* activity. You can use your own customer-specific numbering system as a reference for the implementation.

For the VALREG method, you have to enter the possible values for each land register district in the value table. In the *Differentiation Characteristic* column, enter the land register district. You can use the asterisk (*) and plus sign (+) as wildcard characters. Enter the partner number of the land registry in the *Value* column. You can designate one land registry in each district as a default value.

To be able to use these methods delivered with the system, you have to copy the sample code of the implementing class CL_EXM_IM_RECA_SEARCH_METHOD of the enhancement spot BADI_RE_CA_SH to a customer class. Then you have to activate this customer implementation.

Define Partner Numbers Possible for Search Strategy

Use

In this Customizing activity, you enter the possible values here for a search strategy that was already defined. For search strategies with the VALREG (land register from district) method, enter the land

AP System

register district in the *Differentiation Criterion* column, and enter the partner number of the land registry in the *Field Contents* column.

If your active search strategy uses a method that does not require entering values, then you do not have to have to enter values here.

Activities

For each search strategy, enter the search values that are needed based on the search method:

Where you enter these values is dependent on the search method used by the search strategy. For search methods where the values for the strategy are simply entered, you enter the values directly in the *Differentiation Criterion* field. In that case, you can specify only one value for each search strategy as a default value.

For search methods that recognize a differentiation criterion (such as, the location of the current object), you have to enter the possible values for each differentiation criterion in the *Field Contents* field.

You can use wildcard characters here: An asterisk (*) replaces any number of characters, while a plus sign (+) replaces exactly one character. If more than one value is possible for a differentiation criterion, then enter a number to distinguish the values in the *Seq. Number* (sequence number) field. You are only allowed to designate one value as the default value for each combination of search strategy and differentiation criteria.

To help you select possible values more easily, you can choose *Propose Values*. Position the cursor on the search strategy, for which you want to propose values (or, if there is no entry yet for search strategy, on the search field). Then choose *Propose Values*. The system displays a search help appropriate for the search strategy. You can select the values there that you need for this search strategy.

Note on transport:

Since you enter partner numbers in the table, transporting to another system only makes sense if the partner numbers are the same in both systems!

Dialog**Change Screen Layout**

Use

For more information on using the Business Data Toolset, refer to the SAP Library. Choose *SAP NetWeaver Components --> Cross-Application Functions --> Business Data Toolset*.

Screen Layout

Field Groups

Field Groups

Use

Use

These are the specifications for how the fields are grouped into field groups for the Business Data Toolset.

Standard settings

Do not change the standard settings.

Exception

You should make changes only if you want to add your own new fields to the master data dialog.

Activities

In that case, copy an existing field group to the customer name range. (Enter a number between and in the *Field Group* field.)

Change the properties of the field group accordingly in the detail screen. Then assign the new fields to the field group.

Field Status

Use

Use

Here you can set up the field modification for field groups. Proceed as follows:

1. Enter the activities for which the setting should apply (if not already displayed).
2. Select the row and choose *Field Modification*.
The system displays all field groups that know the given application. In order to display the fields of a field group, position the cursor on the field group and choose *Environment -> Field check*.
3. Now you can, for example, suppress field groups that are not needed or define other field groups as "Required entry" fields. If you choose the "Not specified" setting, then the system itself determines how the field is treated. (Usually these fields are optional entry fields in create and change mode, and display fields in display mode.) If it is not possible to make a setting for a field group, then the system determines how the field is treated (usually dependent on the situation, or on the contents of other fields).

Note

Before you suppress multiple field groups of a view, a section or a screen sequence, you should consider if it makes more sense to remove the view, section or screen completely from the screen sequence.

Views

Use

Use

Here you specify which field groups are grouped together into a view (part of a screen, technically a subscreen). You should group together the field groups that necessarily belong together during a check.

Example

If you have a field group with a valid-from date and a field group with a valid-to date, and these should be checked against each other in a module, then you should group them together into a view.

The check module is in the detailed data under "Function Module After Entry".

Standard settings

SAP recommends that you not change the standard settings. It is only necessary to make changes if you want to add your own new fields to the master data dialog.

In that case, copy an existing view to the customer namespace (Y* or Z*) and modify the properties of the view accordingly (consider the detail screen). Then assign the field groups to the view. You can assign your own field groups, as well as those delivered by SAP.

Sections

Use
Use

Here you specify which views are grouped together into sections. You can recognize a section because it is surrounded by a frame. Fields that logically belong together should be grouped together in sections.

Standard settings

SAP recommends that you not change the standard settings.

It could be necessary to define new sections, either to arrange views delivered by SAP differently or to add your own fields to the master data dialog.

In that case, copy an existing section to the customer namespace (Y* or Z*) and assign the views you want to this section. The item number specifies the sequence in which the views are arranged in the section. For technical reasons, if you make your own assignments from sections to views, the item numbers have to be in the customer namespace (that is, they are not allowed to end in ").

This makes it possible for you to also include your own views in SAP sections. Select a section, and choose *Section -> Views* in the dialog tree, and assign the view to a section using a corresponding item number.

Screens

Use

Use

Here you specify which tab pages appear in the dialog, and which sections make up these tab pages.

Standard settings

SAP recommends that you do not change the standard tab pages.

If you want to change a tab page, copy the standard tab page that is closest to the tab page you have in mind, and give it a name in the customer name range (Y* or Z*). Then assign the sections you want. The position number for user-specific entries also has to be other than here.

Screen Sequences

Use

Use

Here you specify which screen sequences should appear in dialog. A screen sequence consists of different screens, and each screen is equivalent to a tab page.

Standard settings

SAP recommends that you leave the standard screen sequences unchanged. If you have to define other screen sequences, copy a standard screen sequence to the customer name range (Y* or Z*) and then assign the screens you want. The position number for user-specific entries also has to be different from here.

Note

You have to assign the new screen sequences to the standard screen sequence category. Choose **Screen Sequence Categories** or **Screen Sequence Category** -> **Screen Sequences**.

Where does changing the screen sequence make sense?

For applications that can relate to different object types or contract types:

- Architectural object (locality, land, building, floor, space, and so on):
Here you can define the new screen sequence dependent on the architectural object type. If a new screen sequence is not entered, then the system uses the standard screen sequence. This allows you, for example, to hide the *Land* tab page when processing an architectural object of the type *Building*, and vice versa.
- Rental object:

You can define the screen sequence to be dependent on the type of rental object (rental unit, pooled space, rental space).

- Contract:
You can define the screen sequence to be dependent on the contract type. If a new screen sequence is not defined per contract type, or it cannot be defined (for business entity, building and land, for example), then the system uses the screen sequence that is designated as "Standard."
- RE search request:
For normal entry, you use the standard screen sequence. For fast entry (ad hoc search) the RERRFE screen sequence is used. (This cannot be changed.)

Events

Use

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Tables

Use

You need this dialog only if you want to make complex modifications to the standard dialog.

SAP recommends that you leave the settings delivered here unchanged.

Implementation Enhancements (BAdI)

Validation, Substitution

Use

The Business Add-In supports enhancements to the standard functions of land registers. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods needed for your particular enhancement. Then activate the BAdI implementation.

For a description of the methods that are available in all Business Add-Ins for master data objects and the real estate contract, refer to Methods and Events.

For an overview of the programming interfaces for RE-FX, see this text.

Example

There is a sample implementation for each of the following in the BAdI Builder: business entity, rental object and real estate contract.

Choose the menu path: *Goto -> Sample Code -> Display*.

Enhancements of the user interface using the **Business Data Toolset** are explained in more detail in Enhance BDT Applications Notes for Developers

Conversion Exits for the Page Number of Land Register

Use

The Business Add-In supports enhancements to the standard functions of land register page numbers. For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

The following methods exist:

- **NUMBER_INPUT** - Conversion of the land register page number at the time of entry. The method is called when a land register page number is entered on the screen.

- **NUMBER_OUTPUT** - Conversion of the land register page number at the time of output

The method is called when a land register page number is output on the screen.

The implementation of the methods has to be independent of the interface. It is not allowed to contain any COMMIT WORK or ROLLBACK WORK statements.

For example, direct output of messages using the MESSAGE statement, without using the existing exceptions, is not allowed.

Method description

- **NUMBER_INPUT**
For conversion at the time of input (from the screen to the internal display)
- **NUMBER_OUTPUT**
For conversion at the time of output (from the internal display to the screen)

Example

For a sample implementation that shows the conversion of land register page numbers as in the LUM add-on, see the class CL_EXM_IM_RELM_NUMBER_LRPAGENO. Notes for Developers

Conversion Exits for Numbers in the Real Estate Register

Use

The Business Add-In supports enhancements to the standard functions of real estate register numbers.

For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

The following methods exist:

- **NUMBER_INPUT** - Conversion of the real estate register number at the time of entry. The method is called when a real estate register number is entered on the screen.
- **NUMBER_OUTPUT** - Conversion of the real estate register number at the time of output. The method is called when a real estate register number is output on the screen.

The implementation of the methods has to be independent of the interface. It is not allowed to contain any COMMIT WORK or ROLLBACK WORK statements.

For example, direct output of messages using the MESSAGE statement, without using the existing exceptions, is not allowed.

Method description

- **NUMBER_INPUT**
For conversion at the time of input (from the screen to the internal display)
- **NUMBER_OUTPUT**
For conversion at the time of output (from the internal display to the screen)

Example

For a sample implementation that shows the conversion of real estate register numbers as in the LUM add-on, see the class `CL_EXM_IM_RELM_NUMBER_LRREGNO`. Notes for Developers

Conversion Exits for Numbers in Sections II and III**Use**

The Business Add-In supports enhancements to the standard functions of section numbers in sections II and III.

For an overview of the possible enhancement methods, see this text.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

The following methods exist:

- **NUMBER_INPUT** - Conversion of the section number at the time of entry. The method is called when a section number is entered on the screen.
- **NUMBER_OUTPUT** - Conversion of the section number at the time of output (from the internal representation to the screen).
The method is called when a section number is output on the screen.

The implementation of the methods has to be independent of the interface. It is not allowed to contain any COMMIT WORK or ROLLBACK WORK statements.

For example, direct output of messages using the MESSAGE statement, without using the existing exceptions, is not allowed.

Example

For a sample implementation that shows the conversion of section numbers as in the LUM add-on, see the class `CL_EXM_IM_RELM_NUMBER_SECNO`. Notes for Developers

Allow Manual Entry of Ranking Numbers for Sections II and III

Use

In the land register, the system automatically calculates the ranking numbers in Sections II and III. You can only influence the ranking number indirectly by means of the fields 'Rank Before Sequence Number inSection' or 'Add Rank to Current Section Number'. It is not possible for you to enter the ranking number directly.

The BAdI `BADI_RELM_LR_RANKINGNO` makes it possible to enter the ranking number manually. To activate this BAdI, implement the method `IS_RANKINGNO_FILLED_MANUALLY`. The parameters of the method have the following meanings:

- `IO_OBJECT` is an import parameter and contains an object reference to the land register.
- `CF_MANUALLY` is a changing parameter. If it is set to `ABAP_TRUE`, then you can enter the ranking number directly.

The example implementation in class `CL_EXM_IM_RELM_LR_RANKINGNO` shows how you can control the option for manually entering the ranking number dependent on the land register district.

Notes for Developers

Define Custom Search Methods for Search Strategies

Use

Here you define your own custom search methods. You can then process the corresponding implementations for them using a BAdI. For more information, see [Implement/Activate Search Methods for Search Strategies](#).

Standard settings

Some methods are predefined in the system. However, they only deliver the expected results when the sample code of the BAdI is activated.

Activities

If the predefined search methods are not sufficient to meet your needs, you can define your own methods. Choose names for your methods that begin with the letter Y or Z.

You can assign one method to several search fields. However, doing so makes sense only if the search fields point to the same domain (for example, the land registry and the agency responsible for the parcel, since both are business partners).

In addition, specify the following for the search method:

- A descriptive name
- The search help for the differentiation criterion (when entering allowed values)
- The type of the method

Then implement the BAdI for the search method.

Implement/Activate Search Methods for Search Strategies

Use

This BAdI can be used to define your own search methods for a search strategy. Search methods are each assigned to a search strategy. The BAdI method that is used depends on the type of search method that is entered for the method in table TIVCASHMETH. The following applies:

Type SPACE - Single Value Method, Values Are in VICASHFVALUES-SHMETHDIFF

There is no BAdI call, the values for the search strategy are entered directly in table VICASHFVALUES.

Type - Search Strategy + Possibly Object Data => (Program) Values The BAdI determines the possible values solely from the name of the of search strategy and possibly from the object data.

BAdI method to be implemented: **GET_VALUES**

Type Search Strategy =>SMETHDIFF => (Program) Values

First a differentiation criterion is determined for the search strategy from the value table VICASHFVALUES. The BAdI then determines the possible values from this differentiation criterion, possibly dependent on the object data and the name of the search strategy. BAdI method to be implemented: **GET_VALUES_FOR_SHMETHDIFF**

Type Object Data => (Program) SMETHDIFF => (VICASHFVALUES) Values

The BAdI determines a differentiation criterion from the object data and possibly from the name of the search strategy. The values for this differentiation criterion are then read from table VICASHFVALUES.

BAdI method to be implemented: **GET_SHMETHDIFF** Search

strategies are used in the following contexts:

- One-Time Postings:
Vendor search field (VENDOR) and service charge key (SCSCKEY)
The search strategy is determined from the Customizing settings for the posting activity (VENDOR) or for a specific item of the posting activity(SCSCKEY). An object reference is **not** transferred.

- Master Data of Parcel:
Search fields for main contractual partner (PARCOFF) and for all hierarchical locations (LOCHIER). The object reference of the parcel is transferred.
For the LOCHIER search field, the location structure of the hierarchicallocation you are searching for is also in the ID_CONTEXT field.

- Master Data of Land Register:
Search fields for land registry (LROFFICE) and for the hierarchical location (LOCHIER).
The object reference of the land register is transferred.
For the LOCHIER search field, the location structure of the hierarchicallocation you are searching for is also in the ID_CONTEXT field.

The following applies to the search fields for the land register and parcel:

For each search field, only one search strategy is allowed to be designated as active.

Activities

Depending on the type of search method, implement one of the methods:

- **GET_VALUES**
- **GET_VALUES_FOR_SHMETHDIFF**
- **GET_SHMETHDIFF**

Description of parameters:

Method **GET_VALUES** and **GET_SHMETHDIFF**:

FLT_VAL

Search method

IO_REF_OBJ

Reference to the real estate object that is currently being processed. The reference is empty when the call is from posting activities. For the land register, the reference contains a reference to the land register master data; and for parcels, a reference to the parcel master data.

The BAdI method can retrieve the current object data using the API that belongs to it.

ID_CONTEXT

For the LOCHIER search field, contains the location key of the hierarchical location being searched for; otherwise it is empty.

IS_SHSTRAT

Contains certain Customizing data for the active search strategy

IS_SHFIELD

Contains the system Customizing data for the current search field

CT_VALUES

The result of the search is to be placed in this table. The KEY field has to be filled with the determined key of the search field. The text for it does not have to be entered. For methods of type , the value of the search field is not entered. Instead the differentiation criterion, which should be used to search in VICASHFVALUES, should be filled. In this case, wildcard characters (%) are allowed for a search for similar values.

CD_DEFAULT_VALUE

If a default value was determined, it can be returned here. The default value is set when the value of the field, for which the search help was called, was initial at the time of the call.

CF_OTHER_VALUES_ALLOWED

This value should be returned as TRUE, if you want to have an option to choose "Other Values" in the search dialog box, in addition to the search result. If the user chooses this option, then the system calls the standard search help. The value does not influence whether the system checks the result of the search help (normally there is no check).

Method GET_VALUES_FOR_SHMETHDIFF

In addition to the parameters of GET_VALUES, the values that are maintained in the value table for the search strategy are also transferred to table IT_SHVALUES.

Example

Example class **CL_EXM_IM_RECA_SEARCH_METHOD** contains examples for the following search methods:

Type - Search Strategy + Possibly Object Data => (Program) Values

GET_VALUES for **LOCHIER** search method

The hierarchical location of the parcel is derived from hierarchical locations to other location structures that are already entered in the system. A value is allowed here if the same text is entered for this location in Customizing.

GET_VALUES for **PARTNR** search method

The prerequisite here is that there is external number assignment for land registries (land register) and for the main contractual partner (survey office or responsible agency) of the parcel.

The partner number of the land register corresponds to the land registerdistrict; the number of the survey office corresponds to the first characters of the leading hierarchical location. This method might need to be adjusted to agree with the practices of your company regarding partner numbers. For example, it is possible that the partners could all have a prefix in the number, such as LR for land registry.

GET_VALUES for **ADDR** search method

The assumption here is that the postal code of the land registry corresponds to the land register district. All land registries, where postal code = land registry, are offered for selection. For the parcel, the system searches for a partner with the "Responsible Agency" role, where the city agrees with the text of the hierarchical location of the parcel.

Type Search Strategy =>SMETHDIFF => (Program) Values

GET_VALUES_FOR_SHMETHDIFF for **ROLE** search method

This search method is appropriate for the **VENDOR** search field. The search method returns all vendor numbers of partners for the role that are maintained in the value table for the search strategy.

For example, if you create your own role for insurance, you can assign a search strategy with this search method to a posting activity for "insurance costs".

