AssetCenter[™] Version 3.5

Reference Guide: Cost Management

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The Infrastructure Management Company™

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AssetCenter and InfraCenter for Workgroups data integrity

AssetCenter and InfraCenter for Workgroups are extremely rich in functionality. This richness relies on a complex database structure: The database contains a large number of tables, fields, links and indexes; certain intermediary tables are not displayed by the graphical interface; certain links, fields and indexes are automatically created, deleted or modified by the software.

Only the interfaces designed for AssetCenter and InfraCenter for Workgroups (graphical interface, APIs, import program, Web interface and gateways) are capable of modifying the database with respect to its integrity. You must never modify the structure and/or the contents of the database by any means other than those intended for use with the software; such modifications are highly likely to corrupt the database and bring about symptoms such as involuntary loss or modification of data or links, creation of "ghost" links or records, serious error messages, etc. Alterations to the database resulting from manipulations of this type void the guarantee and technical support provided by Peregrine Systems.

Environments supported by AssetCenter and InfraCenter for Workgroups

The list of environments supported by AssetCenter and InfraCenter for Workgroups can be found in the manual entitled "Installation and Upgrade Guide". Using AssetCenter or InfraCenter for Workgroups in environments other than those for which it is intended is done at the user's risk. Alterations made to the database resulting from using AssetCenter or InfraCenter for Workgroups in environments other than those for which it is intended void the guarantee and technical support provided by Peregrine Systems.

Foreword

Presentation of AssetCenter

AssetCenter is a comprehensive IT infrastructure management system with integrated areas of functionality, based on a shared repository:

- Asset Management.
- Procurement Management.
- Leasing Management.
- Cost Management.

Its "integrated" dimension allows you to access all functionality via a unified interface and use a single database, thus avoiding data redundancy.

Its "functional" aspect allows you to adapt the user interface according to your needs. You may simplify the interface by selecting only those areas of functionality you wish to use.

Objectives of the reference manuals

These manuals provide detailed, systematic explanations of AssetCenter's functionality.

They are also available in the form of the on-line help, which has more or less the same contents.

There is a document that contains a table of contents and an index for all of these manuals.

Objective of this manual

This manual gives detailed explanations on how to manage costs with AssetCenter.

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Conventions

The following notation is used for commands:

[]	Square brackets denote an optional parameter. Do not type them in your command. Exception: In BASIC scripts, square brackets are used to denote the data access path and must be included in the script: [Link.Link.Field]
< >	Brackets denote a parameter in plain language. Do not type them. Substitute the text with the appropriate information.
{ }	Curly brackets denote a series of parameters. Only one of these parameters may be used. Do not type these curly brackets in your command.
I	A pipe is used to separate a series of parameters contained within curly brackets.
*	An asterisk added to the right of square brackets means that the formula shown can be repeated several times.

The following text formats have given meanings:

Fixed width characters	DOS command.
Example	Example of code or command.
	Code or command omitted.
Object name	The names of fields, tabs, menus and files are shown in bold.
Note	Important note.

Send us your comments

We want to deliver the most accurate documentation possible.

Any comments would be greatly appreciated.

Send any remarks to **documentation@peregrine.com**.

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Chapter 1 - Currencies

AssetCenter includes support for multiple currencies.

Monetary values can be entered in the currency of your choice. This currency must be defined beforehand in AssetCenter.

AssetCenter can display exchange values in several currencies.

Currencies are used in AssetCenter:

- At the level of the Finance/ Currencies menu item.
- At the level of the Finance/ Exchange rates menu item.
- At the level of each monetary value. Example: Asset rent, cost of a training program, purchase price of a set of consumables, etc.

Managing multiple currency support in AssetCenter consists of:

- Defining currencies,
- Defining exchange rates,
- Populating monetary values,
- Calculating exchange values,
- Updating exchange values.

This chapter details the following points:

- Defining currencies
- Defining exchange rates
- Populating monetary values
- Currency conversion rules
- Calculation of exchange values
- Updating the exchange values
- Limited use of multi-currency support

Defining currencies

We recommend defining currencies when implementing AssetCenter.

Use the Finance/ Currencies menu item to access the table of currencies.

This section details the following points:

- Specific currencies
- Monetary value formatting

Specific currencies

You can define as many currencies as you like. Certain currencies have specific rules associated with them:

- Reference currencies.
- Default currencies.
- The Euro.

Reference currencies

You can define two reference currencies for which exchange values are automatically calculated.

To do this, check the **Reference currency 1** (SQL name: bRefCur1) or **Reference currency 2** (SQL name: bRefCur2) check box in the detail of a currency.

Warning: It is preferable to define your default currencies before saving data in the AssetCenter database. In effect, if you define the reference values after records have been saved in the database, the exchange values associated with the monetary values in these records will not be updated.

Default currency

The default currency is applied to all monetary values entered for which the user does not specify a currency.

The default currency is selected from among:

- The default currency defined at database level. This currency is unique. It is specified by clicking the **Default currency** check box (SQL name: DefCurrency) in the detail of a currency (**Finance**/**Currencies** menu item).
- The default currency defined at the level of each user of AssetCenter. This currency is defined in the **Default currency** field (SQL name: DefCurrency) in the **Profile** tab of the detail of an employee.

The default currency defined at the level of the detail of a user takes priority over the default currency at database level.

If a user populates a monetary value without specifying a currency:

- If a default currency is defined in the **Profile** tab of the detail of the user, this currency is applied.
- Otherwise, the currency defined at database level is applied.

The Euro

If you want to manage conversions between Euro zone currencies, you must define the "Euro" as a currency via the **Finance/ Currencies** menu item.

Warning: The value of the **Name** field (SQL name: Name) of the "Euro" must be set to "Eur".

Monetary value formatting

Define the formatting rules for a given currency in its detail screen:

- The **Precision** field (SQL name: sPrecision) defines the number of decimal places monetary values must have.
- The **Position of symbol** field (SQL name: seSymbolPos) specifies whether the currency symbol precedes or comes after the currency value.

Defining exchange rates

Use the Finance/ Exchange rates menu item to access the table of exchange rates.

This section details the following points:

- Description of exchange rates
- Entering exchange rates

Description of exchange rates

An exchange rate is defined by

- The date from which it is applicable.
- The source currency.
- The target currency.
- Its value.
- Its inverse rate.
- Its link with the Euro zone.

Entering exchange rates

You can enter exchange rates as and when you need them or by importing a file with the relevant information.

Inverse rate

When you enter an exchange rate from a given currency A to a currency B, AssetCenter automatically calculates the inverse exchange rate from B to A. By default, this is taken as being the inverse of the rate from A to B.

However, the inverse exchange rate is not always equal to the inverse of the exchange rate. It is sometimes necessary to adjust the inverse rate in order for it to be exact. AssetCenter allows you to manage this possibility:

- If you modify the exchange rate slightly (1% or less), AssetCenter does not recalculate the inverse rate and vice-versa.
- On the other hand, if you make a larger modification of the exchange rate (greater than 1%), AssetCenter recalculates the inverse rate and vice-versa.

Example:

The exchange rate between the two currencies A and B is equal to 2. The inverse rate is automatically calculated by AssetCenter and is equal to 0.5.

• If the inverse rate is slightly modified, for example set to:

Inverse rate = 0.505

Then the exchange rate is not modified.

• On the other hand, if the inverse rate undergoes a larger variation, for example:

Inverse rate = 0.51

Then the exchange rate is recalculated:

Exchange rate from A to B = 1.960784

Case of the Euro zone

The coming into effect of the Euro zone on January 1, 1999 has consequences on exchange rates; Within the Euro zone, only the following exchange rates will be authorized:

• Exchange rates from Euro zone currencies to the Euro.

Warning: Since the coming into effect of the Euro, exchange rates between the different currencies within the zone will no longer make sense. Only the conversion rate between a given Euro zone currency and the Euro will be allowed.

• Exchange rates between currencies outside of the Euro zone and the Euro and their inverse rates.

Warning: Since the coming into effect of the Euro, exchange rates between a currency outside of the Euro zone and a currency within the Euro zone (excepting the Euro) have no reason for being.

• Exchange rates between currencies outside of the Euro zone.

AssetCenter makes it possible for you to manage the specific exchange and conversion rules that concern the Euro and Euro zone currencies. If you check the **Belongs to Euro zone** (SQL name: bInEuroZone) in the detail of an exchange rate, certain automatic mechanisms are implemented in AssetCenter:

- The **Source currency** field (SQL name: SrcCurrency) is showing the Euro. This cannot be modified.
- The target currency is a currency belonging to the Euro zone.
- You can enter conversion rates from the Euro to Euro zone currencies but not the inverse rate.

Recommendations

In order to easily find the exchanges rates between two currencies and determine which are used in the calculation of exchange values, we recommend always entering the exchanges between two currencies A and B in the same direction. For example, the source currency is always currency A and the target currency, currency B.

Populating monetary values

This section details the following points:

- Data entry
- Convert to contextual menu
- Storage in the database

Data entry

In order to populate a monetary value, enter the value and the corresponding currency:

- If you do not specify a currency, the default currency is applied.
- A specific control is designed for entering monetary values. It depends on the formatting defined at the level of the currency detail.

You can use the arrows to the right of monetary values or the arrow keys on your keyboard to increment or decrement the digit on which the cursor is placed.

Note: At the level of monetary values, you can define two default values: one for the amount ("Default" field in the window displayed by the "Configure object" menu item), and the other for the currency ("Currency" field in the window displayed by the "Configure object" menu item).

"Convert to" contextual menu

AssetCenter lets you convert a monetary value entered in one currency to another. To do this:

- Right-click the monetary value.
- In the popup menu, select **Convert to**.

- Select the appropriate currency.
- The monetary value is converted and displayed in the new currency.

The calculation mechanisms are similar to those used in calculating exchange values. The conversion date is the conversion date associated with the monetary value. The exchange rates are automatically selected by AssetCenter.

For further information on this subject, please refer to the section entitled "Currency conversion rules" on page 7 of this chapter.

Storage in the database

A monetary value is stored in five fields in the AssetCenter database:

• A field contains the entered amount (SQL name "mXXX").

Only the field with SQL name "mXXX" can be viewed directly from in a screen (for example, the **Price** field in the **Products**table). The other fields are defined in the database as subfields of this field. They cannot be viewed on-screen. You can view the values stored in these fields by clicking the button.

- A field contains the currency associated with the entered amount (SQL name "XXXcur").
- Two fields are used to store the exchange values in the two reference currencies (SQL names "mXXXRef1" and "mXXXRef2".
- A field contains the date of conversion (SQL name "dtXXXCv").

Example: If the purchase price of an asset is 1000 USD and the conversion date is October 01, 1998:

- "mPrice" is set to 1000.
- "PriceCur" is set to USD.
- "mPriceRef1" and "mPriceRef2" contain the exchange values.
- "dtPriceCv" is set to October 01, 1998.

Currency conversion rules

Converting a monetary value expressed in one currency to another involves:

- A date of conversion.
- Conversion rates in effect on that date.

This section describes the rules governing conversions and exchange/conversion rates. These rules depend on the currencies involved in the conversion:

- ✤ Both currencies do not belong to the Euro zone.
- One or both currencies belongs to the Euro zone.

Preliminary remark: Currency conversions involve two distinct notions: The inverse (reverse) exchange rate and the inverse of an exchange rate. The inverse exchange rate for a given currency couple A to B is defined in the **Inverse exchange rate** field (SQL name: flnvRate, displayed in the form 1 B = n A) in the detail of the exchange rate. The inverse exchange rate of currency A to currency B is the rate which defines B as the source currency and B as the target currency.

When a currency belongs to the Euro zone, only the official conversion rate from the Euro to the Euro zone currency exists. No inverse rate is defined. In conformity with the official rules, conversions from a Euro zone currency to the Euro involve a division using the appropriate official conversion rate.

This section details the following points:

- Currencies that do not belong to the Euro zone
- One or both currencies belong to the Euro zone

Currencies that do not belong to the Euro zone

To select the appropriate exchange rate between a given currency couple A and B, AssetCenter uses the date of conversion and the following rules:

- If there is an exchange rate defined for the date of conversion when A is the source currency and B is the target (resulting) currency, AssetCenter uses this rate.
- Otherwise, if there is an exchange rate for which currency B is the source currency and currency A the target currency, AssetCenter uses the inverse rate defined for this rate. It is indicated in the "1 A = x B" field in the detail of the exchange rate from B to A.
- $\bullet \quad \mbox{Otherwise, AssetCenter will not calculate an exchange value.}$

Example:

• The exchange rate from currency A to currency B on July 1, 1998 is "1 A = 6 B".

- The exchange rate from currency B to currency A on August 1, 1998 is "1 B = 0.2 A".
- On September 1, 1998, to convert 100 A to currency B, AssetCenter uses the exchange rate "1 A = 6 B", resulting in 600 B.

One or both currencies belong to the Euro zone

Specificities of the Euro zone

With the coming into effect of the Euro, in order to convert a value expressed in a currency A to a currency B belonging to the Euro zone, the mandatory procedure is to:

- To convert the sum to Euros.
- Then convert this sum expressed in Euros to currency B.

AssetCenter automatically performs these conversions in line with the legal calculation rules.

The appropriate conversion and exchange rates must be entered at currency level beforehand.

Both currencies belong to the Euro zone

To convert a sum expressed in currency A to currency B when both currencies belong to the Euro zone:

- AssetCenter converts the sum expressed in currency A to Euros. The calculation:
 - Performs a division using the Euro to currency A conversion rate.
 - ✤ Rounds the result to three decimal places.
- Then AssetCenter converts the sum expressed in Euros to currency B. The calculation:
 - ✤ Uses the Euro to currency B conversion rate.
 - Rounds the result to the number of decimal places specified in the detail of currency B.

One of the currencies belongs to the Euro zone

The target currency belongs to the Euro zone

To convert a sum expressed in a given currency A to given currency B, where A does not belong to the Euro zone and B belongs to the Euro zone:

- AssetCenter converts the sum expressed in A to Euros. The calculation:
 - Uses the exchange rate from currency A to the Euro on the date of the conversion or the inverse rate of the Euro to currency A exchange rate.
 - ✤ Rounds the result to three decimal places.
- Then AssetCenter converts the sum expressed in Euros to currency B. The calculation:
 - ✤ Uses the Euro to currency B conversion rate.
 - Rounds the result to the number of decimal places specified in the detail of currency B.

The source currency belongs to the Euro zone

To convert a sum expressed in a given currency A to given currency B, where A belongs to the Euro zone and B does not belong to the Euro zone:

- AssetCenter converts the sum expressed in A to Euros. The calculation:
 - ✤ Uses the inverse exchange rate from the Euro to currency A.

When a currency belongs to the Euro zone, only the official conversion rate from the Euro to the Euro zone currency exists. No inverse rate is defined. In conformity with the official rules, conversions from a Euro zone currency to the Euro involve a division using the appropriate official conversion rate.

- ✤ Rounds the result to three decimal places.
- Then AssetCenter converts the sum expressed in Euros to currency B. The calculation:
 - ✤ Uses the Euro to currency B conversion rate.
 - Rounds the result to the number of decimal places specified in the detail of currency B.

Calculation of exchange values

This section details the following points:

- Overview
- Date of conversion
- Exchange rates

Overview

When you enter a monetary value, AssetCenter automatically calculates the exchange values as expressed in the reference currencies.

Simply click the \blacksquare icon to the right of the monetary value to display a screen showing the date of conversion, the exchange rates and the exchange values.

The automatic calculation of exchange values uses:

- The date of conversion.
- The exchange rates effective for this date for the currency unit of the entered monetary value and the reference currencies.

Date of conversion

The date of conversion determines the exchange rate to be applied.

For each monetary type value, the date of conversion is stored in an associated field (SQL name "dtxxxCv").

This field can be assigned a default value so that it is populated automatically when the monetary value is defined. By default, the date of conversion associated with all monetary values is the current date.

To define the default values of conversion date fields associated with monetary values, use AssetCenter Database Administrator.

This allows you to, for example, make sure that the conversion date associated with the purchase price of an asset is the date of purchase of this asset.

Exchange rates

Use the Finance/ Exchange rates menu item to define exchange rates.

In order to select the appropriate exchange rate when converting a monetary value expressed in currency A to a reference value R, AssetCenter uses the date of conversion.

AssetCenter automatically determines the exchange rates to be used in calculating exchange values.

For further information, please consult the section entitled "Currency conversion rules" on page 7 of this chapter.