Type - Object Data => (Program) SMETHDIFF => (VICASHFVALUES) Values

GET_SHMETHDIFF for **VALREG** search method

You can use this search method when the land registries for the land register district are entered in the value table. The search method determines the land register district for the current land register, or for the first characters of the hierarchical location of the current parcel.

Notes for Developers

Italy

Tax Calculation for Italy

Basic Information

Use

In these IMG activities, you set up the system so that you can enter the data required for the calculation of the following three taxes in Italy:

- Property tax - ICI/IMU
- Registration tax - IRE
- Stamp Tax - IB

Requirements

Before you carry out the IMG activities as listed for each type of tax, you have to first activate the country Italy in the IMG activity Activate Country-Specifics in order for country-specific program code for Italy to be implemented.

Furthermore, you also have to set up VAT tax summarization for all Italian company codes by carrying out the IMG activity Activate Document or Tax Summarization in Company Code.

When you have made these basic Customizing settings, you can then proceed to make the settings required for each type of tax as listed under the relevant nodes.

Master Data

Define Control Parameters for Property Tax and Service Tax

Use

In this Customizing activity, you can set the following two control parameters:

- You can specify the measurement type for the occupied part of a usage object **for service tax**.
- You can specify the source of the usage object that is assigned to the architectural object. The system uses the *Usage* tab page in the architectural object as a source.

Note:

You must decide whether you want to manually assign usage objects on the *IMU Data* tab page in the architectural object, or you want the system to use the objects that are assigned to the architectural object on the *Usage* tab page. In this Customizing activity, in the *Assigned Object from Usage Tab Page in AO* field, you can choose which object source you want to use. This setting is relevant for the master data of **both the property tax and service tax**.

Property Tax (ICI/IMU)

Basic Information

Use

In these IMG activities, you set up the system so that you can enter the relevant ICI/IMU data required for the ICI/IMU tax calculation, according to Italian requirements.

Requirements

Before you carry out the IMG activities specifically for Italian ICI/IMU tax calculation, you have to carry out the following standard Real Estate IMG activities:

- Create Architectural Object Types. In this activity, you create the architectural object type 'Cadastral entry', with the following naming convention: Ixx, for example, ICI. Note: you have to set 'Locality' as the high level object type.

If you have not defined 'Cadastral entry' as the top level, you also have to carry out the following standard IMG activities:

- Define Allowed Object Type Hierarchy
- Specify Rule for Determining Object ID
- Functions per Architectural Object Type

Activities

Carry out these standard IMG activities and the ICI/IMU-specific IMG activities in the order in which they are listed.

Maintain Cadastral Category Descriptions

Use

In this IMG activity, you enter the cadastral categories and corresponding descriptions that you receive from the cadastral office.

For the calculation types AF (building area) and TA (building), you have to create dummy cadastral categories AF and TA respectively.

Maintain Cadastral Categories

Use

In this IMG activity, you enter your cadastral data using the cadastral categories that you receive from the cadastral office.

Requirements

You have carried out the IMG activity Maintain Cadastral Category Descriptions.

Activities

For each cadastral category, enter the following data:

- Valid from year
- Percentage increase
- Category coefficient

If the rental object is residential, you also have to select the *Residential* checkbox. This is required for the tax calculation procedure because particular tax rates have to be used for non-rented residentials.

Note for ICI Tax Only:

When you enter the percentage increase and category coefficient of a **historical object** to the activity, you must enter the data to the following columns:

- Percentage Increase for Historical Objects
- Category Coefficient for Historical Objects

For the IMU tax calculation, you must leave these fields empty.

Maintain City Parameters

Use

In this IMG activity, you enter the parameters for calculating property tax (ICI/IMU). These parameters depend on the city in which the building is situated.

Requirements

The name of the city must be exactly the same as in the address of the building.

Activities

Enter the following data:

- Name of the city
- Account number
- Tax collection agency
- Period in months

Maintain City Rates

Use

In this IMG activity, you enter the city rates defined by the cadastral office.

Requirements

You have carried out the IMG activities Maintain City Parameters and Maintain Cadastral Categories.

Activities

Enter the following data:

- Valid from year
- City code (or city name)
- Category ID - if no category ID is defined, the ICI/IMU tax rates are valid for all possible category IDs, if the '*' value is entered
- ICI/IMU tax rate
- Normal tax rate (for rented units in case of residential categories; this rate is always applied if no reduction is specified)
- Long vacancy rate (for non-rented units after a specific number of months)
- Short vacancy rate (for non-rented units within a specific number of months)
- Reduced rate (applied in case of a reduction reason with reduction rate ##)
- Reduced rate (applied in case of a reduction reason with reduction rate ##)
- Reduced rate (applied in case of a reduction reason with reduction rate ##) - Vacancy rate and the long vacancy rate **Note:**

The system selects the ICI/IMU tax rate for a city from the latest year and for the required category ID. If the category ID has not been defined, the system determines the ICI/IMU tax rate based on an entry with category ID * from the latest year.

Assign Reduction Rates to Reduction Reasons

Use

In this Customizing activity, you define reduction reasons and assign the relevant reduction rates to them.

Requirements

You have defined reduction rates in the Customizing activity Maintain City Rates.

Example

<u>Reduction ID</u>	<u>Description</u>	<u>Reduced Rate</u>
---------------------	--------------------	---------------------

SC	Rental object used for social purposes	(this refers to the rate that you have entered in the Reduced Rate field in the <i>Maintain City Rates</i> activity)
----	--	--

SA	Rental object for sale	(this refers to the rate that you have entered in the Reduced Rate field in the <i>Maintain City Rates</i> activity)
----	------------------------	--

Maintain Payment Installments

Use

In this IMG activity, you enter data for the minimum amount of property tax and the due dates.

Activities

Enter the following data:

- Tax year

Note:

If you enter the year in this field and then you select the Year of IMU Validity checkbox, the system considers the year as the validity year of the IMU tax. If you do not select the checkbox, the system uses the IMU data as of the given year.

- The first and second due dates
- The share of the first installment as a percentage
- The minimum tax amount
- Rounding value

- Display negative balance for ICI/IMU tax amount
- You can select the % Split checkbox, if you want the system to split the calculated tax amount into two equal parts between the down payment and the balance payment, even if the cadastral object is closed before the end date of the down payment.

Maintain Coefficients for Building Category 'D'

Use

In this IMG activity, you enter the annual revaluation coefficients for the valuation of D-buildings.

Activities

Enter the year and corresponding coefficient.

Communal Service Tax (TASI)

Settings for Service Tax

Use

Before you make Customizing settings for the communal service tax (TASI), make the following prerequisite settings:

- In the Maintain Cadastral Category Description Customizing activity, you can select the TASI Exemption checkbox if your real estate object is exempted from service tax payment.
- In the Define Control Parameters Customizing activity, define control parameters as described in the Customizing documentation.

You can then make the required settings for processing service tax in the following Customizing activities:

- Define Default Service Tax Rates
- Define City Rates
- Define Payment Installments
- Define Settings for Contract Types

Define Default Service Tax Rates

Use

In this Customizing activity, you can enter a general tax rate that is defined by law/government that the system can use for the communal service tax (TASI) calculation by default. The system applies the default tax rate only if there is no city rate defined in the given city.

The following service tax rates are defined by the government:

- Default tax rate for rental objects that have a contract
- Default tax rate for rental objects that do not have a contract
- Maximum tax rate
The sum of the property tax (IMU) and the service tax (TASI) rates cannot exceed the maximum rate.
- Default percentage of service tax that the owner of the rental object must pay This applies only when the rental object is leased out and the contract validity exceeds months. In such a case, the owner and the tenant split the service tax amount in a percentage that the government defines.

In this Customizing activity, enter the validity year of the service tax and enter the default tax rates and the percentage of the tax amount that the rental object owner must pay in case the tax amount is split between the owner and the tenant. If the tax rates are valid only for one year, select the *Validity Year* checkbox. If you do not select it, the system uses the entered tax rates **as of** their validity year.

If there are service tax rates defined by cities that differ from the default tax rates, the system applies the city rates for the service tax calculation. You can enter the service tax rates defined by cities in the Define City Rates Customizing activity.

Define City Rates

Use

In this Customizing activity, you enter the tax rates for the communal service tax (TASI) calculation that are defined by the cities. If there are no service tax rates defined in a city, the system uses the default service tax rates that the government defines. You can enter the default service tax rates in the Define Default Service Tax Rates Customizing activity.

The cities can define service tax rates for rented and not rented real estate objects that are based on the value of the real estate object (see section *Example* below). If a city does not define different tax rates based on the value of the real estate object, create an entry with value (zero).

For each city, enter the validity year of the service tax, assign the city, category ID, and a contract type. After that, enter the value ranges of real estate objects if the city has defined different rates, and then enter

the tax rates that are valid in the given city. After that, enter also the percentage of the tax amount that the rental object owner must pay in case the tax amount is split between the owner and the tenant.

Example

The city can define service tax rates as follows:

<u>Value of real estate object</u>	<u>Rate of Rented</u>	<u>Rate of Not Rented</u>
,		
,		
,		

This means the following:

- If the value of the real estate object is between EUR , and EUR ,, the system applies the % as the service tax rate if the real estate object is rented, and % as the service tax rate if the real estate object is not rented.
- If the value of the real estate object is between EUR , and EUR ,, the system applies the % as the service tax rate if the real estate object is rented, and % as the service tax rate if the real estate object is not rented.
- If the value of the real estate object is above EUR ,, the system applies the % as the service tax rate if the real estate object is rented, and % as the service tax rate if the real estate object is not rented.

Define Payment Installments

Use

In this Customizing activity, you define the due dates (date and month) of the first installment and balance (second installment) payments of the service tax in a given calendar year.

You can select the % Split checkbox, if you want the system to split the calculated tax amount into two equal parts between the down payment and the balance payment.

Define Settings for Contract Types

Use

In this Customizing activity, you can make the following settings for contract types:

- If you select the *Short Term* checkbox, the system always applies the service tax rate that is defined for not rented real estate objects when the service tax is calculated for those real estate objects that are rented, but their contract validity is equal to or less than months in the fiscal year.
If you do not select the checkbox, the system always applies the service tax rate that is defined for rented real estate objects whose contract validity is more than days.
- If you must always apply the service tax rate that is defined for not rented real estate objects, select the *Not Rented* checkbox. In this case, the system does not consider the contract validity at all when calculating the service tax.

Registration Tax (IRE)

Basic Information

Use

In these IMG activities, you set up the system so that you can enter the relevant data for the IRE registration tax calculation, according to Italian requirements.

Activities

Carry out the IMG activities in the order in which they are listed.

Maintain Company Code Dependent Registration Tax Parameters

Use

In this Customizing activity, you maintain company code-dependent parameters for calculating registration tax (IRE).

Activities

You specify the company code and then indicate if you want to exclude transfers from the calculation of registration tax. You select the *Exclude Transfers* checkbox to exclude transfers of ownership and tenancy for the specified company code. Transfer records will no longer be generated for the company code.

Maintain Registration Tax Rates

Use

In this Customizing activity, you define registration tax (IRE) rates for rental object codes.

You additionally specify whether the tax authorities allow a certain amount of deduction in case of one-time payment, and you enter the base condition group that contains all the condition types that are relevant for IRE calculation.

Requirements

You have defined the base condition group in the Customizing activity Define Condition Groups and Assign Condition Types.

Maintain Tax Codes for Rental Object Codes

Use

In this Customizing activity, you assign tax codes to rental object codes and you specify the type of payment.

Requirements

You have maintained:

- The rental object codes in the Customizing activity Maintain Registration Tax Rates
- The tax codes in the Customizing activity Maintain Tax Code Descriptions

Activities

1. Enter the rental object code and its corresponding description.
2. Specify the parameter that defines whether the tax code is for one-time payment or annual payment.
3. Specify the tax code.

Example

<u>Rental Object Code</u>	<u>Tax Code Det. Parameter</u>	<u>Tax Code</u>
	- One-time payment	T
	R - Renewal	T
	- One-time payment	T
	B - Annual payment-Beginning Year	T
	I - Annual payment-Intermediate Year	T
...		
	B - Annual payment-Beginning Year	T

Maintain Calculation Types**Use**

In this Customizing activity, you define the calculation types that can be used for IRE tax.

Activities

Enter an ID and corresponding descriptive text for each calculation type, and select the required attributes.

Note:

If you use the calculation type for both one-time payment and annual payment, proceed as follows:

- Enter the calculation type ID and corresponding descriptive text for annual payment
- Copy the row
- Select the *One-Time Payment* checkbox and change the calculation type ID and text accordingly

Example

For the calculation type **Contract without VAT**, no specific attributes are required. For the calculation type **Contract with VAT**, you have to select the checkbox for the attribute *VAT Included*.

Maintain Tax Code Descriptions**Use**

In this Customizing activity, you enter the tax codes that can be used for IRE tax calculation, with a corresponding descriptive text, and also specify if the tax code is the main or an additional tax code.

Maintain Time Dependent Parameters

Use

In this Customizing activity, you enter the variables that influence the calculation of registration tax (IRE), based on a validity date.

Activities

Enter the following data:

- Validity date as of which the parameters take effect
- Minimum registration tax amount
- Fixed value for registration tax in case of premature termination
- Advance Resolution
- Reduction percentage
- Rounding value
- Payback percentage
- Deduction percentage of one-time payment

Maintain Register Office Master Data

Use

In this IMG activity, you enter the code to identify the relevant register office and the corresponding county name.

Select Reason for Notice Relevant to Transfer of Ownership

Use

In this Customizing activity, you define reasons for notice relevant to transfer of ownership.

Requirements

You have entered **all** the reasons for notice that are related to Italy in the Customizing activity Notice Reasons.

Stamp Tax

Maintain IB Stamp Tax Parameters

Use

In this Customizing activity, you enter the parameters for calculating stamp tax as defined by the register office and as required by your business practice. This is required so that you can determine and post the correct amount of stamp tax to the correct account if the value of postings exceeds the minimum value set.

You reverse the invoice or you can send a credit memo with partial or total amounts.

In case of credit memos, the company must pay the stamp tax of the credit memo. Particularly in case of total credit memos, you (as a company) must pay back the stamp tax to the customer.

Requirements

You have made the required settings in:

- Edit G/L Account Centrally
- Assign Account Symbol to Flow Type

Example

An example of the accounting process in case of credit memos:

Normal invoice (base amount is higher than EUR):

<u>Debit</u>	<u>Credit</u>	<u>Amount</u>
Customer/tenant	Stamp tax account	EUR

Reversal (of invoices the base amount of which is higher than EUR):

<u>Debit</u>	<u>Credit</u>	<u>Amount</u>
Customer/tenant	Stamp tax account	EUR

Partial credit memo:

<u>Debit</u>	<u>Credit</u>	<u>Amount</u>
Expenses account	Stamp tax account	EUR

Total credit memo:

<u>Debit</u>	<u>Credit</u>	<u>Amount</u>
--------------	---------------	---------------

Expenses account	Stamp tax account	EUR
Expenses account	Customer/tenant	EUR

Define Tax Groups Relevant to Stamp Tax (IB)

Use

In this IMG activity, you define the tax groups that should be relevant to stamp tax by selecting the *Stamp Tax Relevancy to Tax Groups* indicator.

In Italy, stamp tax is known as *Imposta di Bollo*.

Requirements

You have defined all the allowed tax groups in the IMG activity Create Tax Groups.

Accrual/Deferral Posting

Implementation: Exclusion of Not Posted Cash Flow Items

Use

You can use this Business Add-In (BAI) implementation to meet the legal requirements of deferral posting in Italy, that is, if there is no revenue posted on the key date in a contract, you must not post any deferrals in the given month of the validity period.

By activating the BAI, the *Accrual Engine* (RERAALCN) checks on the key date whether you have already posted any revenue with the *Periodic Posting: Contracts* (RERAPP) program in the contract. If there was no revenue posted, the accrual engine does not calculate and post deferrals.

When you post revenue within the validity period later on, the next time you run the accrual engine, the program considers the revenue posting and calculates and posts deferrals retroactively to the previous month(s) of the validity period.

Japan

Service Charge Settlement Based on Fixed Unit Prices

Define Rounding Type for Company Code

Use

In this IMG activity, you can assign the following rounding types to the company code:

- Commercial
- Round up
- Round down

The system uses these rounding types to calculate the distributed consumption costs based on fixed unit prices.

The rounding is applied on the sum of the expenses calculated based on fixed unit prices.

Define Flow Types for Posting Fixed Unit Price Based Costs

Use

In this IMG activity, you define the flow types for service charge keys with the relevant company code necessary for posting the costs calculated with the fixed unit price before the standard service charge settlement. Flow types are used to determine cost and tax account numbers for additional postings in the Distribute Consumption Costs Based on Fixed Unit Prices program.

Requirements

You have defined

- Service charge keys in the IMG activity Define Service Charge Keys. You must define here the *Direct Cost Posting* parameters (**RO - Directly Assignable to Account or SU Assignable to Account**)
- Flow types in the IMG activity Define Flow Types

Business Add-Ins (BAdI)

Implementation: Cost Determination for SCS

Use

You can use this Business Add-In (BAdI) implementation to determine the type of collected costs for service charge settlement.

You must activate this BAdI implementation so that the system can collect the consumption costs that are based on fixed-unit prices and calculated by the Pre-Step transaction. If you do not activate the BAdI implementation, the system collects the consumption costs from *Financial Accounting* (FI).