Note: The rates used to calculate exchange rates are shown for informational purposes. They are not stored in the AssetCenter database.

Updating the exchange values

Updating the exchange values associated with a monetary value

For each monetary value, if the exchange values that have been calculated automatically do not suit you, you can force your own exchange values via the exchange value window.

Warning, if you do this and then modify the monetary value later on, the exchange values will be recalculated and any modifications you make will be lost.

Updating the exchange values stored in the database

The exchange values stored in the database can become out of date:

- If the exchange rates are modified.
- If the dates of conversion are calculated via scripts and if the field values used in these scripts are modified.

There is no automatic mechanism in AssetCenter that propagates these modifications to the exchange values.

In order to do this, it is possible to define a workflow scheme.

Limited use of multi-currency support

If you do not want to use all of the available multiple-currency functionality, there are two possibilities open to you:

- Either you do not define currencies. In this case:
 - Monetary values are always expressed without a specified currency unit.
 - The formatting of monetary values is the same as is defined in the Control Panel in Windows (Currency tab in the Regional settings utility). A specific control is designed for entering monetary values.
 - At database level, one field is used to store the monetary value. The four others are left unpopulated.
- Or you create currencies without defining a reference currency. In this case:
 - ✤ You can define different formatting rules for each currency.
 - ★ At the database level, one field is used to store the monetary value, another contains the currency. The three others, which store the exchange values and the date of conversion, are left unpopulated.

Chapter 2 - Managing expenses, budgets and cost centers

This chapter explains how to describe and manage expenses, budgets and cost centers with AssetCenter.

You will find information on the following topics:

- Overview of expenses, budgets and cost centers
- Managing expense lines
- Allocating expenses
- Managing budgets
- Managing cost centers
- Split operations on cost centers

Overview of expenses, budgets and cost centers

Note: Budget and cost center management in AssetCenter concerns money flows and should not be taken as accounting information. It lets you manage projects such as "investment projects", where the goal is to track and forecast expenses. The program does not manage depreciation and current value accounting.

All operations that incur costs can be stored as expense lines.

These operations include, among others:

• Asset acquisitions,

- Work orders, maintenance operations or consumption concerning an asset,
- Employee training,
- Creating a contract.

Use the Finance/ Expense lines menu item to display the list of expense lines.

These lines can be created in several ways:

- manually from the list of expense lines,
- manually from the **Costs** tab in AssetCenter record details (Assets, Contract, etc.),
- automatically from the details of certain records (Work orders, Training, Assets, etc.) when the expenses are entered.
- automatically by the AssetCenter Server monitoring program (lease contract rents, split operations, etc.).

When an expense line is created automatically, the **Status** field (SQL name: seStatus) does not show **Incurred and locked**. In this way you can keep track of automatically created expense lines that you have not validated yet: you just need to use a filter to search those expense lines whose **Status** fields (SQL name: seStatus) are not set to **Incurred and locked**.

Each expense line may be assigned to a budget and a cost center.

Budgets and cost centers are managed in separate tables. Use the Finance/ Budgets and Finance/ Cost centers menu items.

The budget and cost center details contain the expense lines which have been created.

Budgets and cost centers operate in the same way. However, they are different from an accounting viewpoint:

- Budgets include scheduled, budgeted expenses (budgetary accounting).
- Cost centers include actual expenses (cost accounting).

AssetCenter takes these differences into account by allowing you to split cost centers, i.e. to allocate an expense to several cost centers. Budgets are not split, however.

Managing expense lines

This section describes the expense line detail screen.

You will find information on the following topics:

- List and detail of expense lines
- Controlling automatically created expense lines
- Creation of expense lines
- Modifying expense lines

Use the Finance/ Expense lines menu item to display the list of expense lines.

List and detail of expense lines

Use the Finance/ Expense lines menu item to access the list of expense lines.

Each expense line includes:

- A **Débit** field (SQL name: mDebit) and a **Crédit** field (SQL name: mCredit).
- a **Title** (SQL name: Title) indicating the origin of the expense line (e.g. to purchase an asset).
- An item involved in the expense line ("asset", "consumption", "contract", "training"), unless the expense line was created from the **Finance/ Expense lines** menu item.
- A Status (SQL name: seStatus): the expense line may be: Incurred, Incurred and locked, Projected. When the expense line is created automatically, this field is not set to Incurred and locked. This allows you to control the expense lines created automatically, and only to validate the ones you choose.
- A **Cost center** (SQL name: CostCenter) and a **Budget** (SQL name: Budget), displayed in the **Allocation** tab.

To prepare a report of your incurred expenses:

- Display the list of expense lines.
- b Optionally define filters to display only certain expense lines.
- Press the I button: the total amount of debits and credits for all expense lines in the list is displayed, after applying any filters you have defined.

Controlling automatically-created expense lines

Expenses are recorded as expense lines. These lines may be created manually or automatically.

Automatically created lines are systematically created with a **Status** (SQL name: seStatus) other than **Incurred and locked**.

This allows you to keep control over their validity.

To verify these expense lines:

- Display the list of expense lines using the Finance/ Expense lines menu item.
- ✤ Right-click the Status field (SQL name: seStatus) and select Filter on this field from the popup menu.
- ♦ At the level of the filter, select the "<>" operator and the value Incurred and locked.

You can also use other filters, queries, or views.

- Click **\textcircled{}** to start the search.
- ♦ AssetCenter displays the list of expense lines that meet your filter conditions.
- Simultaneously select all the lines you want to validate, modify the Status field (SQL name: seStatus) in order to show Incurred and locked and confirm the modification by clicking Modify.

Creating expense lines

Expense lines are created in several different ways.

Creating an expense line from the list of expense lines

Click <u>New</u> to manually create a new expense line.

Creating an expense line from the Costs tab in an asset or contract detail

Here is the procedure to follow to create an expense line manually and associate it with an asset or a contract:

- ✤ Display the asset or contract detail.
- ♦ Go to the **Costs** tab.
- ♥ Use the ➡ and ➡ buttons to add or delete expense lines linked to the asset or the contract.

Automatic creation from a record detail

Expense lines are automatically generated as soon as an expense is incurred in certain screens in AssetCenter. For example, it may concern an expense linked to:

- the consumption of an asset.
- a work order for an asset.
- the training of an employee.
- the interim rent of a lease contract.
- the delivery of an asset you have ordered.

Expense line amounts are automatically calculated using the available information.

The Status of the expense line is set to either: Projected or Incurred.

Automatic creation by AssetCenter Server

Rent and loan payments

AssetCenter Server automatically generates expense lines linked:

- ✤ to periodic rent payments for contracts or assets.
- to payment lines for loans obtained in order to finance contracts.

The amount of the expense lines is calculated automatically based on information available in the sub-tabs of the rents and loans in the contract and asset detail. The **Status** (SQL name: seStatus) of the expense lines may indicate either **Projected** or **Incurred**.

Split operations on cost centers

AssetCenter Server automatically generates expense lines resulting from split operations on cost centers.

Modifying expense lines

If certain items of information concerning expenses are modified after an expense line is created, and if the expense line has not been validated (the **Status** field (SQL name: seStatus) in the expense line detail is not set to **Incurred and locked**), AssetCenter offers to modify the expense line accordingly. If the line has been validated, the record cannot be modified.

When an expense line is modified after its creation, the information used in the detail of an item (of a contract for example) used to create the expense line is left unchanged.

Consequences on how expense lines are split

- If a given expense line L results from the split of another expense line, then manual changes to the amount of the expense line L are not reflected:
 - \diamond on the expense lines resulting from the split of expense line L.
 - nor on the expense lines whose split triggered the creation of expense line L.

Warning: Changes are lost if the expense line is recalculated automatically by AssetCenter Server, e.g. if a cost center is deleted.

• If an expense line is not the result of a split operation on another expense line, and if its amount is changed, then that change is taken into account in the expense lines resulting from the split of the expense line.

Allocating expenses

The budget and cost center fields appear in several places in AssetCenter. In certain cases, you need to click the solution to display them.

They allow you to allocate expenses to a budget and a cost center.

Managing budgets

This chapter describes the budget detail screen.

You will find information on the following topics:

Introduction

• Definition of a budget

Information on budgets

• Expenses allocated to budgets

Use the Finance/ Budgets menu item to display the budget list.

Definition of a budget

"Budgets" in AssetCenter are operating budgets which help you track expenses (cash flows). They do not have a strict adherence in accounting terms. They allow you to manage projects such as "Investment projects" where the goal is to track and forecast expenses. Depreciation and current value are not dealt with.

Budgets let you group various kinds of expenses, related to the acquisition and maintenance of assets, employee training, the cost of maintenance, insurance or leasing contracts, etc.

Each "expense line" created in AssetCenter is assigned to a given budget. This lets you obtain an immediate summary of the expenses for each budget. Budgets operate like a resource container.

Budgets have a number to help you reconcile them with other departments in the company.

Expenses allocated to budgets

The **Expenses** tab displays the list of expense lines allocated to the budget.

A specific filter can be found at the top of the tab.

Total

The 💷 buttons let you calculate the total of the expenses in the lists, after applying the filter.

Managing cost centers

This section explains how to describe and manage cost centers with AssetCenter.

You will find information on the following topics:

Introduction

• Definition of a cost center

Information on cost centers

• Expenses allocated to cost centers

Use the Finance/ Cost centers menu item to display the list of cost centers.

Definition of a cost center

Cost centers let you identify expense lines you want to group together. You should consider cost centers in a very general sense. Cost centers in AssetCenter help you track expenses (cash flows). They do not have a strict adherence in accounting terms.

Cost centers in AssetCenter let you group various kinds of expenses, related to the acquisition and maintenance of assets, employee training, the cost of maintenance, insurance or leasing contracts, etc.

When you create an expense line you can specify its cost center.

Each cost center has a number to help you reconcile them with data from other departments in the company.

AssetCenter can manage multiple cost centers.

Expenses allocated to cost centers

The **Expenses** tab displays the list of expenses assigned to the cost center.

A specific filter is located at the top of the tab.

Total

The 💷 buttons let you calculate the total of the expenses displayed in the list, after filtering.

Cost center split operations

The expense lines in a cost center may be split among other cost centers.

Split operations on cost centers

This section explains how AssetCenter manages split operations on cost centers:

- Overview of split operations
- Methodology
- Description and calculation of split operations
- Deleting a cost center

Overview of split operations

An expense line may be split over several cost centers.

To split an expense line, you allocate it to an intermediate cost center. This cost center defines the list of cost centers to which the expense may be split, and the split percentage for each cost center.

Successive split operations may be performed on a given cost center. For example, cost center C1 is split between C2 and C3; C3 is split between C4 and C5, etc.

By convention, we will use the term "source cost center" to describe a cost center split between other cost centers, and "target cost center" to describe a cost center to which a source cost center is split.

Expense lines are split by AssetCenter Server.

The **Split operation status** field (SQL name: seSplitStatus) in the expense line detail indicates whether or not the expense line has been split. By default, all expense lines are to be split, whatever their status (the **Status** field (SQL name: seStatus) in an expense line).

AssetCenter Server searches for expense lines to split, and splits them. The frequency for monitoring expense lines is defined in the AssetCenter Server options.

When an expense line is split:

- An offset expense line, equivalent to the split expense line, is created in the source cost center.
- Expense lines are created in the child cost centers, according to the split percentages.



Split operations on cost centers

Methodology

In order to correctly split an expense line, proceed as follows:

- ✤ Configure AssetCenter Server.
- ♦ Activate AssetCenter Server.
- Create the cost centers which describe the split operations.
- ✤ Assign these cost centers to the AssetCenter items concerned by the expense lines.

Description and calculation of split operations

Use the Split operations tab in the cost center detail to split a cost center.

Add a split line for each target cost center.
Each split line includes a start of split date, an end date, and a split percentage.

Precautions

- In the detail of a split line, the start date is inclusive and the end date is exclusive. E.g., if the start date is 1/1/1999 and the end date is 4/1/1999, the split is valid from 1/1/1999 through 3/31/1999.
- At a given date, the sum of the percentages assigned to the target cost centers must equal 100 %, plus or minus 0.1%.
- A source cost center cannot be included in the split of one of its target cost centers.

Calculating expense lines

- After the split percentages have been applied, the expenses are rounded to 0.1.
- Rounding errors are carried to the first expense line.

Note on changing the amount of an expense line

- If a given expense line L results from the split of another expense line, then manual changes to the amount of the expense line L are not reflected:
 - ✤ on the expense lines resulting from the split of expense line L.
 - nor on the expense lines whose split triggered the creation of expense line L.

Warning: Changes are lost if the expense line is recalculated automatically by AssetCenter Server, e.g. if a cost center is deleted.

• If an expense line is not the result of a split operation on another expense line, and if its amount is changed, then that change is taken into account in the expense lines resulting from the split of the expense line.

Deleting a cost center

When you decide to delete a cost center, and the cost center contains expense lines, AssetCenter will not allow you to perform the operation unless the **Authorize extended deletions** option in the **General** tab in the **Tools/ Options** menu item is checked. In this case, AssetCenter gives you three possibilities:

- Delete all the linked records.
- Detach the linked records.
- Attach the linked records to another record.

What happens next depends on the option you choose:

Delete all linked records

When a cost center is deleted, AssetCenter deletes:

- ✤ The expense lines of the deleted cost center.
- ✤ The expense lines resulting from split operations on the deleted cost center.

An AssetCenter agent modifies the **Split operation status** field (SQL name: seSplitStatus) in order for it to show "Not split" at the level of the expense lines highest up in the split operation and which when split generated the expense lines belonging to the deleted cost center (after any intermediate split operations).

When AssetCenter Server finds these expense lines, which are not split but have generated split expense lines, it deletes all the expense lines resulting from their split operations. In doing this, AssetCenter Server deletes the expense lines which, when split generated the expense lines belonging to the deleted cost center.

Then AssetCenter Server performs the split operations on those expense lines, which have not yet been split, and thus recalculates, using new parameters, all the expense lines which when split generated the expense lines of the deleted cost center.

Detach all linked records

In this case:

- ✤ The expense lines of the deleted cost center are no longer associated with a cost center.
- ✤ The expense lines, which when split generated the expense lines for the deleted cost center are split again.
- ✤ The expense lines, resulting from split operations on the deleted cost center, are not modified.

Attach linked records to another record

In this case, you select another cost center X, which takes the place of the deleted cost center:

- \clubsuit The expense lines of the deleted cost center are attached to cost center X.
- ✤ The expense lines, which when split generated the expense lines for the deleted cost center, are split again; cost center X is considered as the new target cost center.
- Solution The expense lines resulting from split operations on the deleted cost center are deleted and the expense lines of cost center X are split.

Chapter 3 - Reconciling fixed assets with the AssetCenter database

This chapter explains how to reconcile fixed assets with the AssetCenter database.

You will find information on the following topics:

- Overview of reconciling fixed assets with the AssetCenter database
- Describing a fixed asset

Use the Finance/ Fixed assets menu item to display the list of fixed assets

 This field may contain one of four va Not reconciled: indicates the fix associated with any assets. Partially reconciled: indicates the has been associated with the fix has not been fully reconciled. Reconciled: indicates that you has been fully reconciled with as Write off: indicates that the fixe longer appear in the list of fixed case when fixed assets are retir 	alues: ed asset is not hat at least one asset ed asset, but that it believe the fixed asset ssets. d asset should no assets. This is the ed.
Number: Electrication Pamily: Juar	
Detion: Reconciled	
General Depreciation Assets History Documents	
Accounting code: 283 Update: 7/23/99	
Acquis. date: 10/31/95 Installation date: 10/31/95	
Location: /San Mateo site/South site	
Price (pre-tax): US\$15,000.00	
Unit price: US\$18,000.00 🚔 😫	
Field1:	
Field2:	
Field3:	
Comment:	Close

Detail of a fixed asset

Overview of reconciling fixed assets with the AssetCenter database

Your accounting department probably manages fixed assets in detail using specific accounting software. It is difficult for Accounting to maintain an up-to-date list of fixed assets, especially when considering assets that disappear or that are not used. You commonly find fixed assets in accounting records corresponding to assets that should have been written off.

To update these files, you need a physical asset inventory. AssetCenter can supply that inventory. This physical inventory can then be reconciled

with the list of fixed assets, to highlight differences and to update the accounting files.