Requirements

If you activate this BAdI implementation, you must also activate the BAdI implementation Cost Distribution for SCS.

Implementation: Cost Distribution for SCS

Use

You can use this Business Add-In (BAdI) implementation to distribute the consumption costs defined by cost determination. The system distributes the costs among the real estate objects involved in service charge settlement.

Requirements

If you activate this BAdI implementation, you must also activate the BAdI implementation Cost Determination for SCS.

Payment Report for Real Estate Charges

Basic Form Settings

Define Form Settings

Use

In this IMG activity, you can specify the name and the content structure name of the specific form. The settings for this IMG activity are required for the generation of the PDF output.

Note

SAP delivers standard forms and interfaces for the legal forms. Use this activity if you want to replace the forms or interfaces or if you want to define new legal forms.

Activities

1. Define the form settings for your report.
2. Define the company-specific settings for the different forms, for example, name of context, name of PDF interface, name of layout in the IMG activity Define Company-Specific Form Settings.

Example

The following table is an example of the settings for forms specific in Japan.

<u>Legal Form Name</u>	<u>Description of the Form</u>	<u>DDIC Structure Name</u>
FORMForms - (RE-FX Japan)		REXCJP_F
PYMNTREP	Payment Report (RE-FX Japan)	RE_T_REXCJP_PDF_PAGE

Define Company-Specific Form Settings

Use

In this IMG activity, you maintain and create company-specific legal forms.

Note

SAP delivers standard forms and interfaces for the legal forms. Use this activity if you want to replace the forms or interfaces or if you want to define new legal forms.

Requirements

You have defined the:

- Forms in the IMG activity Form Builder for PDF-Based Forms
- Form settings for the relevant form in the IMG activity Define Form Settings

Example

The following table is an example of the settings for forms specific in Japan.

<u>CoCd</u>	<u>Legal Form Name</u>	<u>Form</u>	<u>Interface</u>
JP	FORM	REXCJPFORM	REXCJPFORMIF
JP	PYMNTREP	REXCJP_PAYMENTREPORT	REXCJP_PAYMENTREP
	ORTIF		

Define Payment Categories

Use

In this IMG activity, you can define payment categories used in Japan, for example, security deposits, maintenance fees, premiums, renewals.

Activities

1. Define the payment categories for real estate charges in the IMG activity Define Payment Categories.
2. Allocate the payment categories to flow types in the IMG activity Assign Payment Categories to Flow Types.

Assign Payment Categories to Flow Types

Use

In this IMG activity, you can assign the payment categories to the flow types.

Requirements

You have defined the:

- Payment categories in the IMG activity Define Payment Categories
- Flow types in the IMG activity Define Flow Types

Define Company-Specific Data for Payment Report

Use

In this IMG activity, you can maintain information about the real estate company. The system displays this information in the output of the Payment Charge Report.

Activities

This activity allows you to:

- Maintain information about the tax office that your company belongs to, as required by the tax authorities in Japan
- Specify the payment limit for reporting
- Maintain information about the reporting office of the real estate company to be displayed in the report output
- Specify whether you want the agent commission to be included in the Payment Charge Report
- Specify the agent commission limit for reporting

Define Grouping Order for Payment Charges

Use

In this Customizing activity, you define the sequence of the relevant data that appear in the output of the Payment Charge Report. You can additionally define for which data you want the report to create a new

table, such as for each vendor ID or agent, in the PDF-based output form or to create a new row in the ALV list of the output lines.

If you do not select the Create Table checkbox, the report only creates new payment information in the ALV list of the output lines, and a new row in the PDF-based output form.

If you do not define the grouping order in **this** Customizing activity, the report uses the following grouping order:

- Company Code
- Agent
- Vendor
- Payment Category
- Object Number

Note:

If you want to define the grouping order of the basis of calculation and details values, you must implement the relevant BAdI method to specify values for the basis of calculation and the details as described in BAdI: Maintenance of Payment Charges.

Business Add-In (BAdI)

Notes on Implementation

Use

All Business Add-Ins that are grouped under this structure node belong to the enhancement spot **REXCJP_PAYMENTREP_ENH_SPOT**. In this enhancement spot, you can implement the **BADI_REXCJP_PAYMENTREP** BAdI definition.

You use this enhancement to define your own fields that the system displays in the ALV and PDF output.

Note!

SAP delivers this enhancement with an example implementation. You can use this example implementation for defining your own settings.

Activities

1. Modify the ABAP Dictionary elements.
You can make the modifications by customer includes or append structures. You need to make sure that you add the new fields parallelly to both ALV and PDF with the same name and type.
2. Implement the Business Add-In.
Use the delivered example implementation for this purpose. For your implementation, use your own namespace (Z*).
3. Modify the PDF context and layout.

For more information about modifying the PDF form in the SAP Library, see *Interactive Forms based on Adobe Software* (http://help.sap.com/saphelp_erpvp/helpdata/en/c/ebacaadbfb/f/frameset.htm).

BAdI: Maintenance of Payment Charges

Use

This Business Add-In (BAdI) is used in the Flexible Real Estate Management (RE-FX) component in Japan.

You can use this BAdI to modify or validate the content of the Payment Charge Report.

The BAdI offers different methods that allow you to:

- Propose default values for the selection parameters
- Check and modify the user input
- Make final modifications in the content of the legal form after data selection
- Replace the business partner category for a business partner
- Specify values for the basis of calculation and the details for a given payment data
- Calculate the value of the total agent commission paid by a given landlord for a given agent

Standard settings

In the standard system, there is no activated BAdI implementation.

Activities

For information about implementing BAdIs as part of the Enhancement Concept, see SAP Library for SAP NetWeaver under BAdIs - Embedding in the Enhancement Framework.

Example

To display the sample code, choose Goto -> Sample Code -> Display.

See also:

This BAdI uses the interface **REXCJP_PYMNTREP_BADI_INTERFACE**. For more information, display the interface in the Class Builder.

Lease-Out Offices in Mega Cities

Basic Form Settings

Define Form Settings

Use

In this IMG activity, you can specify the name and the content structure name of the specific form. The settings for this IMG activity are required for the generation of the PDF output.

Note

SAP delivers standard forms and interfaces for the legal forms. Use this activity if you want to replace the forms or interfaces or if you want to define new legal forms.

Activities

1. Define the form settings for your report.
2. Define the company-specific settings for the different forms, for example, name of context, name of PDF interface, name of layout in the IMG activity Define Company-Specific Form Settings.

Example

The following table is an example of the settings for forms specific in Japan.

<u>Legal Form Name</u>	<u>Description of the Form</u>	<u>DDIC Structure Name</u>
FORM	Forms - (RE-FX Japan)	REXCJP_F
PYMNTREP	Payment Report (RE-FX Japan)	RE_T_REXCJP_PDF_PAGE

Define Company-Specific Form Settings

Use

In this IMG activity, you maintain and create company-specific legal forms.

Note

SAP delivers standard forms and interfaces for the legal forms. Use this activity if you want to replace the forms or interfaces or if you want to define new legal forms.

Requirements

You have defined the:

- Forms in the IMG activity Form Builder for PDF-Based Forms
- Form settings for the relevant form in the IMG activity Define Form Settings

Example

The following table is an example of the settings for forms specific in Japan.

<u>CoCd</u>	<u>Legal Form Name</u>	<u>Form</u>	<u>Interface</u>
JP	FORM	REXCJPFORM	REXCJPFORMIF
JP	PYMNTREP	REXCJP_PAYMENTREPORT	REXCJP_PAYMENTREP ORTIF

Define Settings for Tax Office

Use

In this IMG activity, you need to make the settings as required by the tax office. You can:

- Round the floor area data according to the rounding algorithm required by the tax office
- Define the decimal length of the measurements for rounding
- Maintain the layout of forms for buildings (in Tokyo: Form -) and offices (in Tokyo: Form -)
- Group of the office data after rental objects or after tenants

Requirements

You have assigned the tax office role for the business partner in Maintain Business Partner.

Activities

Select a business partner, which has a tax office role and make the required Customizing settings described above.

Define Kanji and Katakana Name Locations

Use

In this IMG activity, you can maintain the location of the Kanji/Katakana names in the master data. The information that you define in this activity, allows the system to select the Kanji and Katakana names for the Lease-Out Offices in Mega Cities report.

Activities

- Assign the location of the Kanji and Katakana names for the company code as used in the company.
- Assign the location of the Kanji and Katakana names for the business partners as used in the company.

Example

The Kanji name is located in the *Name* field and the Katakana name is located in the *Name* field of the company code.

Define Company-Specific Data for Lease-Out Offices in Mega Cities

Use

In this IMG activity, you can maintain information about the real estate company. The system displays this information in the output of Lease-Out Offices in Mega Cities legal form.

Activities

For each company code, maintain the information about the president, contact person, and own business partner at the company.

Assign Measurement Types to Measurement References

Use

In this IMG activity, you define the measurement types that you need to display the floor area data in the output of Lease-Out Offices in Mega Cities.

Requirements

You have defined the measurement types for the floor area, in the IMG activity Define Measurement Types.

Activities

Assign the relevant measurement reference, for example, total room for business usage, common floor area lent to a tenant, total room for common floor area, common portion floor area in a shared building and so on to the measurement type. Then the system displays this data for the floor area in the output of Lease-Out Offices in Mega Cities.

Business Add-In (BAdI)

Notes on Implementation

Use

All Business Add-Ins that are grouped under this structure node belong to the enhancement spot **REXCJP_FORMS_ENH_SPOT**. In this enhancement spot, you can implement the **BADI_REXCJP_FORMS** BAdI definition.

You use this enhancement to define your own fields that the system displays in the ALV and PDF output.

Note!

SAP delivers this enhancement with an example implementation. You can use this example implementation for defining your own settings.

Activities

1. Modify the ABAP Dictionary elements.

The following table shows an example of how to modify the ABAP Dictionary elements. You can make the modifications by customer includes or append structures. You need to make sure that you add the new fields parallelly to both ALV and PDF with the same name and type.

<u>Type</u>	<u>Header</u>	<u>Detail</u>
PDF	REXCJPF_FSD	REXCJPF_STL
ALV	REXCJPF	REXCJPF

2. Implement the Business Add-In.

Use the delivered example implementation for this purpose. For your implementation, use your own namespace (Z*).

3. Modify the PDF context and layout.

For more information about modifying the PDF form in the SAP Library, see *Interactive Forms based on Adobe Software*

(http://help.sap.com/saphelp_erpvp/helpdata/en/c/ebacaadbfb/f/frameset.htm).

BAdI: Maintenance of Forms for Lease-Out Offices in Mega Cities

Use

This Business Add-In (BAdI) is used in the Flexible Real Estate Management (RE-FX) component in Japan.

You can use this BAdI to modify or validate the content of the Lease-Out Offices in Mega Cities legal form.

The BAdI offers different methods that allow you to:

- Propose default values for the selection parameters
- Check and modify the user input

- Make final modifications in the content of the legal form after data selection

Standard settings

In the standard system, there is no activated BAdI implementation.

Activities

For information about implementing BAdIs as part of the Enhancement Concept, see SAP Library for SAP NetWeaver under BAdIs - Embedding in the Enhancement Framework.

Example

To display the sample code, choose Goto -> Sample Code -> Display.

See also:

This BAdI uses the interface **REXCJP_FORMS_BADI_INTERFACE**. For more information, display the interface in the Class Builder.

China

Contract Version Management Maintain Fields Used in Contract Comparison with Display Order

Use

In this Customizing activity, you can change the display order of the results of contract comparison reports by manually entering the display order for key names in the required order in this activity. The display order you configure here is used in the layout of a Simple Contract Comparison Report, or a Detailed Contract Comparison Report.

Activities

1. In the *Header table* column, select a header field.

The *Header table* column in this activity corresponds to the Tab Description in a contract comparison report. This information is displayed as a tab page element, such as: a tab page name, table name, or table values, and so on; on a tab page in a real estate contract.

2. In the *DispOrder* column, for each Key name that you want to configure the order for, enter a numeric value for the corresponding Key name in the order as you want the system to display the data.

The *Key Name* column in this activity corresponds to the Key Info column in the contract comparison report. This information is displayed as fields on a tab page in a real estate contract.

The key name can be an element, for example, can be a tab page name, a table name, or a parameter within in a table.

You can check the key names within a header table parameter, in transaction SE or in transaction SE, calling the BAPI_RE_CN_GET_DETAIL function module.

After you run a contract comparison report, the Key Info data in the report result is displayed in the sequence in which it was configured.

Caution: We recommend that you do not delete or modify any other fields in the table (such as fields in the *Header table* or *Key Name* columns). Doing so may cause the application to behave unexpectedly.

Example

Use

Maintain Change Reason for Contract Version

Use

In this Customizing activity, you register the change reason in the system. The change reason states the reason for the change to an original contract.

This change reason is displayed when you view the contract version history, and when you view the contract details on the *Original Contract* tab page of a real estate contract (transaction RECN).

Activities

Registering a change reason is optional and you maintain this attribute when you create a new contract version. You can register any reason for the change, and you can register as many change reasons as necessary.

Example

For example, you need to update the contract terms for a contract because the contract is renewed on a yearly basis. When you create a new version of a contract with the updated terms, you can register the reason for this change as *Annual Change* because this change occurs annually.

Assign Number Range Interval to Contract Version

Use

In this Customizing activity, you assign a number range interval to a contract version. Whenever a new contract version is created, the system generates a unique contract version number that falls within the number range specified in this activity.

Requirements

A number range interval is defined in the Customizing activity Number Range for Contracts.

Activities

In the *Number range number* field, enter the number for a number range interval.

Business Add-Ins

BAdI: Contract Comparison Display/Approval

Use

You can use this Business Add-In (BAdI) to support the Contract Version Management enhancement made for *Flexible Real Estate Management (RE-FX) China*.

This BAdI serves two purposes, depending on the mode selected:

- **Approval Mode** - You specify the approval criteria required in an approval process. If the required approval criteria for an original contract and a contract version are the same, then the contract version is automatically approved and processed. Otherwise, the contract version is submitted to the standard approval process via a workflow.
- **Display Mode** - You specify the criteria to display in a comparison report result. If no criteria is specified, then by default, the system displays the results of all differences in a contract comparison report.

The following method is available:

- **COMPARE_EXT Method** - You can use this Business Add-In (BAI) method to compare tables or customized tables. This method is called before the FILTER_DIFFERENCE method.
- **Importing parameter**
IO_CONTRACT_ORIG - object for original contract
IO_CONTRACT_VERS - object for contract version
- **Changing parameter** - Use **ct_diff** to view the result of the comparison
- **FILTER_DIFFERENCE Method** - You can use this Business Add-In (BAI) method to select the method, and change the criteria parameters.
- **Importing parameter** - Use **iv_mode** to select the mode you are using:
 - 1 - Display
 - 2 - Approval
 - Others
- **Changing parameter** - Use **ct_diff** to change the parameters in the table. Depending on the mode selected, you can change either the comparison result, or the required criteria in a workflow.

Standard settings

In the standard system, there is no default implementation. You must create your own BAI implementation.

BAI: Availability of Functions for Contract Version Management

Use

You can use this Business Add-In (BAI) to support the *Contract Version Management* enhancement made for *Flexible Real Estate Management (RE-FX) China*. You can modify and validate content

The following methods are available:

- **IF_EX_RECN_CONTRACT-CHECK_ALL Method**
You can use this Business Add-In (BAI) method to check whether the contract can be edited. For a **contract version**, if it has been processed or deleted, then the contract version cannot be edited. It also checks to see whether the sales type used in the contract is unique. For an **original contract**, if it contains a contract version that is unprocessed, then the original contract cannot be edited.

This method is called when you save either an original contract or a contract version.

- **IF_EX_RECN_CONTRACT~GET_NUMBER Method**

You can use this Business Add-In (BAI) method to get the contract number for a contract version from another contract number range.

This method is called when you create a new contract version.

- **IF_EX_RECN_CONTRACT~AFTER_STORE Method**

You can use this Business Add-In (BAI) method to update the master data for a contract version (such as promotion code, promotional category, store information, and material group) on the *Stores* tab page in the Real Estate system

This method is called when you save either an original contract or a contract version.

- **IF_EX_RECN_CONTRACT~BEFORE_DELETE Method**

You can use this Business Add-In (BAI) method to check to see if a contract can be deleted.

This method is called when you delete either an original contract or a contract version.

- **IF_EX_RECN_CONTRACT~AFTER_DELETE Method**

You can use this Business Add-In (BAI) method to check to see that data related to the contract is also deleted from the system when you delete a contract.

This method is called when you delete either an original contract or a contract version.

Standard settings

By default, the BAI implementation is active.

BAdI: Enhancements to Standard Real Estate Contract

Use

You can use this Business Add-In (BAI) implementation to deactivate certain functionalities available for contract version management.

The following method is available:

IF_EX_RECA_BUS_TRANS~CHECK_TRANSACTION_ALLOWED

For a contract version, this method deactivates business activity *Activate* from the menu item and disables the *Activate* button. It also deactivates the *Change* mode option for a contract version that has been processed and approved.

For an original contract, this method deactivates the *Change* mode option only if the original contract contains a contract version that is unprocessed.

This method is called when you open a real estate contract (transaction RECN).

Standard settings

By default, the BAdI implementation is active.

Workflow Management

Define Parameters for Approval Process

Use

In this Customizing activity, you define the parameters for a contract version approval such as the number of approval levels and whether or not a workflow is enabled. If workflow is enabled, you can also assign agents to each approval level. An agent can be an individual (user), or a group (job, organization unit, or position).