To help you with this reconciliation, AssetCenter provides a table that can receive fixed assets from your accounting program. Once these fixed assets are imported, they may be reconciled with inventoried assets. AssetCenter provides a reconciliation window where you can manually associate accounting fixed assets with inventoried assets.

AssetCenter provides three ways for you to associate the assets in its database with fixed assets:

- An asset associated with a fixed asset.
- An asset associated with several fixed assets (to manage work in progress associated with an asset, for example).
- A fixed asset associated with several assets (to manage groups of assets, for example).

Here is the procedure to follow to reconcile assets in the AssetCenter database and accounting fixed asset information:

- Extract the useful information from the fixed asset accounting software (output to a text file.)
- ✤ Import the text file into the AssetCenter fixed asset table.
- \clubsuit Reconcile the assets with the fixed assets.
- Display and print the list of "Un-reconciled" fixed assets. These are fixed assets which you could not associate with assets. The accounting department can then remove these fixed assets from their list of fixed assets if that is appropriate.
- Display and print the list of "Partially reconciled" fixed assets. These are fixed assets with which you could only associate part of the assets that should be included. The accounting department can break these fixed assets down and remove the unreconciled fixed assets from their list.
- Display and print the fixed assets that are "To write off". These are fixed assets to which you were only able to associate retired assets. The accounting department can then remove these assets from their list of fixed assets.

Describing a fixed asset

Most of the information contained in the fixed asset detail is provided by an external software application to manage fixed assets.

None of the fields at the top of the window of the fixed asset detail and in the **General** and **Depreciation** tabs are linked to other AssetCenter tables.

Once you have imported a fixed asset into the AssetCenter database, populate its description (if necessary):

For information on importing data, refer to "Reference Guide: Administration and Advanced Use", chapter "Importing data"

- Populate the fields in the **General** tab. If necessary, indicate the accounting code associated with the fixed asset, the acquisition date and the **Installation date** (SQL name: InstallDate), the updating date of the record, the location of the fixed assets, their quantity and their unit price.
- Populate the fields in the **Depreciation** tab. If necessary, specify the type of depreciation for the fixed asset (accounting, technical, fiscal, etc.), its calculation mode (straight line, declining balance, exceptional, etc, and the duration of the depreciation.
- Associate the assets with the fixed asset from the **Assets** tab in the fixed asset detail. Use the ➡, and ♀ buttons to add, delete, view or modify the assets associated with the fixed asset.
- Populate the **Option** (SQL name: seOption) field at the top of the fixed asset detail. This field may contain one of the following four values:
 - Not reconciled: Indicates the fixed asset is not associated with any assets.
 - Partially reconciled: Indicates that at least one asset has been associated with the fixed asset, but that it has not been fully reconciled.
 - Reconciled: Indicates the fixed asset has been fully reconciled with assets.
 - To write off: Indicates that the fixed asset should no longer appear in the list of fixed assets. This may arise when the assets that were at the origin of the fixed asset are no longer in use.

Note on the **Acquis. date** (SQL name: AcquDate) and **Installation date** (SQL name: InstallDate) fields (**General** tab in the fixed asset detail): because these dates come from an external database, it is impossible to guarantee their data entry and storage format. Therefore they are stored in text format in the AssetCenter database.

Chapter 4 - Managing taxes

Taxes may be:

- fixed,
- calculated using a formula. In this case, they may depend on tax jurisdictions.

This chapter explains how to use the different calculation methods supported by AssetCenter:

- Areas in the software where taxes come into play
- Concepts linked to taxes
- Methodology used to implement tax calculations
- Declaring taxes linked to locations
- Declaring the calculation method for taxes payable on rents
- Using taxes in the procurement cycle

Areas in the software where taxes come into play

Taxes come into play in several parts of the software:

• At the level of contract rents: in the rent sub-tabs of the **Rents** tab in the detail of a contract, the **Tax formula** (SQL name: TaxFormula), **Tax code** (SQL name: TaxJuris), **Tax rates** (SQL name: pTaxRate) and **Taxes** (SQL name: mTaxValue) fields specify the taxes payable on contract level rent payments. Note: The **Rents** tab is only displayed if the **Type** field (SQL name:seType) is not set to **Master lease** and the **Nature of payments** field (SQL name:sePayType) in the **General** tab of the contract detail indicates the payments are **Rents** or **Both** (i.e both rents and loans).

• At the level of asset rent: in the rent sub-tabs of the Acquis. tab in the detail of an asset, the **Tax formula** (SQL name: TaxFormula), **Tax code** (SQL name: TaxJuris), **Tax rates** (SQL name: pTaxRate), and **Taxes** (SQL name: mTaxValue) fields specify the taxes payable on asset level rent payments.

Note: A rent sub-tab is automatically created when the Acq. method field (SQL name: seAcquMethod) in the Acquis. tab is set to Rental or Lease and when the asset is added to a contract whose rent is prorated and distributed or allocated at the asset level (contract detail, Rents tab, individual rent sub-tab, Prorate to assets field (SQL name: seProrateRule)).

- At the level of tax jurisdictions.
- At location level: the **Jurisdiction** field (SQL name: TaxJuris) contains a link to a tax jurisdiction which details the tax rates associated with a location.
- At tax type level.
- At expense line level: An expense line's **Tax credit** and **Tax debit** fields show the amount of tax payable on the sum credited or debited. In particular, the expense lines associated with asset or contract level rent payments contain the amount of taxes payable on these rents. These expense lines are displayed in the **Costs** tab of the detail of these assets and contracts.
- At the level of the surveillance program, AssetCenter Server: this program launches the automatic creation of expense lines corresponding to contract or asset level rent items. Each expense line is made up of a periodic rent and an associated tax.
- At the level of the procurement cycle and requests, orders invoices in particular. Taxes associated with the procurement cycle appear in the **Composition** tab of a request, order or invoice. Taxes can be declared in the detail of a request line, order line or invoice line.

Concepts linked to taxes

This section contains information on the concepts used in managing taxes.

- Tax jurisdictions
- Tax type
- Tax rate
- Tax formulas

Tax jurisdictions

Use the Finance/ Taxes/ Tax jurisdictions and rates menu item to access the table of tax jurisdictions.

Tax jurisdictions provide the ability to combine locations, tax types, and tax rates. The tax jurisdictions detail screen allows you to carry out two operations, both of which are accessible via the **Rates** tab of a tax jurisdiction:

- View the tax rates applicable for a jurisdiction.
- Edit the tax rates of a jurisdiction.

By selecting the **Edit tax rates for this jurisdiction** option, you can add tax rates by clicking the 🖶 button.

Tax jurisdictions are organized hierarchically.

Tax type

A "Tax type" defines a tax to apply. For example: "Local tax".

The table of "Tax types" can be accessed in several ways:

- Via the **Tools/ List of screens** menu item.
- Via the **Tax type** link (SQL name: TaxType) in the table of tax rates of a tax jurisdiction.

By doing this you display the tax type detail:

The **Variable name** (SQL name: SQLName) of the tax type can appear in tax formulas. It is alphanumeric and may contain no spaces. The first character must be a letter of the alphabet.

Tax rate

For each "Tax type " applicable for a given jurisdiction, you define a list of tax "Rates" applicable from a given date.

To view the list of rates used by a tax type for a given location:

- Use the **Repository**/**Locations** menu item to display the table of locations.
- Click the Subtron to view the detail of the tax jurisdiction associated with the location.
- Select the option View the tax rates applicable in this jurisdiction in the Rates tab of the detail of the jurisdiction.
- This list summarizes all the applicable tax rates for the tax types of the jurisdiction:

Г	Edition of tax values for this jurisdiction					
	\triangle T ax type	Application	date	ARate		Q
	VAT	08/02/99			15%	+
	Local	08/02/99			3%	_
			▲ ⊗	2/2		

In the above example, the sub-tab lists the applicable "Local" tax types for a given location.

Tax formulas

Use the Finance/ Taxes/ Calculation formulas menu item to access the table of tax formulas.

Tax formulas are formulas defined in order to calculate the tax amount.

An editor is at your disposal to help build these formulas from Basic scripts. For a given tax formula, you can define an unlimited number of different calculation formulas dependent on a context (a table in the database). Thus, for example, the tax formula "Sales tax" can have a different calculation formula depending on whether it is applied to purchase requests or delivery slips.

In practice, tax calculation formulas can be calculated using the Basic function "AmTaxRate()" which returns a tax rate according to a tax type, tax jurisdiction and given date:

RetVal = AmTaxRate()*mAmount

When the tax rate is not dependent on a tax jurisdiction, it is not necessary to use the "AmTaxRate()" function.

Two contextual variables are useful when writing tax formulas:

- "mAmount", which represents the pre-tax value on which the tax is calculated. According to the context, this variable can take the value of the asset-level rent, contract-level rent, the value of a request line or purchase order line, for example.
- "dDate", which represents the date on which the tax is calculated. According to the context, this variable can take the value of the billing date, the payment date of an asset-level or contract level rent, etc.

The values of these variables are automatically set by AssetCenter according to the context of declaration of the tax.

Examples of valid tax formulas:

RetVal=mAmount*0.0655

This example applies a rate of 6.55% on the pre-tax total concerned.

RetVal=AmTaxRate("Sales tax", [lTaxJurisId], dDate, mAmount)*mAmount

This example applies a rate (calculated according to a tax type, jurisdiction and date) on the pre-tax total concerned.

Example

The following example defines the amount of tax payable on the rent of an asset falling under a given tax jurisdiction. It is first useful to edit the tax rates in effect in the tax jurisdiction under which the asset falls (in this example, "Ohio"):

• Select **Finance**/**Taxes**/**Tax jurisdictions and rates** to open the tax jurisdictions screen and define a tax rate dependent on the "Sales tax" tax type as shown below.



- Open the table of assets and select an asset whose location falls under the jurisdiction "Ohio" (or modify an asset so that its tax jurisdiction is "Ohio").
- Verify that the acquisition method of the asset, defined by the Acq. method (SQL name: seAcquMethod), leads to a rent payment. A rent sub-tab is added in the Acquis. tab of the asset detail. This tab defines the asset's rent payment amount. It also allows you to specify the taxes associated with this rent.
- Set the Tax code field (SQL name: TaxJuris) to "Ohio".
- Check the **Tax calculation** box (SQL name: bUsesTaxForm) and click the **I** button to the right of the **Tax formula** field (SQL name: TaxFormula) to create a tax formula. Populate the **Name** field (SQL name: Name), select the appropriate table (i.e. the table of asset rents; SQL name: amAssetRent) and enter the following tax formula in the **Formula** field (SQL name: memFormula):

```
RetVal=AmTaxRate("Sales tax", [lTaxJurisId], dDate,
mAmount)*mAmount
```

• Validate. In the rent sub-tab in the **Acquis.** tab of the asset detail, AssetCenter updates the value of the **Taxes** field (SQL name: mTaxValue) according to the value of the defined tax formula.

Methodology used to implement tax calculations

- If the tax calculation formula depends on the location and therefore the tax jurisdiction:
 - Create tax types: from the "Tax types" screen obtained via the Tools/ List of screens menu item or from the table of tax jurisdictions.
 - ✤ Declare tax jurisdictions for each location.
 - Define applicable rates for each tax type declared at the level of each tax jurisdiction: from the **Rates** tab in the detail of each tax jurisdiction.
- ♥ Whether or not the tax depends on the location: Entering the tax calculation method:
 - ✤ If the tax is payable on the asset-level or contract level rent, the tax calculation method is entered in the rent sub-tab (**Rents** tab in the contract detail or **Acquis.** tab in the asset detail).
 - If the tax is associated with a request or order line, the tax calculation method is entered in the **Purchase** tab of the detail of this line.
 - ✤ If the tax is associated with an invoice line, the tax calculation method is entered in the Price tab of the detail of this line.
 - The tax calculation method can either be:
 - Fixed.
 - Formula.

Remark concerning the taxes payable on rent payments

Taxes payable on period rent payments of assets or contracts are calculated automatically by AssetCenter Server. These taxes appear in expense lines of rent payments. These are either generated at the contract level (rent payments not allocated or distributed to asset level) or at the level of the assets under contract (for rent payments prorated to the asset level).

Note: The automatic calculation of taxes does not apply to interim rents in lease contracts.

Declaring taxes linked to locations

This section explains how to declare taxes linked to locations.

You will find information on the following topics:

- Overview
- Managing tax types applicable for a tax jurisdiction
- Viewing applicable taxes for a location

Overview

If the tax payable depends on the location, you must first:

- define the tax jurisdiction under which it falls for each location.
- define for each tax jurisdiction the tax types and rates according to their date of application.

Since the table of tax jurisdictions is hierarchical, the tax types and tax rates that you define for a given jurisdiction apply to all sub-jurisdictions without having to copy them over manually.

Using the **Jurisdiction** field (SQL name: TaxJuris) in the **General** tab of the detail of a location, you can associate a tax jurisdiction (and therefor tax rates) with a location.

Managing tax types applicable for a tax jurisdiction

Select the **Edit tax rates for this jurisdiction** option at the top of the **Rates** tab.

To declare a tax rate and tax type applicable in a tax jurisdiction

- Solution Section S
- ✤ Populate the Tax type field (SQL name: TaxType):
 - Either by selecting an existing **Tax type** in the table of tax types.
 - Or by creating the **Tax type** ("On-the-fly" or "Detailed").

- Populate the Application date (SQL name: dApplication) and Rate (SQL name: pRateVal) fields. These fields designate the start date of application of the tax rate and the value of the tax rate respectively.
- ♦ Click Add

To delete a tax rate and tax type applicable in a tax jurisdiction

- \clubsuit Select the line in the list that you want to delete.
- \clubsuit Click the **=** button next to the list.

Viewing applicable taxes for a tax jurisdiction

Once the tax types and tax values are defined, you can view the taxes applicable in a tax jurisdiction on a given date as follows:

- Display the table of tax jurisdictions via the Finance/ Taxes/ Tax jurisdictions and rates.
- Select the jurisdiction for which you want to view the taxes.
- Select the **View the tax rates applicable in this jurisdiction** at the top of the **Rates** tab in the detail of the jurisdiction.
- Enter the date for which you want to know the taxes in effect for the location field in the Application date field (SQL name: dApplication).
- The taxes in effect on the date of application are displayed: These are taxes specific to the jurisdiction and taxes inherited from parent locations.

Declaring the calculation method for taxes payable on rents

This section explains how to declare the calculation method for taxes on rent payments.

You will find information on the following topics:

- Fixed taxes
- Tax formulas
- Managing changes to tax rates during a rent period

The tax calculation method is defined by the Tax formula (SQL name: TaxFormula), Tax code (SQL name: TaxJuris), Taxes (SQL name: mTaxValue) and Tax rates (SQL name: pTaxRate) fields which appear in several places:

At contract rent level, (Rents tab, rent description sub-tab).

At asset rent level, (Acquis. tab, rent description sub-tab).

The **Tax calculation** check box (SQL name: bUsesTaxForm) allows you to specify the method of calculation of the tax:

- When this box is unchecked, the tax is fixed rate.
- When this box is checked, the tax is calculated according to a formula.

Fixed taxes

To define a fixed tax associated with an asset or contract(schedule) level rent:

- ♥ Uncheck the Tax calculation box (SQL name: bUsesTaxForm) to indicate that the tax is fixed.
- Enter the amount of the tax in the **Taxes** field (SQL name: mTaxValue) or the tax rate in the **Tax rates** field (SQL name: pTaxRate).

Example of a fixed tax:

Tax: 450,00

The tax remains fixed for all periodic rents calculated in the rent sub-tab containing the fixed tax.

When rent is distributed to the asset level: the tax payment is distributed to the asset level according to the same rules as for the rent.

Tax formulas

AssetCenter allows you to calculate taxes using formulas.

To access the detail of a tax formula:

- Scheck the **Tax calculation** box (SQL name: bUsesTaxForm) to indicate that the taxes use a calculation formula.
- ♥ Click the initial icon to the right of the **Tax formula** field or select a pre-defined formula by clicking initial.

If the tax formulas have already been created in the table of tax formulas, select one then click <u>Select</u> and on <u>Select</u>; else click <u>New</u>

A tax formula is characterized by:

- A **Name** (SQL name: Name): identifies the tax formula in the table of tax formulas.
- A **Category** (SQL name: Category): selected from a free itemized list, the "Category" provides further information on the "Description". This field is for informational purposes only and is not linked to any automatic mechanisms. If the itemized list is "open" and if you have the necessary rights, you can enter a new value in this field.
- The Table (SQL name: TableName) to which it is linked.
- A syntax specified in the **Formula** (SQL name: memFormula) zone. Clicking **Q** displays the script builder that facilitates entering the Basic calculation formula script.