- **Job**
A job describes the position; it is a classification of the function. For example, a financial manager.
- **Organization Unit**
An organization unit is a function within the organization - such as a group, department, or team - which the user is assigned to.
- **Position**
A position is a specific role occupied by the user. For example, a manager in the finance department.
- **User**
A user is a specific individual within the organization.

Standard settings

Default agent level assignment is preconfigured, however you can also create your own user.

Activities

Defining the approval parameters

1. On the *Levels* screen, enter the number of approval levels in the *No. Levels* field.
2. Select *WF enabled* to use a workflow to manage the approval process.
3. Save the changes.

Defining the user agent assignment

If you have enabled the workflow, you can also assign user agents to each approval level.

4. On the *Levels* screen, select a line entry for which you would like to customize the agent assignment.
5. Double click *Level -> Agents* in the *Dialog Structure* menu. The *Level -> Agents* screen appears.
6. Define the user agent for each approval level.
 - a) In the *Type* field, enter an object type that the system then assigns to. You can select an individual (user), or a group (job, organization unit, or position).
 - b) In the *Agent ID* field, assign an object type to this individual or group at this particular level.
Note: The **Agent ID** must be an agent already defined in the human resource component.

You must assign one user agent for each approval level.

7. Save the user agent assignment.

Point-of-Sale Data Management Integration

BAdI: Retrieval of Master Data

Use

You can use this Business Add-In (BAdI) to retrieve master data from the Point-Of-Sales Database Management (POS DM) system, and map it to the Real Estate system. It enhances the data integration between two databases in these two different systems. The following master data can be retrieved:

- Store data such as store number
- Material data such as material group
- Promotional data such as promotion category and promotion code
The following methods are available.
- **CUSTOMER_TO_STORE method** - You can use this BAdI method to get the store number through a customer number. The parameter *IV_KUNNR* is imported into this method. After the mapping process, a corresponding store number is exported.

- **STORE_TO_CONTRACT method** - You can use this BAdI method to get the contract number via a store number. The parameter IV_WERKS is imported into this method. After the mapping process, contracts related to this store are exported.
- **LOAD_STORE method** - You can use this BAdI method to retrieve store data (such as the store ID, store name, and customer number) from an existing system. The method is called when you run the Master Data Retrieval (REFXCN_RETDATA) report.
- **LOAD_MTG method** - You can use this BAdI method to retrieve material group data (such as the material group and customer number) from an existing system. The method is called when you run the Master Data Retrieval (REFXCN_RETDATA) report.
- **LOAD_PRM method** - You can use this BAdI method to retrieve promotional data (such as the promotion code and promotion category) from an existing system. The method is called when you run the Master Data Retrieval (REFXCN_RETDATA) report.

Standard settings

In the standard system, the BAdI implementation is active.

Activities

If the source system is not SAP retail system, then you must create your own BAdI Implementation.

Portugal

Municipal Property Tax

Location Hierarchy

Define Hierarchical Location Structure

Use

In this IMG activity, you define various location structures. Location structures are used to uniquely identify parcels or land registers for different purposes.

In Portugal, you use the PT Hierarchical Location Structure to create the hierarchy for Portugal.

Activities

You must first define the **location structure ID** (PT for Portugal) and its name on the *Hierarchical Location Structure* screen, and specify the number of levels for the hierarchy and the names of each level as follows:

1. Country
2. District
3. Municipality
4. Freguesia

You must also define the type of **real estate object** on the *Allowed Hier. Location Structures per Object Type* screen, and then you enter all the possible locations for each defined hierarchy level on the *Hierarchical Locations in Location Structure* screen. In Portugal, the code system is built up as follows:

- A -digit number (for example) represents the district
- A -digit number (for example) represents the municipality
- A -digit number (for example) represents the freguesia

Then, you assign the already defined hierarchical locations to one another and assign a key for each location on the *Assignment of Hierarchical Locations in Location Structure* screen. You can then assign only this key to a parcel or a public register in the application.

You are not required to assign the keys. The key of the hierarchical location is not allowed to contain any spaces.

If the assignment changes due to restructuring of individual hierarchical locations, you can assign new keys (at the level *Assignment of Hierarchical Locations in Location Structure*) or other locations to an existing key. However, if the key itself changes, then you have to change the master data.

Make General Settings for Land Use Management

Use

In this section you make general settings for Land Use Management (LUM).

Activities

You enter default values in the *Defaults for Land Registers* and *Defaults for Parcels* group boxes. These default values apply per master data object in dialog processing. You enter values for units of area, units of length and units of time. You can also enter a default currency, if needed.

For parcels, you can also enter default values for the location structure and for overlays for cadastral usage types.

Tax Categories and Tax Rates

Define Municipal Property Tax-Rate Limits per Category

Use

In this IMG activity, you must define the minimum and maximum limits for tax rates for the tax categories defined by law. The limits are required for controlling the tax rates defined in the IMG activity Define Municipal Property Tax Rate.

Activities

Proceed as follows:

1. Specify the tax category (mandatory).
2. If required, enter the relevant calendar year.
3. Enter the minimum and maximum limits (values) that are defined by law, noting the following:
 - If the values are equal, enter the same value in both columns
 - If you enter a tax category, but you do not specify any values, the system considers it as zero. In this case, you are not allowed to enter a tax rate other than zero in the IMG activity Define Municipal Property Tax Rate.

If you do not enter a tax category, you are allowed to enter any tax rate specified by the municipality in the IMG activity Define Municipal Property Tax Rate. This means that the tax rate is not limited.

If you do not specify any year, the tax rate limits will be valid for every year. If you enter the same tax category with a year in another row, the limits without the year will be valid until the defined year in this row.

You can also enter the same tax category with different years and different tax rate limits in separate rows. In this case, the defined limit for the earlier year is valid until the next defined year in chronological order.

Define Municipal Property Tax Rates

Use

In this IMG activity, you assign the official tax-rate values defined by municipalities to the tax categories.

Requirements

You have defined the minimum and maximum limits for tax rates in the IMG activity Define Municipal Property Tax Rate Limit per Category.

Activities

You enter the tax category, for which you can specify the following data:

- Code of the municipality (optional)
If you do not specify the municipality, the property tax rate will be valid for all municipalities (for example, to tax category *State entity owned property*)
- Calendar year (optional)
If you do not specify the year, the property tax rate limits will be valid for every year or until the next specified year.
- Value of tax rate (optional - if you enter the tax rate, it must be within the minimum and maximum limit values of tax rates entered in customizing) You can assign more than one municipality to a tax category.

Example

<u>Tax Category</u>	<u>Municipality</u>	<u>Year</u>	<u>Tax Rate</u>
Urban Property Subject to IMI Code	Lisboa		%
Non-Urban Property	-	-	%
State entity owned property	-	-	%
Urban Property not subject to IMI Code	Setúbal	-	%

Exemption Periods

Define Exemption Periods

Use

In this IMG activity, you enter the number of years for each category for which the owner is exempted in case of permanent residential objects. The number of years is defined by law for each exemption period category.

Activities

You need to enter the codes of following exemption periods as defined by law:

Exemption period categories Exemption period (years)

NB (New Buildings)

SR (Buildings in Exceptional Renting Conditions (Social Renting))

V (Property Taxable Value: - EUR)

V (Property Taxable Value: - EUR)

Installments

Define Installment Limits for Municipal Property Tax

Use

In this IMG activity, you specify the limit of installment for the municipal property tax in Portugal.

The number of installments for municipal property tax in Portugal depends on the limit defined by law for all companies in the country. If the amount of tax to be paid is above this limit, there must be two installment dates entered with equal amounts in April and September. Otherwise, one date is sufficient.

You enter the installment dates in the IMG activity Define Installment Dates.

Define Installment Dates

Use

In this IMG activity, you specify the due dates of installments for paying the property tax. This can be more than one date per year, depending on the property tax amount of the reporting company code.

In Portugal, the installment dates are in April and September.

For more information on installment limits, see the IMG activity Define Installment Limits for Municipal Property Tax.

Technical Settings

Define Technical Parameters for Cash Flow Creation

Use

In this IMG activity, you define the technical parameters for cash flow creation.

Requirements

You have entered:

- The contract type defined for Portugal in the IMG activity Define Contract Types Contract type *LMPT* is set by default in the system for municipal property tax.
- The condition types for accruals and installments in the IMG activity Define Condition Types
The following condition types are set by default in the system:
 - *PTXA* for accruals
 - *PTX* for installments

Activities

You enter the company code and specify the day within a month for the due date of the accruals.

You also specify:

- The contract type you use in the municipal property tax contract
- The condition types for accruals and installments
You must specify one condition type for accruals and one for installments for each contract of a company code that is used in the Real Estate Contract report.

Digital Signature

Define Settings for Digital Signature

Use

In this Customizing activity, you enter company codes and define document types for real estate invoices and credit memos in a given number range interval and a two-digit serial number that the system uses as input (as an internal code) for generating digital signature. The system includes the signature information and the SAP#s certification number in the printout of invoices and credit memos.

Note:

- If you do not enter a Portuguese company code, you receive an error message when trying to create an invoice or credit memo with digital signature.
- If you do not enter a document type for invoices or credit memos, the system uses the document type of the first FI document of the corresponding invoice that you want to print.

SAF-T

Specify Technical Parameters for SAF-T

Use

In this Customizing activity you specify technical parameters for the SAF-T output. For a given company code you can select the line item calculation method and activate the inclusion of the product list in the XML output without defining the products in the material master table.

Activities

Select a company code and in *Method* indicate an option from the dropdown list:

- Invoice Items
- Document Items

These methods control the level of detail in the SAF-T output. *Document Items* includes a greater level of detail as it includes all the line items from the document.

Select the checkbox under *Product* to include the product list in the SAF-T output for the company code you have selected.

Correspondence

Correspondence

Use

In *Flexible Real Estate Management*, two different types of correspondence are supported. Depending on your needs, you can use these two types together or separately.

1. **Correspondence using PDF-based forms** is the more powerful of the two types, and the only one which allows mass printing.
2. **Correspondence using an office application** enables you to create single documents using your accustomed word processing software (such as Microsoft Word).

In addition to the output of documents related to contracts, both types of correspondence support document output for real estate objects, such as business entity, rental object and architectural object.

Both types allow you to store and retrieve documents in the system with a link to the business object (contract or real estate object).

The following brief explanation of the basic functions of these two correspondence types is intended to help you decide which better suits your needs.

. Correspondence Using PDF-Based Forms

PDF-based forms do not provide word processing in the usual sense. Instead they define the layout, output characteristics, and so on, of templates. During the output activity, documents are generated based on these templates, but documents are not directly edited. PDF-based forms are cross-client transport objects.

Advantages:

- PDF-based forms enable high-performance mass printing (also as batch processing) with optional document archiving using the *SAP ArchiveLink* interface.
- Within the range of typical real estate correspondence, there are almost no limitations on retrieval and output of application data. Output of data in table form is directly supported. Enhancements (without needing to write program code) are also supported for determining, calculating and outputting your own user-defined data.
- You have flexible, automatic control of the documents that are created for each business partner (role). (These are known as correspondence activities.)
- E-mail and fax are supported, dependent on the settings of the business partner.
- There is excellent integration in the development landscape, such as transport connection, translation tools, and so on.

Disadvantages:

- You cannot change a document once it is created. However, this is reduced somewhat by the fact that before you create a document you can copy any section of the text into a text editor. This text is then output in the correct place in the template. This procedure is suitable for short pieces of correspondence such as a general letter, but not for a complicated contract with many unique text passages.

SAP provides PDF-based sample forms in *Flexible Real Estate Management* starting in ERP . PDF-based forms are the type of form now recommended. They replace the functions previously covered by *SAP Smart Forms*, which were used up to now. If you created your own Smart Forms in earlier releases, you

can continue to use your existing Smart Forms without making any changes to them. However, if you want to set up new forms, you have to use PDF-based forms. The sample forms for Smart Forms that were delivered in *Flexible Real Estate Management* up to and including ERP are frozen at the level of Release ERP , and will not be developed further.

. Correspondence Using an Office Application

The office applications supported are Microsoft ® Word (starting with the Word version) and Ami Pro ®. The office application has to be installed on the desktop. Using the *SAP GUI for Windows* is required, since communication with the office application is not supported in the *SAP GUI for HTML* and *SAP GUI for the Java Environment*. Due to the attributes of the standard content model, the templates are client-dependent and have to be transported manually.

The main limitation of this correspondence type is that the options for transferring application data to the office application are limited. It is only possible to transfer a flat structure of individual fields for each document, so that tables with a flexible number of lines are **not** supported. For example, it is **not** possible to display invoice items or to show the service charge keys in the attachment for service charge settlement. The number of potential fields that can be output is limited to .

Advantages:

- Since you use standard word processing, you need less time and energy for setting up and learning to use the correspondence functions.
- You can use your existing sample letters directly as templates. Flexible text modules are replaced by Mail Merge fields.
- Immediately after you create a document, you can change it using the functions of the word processing program before it is printed or stored. This is especially useful for individual contract forms that need to be changed considerably.
- You can change stored documents at a later date and store the new version under a new number.

Disadvantages:

- Data transfer to the office applications is technically limited (see above).
- Batch processing and automatic creation of multiple documents is not possible. Only single print is possible, and you have to execute it from the RE Navigator.
- The office application (Microsoft Word or Ami Pro) has to be installed locally. *SAP GUI for Windows* is mandatory.

For more information on correspondence using an office application, see Basic Settings and Document Templates

PDF-Based Forms (Mass Print and Single Print)

Basic Settings

Use

In this section, you make basic settings for print functions for PDF-based forms. Specify the following:

- How the system determines the language when creating documents
- If the outgoing document should be archived
- If e-mail and fax are used as output media
- Which sort variants are used for specifying the output sequence during creation of documents

Activities

Language for creating documents

The system determines the document language for each document (even within the same output activity) using the settings you make here. These Customizing settings for language apply for all correspondence activities.

The document language is most relevant for the static texts in a form, such as the titles. In addition, the document language is used for language-dependent texts originating in Customizing, such as, texts for the contract type. Normally it is **not** possible for texts of master data and transaction data to be entered as language-dependent (for example, names of business entities).

- **Example**
You want to output all documents in one specified language, such as English (EN). In the *Basic Settings*, choose *Defined Language* in the *First Step* field and enter the language EN. Under *Supported Languages* enter only EN.
- **Example**
You want to print all documents in the language of the recipient. The languages involved are English, French and Italian.
In the *Basic Settings*, choose *Correspondence Language of Recipient* in the *First Step* field. Under *Supported Languages* enter EN, FR, IT.
- **Example**
You want to specify several language options.
You can enter up to three options using the fields for the three steps. If no supported language is assigned to a business partner, for example, you can still print a document by entering a language that is entered as a *Defined Language* in the nd or rd step.

Supported Languages

You specify here the languages that are available for your correspondence. You can use this setting, for example, to prevent the system from trying to create a document in the language of the recipient when that language is not supported in your system. Forms are not available in languages that are not supported, or no Customizing texts were entered in these languages.

The sequence of the entries in the table is not significant.

Archiving

You can specify that the documents you create are archived using the SAP ArchiveLink interface. To use this function, you have to install the archive system and configure the ArchiveLink interface. You make these settings in Customizing for *SAP NetWeaver* in the ArchiveLink IMG activities.

Afterward you enter your setting for archiving here. You can specify at different levels for your correspondence whether or not archiving should be performed.

The system assigns document types to archive documents. There is a single document type for each correspondence application. The name of the document type is always RECP<key of correspondence application>, such as RECPA for a *General Letter*. The document types used are already assigned in standard Customizing to the corresponding BOR object types, for instance RECPA is assigned to object type BUS (real estate contract).

Note

Do not change the standard settings! Check in the current client if all settings in the following activities are in accordance with standard Customizing:

- the document types RECP*
- the links between BOR object type and document type RECP*

Additional Output Media

Depending on the settings of the recipient, you can use e-mail and fax as output media. To be able to use these options, you have to have configured the SAPconnect interface. You make these settings in Customizing for *SAP NetWeaver* in the SAPconnect IMG activities.

Afterward you enter your settings for output media here. You can specify at different levels whether or not e-mail or fax are supported for your correspondence.

To use these settings in the application, set the appropriate indicator in the Define Correspondence Applications and Assign Correspondence Activities IMG activity.

Sort Variants

During mass printing you create a large number of documents. If you do not use a sort variant, the system outputs the documents in the following sequence:

1. Sorted in ascending order by the key fields of the real estate object: For rental objects, for example: company code/business entity/rental object
For contracts, for example: company code/contract number

- Sorted in ascending order by the sequence number of the document in the correspondence activity, if multiple documents are created for the object due to the correspondence activity

If you want a different type of sorting, choose *New Entries* under **Sort Variants** and enter the sort variant you want to use. Select the line for the sort variant and choose *Sort Fields*. Using the input help, select one or more fields that you want to sort by (such as, the contract number).

The system always applies sort variants to the entire document list. Therefore it is not necessary for documents for the same object to follow each other. Possible variants for sort fields include:

- Postal code/Street/Recipient
- Processor/Company Code/Contract Number

You can have the system create a new spool request for each sort field. For example, you could have the system create a spool request for each processor when the sort fields *Processor/Company Code/Contract Number* are used.

Since you define each sort variant for one object type, then the sort variant is available for all correspondence applications of this object type.

For each correspondence application, you can specify a default sort variant and decide if it can be changed in the application. You make these settings in the Define Correspondence Applications and Define Correspondence Activities IMG activity.

Forms

Define Forms

Use

In this activity, you specify the forms you want to use for correspondence activities.

Activities

Define the forms you need (such as, *Master Data Summary for Building*) and assign a form object to them (PDF-based form or Smart Form).

In the Define Correspondence Activities IMG activity, you then assign the logical form objects, rather than the PDF forms or Smart Forms themselves, to the correspondence activities. The logical form objects contain a link to the form itself.

- You define all the attributes of your Smart Forms (layout, texts, your own data retrieval, and so on) in the Form Builder for Smart Forms and Text Modules IMG activity (transaction SMARTFORMS).
- You define all the attributes of your PDF forms in the Form Builder for PDF-Based Forms IMG activity (transaction SFP).

Define Company-Code-Dependent Text Modules

Use

In order to avoid creating several form versions with different company data, you can define **company code-dependent** text modules. Depending on the company code of the object for output, the system determines the text module and inserts it dynamically during document creation.

Some real estate objects, such as architectural objects, are not assigned directly to a company code. To have the configured text modules also available in the form, make the settings in a request with the company code blank (standard setting).

The text modules you assign are independent objects that exist independently of the settings in this activity.

Technical Information

The new text modules introduced with the Smart Forms are used and not the standard texts on the basis of table STXH/STXP. These new text modules are client-specific and have their own transport link (a separate transport link is therefore not required).

If you wish to use the text modules client-specifically, you should use suitable names (client as prefix).

The texts have the status of development objects and must not be changed in the productive system.

Standard settings

The following company code-dependent text modules are available:

- Header, footer, signature, and sender
- A maximum of four further texts

You determine whether or not the text module is output in the document and in which place by means of the form definition. Here you use the Form Builder to dynamically include the text modules. The names of the text modules are retrieved by means of the specific data retrieval functions of *Flexible Real Estate Management* since the Form Builder itself does not recognize "company code-dependent" text modules.

Activities Double-click the entry you wish to process to start the editor.

Form Builder for PDF-Based Forms

Use

You use the Form Builder for PDF-based forms to define the layout for your forms.

Standard settings

SAP provides a large number of sample forms for *Flexible Real Estate Management*. The names of these sample forms all begin with RE_.

Never change a sample form directly. When you set up your correspondence, copy the sample form and modify it so that it suits your needs.

For correspondence that you send to your business partners, you should also work with a copy of the sample form, if no changes to the sample form are required. By following this practice, you ensure that any changes SAP makes to the sample form in a new release do **not** affect your correspondence.

However, in the case of master data summaries, you should use the sample forms directly, as long as you do not require any changes in the form. By doing so, you ensure that after a release change, you are always using the most up-to-date form, which includes any new data that might have been added to the real estate object.

Note

For more information on using the Form Builder for PDF-based forms, see the SAP Library. Choose:

SAP NetWeaver --> Application Platform (SAP Web Application Server) --> Business Services --> PDF-Based Forms --> Designing Forms with the Form Builder.

You can access the SAP Library from the initial screen of the transaction by choosing *Help --> SAP Library*, or on the *Service Marketplace* by choosing *SAP Help Portal --> Documentation*.

For more information on correspondence for *Flexible Real Estate Management*, see the Correspondence IMG documentation.

Form Builder for Smart Forms and Text Modules

Use

You use the Form Builder for Smart Forms to define the layout for your forms.

Keep in mind that SAP recommends using PDF-based forms, and that you should therefore use Smart Forms only for existing correspondence.

Standard settings

SAP provides a large number of sample forms for *Flexible Real Estate Management*. The names of these sample forms all begin with RE_.

Never change a sample form directly. When you set up your correspondence, first manually copy the sample form and modify the copy so that it suits your needs.

For correspondence that you send to your business partners, you should also work with a copy of the sample form, if no changes to the sample form are required. By following this practice, you ensure that any changes SAP makes to the sample form in a new release do **not** affect your correspondence.

However, in the case of master data summaries, you should use the sample forms directly, as long as you do not require any changes in the form. By doing so, you ensure that after a release change, you are always using the most up-to-date form, which includes any new data that might have been added to the real estate object.

Activities

You can access processing of Smart Forms text modules from the initial screen of the Form Builder for Smart Forms (cross-client). These text modules can also be used in PDF-based forms. These text modules are put to use, for example, for Company-Code-Dependent Text Modules in *Flexible Real Estate Management*.

Information:

For more information on using the Form Builder for Smart Forms, see the SAP Library. Choose:

SAP NetWeaver --> Application Platform (SAP Web Application Server) --> Business Services --> Smart Forms --> Designing Forms with the Form Builder.

You can access the SAP Library from the initial screen of the transaction by choosing *Help --> SAP Library*, or on the *Service Marketplace* by choosing *SAP Help Portal --> Documentation*.

For more information on correspondence for *Flexible Real Estate Management*, see the Correspondence IMG documentation.

Correspondence Activities and Applications

Define Correspondence Activities

Use

In this step, you define correspondence activities, initially without relating them to a correspondence application. You assign the activities in the IMG activity for defining correspondence applications.

Standard settings

Standard Customizing contains the usual correspondence activities.

Activities

Correspondence activities

Check the standard settings and change these if necessary. If you want to create additional correspondence activities, choose *New Entries* and enter a name for the activity.

Assign Recipients and Forms

1. Select a correspondence activity and choose *Assign Recipients and Forms*.
2. Assign the recipient.

Example

Seq.No.	Recip. Selection	Role Cat.
Hierarchical Search	Form	
Letter	Main contractual partner	
	Main contractual partner	
Contract form	Partner with Role	Supplier
x Information		

The Group field offers additional means for controlling the selection of recipients.

3. Assign the form to the correspondence activity, for example, master data summary (business entity). You have to create forms in the Form Builder IMG activity.
4. Save. If you want to assign additional recipients and forms to a correspondence activity, choose *New Entries* and proceed as described above.

Define Correspondence Applications and Assign Correspondence Activities

Use

In this step, you first make the *basic settings* for your correspondence applications. Then you assign one or more correspondence activities (for example, *general correspondence*, *master data summary*) to each correspondence application. In the *Flexible Text Modules* table, there is a text editor you can use to create and store text modules (such as an introductory text), per correspondence application.

Standard settings

Correspondence applications are predefined in the system, and relate to exactly one object type. The following correspondence applications are prescribed for usage objects and architectural objects:

- *General Correspondence*
- *Master Data Summary*

The following correspondence applications are available for contracts:

- *General Correspondence*
- *Master Data Summary*
- *Contract Form*
- *Contract Account Sheet*
- *Service Charge Settlement*
- *Sales-Based Settlement*
- *Sales-Reports*
- *Dunning of Missing Sales Reports*
- *Notice/Confirmation of Notice*

Activities

Basic Settings .

Make your basic settings for each correspondence application.

a) Indicator

Inactive

Correspondence activity

nd currency

Text editor

Text module

Sort variant

b) Role categories/Role types

In order to be able to use the data of a processor (such as, name, telephone number, and so on), as well as the data of up to two additional business partners using a uniform correspondence structure, enter the corresponding role categories (and role types, if needed).

AP System

The business partner data is then available, independently of the actual role, in the document data for use as a sort criteria, for example, or to be output in a form.

Correspondence Activities.

In this section, you assign the allowed correspondence activities to the correspondence applications. Select the correspondence application and double click on *Correspondence Activities* in the dialog structure. Then choose *New Entries*. If you want to define a correspondence activity as a default value, set the *Default* indicator. **Flexible Text Modules.**

In order to support the selection of text modules in the application dialog, enter all allowed text modules here per correspondence application. If you want to create a new text module, choose *New Entries* and choose *@Q@ Editor*. To change an existing text module, select it and choose *@Q@ Editor*. Save. Regarding the technical background of the modules used, the same applies as for the company-code-dependent text modules.

Exception

Dunning correspondence:

You make Customizing settings for dunning correspondence and call this correspondence in the FI component.

Enhancements

Differentiating Characteristics

Use

In this activity, you can enter differentiating characteristics for each correspondence application. These differentiating characteristics are used within mass correspondence for selecting each correspondence activity individually for printing.

Example

The system automatically determines a correspondence activity for each object using the differentiating characteristics. As a result, the system prints contract using correspondence activity T and contract using correspondence activity T.

Implement Enhancements (BAdI)

Use

This Business Add-In (BAI) allows you to enhance the standard behavior of correspondence. You can:

- Specify default values for the selection screen options
- Define your own parameters
- Define differentiating characteristics
- Influence how the document list is created
- Change the output of forms

Specify default values for the selection screen options

- **APP_OPTIONS_INIT** - The method is called once when the selection screen is initialized. You can change the fields of the `CS_OPTIONS` parameter so that the standard defaults for output device, correspondence activity, and so on, can be overridden.

Define your own parameters

You can add an additional tab page for print parameters for each correspondence application.

This is in addition to the selection screen for mass printing and the print dialog within the RE Navigator. These print parameters can then be applied, for example, when the document list is created, or when the form is output. Carry out the following activities:

- Add the fields you want to the `RECP_SF_OPTIONS_BADI` DDIC structure using `APPEND`.
- Copy the `RECP_GUI_SF_BADI_EXAMPLE` function group, including the function module, to the customer name range. Modify subscreen so that the fields are displayed.
- Implement the **APP_OPTIONS_INIT** method and set the following fields for the `CS_OPTIONS` parameter:
- `SUBSCREENEXTFM` - Name of the PBO function module
- `REPIDBADI` - Program name of the subscreen
- `DYNNRBADI` - Screen number of the subscreen
- `XSUBSCREENEXT` - Tab page title (optional)

Example class `CL_EXM_IM_RECP_SF` contains a corresponding implementation of `APP_OPTIONS_INIT`.

Define differentiating characteristics

By using differentiating characteristics, you can have the system determine a specific correspondence activity for each real estate object during mass printing. For example, you can set up the system so that contracts with contract types A and B are printed using correspondence activity , while all other contracts are printed using correspondence activity .

Before you decide to use differentiating characteristics, you should check if your requirements for different documents can be met using conditions within Smart Forms. In general, you should try to limit the number of forms you have, since they often contain many of the same parts (form structure, information windows, and so on), which increases the time and effort required in maintenance and comparisons.

Using differentiating characteristics makes the most sense when correspondence activities differ in their recipient roles.

- **GET_DIFF_CHARACTERISTIC** - The method is called once for each real estate object that is processed. The purpose of the method is to derive the differentiating characteristic from the properties of the real estate object. The differentiating characteristic itself is a text you define with a length of . First create the allowed differentiating characteristics in Customizing for each correspondence activity, which can be delivered by the Business Add-In. Then assign the differentiation characteristics to the resulting correspondence activities (in Customizing for correspondence applications under correspondence activities).

Since the differentiation characteristic is any text you choose, there are two options for how you can implement the example explained above:

- The contract type can represent the differentiation characteristic, so that many Customizing entries are necessary (one entry for each contract type).
- The resulting correspondence activity can represent the differentiation characteristic, whereby only two Customizing entries are required.

Influence how the document list is created

In the standard system, real estate objects are selected first. Then the system determines the documents to be created for each real estate object based on the correspondence activity. You can change this behavior using the following methods:

- **CHECK_BUSOBJ_RELEVANCE** - Checks if the real estate object is taken into account when documents are created for this correspondence application. Trigger the `NOT_RELEVANT` exception to have the system ignore the real estate object. The correspondence log then does not contain any reference to the ignored real estate object. The method is called exactly once for each selected real estate object.
- **CHANGE_DOC_DATA** - Using this method, you can change the properties of a document that was determined in the standard way. For example, you can change the document language or the form name (if you are not able to control them enough using the basic settings or the correspondence activities). To keep the document from appearing in the document list, add appropriate warning or error messages to table `CT_MESSAGE`. These are displayed in the correspondence log. The method is called exactly once for each document.
- **CHANGE_DOC_LIST** - Using this method, you can modify the entire document list and change how documents are sorted. The method is called exactly once for each run, after the standard document list was created.

Change the output of forms

In the standard system, the output of forms is handled by function module calls:

1. `SSF_OPEN` - Opens the print request
2. Call of the generated function module for each document to be output
3. `SSF_CLOSE` - Closes the print request

`SSF_OPEN` and `SSF_CLOSE` are not absolutely required for output with Smart Forms, but they do improve performance when the system generates spool requests in OTF format (for later output to printers).

There are BAdI methods available for each of the three steps listed above and for displaying the print preview:

- **SF_OPEN** - Smart Form: Opens new print request
- **SF_PRINT** - Smart Form: Prints the document
- **SF_CLOSE** - Smart Form: Closes the current print request
- **SF_PREVIEW** - Smart Form: Displays the print preview

These methods are called **before** the standard function module. The following are available in the methods as inbound parameters:

- **IS_OPTIONS** - Options of the correspondence application, that is, of the whole current output operation, such as all settings on the selection screen
- **IS_DOC** - Document properties, such as real estate object, recipient, name of Smart Form

In these methods, you can change exactly those parameters that also support the corresponding function modules.

If you set another output parameter that is also supported, `CF_SUPPRESS_DEFAULT_OUTPUT = 'X'`, then the next standard function module is **not** called, so that you can completely **replace** the standard behavior. In that case, you have to supply the correct values to the return parameters. For `SF_PRINT` these are `CS_DOCUMENT_OUTPUT_INFO` and `CS_JOB_OUTPUT_INFO`. This is necessary because the messages for the correspondence log are always derived from them.

If you only want to change form parameters for `SF_PRINT`, such as `CS_OUTPUT_OPTIONS`, but still want to use the standard output, then `CS_DOCUMENT_OUTPUT_INFO` and `CS_JOB_OUTPUT_INFO` are irrelevant.

Changing the standard form output might be advantageous in the following scenarios:

- You want to use output of Smart Forms to the usual output media, but you want to override certain parameters during the call of forms (for example, entries for the spool request, such as name, cover sheet, and so on). To do so, for example, implement, `SF_PRINT` and change the fields in the appropriate return parameters, such as `CS_OUTPUT_OPTIONS`.
- You want to output using Smart Forms, but you want a different output format, such as `XSF (XML for Smart Forms)`. Since output with `XSF` is technically incompatible with the `SSF_OPEN` and `SSF_CLOSE` function modules, implement the `SF_OPEN` and `SF_CLOSE` BAdI methods by setting `CF_SUPPRESS_DEFAULT_OUTPUT = 'X'` for each one. The standard call of these function modules is thereby suppressed. Implement `SF_PRINT` and set the corresponding parameters in `CS_CONTROL_PARAMETERS` and `CS_OUTPUT_OPTIONS`. In this way, you can have the system return the form output, for example, in `XSF` format as an internal table, in order to write this data to a file.
- You want to use an external tool for form output. Set the `CF_SUPPRESS_DEFAULT_OUTPUT = 'X'` return parameter in all four BAdI methods.

Implement the call of the external tool in `SF_PRINT`. You can use standard data retrieval again by

calling the standard methods SF_PRINT , which are called within the corresponding Smart Form in the initialization. Transfer the standard methods of parameter ID_DOCGUID in order to identify the current document. Notes for Developers

Office Application (Single Print)

Basic Settings and Document Templates

Use

In this section, you make basic settings for single correspondence using office integration. For an overview of the correspondence functions available, along with their pros and cons, refer to Correspondence. You can create single correspondence in the application using office integration, for example, for a real estate contract. In the RE Navigator choose @DK@ with the quick info text *Print with Office Application*.

You make separate settings and enter separate document templates for each different real estate object type.

Prerequisites

From the RE Navigator, you can also choose to store documents that were created. You can choose among three different types of storage: database of the SAP System, content server or external archiving system. Which strategy is best for you is dependent on the volume of documents you need to store. In the standard system, documents are stored in the database of the SAP System. However, this makes sense only for a small number of documents. The settings for the storage system are found in the Define Content Repositories IMG activity.

To use a different type of storage, assign the configured content repository to your real estate object types. The Customizing settings are in these IMG activities:

Assign Business Objects to Document Classes
Maintain Storage Categories

Standard Settings

Standard Customizing contains the real estate objects, for which you can make these settings:

- Business entity
- Property - Building

- Rental object

- Architectural object
- Real estate contract

For each object type, SAP provides an example of a document template for a *general letter* for Microsoft Word (in English and German). The document templates are also stored as Business Documents. You display and manage the stored document templates, along with stored documents, using the *Business Document Navigator*.

Activities

You use the *Inactive* indicator to specify if the single correspondence function is needed for a given object type. For example, to deactivate the @DK@ button for architectural objects in the RE Navigator, set this indicator for the *I* object type. Existing document templates are not affected by this change.

To edit and assign document templates for an object type in the *Business Document Navigator*, double click on the object type. The detail view appears, where you choose @Z@ *Document Templates* with the quick info text *Change Document Templates*.

Example

Creating a New Document Template Using Microsoft Word

You can transfer the documents you currently use to a document template without difficulty.