Fields in the table to which the tax formula is linked can be incorporated in the formula.

Whether or not you are able to select a tax formula linked to a table in a rent description sub-tab depends on if and how rent is distributed to asset level:

- The following formulas may be linked to the table of asset rents:
 - ✤ The taxes payable on asset rents independent of any contract.
 - The taxes payable on contract rents prorated and distributed or allocated to all or a selection of assets under contract.
- The following formulas may be linked to the table of contract rents:
 - The taxes payable on contract rents which are not distributed to the asset level.

Tax distribution method

- If the tax formula uses variables from the table of asset rents, tax is directly calculated at the asset level when rent expense lines are created.
- If the tax formula does not use variables from the table of asset rents, tax is calculated at the contract level.
 - If rent is not distributed to asset level, the tax is integrated into the expense lines generated for the contract.

If the rent is distributed to asset level, tax is distributed to the asset level expense lines according to the same rules as used for the rent calculations.

Tax formula syntax

The syntax of tax formulas can be complex and involve:

- Fields from the table to which the formula is linked.
- "Tax types" applicable to the tax jurisdiction of the rent payments that are subject to the tax: they are identified by the names of their variables.

Associating a tax calculated using a formula with a rent item

This is the procedure to follow to associate a tax calculated using a formula with a rent item:

1st step at the level of the table of locations

You will pass through this step if the tax is paid on an asset rent or a contract rent distributed to all (or a selection) of the assets under contract and if the tax depends on the location of the assets.

- Use the **Repository**/Locations menu item to open the table of locations.
- \clubsuit Select the location of the assets.
- Select the tax jurisdiction of the location.
- Declare the possible tax types which are applicable for this jurisdiction as well as the associated rates and their application dates.

2nd step at the level of the *Tax formula* (SQL name: TaxFormula) field of the contract or asset rent

- Check the **Tax calculation** box (SQL name: bUsesTaxForm) to specify that the tax payable on the rent is calculated using a formula.
- If the tax formula already exists, select it from the table of formulas using the ■ button to the right of the Tax formula field.

- Solution Otherwise, create it directly from the **Tax formula** field:
 - Enter its name in the **Tax formula** field and move the cursor to another field.
 - Select **Detailed creation**: the tax formula detail is displayed.
 - Enter the Category of the formula if necessary.
 - ✤ Enter the syntax of the formula.
- \checkmark Click <u>Modify</u> to confirm the changes.

Example of tax formula independent of the tax jurisdiction

Here is an example of a tax formula where "Tax types" are not involved.

📓 Detail of tax	formula 'VAT'		_ 🗆 ×
Name:	VAT		
Category:		<u> </u>	
Table:	📰 Asset rents (amAssetRent)	<u> </u>	
Formula:	RetVal=mAmount*18/100	<u> </u>	<u>C</u> reate
			C <u>r</u> eate 🐝
			Ca <u>n</u> cel

In this example, the jurisdiction-independent tax formula is entered directly in the "Formula" zone. The value of the tax is equal to 18% of the value of the rent (value\$).

Example of tax formula dependent on the tax jurisdiction

Here is an example of a tax formula associated with a contract rent distributed to all assets where tax types come in to play:

📓 Detail of tax	formula 'Local and State'		_ 🗆 ×
Name:	Local and State		<u>N</u> ew
Category:		_	D <u>u</u> plicate
Table:	📰 amAssetRent (Asset rents)		
Formula:	Set [mTaxValue] = [mPayments] * (AmTaxRate ("Local", [ITaxJurisId], [dStart]) + AmTaxRate ("State", [ITaxJurisId], [dStart]])	<u> </u>	
		v	<u>C</u> lose

In this example, the tax is equal to a percentage of the value of the rent. This percentage is the sum of the "Local" and "State" "Tax types".

In the case of the above formula, here are the steps in the calculation of the tax associated with the contract rent for a given period:

- AssetCenter Server searches to see whether the tax types (whose variable names appear in the formula) apply for the tax jurisdiction.
- If one of these tax types in the formula does not exist for the tax jurisdiction, the corresponding tax rate is replaced by 0 in the formula.
- Otherwise, AssetCenter Server searches the tax value applicable on the date of application of the rent, and uses this in the formula. If no tax rate is defined for this date, it is replaced by 0.
- Then AssetCenter Server calculates the total amount of the tax and integrates it in the expense line associated with rent.

Managing changes to tax rates during a rent period

It is possible that the tax rates used by the "Tax types" in a tax calculation change during the period covered by the rent (between two bill cycle days).

AssetCenter Server applies the tax rates in force on the date of payment of the rent, this is sufficient for the majority of situations.

To achieve another result which takes into account the variation in the tax rate, it is recommended that you define several successive rents as described below:

- ♥ Go to the rent description sub-tab (in the **Rents** tab of the contract detail, or in the **Acquis.** tab of the asset).
- Modify the date of end of validity of the rent in order for the rent to cover only that period before the change in tax rate.
- ♥ Duplicate the rent sub-tab in order to create 2 new rent items:
 - ✤ A rent item for the transition period: enter directly the tax to pay for this rent as for a fixed tax without creating a tax formula.
 - ✤ A rent item applicable for the periods coming after the change in rate.

Using taxes in the procurement cycle

This section explains how to use taxes in the procurement cycle of an asset.

General points

The amount of taxes linked to the acquisition of an asset appears in each of the stages of the procurement cycle (purchase request, estimate (quote), order, supplier invoice) in the lower part of the **Composition** tab in the detail of a request, estimate, order or invoice.

This total is for informational purposes only and cannot be edited directly by the user. However, from the detail of a request, order or invoice line, the user can define the taxes associated with the line.

Automatic mechanisms

AssetCenter propagates the tax amount throughout the procurement cycle. Thus, if you define taxes for a purchase request, they will be propagated identically when an order and corresponding invoice are created.

Propagation of taxes in the procurement cycle is not retroactive. For example, if the taxes were defined when drawing up the purchase order, the original purchase request will not be modified accordingly.

As far as is possible, we recommend systematically defining taxes at the earliest possible stage in the procurement cycle, i.e. the purchase request, in order to ensure the integrity of automatic mechanisms.

Entering taxes

Data entry

Within the procurement cycle, taxes can be entered via:

- The **Purchase** tab in the detail of a request line.
- ✤ The **Purchase** tab in the detail of an order line.
- ✤ The Price tab in the detail of an invoice line.

The section at the bottom right of the screen is used to declare taxes. For a fixed tax, uncheck the **Tax calculation** check box (SQL name: bUsesTaxForm) and enter the amount of the tax or the tax rate directly. For a calculated tax, check the **Tax calculation** box (SQL name: bUsesTaxForm) and select a tax formula.

Automatic mechanisms using taxes

The fields in the lower area of the **Purchase** tabs in the details of request, order or invoice lines are linked by the following automatic mechanisms:

Modifying this field	Brings about modification of this field	According to this field
Unit price (SQL name: mUnitCost)	Taxes (SQL name: mTaxValue)	Tax formula (SQL name: TaxFormula)
Tax formula (SQL name: TaxFormula)	Taxes (SQL name: mTaxValue)	Unit price (SQL name: mUnitCost)
Tax rates (SQL name: pTaxRate)	Taxes (SQL name: mTaxValue)	Unit price (SQL name: mUnitCost)

The following formula allows you to calculate the value of the **Total price** field (SQL name: mCost):

```
Total=(Unit price + Taxes)*(1-Discount)
```

Chapter 5 - Introduction to TCO (Total Cost of Ownership)

The Total Cost of Ownership (TCO) aims to identify all expenses—both direct and indirect—resulting from owning hardware or software.

It includes an evaluation of acquisition, training, technical support, and upgrade-related expenses and makes it possible to highlight unusually high or redundant expenses.

Controlling TCO is a major factor in competitive advantage. Studies conducted by analysts indicate that implementing a coherent TCO strategy can bring about a 30–40% reduction in TCO in a two-year time frame. However, failing to address TCO issues can lead to a 50% increase in TCO over the same period of time.