1. Start Microsoft Word on your PC and open the existing document. Replace the variable elements in the document, such as name, address, contract number, with mail merge fields (see the *Supported Mail Merge Fields* section below). Save the changed document and leave Microsoft Word, so the document is not blocked.
Note: The term *Document Template* as used by SAP does **not** refer to the *Document Template (.dot)* file type in Microsoft Word. Save all document templates for your single correspondence as *Word Document (.doc)* file types.
2. Import the document templates you saved locally to the SAP System. First go to the *Business Document Navigator* for the given object type using this IMG activity by choosing @Z@ *Document Templates* in the detail screen of the object type.
3. Choose the *Create* tab page in the lower part of the *Business Document Navigator*. Double click on the *Text* entry under *Standard doc. types*. The *Open File* dialog box appears, where you can import the documents.

Storing and Transporting the Document Templates

The document templates are assigned to a content model in the standard system. This defines the documents as client-dependent and transportable. The document templates provided by SAP are in client . There are two ways to make the document templates available in another system or client.

1. Go to the *Business Document Navigator* that shows the document types for the given object type using this IMG activity (see step for description).
 - a) To transport documents, select the document templates and choose @A@ with the quick info text *Transport documents*.
 - b) To download documents locally, select the document templates and choose @@ with the quick info text *Export document*. Save the document in a directory of your choice (for example, on

your PC). Log on to the target system or client and go to the *Business Document Navigator* there. To import the locally saved document as a document template, choose the *Create* tab page in the lower part of the *Business Document Navigator*. Double click on the *Text* entry under *Standard doc. types*. The *Open File* dialog box appears, where you can import the documents.

Display Supported Mail Merge Fields

For each real estate object type, there is exactly one flat DDIC structure that defines all mail merge fields that are supported. Only this data from the SAP System is available to the office application when you create documents. The name of the DDIC structure is predefined in the system and is displayed in this IMG activity. You can navigate directly from the detail display of the object type attributes to the field list of the DDIC structure:

2. Choose *@@ Supported Data Fields* (this corresponds to transaction SE). Using an enhancement, you can add more fields to this DDIC structure, and fill it with data when a document is created. For more information on this enhancement, refer to *Implement Enhancements (BAdI)*

Adding a Mail Merge Field Using Microsoft Word

3. Open the document template using Microsoft Word and perform these two steps:
 - a) Determine the field name for the mail merge field you want in the DDIC structure (as described in step). Use a separate session for this.
 - b) In Microsoft Word, position the cursor where the mail merge field should appear. In the menu, choose *Insert -> Field*, then select *Category: Mail Merge -> Field Name: MergeField*. For the field name, enter the field from the DDIC structure and confirm.
4. Repeat these two steps for all mail merge fields and save the document.

There is no option for making a selection within Microsoft Word when you are adding a mail merge field.

Additional Hints

Formatting Mail Merge Fields in Microsoft Word

For technical reasons, replacement of text in mail merge fields during document creation is based on simple text replacement (search and replace function). Therefore, the mail merge function of Microsoft Word, which can use other data sources, such as ODBC data source, text file, and so on, is not used here. As a result, formatting options for mail merge letters, such as different date or currency formatting, as well as line compression for blank field contents, are ignored.

The number of mail merge fields is limited to . If you add technical fields automatically, then this maximum number can be reduced slightly.

The data from the SAP System is displayed in the office application just as it would be in the SAP System, taking the current user settings into account (date, number and currency formatting). If you need other formatting, add a user-defined field, typed for this formatting, to the DDIC structure.

File Size of Templates

Regardless of the integration with the SAP System, the size of file (bytes) for the documents created is at least equal to that of the template. If you want to store the documents created, you should make sure that the file size of the template is as small as possible. Before you import a document into the SAP System as a template, make sure you avoid all macros or similar code and delete the processing history.

Using Key Words for Structuring in the Business Document Navigator

You can enter up to four key words for a stored document template in the *Business Document Navigator*. When you call single correspondence in the RE Navigator, these key words are evaluated for the display of the input help for templates. The system interprets the key words here as grouping criteria. The grouping is always at one level. If you want to define more than ten templates for an object type, then it makes sense to group the templates by topic or by organizational units. If you assign a template to several key words, then the template appears under several nodes in the input help.

Notes for Correcting Errors

If mail merge fields are not replaced with data from the SAP System when documents are created, then check the following settings:

- Document protection is **not** allowed to be active for the stored templates.
- The mail merge field has to have been added to the template using the appropriate field function (see above).
- The name of the mail merge field has to be exactly the same as the field name from the DDIC structure for the given object type.

Enhancements

Implement Enhancements (BAdI)

Use

When you create a document for an office application, the system transfers certain application data from the SAP System to the office application. This application data is output in the specified areas of the template (merge fields).

SAP's standard delivery includes a wide range of application data for output in your office document. Use method **CHANGE_DOC_DATA** to change application data before transferring it to your office application.

If you require any of the following, you should implement the Business Add-In.

1. You require additional data that is not included in the SAP standard delivery (for instance, data from customer-specific tables).
2. You wish to change standard data (for instance, modify certain texts).

3. You wish to reformat standard data (for instance, number of decimal places).

If you have already enhanced the CI includes of the master data tables in order to define user fields without modifying the code, you do not need to implement the Business Add-In. The data from the CI includes is automatically transferred to your office application.

You can limit the selection of templates using the method **CHANGE_TEMPLATE_RANGE**. In doing so you can have read access to the data of the object.

Standard settings

Correspondence using an office application is supported for the following object types:

- Architectural object
- Business entity
- Land
- Building
- Rental object
- Real estate contract

The Business Add-In supports enhancements for all the above object types and provides a common interface. When you implement a Business Add-In, choose the filter attribute corresponding to the particular object type. For instance, to change the contract data to be transferred, choose object type *IS* (*real estate contract*) as the filter attribute.

Multiple implementation of the Business Add-In in the same system is possible, which means that the data to be transferred can be changed by partner add-ons or your own enhancements.

Activities

Each of the above object types has exactly one DDIC structure whose data is transferred to the office application. The names of these structures are displayed in the IMG activity *Correspondence -> Office Application (Single Print) -> Basic Settings and Document Templates* in the *Data Transfer Structure* field.

To implement an enhancement, carry out the following steps:

1. Add the additional fields you want to the transfer structure using an APPEND (see requirement or).
Start transaction SE and display the required structure. Choose menu path *Goto -> Append Structure...* and enter the new fields. Activate the structure.
2. Implement the Business Add-In. Assign the required values to the fields in method **CHANGE_DOC_DATA**. Activate the Business Add-In implementation.
For more information on Business Add-Ins, choose *Goto -> Online Handbook* in the BAdI Builder or choose @S@ in the toolbar.

3. Use the new fields in the template for the office document you wish to create. Open the required template in the detail view of the IMG activity Basic Settings and Document Templates.
To include field ZMYFIELD in a Microsoft Word template, position your cursor on the appropriate place in the document and choose *Insert -> Field -> Category: Mail Merge -> Field Name: Merge Field*. In the MERGEFIELD input field, enter the field name ZMYFIELD and confirm. Save the template.

Note on data format:

The application data is output in the office document as displayed in the SAP System. This is particularly relevant for the display of dates and figures, which you can modify with transaction User Settings.

For technical reasons, the formatting options for the merge field of Microsoft Word are not available.

If you require another format, add another field of type CHAR to the structure and specify the value explicitly in method CHANGE_DOC_DATA (for instance using the ABAP statement WRITE ... TO ...).

Note that a maximum of fields per document can be transferred to the office application (standard fields and fields added with APPEND).

Example

See BAdI Builder under *Goto -> Sample Code -> Display*. Doubleclick method name CHANGE_DOC_DATA.

Notes for Developers

Information System

Create Report Profile

Report Profile

Use

Using a report profile, you can display attributes of master data, where the attributes have a :n relationship to this data, in report columns.

You can enter a report profile on the initial screen of reports that support its use.

In Customizing, a profile is assigned to this report profile for each relevant aspect:

- These are: The measurement profile, which determines which measurement types are displayed in additional columns
- The condition profile, which determines which condition types or condition groups are displayed in additional columns
- The fixtures and fittings profile, which determines which fixtures and fittings characteristics are displayed in additional columns

Adding Columns

The output structures for the lists contain the following INCLUDE structures for the profiles:

- Measurements: REIS_PF_MEAS_ALL
- Conditions for rental objects: REIS_PF_CDBD_ALL
- Conditions for contracts: REIS_PF_CDCN_ALL
- Fixtures and fittings characteristics: REIS_PF_CT_ALL

Each INCLUDE contains five INCLUDEs for the structures

- REIS_PF_MEAS - REIS_PF_CDBD - REIS_PF_CDCN
- REIS_PF_CT

This allows five conditions, measurements, and fixtures and fittings characteristics to be displayed in the lists. To display more than five characteristics, you can enhance the list without modifications as follows:

- Measurements
In transaction SE, create structure CI_REIS_PF_MEAS. In the menu, choose Edit -> Include -> Insert, structure: REIS_PF_MEAS, name suffix: .
Save your entries and activate structure CI_REIS_PF_MEAS. This adds a new measurement with the corresponding columns. If you require more columns, insert the include again and increment the name suffix.
- Conditions for rental objects or contracts
In transaction SE, create structure CI_REIS_PF_CDBD or CI_REIS_PF_CDCN. In the menu, choose Edit -> Include -> Insert, structure: REIS_PF_CDBD or REIS_PF_CDCN, name suffix: .
Save your entries and activate structure CI_REIS_PF_CDBD or CI_REIS_PF_CDCN. This adds a new condition with the corresponding columns. If you require more columns, insert the include again and increment the name suffix.
- Fixtures/fittings characteristics
In transaction SE, create structure CI_REIS_PF_CT. In the menu, choose Edit -> Include -> Insert, structure: REIS_PF_CT, name suffix: .
Save your entries and activate structure CI_REIS_PF_CT. This adds a new fixtures and fittings characteristic with the corresponding columns. If you require more columns, insert the include again and increment the name suffix.

The columns you have inserted are filled automatically by the program without further action on your part.

Configure Measurement Profiles

Use

Here you define the measurement profile and assign measurement types to it. Additional columns are available for each assigned measurement type in the report that uses the measurement profile.

The following columns can be displayed in the report per measurement type:

- Measurement amount (available)
 - Measurement amount (capacity)
 - Unit of measure
 - Measurement valid from
 - Measurement valid to
- The column titles tell you which measurement type the data is for.

Activities

Create measurement profiles and assign measurement types to them. The measurements that are assigned to a profile can be displayed in different columns in one report at the same time. To improve performance, SAP recommends defining profiles only for those measurements that you would see in normal master data reports. "Residential/usable space" is certainly an indispensable attribute in almost every report. The measurement type for it (A in the standard system) should therefore be assigned to most measurement profiles.

Performance is better in the report when this one total measurement is assigned than when you assign the measurement types that belong to the total measurement individually. SAP recommends that you use special reports for measurements or the reports of the Business Information Warehouse for reporting by individual measurements.

At the present, it is only possible to assign a maximum of five measurement types to a measurement profile.

Assign the measurement profile to a report profile, since only the report profile can be entered on the initial screen.

If you use measurement types in the report that are not allowed on the objects being considered, the report does not provide any values for these measurement types. It is possible to create totals for these measurement types by reporting on the subordinate objects, if you use an appropriate layout.

Configure Condition Profiles

Use

Here you define condition profiles and assign condition types and condition groups to them.

Additional columns are available for each assigned condition type/condition group in the report that uses the condition profile.

You can assign a condition profile for rental objects and one for contracts to the report profile. It makes sense to define these profiles so that the only difference between them is the condition purpose. This makes it possible to compare condition values in the occupancy report, which compares the conditions on the object and those on the contract.

The following columns can be displayed in the report per condition type or condition group:

- Unit price
- Currency
- Gross/net indicator
- Resulting net condition amount
- Resulting gross condition amount
- Net amount per condition
- Gross amount per condition
- Condition amount valid from
- Condition amount valid to

The column titles tell you which condition type or condition group the data is for.

Activities

Create condition profiles and assign condition types or condition groups to them. The condition types or condition groups that are assigned to the same profile can be displayed in different columns in one report at the same time.

Specify the following for each condition type or condition group:

- Number of the column, in which this condition type or condition group should appear. This is a purely technical key. It has to be unique for each column of the condition profile. This number determines the sequence of the fields in the ALV catalog. However, you can define the sequence of columns in the actual report as you like in the definition of ALV layouts, so the number here does not influence the display in the report itself.
- Condition purpose (mandatory):

Only those condition values are displayed that belong to the condition purpose entered here. By defining condition profiles, in which the only difference in the individual columns is the condition purpose, you can, for example, display statistical conditions and actual conditions side by side for comparison. Always enter the condition purpose, even if it is not yet a required entry.

- Condition Group/Condition Type:
Complete only one or the other of these two columns. Here you enter the condition group or condition type for which you want to display the extra columns.
If you enter a condition group, then all condition amounts for all condition types belonging to this group are added together.

@S@

Create special condition groups just for reporting in Customizing under Define Condition Groups and Assign Condition Types. This enables you to create easily understandable reports on a given topic, such as "Net Rent Without Service Charges" or "Advance Payments."

All condition types, which are not in a column already defined for the same purpose, are totaled in the 'Other Condition Amounts' column.

If you use different condition groups that contain the same condition types in different columns of the same condition profile, then the value is included in the calculation of the total in all columns affected. If you do not want this to happen, you have to define the condition profiles so that they are separate with regard to directly or indirectly referenced condition types in the columns.

- Currency
If you do not make any entry here, the system displays the conditions in the currency in which they are defined. If you enter a currency, the condition amount is translated into the currency you entered on a key date.
- Measurement Type
The system converts the condition amount into the measurement type entered here. This conversion does not take place unless the measurement type entered is contained in the measurement profile that is linked to the condition profile.
- Frequency/Frequency Unit
The condition amount is converted to the frequency entered here when displayed. If you have contracts/rental objects in your system that have different frequencies, then you should enter a frequency and unit here so that you can compare their values.
To improve performance, you should limit the number of columns in a condition profile to as few as possible. The upper limit set by the system is currently eight columns per condition profile. For reports on individual condition types, use the special reports for that purpose or the reports in Business Intelligence (BI).

Remember to assign the condition profile to a report profile, since only the report profile can be entered on the initial screen.

Configure Fixtures and Fittings Profiles

Use

Here you define the fixtures and fittings profile and assign fixtures and fittings to it.

Additional columns are available for all assigned fixtures and fittings in the report that uses the fixtures and fittings profile.

The following columns can be displayed for fixtures and fittings:

- Fixtures and Fittings Characteristic
- Date: Valid from
- Date: Valid to
- Fixtures and Fittings Characteristic Is Applicable
- Number of Fixtures/Fittings Characteristics
- Additional Value for Characteristic
- Additional Information

The column titles tell you which fixtures and fittings the data is for.

Activities

Create fixtures and fittings profiles and assign the required fixtures and fittings types to them. The fixtures and fittings that are assigned to a profile can be displayed in different columns in one report at the same time.

To improve performance, SAP recommends defining profiles only for those fixtures and fittings that you want to see in normal master data reports.

SAP recommends that you use special reports for fixtures and fittings or the reports of SAP Business Information Warehouse for reporting by individual fixtures and fittings.

Then assign the fixtures and fittings profile to a report profile, since only the report profile can be entered on the initial screen.

If you use fixtures and fittings in the report that are not allowed on the objects being considered, the report does not provide any values for these fixtures and fittings.

Administer Report Profile (Main Profile)

Use

Here you specify which report profiles should be available to the end user on the initial screen of the report. Assign to the report profile a measurement profile and/or a condition profile for rental object and/or condition profile for real estate contract.

The report profile relieves users of the report from having to deal with the individual profiles. Since end users only see the report profile and not the measurement profile or the condition profile, they cannot use measurement and condition profiles that are not assigned to any report profile.

The system automatically recognizes which aspects of a report profile can be used in the concrete report, and ignores any profiles that are not applicable. For example, if the user selects a profile for a building report to which both a measurement profile and a condition profile are assigned, only the measurement profile is used (since buildings have no conditions). Therefore, it is not necessary to create special report profiles for each object type.

The report "Occupancy of Rental Objects" compares the conditions of the rental object with those of the occupancy contract. With all other reports, either the profile for rental object conditions or the profile for contract conditions is used for the conditions, depending on the object.

@S@

To improve performance, SAP recommends defining profiles only for aspects that you would see in normal master data reports, such as "residential/usable space" or "number of parking spaces."

With the conditions, it is recommended that you distinguish between basic rent, advance payments for service charges, service charges flat rate, and miscellaneous.

If you want to analyze across all condition types and/or all measurement types, use the special reports for conditions and measurements or the corresponding reports in the Business Information Warehouse.

Requirements

You must have created the measurement and condition profiles that you want to use.

Activities

Create the required report profiles and enter the measurement and/or condition profile. For each profile, enter a layout group. You can name it anything you want. ALV layouts can only be reused within the same reports and within the same layout group.

Example

The layout group is purely technical and cannot be seen by end users. It is recommended that you name it systematically: Assume the following report profiles are defined:

PROFA, measurement profile FL, condition profile GRM

PROFB, measurement profile FL_ST, condition profile ALL

PROFC, measurement profile FL, no condition profile

PROFD, no measurement profile, condition profile ALL
PROFE, measurement profile FL, condition profile VGL

Assume the condition and measurement profiles are defined as follows (in the following, "condition group" stands for a logical column that is assigned to the condition profile. The basis for this column can be a condition group or a concrete condition type, or the special case of "other conditions").

FL: Measurement type (residential/usable space)

FL_ST: Measurement types (residential/usable space, number of parking spaces)

ALL: Condition group (all "ledger" conditions)

GRM: Condition groups (basic rent, other) VGL:

Condition groups (basic rent, statistical rent)

The assigned layout groups could be as follows, for example:

PROFA: BK

PROFB: BK

PROFC: BK PROFD:

BK

PROFE: BK

In this case, layouts created for a report using the report profile PROFA could be reused for PROFE. If the settings affect the layout condition columns, the settings for the condition group "basic rent" are transferred to the basic rent of the report with profile PROFE, and the settings made for the condition group "miscellaneous" are transferred to the "statistical rent" (and vice-versa).

Note

Avoid changing the layout group in Customizing afterwards! If you do so, you can no longer access the layouts that you defined for reports with report profiles of the old group!

Status Selection

Status Selection Profile

Use

Note that the examples in the following text are from Classic RE. However, the explanation still applies for Flexible Real Estate Management (RE-FX).

When calling up evaluations, you can specify a status selection profile.

This enables you to select Real Estate objects with a certain system or user status in a report.

In this step you define status selection profiles which you use to specify status combinations for the selection of objects. A status selection profile is especially useful when you repeatedly select a large number of objects according to the same selection criteria, for example, requests for printing documents, for collective release or for the creation of request evaluations.

Selection procedure

The selection conditions are evaluated topdown. The following rules apply:

- Several consecutive lines joined with **OR** become a block and are evaluated together. The block must fulfil at least one selection condition.
- **AND** links this type of block as well as individual conditions. All blocks linked with **AND** or individual conditions must be fulfilled. An object is rejected as soon as a block or an individual condition is not fulfilled. This means that each **AND** that is inserted causes parentheses to be placed around the preceding statements. In order to select the required status combinations you may have to adjust the selection conditions.
- To summarize: **OR** is stronger than **AND**!

Example

You want to define a status selection profile for selecting rental units with the following status combinations:

- REL (released)
- PROP **AND** ACRA (for own use and active rental agreement exists)

You use the following formulation:
REL **OR** (PROP **AND** ACRA)

However, the system interprets it in the following way:
(REL **OR** PROP) **AND** ACRA

This results in the selection of the rental units with the following status combinations:

- REL AND PROP
- CRTD AND ACRA

Therefore, you have to adjust the formulation in the following way:
(REL OR PROP) AND (REL OR ACRA)

State of status "Active", "Inactive", "Never active"

You can also carry out the selection according to a specific status state:

- If you set the state to **Active**, the system searches for objects whose status is currently active.
- If you set the state to **Inactive**, the system searches for objects whose status is currently inactive.
- If you set the state to **Never active**, the system searches for requests whose status has never been active.

Example

The following is an example of a status selection profile that is to select all released rental units which are either for own use or used by a corporate group:

<u>Link</u>	<u>Status</u>	<u>Status</u>
	REL (released)	active
AND	PROP (for own use)	active
OR	GRPR (used by group)	active

The selection is carried out in two steps:

- First, all released rental units are selected (rental units with the active status "REL").
- Then, the system selects from this list all rental units with the PROP or GRPR status.

"Not" indicator

You can use this indicator to simplify the maintenance of selection conditions in certain cases. Some status conditions are easier to display when the "Not" indicator is set.

Example

Selection condition without "Not" indicator:

<u>Link Not</u>	<u>State</u>
<Status>	_ Inactive
OR <Status>	_ Never active

Same selection condition with "Not" indicator:

<u>Link Not</u>	<u>State</u>
<Status>	X Inactive

Recommendation

To minimize selection time, conditions which greatly limit the selection should be placed at the beginning of the status selection profile.

System status / User status

In a status selection profile; you can specify both the **system status** and the **user status**. If you wish to select objects according to user status you have to specify the corresponding status profile.

Once you have maintained a status profile; in the status selection profile you have to assign this status profile to all objects; the selection will only be limited by the status selection profile if the status profile is assigned to all the objects. Any system status that you assign in addition to the status profile will not be considered by the system if the status profile is not assigned.

Language dependency of the selection profile

Once a selection profile is created in a language it can be used in all languages defined in the system. If **user statuses** are defined in a selection profile, make sure that they are translated in the corresponding status profile. If no translation exists, you have to enter the user status in the language in which it was created.

Default Values by Object Type

Use

Here you specify which selection profile of a report is used as the default. For example, you can define a selection profile that excludes objects from the report if the deletion flag is set for them. Then you can set this profile as a default.

SAP Business Information Warehouse

Status Concept

The status concept allows you to represent SAP status objects in BW. The system can transfer system and user statuses from the ERP system to BW.

In the following steps:

- To make the SAP default settings available in the productive client, carry out an import from the Customizing client for Customizing table BWCUSYSTAT (system status) before the production start-up.
- Assign the ERP status objects to a BW status object.
Use either a standard BW status object, or create a user-specific BW status object.
- Generate a DataSource for the BW status object.

Background Information

ERP master data usually shows all statuses currently active for an object. Any number of statuses can be active simultaneously.

However, there are some status values that are mutually exclusive, so that only one of them can be active at any one time.

For projects, for example, these statuses include the following:

- Created
- Released
- Technically complete
- Complete

You can define a BW status object for these statuses in the source system, in Customizing for

BW.

The statuses are combined under a four-character key. A sequence number is assigned to each status for the internal representation of the status value in BW.

A BW status object can depict either a group of system statuses or a group of user statuses. Use transaction BWS in the case of system statuses or BWS in the case of user statuses.

Additional Hints

For detailed information on the status concept and implementation, see note .

Maintain BW Status Object for System Status

In this work step, you assign a BW status object to an ERP system status object. You can assign any number of ERP system status objects to a BW status object.

Requirements

To make the SAP standard settings available in the productive client, carry out an import from the Customizing client for the Customizing table BWCUSYSTAT (system status) before the production start-up.

Activities

1. Choose *New Entries*.
2. If you want to add an assignment to a standard BW status object, enter the name of the standard BW status object.
3. To create a new BW status object, enter any four-character name for the BW status object.
4. Choose the ERP system statuses that you want to assign to the BW status object.
5. Save your entries.

Maintain BW Status Object for User Status

In this work step you assign a BW status object to ERP user status objects. You can assign any number of ERP user status objects to a BW status object.

Activities

1. Choose *New entries*.
2. If you want to make an assignment to a standard BW status object, enter the name of the standard BW status object.
3. If you want to create a new BW status object, enter any four character name for the BW status object.
4. Choose the ERP user status that you want to assign to the BW status object.
The system assigns the corresponding status profile to the user status automatically.
5. Save the entry.

Generate Data Source for a BW Status Object

In this workstep you generate an info object for a BW status object.

Activities

1. Enter the four character abbreviation for the BW status object.
2. Enter a description for the BW status object.
This will be used in the BW as a column description.
3. If you want to assign an info object to an application, enter the name of the application.
If you do not want to assign an info object to **any** application, enter the abbreviation *SAP-R/IO*.
Assignments help to search info objects in the BW.
4. Choose *Generate*.

The system produces

- an info object with the name *STATUS + four character status abbrev* and - a data element with the name *BWST + four character status abbrev*.

Enhancements

Implement Enhancements (BAdI): Influence Expenditure List

Use

The Business Add-In (BAI) provides the following options:

- You can use the method **CHANGE_OUTPUT_DATA** to modify the output table that an information system report transfers to the SAP List Viewer. This means you have the option of adjusting the values determined by the report to meet your requirements. In addition, the BAI supports enhancements to the output structure without your having to write program code. There you can fill the fields that were added to the output structures using append.
- You can use the method **CHANGE_DISPLAY_OPTIONS** to adjust the output characteristics (field catalog, print properties, layout, and so on).
- You can use the method **SET_ALV_GRID** to set a default value for the 'Grid Control' indicator.
- You can use method **CHANGE_TOOLBAR_BUTTONS** to add new buttons with assigned function codes to the toolbar.
- You can use method **PROCESS_TOOLBAR_FUNCTION** to implement the associated functions.

The report ID (data element **REISREPID**) is used as the filter criterion for the BAI. It identifies the report that has been started. Table **TIVISREP** contains an overview of the report IDs. The table also tells you which structure is assigned to a report.

Exceptions:

For "Information System: Actual Line Items - Contracts", you use the value "COLICN" as REPID, and for "Information System: Actual Line Items Master Data", the value "COLIBD".

For the information system service charge settlement, the default setting for the grid indicator is configured in Customizing for service charge settlement.

Example

You can access an example implementation in the BAI Builder by choosing *Goto -> Sample code -> Display*.

Notes for Developers

Implement Enhancements (BAI): Default Values Selection Screen

Use

When you call the info system programs directly from the object on the **Overviews** tab page, it is not possible to manually set the selection parameters. The Business Add-In (BAI) allows you to modify the selection parameters (that is, their default values).

The report ID (data element **REISREPID**) is used as the filter criterion for the BAI. It identifies the report that has been started. Table **TIVISREP** contains an overview of the report IDs.

The BAI is called for the following reports:

- Overviews of Parcel

Activities

Create a BAdI implementation. Implement the method **SET_ADDITIONAL_PARAM** and fill the filter with the appropriate values. Then activate the BAdI implementation.

Example

You can access an example implementation in the BAdI Builder by choosing *Goto -> Sample code -> Display*.

Notes for Developers

Implement Enhancements (BAdI): Set Generation Based on Other Fields

Use

Using this Business Add-In (BAdI), you can use your own grouping fields for set selection.

You can use this BAdI for three reports:

- Generation of sets for usage objects (transaction REEXSETGENBD)
- Generation of sets for real estate contracts (transaction REEXSETGENCN)
- Generation of sets for settlement units (transaction REEXSETGENSU)

Activities

1. Structure enhancement

If you also want to generate sets according to other grouping fields, then first add an APPEND containing these grouping fields to the structure of the object. The following structures exist for the objects:

- REBD_BUSINESS_ENTITY_SET for the business entity
- REBD_PROPERTY_SET for land
- REBD_BUILDING_SET for buildings
- REBD_RENTAL_OBJECT_SET for rental objects
- RECN_CONTRACT_SET for contracts

The APPEND structure must contain the component that you want to use for generating sets. This component can have a maximum of characters, since the content of the component is used for the name of the sets.

2. BAdI Implementation

Create a BAdI implementation and implement the method **COMPLETE_OUTPUT_DATA**.

In this method you fill the field from your APPEND structure with the necessary content. You can also remove or add selected objects here, if you wish. Then activate the BAdI implementation.

Example

You can access an example implementation in the BAdI Builder by choosing Goto -> Sample code.

Note that that grouping in a set generation run can only take place based on **one** field. If you want to group based on several fields at the same time, then you have to summarize them in one field.

Notes for Developers

Implement Enhancements (BAdI): Tenant Account Overview

Use

The Business Add-In (BAdI) makes it possible to enhance or modify the output of the tenant account overview, for example, adding fields or modifying text. For example, you can also make fields of Dispute Management available ('Dispute Case').

Activities

Create a BAdI implementation and implement the methods you require for your enhancement. Then activate the BAdI implementation.

- **MODIFY_ITEM_LIST: Change of item overview**
In the MODIFY_ITEM_LIST method, you can change the data of the item overview. This method is called after data selection and formatting of the standard list. The complete output list is transferred in the CT_ITEM_LIST parameter. It can be changed in the method.
- **MODIFY_ACCT_STATEMENT: Change of balance history**
You can change the data of the balance history in the method. This method is called after data selection and formatting of the standard list. The complete output list is transferred in the CT_ACCT_STATEMENT parameter. It can be changed in the method.
- **MODIFY_OI_ACCT_DETAIL: Change of detail data for account (such as, customer)** You can modify the detail data of the customer account in the method.
To display your own fields on the detail screen, you first have to add the fields you want to the DDIC structure REEX_ACCT_SHEET_OIACCT_DET_S in an append structure.
After that you can fill the fields in this method.
The IT_ACCT_STATEMENT importing parameter contains the balance history data. The data for the item overview is available in the IT_ITEM_LIST importing parameter.
- **MODIFY_SUMMARY: Adjustment of overview data of tenant account sheet**
In this method, you can adjust the data summarized together in the tenant account sheet by overwriting values already calculated, or adding your own values.
To include your own values in the display, you first have to add the fields you want to an append structure and append it to the RERA_ACCT_SHEET_SUMMARY DDIC structure. After that you can fill the fields in this method. The importing parameter IS_SEL_OPT contains the current selection criteria for the contract account sheet; importing parameter IT_ITEM_LIST contains the

selected line items. For user-defined fields to be displayed in the master data dialog of the contract (*Overviews -> Tenant Account -> Summary*), the MODIFY_GRID_SUMMARY method also has to be implemented.

- **MODIFY_GRID_SUMMARY: Adjustment of output of overview data of tenant account sheet**

In this method, you can change the display of the summary, for example by switching or omitting rows. You can also display new fields that were filled using MODIFY_SUMMARY.

For information on using BAdIs, see this documentation.

Notes for Developers

Performance: Control Parallel Processing

Use

Reports that read large amounts of data often have long processing times. To improve the processing time for such reports, you can split the task of reading data across a number of processes. Here, you can set for each report how many work processes are to be triggered that are to retrieve data in parallel.

For reports that you frequently start for large amounts of data, configure the settings for the number of processes and the size of the data packages for each process. Which settings for which reports result in the best results in your system depends primarily on the amounts of data and the number of work processes available. This means you need to record values used and adjust these values based on your experience, where applicable.

Tools

Define Groups Responsible

Use

All master data objects, contracts, as well as reminder dates in SAP Real Estate Management are assigned persons responsible (users). This enables these objects to be accessed, for example, in the RE Navigator via "My Objects" or in the information system via the selection by person responsible.

Selection by group responsible also enables objects to be accessed in the RE Navigator, in the lists of reminders, and in reporting for a group responsible.

A group responsible comprises a number of users responsible. In the case of selection by group responsible, all objects or reminder dates that are assigned to one of the members of the group are displayed.

Requirements

The user groups are visible in the application only if at least one group is maintained.

Example

The users NEUMANN, MAYER, and KUNZMANN are entered as the person responsible in various objects that lie in the postal code zone in Berlin. The three colleagues are to substitute for each other. Create a "Group Responsible" called BER and assign the three named users to this group.

The colleagues can now, for example, in the RE Navigator, call up not only their own objects but those of their colleagues by selecting "Objects of Group Responsible" = BER.

Check RE Customizing

Use

There are checks you can run for certain Customizing settings in *Flexible Real Estate Management*. You can start these checks here.

Activities

- To execute all existing checks, do not make any changes on the initial screen, and choose *Execute*.
- If you want to limit the check to certain areas, choose the check you want using the input help for the *Customizing Check* field. If the area you want also has sub-areas, then the system always includes these in the check as well. Therefore, do not enter an asterisk (*) as a placeholder.
- The *Language* field is relevant for checks that are language-dependent, such as for correspondence.
- Deselect the *Display Warnings/Errors Only* indicator, if you want the system to also display information messages. The information messages show, among other things, which checks were performed successfully.
- Set the *Save Log* indicator, if you want to be able to display the log for completed checks later.

The system runs the checks. In the upper window, it displays how many messages of each error category occurred. This is shown in a hierarchical form. You can display a given message in the lower part of the window by double clicking on it. By double clicking on the message in the lower part of the screen, you can have the system display the long text for the message (if there is one).

You can go directly to the Customizing dialog, where you can display and correct the data that was checked. To do so, choose @@ with the quick info text *Detail* in the row of the message.

Configurable Messages

Change Message Control

In this IMG activity, you set the appearances of system messages to meet your requirements.

You can do the following:

- Determine the message type (error, warning, note)
- Deactivate messages completely

You can also make different settings for online and background processing.

The corresponding determinations can apply to a client or to an individual user if necessary.

Recommendation

Use standard system messages at the beginning. If a changeable message appears, you have the option of branching to message maintenance from the message long text.

Activities

1. Enter the work area from which the messages come. In Controlling, enter "KI" for CO checks.
2. Choose "Edit -> New entries".
3. Enter the following data:
 - Message number
Note that you can change only certain messages in a work area; others are fixed.
 - User name
If you enter a name, the settings are valid for this user only. If you enter a blank space, the settings are valid for all client users.
 - Message type
Enter the given message type.
 - Save your entries. The message texts are automatically implemented.

Note on transport

To transport settings for message transport manually, choose "Table view -> Transport".

Implement Differentiation of Message Control

Use

Certain messages can be configured using transaction OBA. You can define a different error type for each message (for example, warning or information instead of error) or hide the message. You do not need an implementation for this.

However, if you want to define the error type based on specific attributes of a real estate object (for example, dependent on contract type), you need to implement this Business Add-In.

The message classes in Flexible Real Estate Management (RE-FX) conform to the search string RE++++. The plus (+) character stands for one letter. You can only change messages with this Business Add-In if the messages can be configured using transaction OBMSG.

Activities

Create a BAdI implementation and implement the methods you require for your enhancement.

Example

Class CL_EXM_IM_RECA_MESSAGE contains a sample implementation. To display the sample implementation, choose *Goto -> Sample Code -> Display*. Notes for Developers

Technical Number Ranges

IMKEY Number Range

Use

The IMKEY field is used to encrypt real estate objects for accounting. The system assigns the IMKEY as soon as a real estate object is released for posting.

Standard settings

In the standard system, the number range is set up as follows: Number range , from number , to number The system assigns the numbers internally.

You are not allowed to change the number range.

INTRENO Number Range

Use

Real estate objects receive a unique key (field INTRENO) for internal purposes. Internal number assignment is used.

Standard settings

The number ranges are set up for all object types as follows:

Number range , from number , to number , internal number assignment.

You are not allowed to change the number ranges.

Activities

Use this transaction only to maintain missing number ranges for affected object types if an error of that kind occurs in the application.

Technical Views of Customizing Tables

Use

The menu option contains technical views for editing special Customizing entries. Here, you can postprocess tables that contain entries related to deleted check entries, for example.

Enhancements

Implement Enhancements (BAdI): BDT

Use

The BAdI is called in BDT dialogs in Real Estate Management.

- Method **BDT_FRAME_GET_SCREEN_SEQUENCE**
makes it possible to specify a specific screen sequence of the BDT dialog.
- Method **BDT_APPL_AFTER_CREATE_POPUP**
makes it possible to execute additional actions (such as displaying an additional popup) when creating an object. Notes for Developers

Implement Enhancements (BAdI): Authorization Checks

Use

You can use this Business Add-In (BAdI) to enhance the authorization check for the master data of the following real estate objects:

- Business entity
- Building
- Land
- Rental object
- Real estate contract
- Architectural object
- Settlement unit
- Adjustment measure
- RE search request
- Offered object/reservation object
- Contract offer

In addition, you can use this BAdI to check FI and CO transactions in the posting interface.

Activities

Create a BAdI implementation and implement your authorization check. Then activate the BAdI implementation.

- **CHECK_AUTHORITY Method:**
This method is called when someone tries to create, change or display one of the above real estate objects. At the time of the call, substitutions were already executed. The `IO_OBJECT` parameter contains the instance of the given real estate object. Using the API module for the object makes accessing the current attributes of the object possible (even if these were not yet saved).
The `ID_AUTH_OBJECT` and `IS_AUTH_PARAM` parameters contain the parameters used for standard authorization checks.
- **CHECK_AUTHORITY_FOR_BUS_TRANS Method:**
You can use this method to check authorizations in conjunction with FI and CO postings. The `ID_TRANS` parameter contains the current transaction, if it is available. Notes for Developers

Implement Enhancements (BAdI): Control Processes

Use

Using this BAdI you can intervene in the control of processes.

Caution:

Be aware that this BAdI is executed for each process. Therefore it is imperative that you query the type of process.

Examples of processes:

ORPO Posting of continuous occupancy

ORRS Posting of reservations REAA

Assessment adjustment

REAJ Adjustment of conditions

REAL Accrual/deferral

RECO COA settlement

REIT Input tax distribution

REIV Creation of invoices

REOP One-time postings

REOR Option rate determination

REPP Periodic posting: contracts

RERV Reversal process

RESA Accrual/deferral of service charges

RESC Service charge settlement

RESR Sales-based settlement

RETC Input tax correction

RETN Tenant settlement of COA

REVP Periodic posting: objects

Note that within a process other processes can be active. For example, in the process "Accrual/deferral of service charges" processes are built up for service charge settlements. The BAdI interface makes the following methods available:

- **IS_REVERSE_ALLOWED:** Using this method you can control whether a process is allowed to be reversed. You can, for example, implement additional checks in order to prevent processes, for which you have executed customer-specific follow-on actions, from being reversed.
- **IS_STEP_EXECUTEABLE:** Using this method you control whether substeps of a process can be executed. For example, if you want to prevent the results of a settlement from being posted unless an approval is entered in a customer-specific table, you can intervene here.

Notes for Developers

Implement Enhancements (BAdI): Occupancy

Use

Use this BAdI if you want to change the data of the occupancy history of a rental object.

Requirements

The data of the occupancy history of the rental object were changed by another object. This is the case, for example, when an offer was created for the rental object, or the validity of a building was changed. In that case, the SUBSTITUTE method for the rental object is not run.

Standard settings

Only change the data for vacant time periods (ISVACANT = 'X').

Activities

Implement the method CHANGE_OCCUPANCY and change the parameter CT_VIBDROOCC_NEW.

Example

There is an example in the related example class CL_EXM_IM_REBD_OCCUPANCY. Notes for Developers

Search Strategy

Define Search Strategy

Use

You can specify the search strategy generically here for each supported search field.

Activities

First select the search field. Then proceed as described in the specific IMG activity for the search field:

- Vendor for Posting Activity
- Service Charge Key of Posting Activity
- Land Registry
- Agency Responsible for Parcel

Specify Values for Search Strategy

Use

You can enter generic values for each defined search strategy here (for each supported search field).

Requirements

The search strategy is active and entering values for it is allowed (see Define Search Strategy).

Activities

First select the search field and choose Propose Values. Then proceed as described in the specific IMG activity:

- Vendor of Posting Activity
- Service Charge Key of Posting Activity
- Land Registry
- Agency Responsible for Parcel

Client-Dependent Text Modules

Client Copy of Text Modules for RE-FX

Use

SAP provides text modules, for example for

- Predefined renewal rules (refer to this Customizing activity)
- Predefined notice procedures (refer to this Customizing activity).

These text modules are client-dependent. Following a system installation, the text modules are in client . To make the text modules (those provided by SAP and any you created in addition) available to a different client of the same system, copy the text modules using this program.

To place text modules in a transport request or to edit them directly (expert tool), refer to this Customizing activity.

Text modules within an SAP System are identified by their client, text object, text ID, and language, in addition to the text module name. In the *Flexible Real Estate Management* component, the text object **RE** is used for all text modules.

You can manage text objects and text IDs using transaction SE. However, this is not absolutely required for creating new texts.

Manage Text Modules

Use

Text modules are client-dependent. They are used within Customizing, for example for standard renewal rules and for standard notice procedures. In the application data area, they are used for memos, additional texts, and so on.

Using this program, you can place these texts in a transport request. In addition, you can edit, copy and delete texts in a sort of expert tool.

To execute a client copy of texts within the same system, refer to this Customizing activity.

Text modules within an SAP System are identified by their client, text object, text ID, and language, in addition to the text module name. In the *Flexible Real Estate Management* component, the text object **RE** is used for all text modules.

Archiving

Define Residence Times for Archiving

Use

Data Archiving reduces the data volume in your production system by removing data that is no longer needed for current work, but should be available in case of inquiries.

For deleting data that was created in error and not actually used, you can use the *Deleting Real Estate Objects Without Archiving* function, rather than data archiving (refer to the Implementation Guide).

For an overview of data archiving of real estate master data and contracts, refer to this text.

Activities

In this IMG activity, you specify residence time and residence time for data being archived per object type.

Example

Activate Archive Information Structures

Use

For you to also be able to display archived data in the normal display transactions (for example, in the RE Navigator), you have to activate certain Archive Information Structures.

Using an Archive Information Structure, the system can create and manage an index table for the archived data objects, so that performance is good when the archived data is accessed.

The Archive Information Structures are redundant and are not a prerequisite for archiving itself. The system can also build the index data at a later date for existing archive files.

Standard settings

In the standard system, the Archive Information Structures listed below are inactive.

Activities

You need the following Archive Information Structures in the display transactions in order to be able to display archived data:

<u>Info Structure</u>	<u>Description</u>	<u>Object</u>
SAP_REFX_AO	Architectural object	REFX_AO
SAP_REFX_BE	Business entity	REFX_BE
SAP_REFX_PR	Land	REFX_PR
SAP_REFX_BU	Building	REFX_BU
SAP_REFX_RO	Rental object	REFX_RO
SAP_REFX_ROCF	Cash flow of rental objects	REFX_ROCF
SAP_REFX_CN	Real estate contract	REFX_CN
SAP_REFX_CNCF	Cash flow of contracts	REFX_CNCF
SAP_REFX_PG	Participation group	REFX_PG
SAP_REFX_SU	Settlement unit	REFX_SU
SAP_REFX_CG	Comparative group of appartments	REFX_CG
SAP_REFX_AT	Adjustment measure	REFX_AT
SAP_REFX_RR	RE search request	REFX_RR
SAP_REFX_OO	Offered object	REFX_OO
SAP_REFX_OF	Contract offer	REFX_OF
SAP_REFX_PL	Parcel	REFX_PL
SAP_REFX_RC	Parcel update	REFX_RC
SAP_REFX_LR	Land register	REFX_LR
SAP_REFX_JL	Joint liability	REFX_JL
SAP_REFX_PE	Other public register	REFX_PE
SAP_REFX_NA	Notice of assessment	REFX_NA
SAP_REFX_RADOC	RE invoice	REFX_RADOC
SAP_REFX_SCSE	Service charge settlement	REFX_SCSE

To activate an Information Structure, enter the name of the structure and choose @C@ Activate (with the quick info *Activate*).

This can also be done in the Archive Retrieval Configurator (SARJ)

In addition, you can create new Information Structures to make other views of archived data possible. You can then access this data using the Archive Explorer(SARI).

Archive Administration

Use

Archive administration (transaction SARA) is the initial screen for all transactions relevant to archiving. From here you can start the preprocessing, write and delete programs, and also make the central Customizing settings for archiving.

The technical names of the archiving objects for *Flexible Real Estate Management* begin with REFX_ (for example, REFX_CN for the Real Estate contract).

The technical names of the archive information structures for *Flexible Real Estate Management* start with SAP_REFX_. SAP provides one archive information structure for each archiving object in the standard system (for example, SAP_REFX_CN for the real estate contract).

Deletion of Real Estate Objects Without Archiving

Use

The **Delete** function is particularly useful for easily removing any real estate objects created by mistake. You can perform the function within the RE Navigator.

This function deletes the data irretrievably from the database.

However, the system ensures that a real estate object is deleted only when specific prerequisites are fulfilled. In particular, there should not have been any posting to the object. To remove any objects that have already been posted, use the **Archive** function instead.

Real estate objects with the following object types can be deleted without archiving:

- Business Entity - see Prerequisites
- Property - see Prerequisites
- Building - see Prerequisites
- Rental Object - see Prerequisites
- Architectural Object - see Prerequisites
- Real Estate Contract - see Prerequisites
- Participation Group - see Prerequisites
- Settlement Unit - see Prerequisites

You can use this Customizing activity to deactivate the function for an object type in general.

Prior to deletion, the system also runs an authorization check for each object to ascertain whether the current user has authorization to perform the deletion (). Furthermore, a check is run to see whether the transaction *RE: Delete object* is permitted by status management. By setting a user status, you can also prevent specific objects from being deleted.

Additional Hints on Deleting Without Archiving

Standard settings

By default, the delete function is active for all object types.

Activities

Deactivate this function where required for the desired object types.

Legacy Data Transfer

Use

Legacy data transfer is used to transfer data from a legacy system into the SAP system.

Activities

- Use the *Data Transfer Workbench* (transaction SXDA) to plan and execute the legacy data transfer. The only interfaces used for RE-FX are BAPIs. These BAPIs are called up automatically by transaction SXDA (after appropriate configuration) during legacy data transfer. Since BAPIs are function modules, you can also call up the BAPIs directly in your own reports. SAP makes BAPIs available for creating, changing and getting data for the master data objects and the real estate contract. To display all BAPIs for RE-FX, search for modules with the names BAPI_RE_* in SE. Alternatively, you can display all BAPIs using the transaction BAPI when you select the entry *All* after choosing *Goto -> BAPIs to Display* from the menu. The BAPIs have the function of direct input programs. Therefore, no direct input programs are necessary for RE-FX. Batch input **cannot** be used to record and process master data processing because of the configurable interfaces.
- There is an iTutor on legacy data transfer for RE-FX in the *SAP Service Marketplace* at service.sap.com under *Real Estate / Flexible Real Estate, iTutor Data Transfer*.
- For more information on the *Data Transfer Workbench*, see the SAP Library under *SAP NetWeaver Components --> Cross-Application Functions --> Data Transfer Workbench*.
- Use the Legacy System Migration Workbench (transaction LSMW), which you can also access using SXDA, to define a mapping of data structures from the legacy system with the SAP data structures. The documentation on the Legacy System Migration Workbench is in the *SAP Service Marketplace* at service.sap.com/LSMW.

Control of Creating Mandates: Exclude Tables

Use

When you create a mandate company code, the Customizing settings of the reference company code are copied based on rules that are predefined in the system. For example, it is predefined that the house bank

data is not copied from the reference company code. Instead it is copied from the mandate master data. Other Customizing table entries, on the other hand, are copied completely.

In exceptional cases, it might be necessary to make certain settings separately for each mandate company code. In that case, those settings should be kept from being overwritten by the data of the reference company code when the mandate company code is created or updated.

To prevent these tables, which you should process separately for each company code, from being overwritten during copying, you should enter them in the table for the given reference company code (adding to the system logic).

Other Settings

System Settings for Master Data Dialogs

Colors and Icons

Icons

Use

In this section, you assign icons to areas.

In *Flexible Real Estate Management*, master data structures are often represented in the form of hierarchical structures. In these structures, different object types are represented by icons. Icons are also used in other contexts to assist visualization.

Requirements

The following areas and their IDs are predefined:

- Object type
- Architectural object type
- Term category
- Term group
- Other

Activities

Normally you can adopt the predefined icons. However, if you want to make changes, follow this procedure:

For icons for *object type*, *term category*, *term group*, and *other*, choose the icon you want using the input help. The field remains empty. The number of the icon is displayed in the next field, the icon itself is shown in the following field. You assign icons for architectural object types separately in the Assign Icons to Architectural Object Types IMG activity.

If icons are not already predefined, you can copy those from client . Choose *Utilities -> Adjust*.

Example

@A@ Icon Area "Object Type": Business Entity

@U@ Icon Area "Term Category": Notice

@JL@ Icon Area "Term Group": Posting Data @AD@ Icon

Area "Other": Vendor Partner

Color Settings

Use

You can use colors in list displays to help distinguish the meaning of entries at a glance. In the display of time-dependent data, for example, you can use different colors to distinguish entries for past time periods from entries for the future. The settings for distinguishing past (historical) and future entries can be used, for example, in the following master data dialogs:

- Measurements (architectural object, business entity, building, property, rental object...)
- Partners (all objects)
- Fixtures and fittings characteristics (building and rental object)

In addition, you can set a color for the main business partner role, to make this role more prominent. If a contract type allows two main business partner roles, you can highlight them using two different colors.

In this step, you can change the existing color settings.

Requirements

The following color types are predefined:

- Date: Current entries

- Date: Future entries
- Date: Past entries
- Main business partner
- Main business partner

Activities

To set a color, choose a number between and in the main window, and if you wish, set the *Highlighted* and *Inverted* indicators. Choose *Enter*.

In a modeless window, the system shows how the color will appear on the screen. If you want to change the existing colors, try the combinations that are available until you have the combination you want.

Save your settings. You cannot close the window containing the colors directly. It is closed automatically when you leave the main dialog.

User Interface

Use

In this activity, you make settings for the interface of the RE Navigator.

Activities

Navigation: Settings for the initial screen and for the navigation area

- Initial screen
- **Hide Navigation Area**: Set this indicator if you want the navigation area for the RE Navigator to be turned off as a default. You still turn it on again in the RE Navigator and in each master data dialog by choosing *Navigation Area On/Off*.
- **Display of Navigation Area**: You can have the system display the navigation area as a fixed part of the screen (choose: *As Part of Window*) or in a separate window.
- Direct Display of Objects
- Use Standard Icons
- Maximum Number of "Last Objects"

General: Settings for error list

- Here you decide if the error list should appear in a separate window. You can also specify that errors be displayed hierarchically. However, this is only possible if the error list is displayed in a separate window.

Contract: Settings for the worklist for processing contracts

- Here you set a default for which contracts are displayed when you call contract processing - either your own contracts only, or all contracts in the system. You can limit the number displayed to ten.

If you do **not** set the Use System Settings indicator in the RE Navigator, you can change all of the settings in the Navigator that were made here in Customizing. Choose:

RE Navigator -> Extras -> Settings

Note

The settings you make here are not transported, so they have to be made separately in each system.

Background Graphic

Use

In this activity, you can make settings for the background picture that is displayed in the master data dialogs.

Requirements

These settings are not relevant unless you chose *Display Background Picture* for the initial screen in the User Interface IMG activity.

Standard settings

Several background pictures and a default initial screen are available.

Activities

To use your own picture instead, choose *Specify Own Graphic* in the *Background Picture* field. The Own Background Graphic field is then available for input.

You specify how the picture is displayed in the Display Mode field.

Note

The settings you make here are not transported, so they have to be made separately in each system.

Folder for Temporary Data

Temporary data from various programs is stored on the system level in files. Specify where this data is to be stored.

This file is also used for the data medium exchange used for external heating expenses settlement.

Number Range for Logs in SAP Application Log

Use

Certain processes in Flexible Real Estate Management (RE-FX) use the SAP Application Log as a basis when writing their logs. In order to generate a log, the system requires an internal number. In this step, you set up the number range from which this number is taken.

Standard settings

SAP provides the number range interval with the number'. ' Generally you do not need to change this setting.

Activities

If there is no number range interval " yet, create it. Choose *Internal Number Assignment* by deselecting *Ext.* Choose the number range from - .

Notes on Required Periodic Procedures

Use

Required background job

RECDCGOL - Cash Flow Update for Contracts

For more information, refer to the documentation of report RFVICF in Classic RE.

@@ The report for updating occupancy history, which is also mentioned in this documentation, is not relevant in RE-FX.