This section includes information on the following:

- Costs included in calculating TCO
- Managing TCO in AssetCenter
- Implementation

Costs included in calculating TCO

The Total Cost of Ownership of an asset includes several categories of costs:

- Hardware and software costs (also called acquisition costs)
- Management costs (external and internal)
- End user costs

Hardware and software costs

These are the annual expenses associated with desktop and laptop computers, servers, peripherals, and network systems.

These costs also include acquisition and lease costs.

In general, hardware and software costs are determined using financial information from the assets, lease contracts, and purchasing records. Residual values also taken into account.

This cost category is made up of several subcategories:

- Acquisition costs: These are the annual expenses related to buying or upgrading hardware. Acquisition costs are amortized over a period that differs according to the asset's category (in general, a three-year straight-line schedule is used for a desktop computer).
- Software costs: These are the annual expenses related to buying or upgrading software. Usually, these expenses are not amortized. Site or "Select" type license agreements are depreciated over the duration of the license agreement. For example, the costs of a three-year, \$60.000 Select contract are allocated on the basis of \$20.000 annually.
- Rent costs: This category includes both annual hardware, and software lease fees.

Management costs

These are costs related to installing, administering, supporting, and maintaining hardware and software. They can be both external (paying a subcontracted technician for a repair) or internal costs (a technician from IS installing a computer). External costs can easily be evaluated since they are invoiced and paid for. Internal costs can be estimated by allocating an hourly cost to each employee category. For example, one engineer hour will be invoiced \$200 internally. This category also includes all management fees (both internal and outsourced).

End user costs

These are indirect costs linked to using an asset. This category can be broken down as follows:

- Costs incurred by end users or co-workers performing support tasks without using the usual technical support channels.
- Self-education costs: the time spent by users in training themselves (reading manuals, testing hardware and software, etc.).

Traditionally, these costs have been considered as hidden costs and evaluated using surveys. As such, it is difficult to measure them on the basis of identifiable information (such as the acquisition, lease or maintenance costs. Certain studies have concluded that end user costs make up around twenty-seven percent of hardware, software, and management costs.

Managing TCO with AssetCenter

This section includes information on the following:

- Acquisition costs and external management costs
- Internal management costs
- Implementation in AssetCenter

Acquisition costs and external management costs

Using expense lines, AssetCenter keeps history of hardware and software costs, and external management costs. All the costs in this category are handled by different areas of functionality:

- Acquisition costs are generated on receiving or creating an asset.
- Depreciation costs are listed in the **Fixed Asset** tab of an asset.

By default, a three-year straight-line depreciation is applied to these costs before they are used in calculating the TCO.

- Software costs are evaluated both when acquiring a software asset and by the license management functionality.
- Rent costs are generated by the contract management functionality.

Internal management costs

Internal management costs show up in both helpdesk tickets and work orders to which expense lines are associated. These tickets or work orders involve an internal technician whose time is invoiced. AssetCenter also calculates the average annual TCO for an asset using a calculated field (SQL name **cf_AverageYearlyTco**), which is supplied in the standard AssetCenter datakit.

The formulas used to calculated the average annual TCO for an asset are complex. To minimize the impact this has on AssetCenter's performance, we recommend against displaying this field in lists and to only use it for one-shot calculations or batch generated reports.

Implementation in AssetCenter

AssetCenter handles simplified internal management cost calculations. The following areas of the program are concerned:

- The product catalog (amProduct table)
- Departments and employees (amEmplDept table)
- Helpdesk tickets (**amTicket** table)
- Work orders (amWorkOrder table)
- Expense lines (**amExpenseLine** table)

The AssetCenter datakit provides TCO-dedicated features and calculated fields:

- **fv_WorkUnit** available for the table of departments and employees: this feature makes it possible to assign a work unit to an employee.
- **fv_UnitDuration** available (and mandatory when the product's category is **Work unit**) for the table of products: this feature is used to describe the labor cost of an employee.
- **fv_OverheadFactor** available for the table of products: this feature is used to calculate the cost of an internal operation.
- **fv_seTcoPurpose** available for the table of expense lines: the value of this feature is automatically updated. This feature allows you to differentiate between expense lines generated by an internal helpdesk ticket (its value is set to 51) or an internal work order (its value is set to 52). This feature is only available for expense lines whose purpose (SQL name **sePurpose**), which designates the operation that created the expense line, is set to 6 (a free user-definable value).
- **cf_AverageYearlyTCO** for the table of products and of assets: This calculated field contains the average annual TCO of an asset.

• **cf_Cost**, **cf_CostCurrency**, **cf_CostRefCur1**, **cf_CostRefCur2** for the table of helpdesk tickets: contain the cost of a helpdesk ticket activity, the main in which the cost is expressed, and its equivalent in the two defined reference currencies.

Do not modify the scripts that are linked to these features and these fields. You run the risk of not being able to use AssetCenter's TCO functionality.

Implementation

This section includes information on the following:

- Work units
- Describing an internal management cost using a help desk ticket
- Describing an internal management cost using a work order
- Evaluating an asset's TCO

Work units

Definition

A work unit defines the labor cost of an employee category. The time spent by an employee carrying out a task is multiplied by his or her work unit. In this way, it is easy to estimate the internal cost of an operation using the following formula:

Average internal cost of an operation = Work unit cost * Time spent

The cost of a work unit varies according to the employee category. For example, one technical support engineer hour can cost more than a help desk technician hour because of differences concerning:

- Salary
- Holiday related benefits
- Activities that cannot be allocated
- Training effort
- Absenteeism

It is for this reason that the TCO functionality gives you, apart from the direct work-unit cost (usually corresponding to one single burdened salary), a multiplier factor that allows you to calculate the full cost. The previous formula is modified to give the following:

Average internal cost of an operation = Work unit cost * Time spent* Multiplier factor

The cost of the operation must be added to the TCO of the asset concerned.

Creating a work unit and assigning it to an employee

A work unit is defined as a **product** whose category is **Work unit**. In the following example, we are going to create a work unit, **Technical support engineer hour**.

- Select Repository/ Products.
- Click New Populate the product detail using the following information from the General tab:

Field (SQL name)	Value
Category	Work unit
Create by default	Nothing
Price	120 (expressed in USD)

✤ Go to the Features tab in the product detail and enter the following information:

Name of the feature	Value
Duration	1 hour
Multiplier factor	2

Detail of a product describing a work unit

This gives us the following formula:

Average cost of technical support engineer = Cost * Time spent * Multiplier factor = 120 * 1 * 2 = 240 dollars

This work unit now needs to be assigned to all **Technical support engineers**. To do this:

- So to the Features tab of an employee and add the Work unit (SQL name: fv_WorkUnit) feature. Click Modify.
- Select the work unit that you have just created (Technical support engineer hour) to populate this feature).

💑 Detail of employee 'Chavez, Philip'	_ 🗆 🗙
Name: Chavez First: Philip Title: Directeur C101 Mr/Mrs: Mr. Department: /Taltek/I.S. Department/ Q	<u>N</u> ew D <u>u</u> plicate
Projects Contracts Photo History Features Docum	
With sub-classes With the 'inheritable' fi	

Detail of a work unit assigned to an employee

From now on, when an internal operation is assigned to a **Technical support engineer** via a helpdesk ticket or a work order, an expense line corresponding to the cost of this operation is generated. This cost is included in the TCO calculation for the asset concerned by the operation.

Describing an internal management cost using a helpdesk ticket

To describe an internal management cost associated with an asset, you can take a call in the usual way. Make sure a work unit is defined for the ticket assignee—if not expense lines will not be created.

An expense line is created for each activity performed in resolving the helpdesk ticket. (The list of activities can be seen in the **Activity** tab of the helpdesk ticket detail.) This expense line is included in the asset's TCO calculation.

To see all the expense lines describing internal management costs resulting from helpdesk tickets, you can filter the **fv_seTcoPurpose**
feature. Expense lines for which this feature is set to 51 result from this type of operation.

	Number: TICK000005 Opened on: 24/09/1999 10:31:29 💌			Status: Assigned Asset: Compaq Deskpro 4000S (DKT000279)					_ Q _
ſ	Iracking Activity		ure	Work orders	Linked <u>t</u> i	ckets	C <u>o</u> st	Other	• •
	⊻iew: All			<u> </u>		-	To:		-
	🔺 Date		∆ Title			∆Debit			<u>Q</u>
	24/09/1999		Help de:	sk activity internal	со		72,47		+
						🔺 🍣	2 1	71	

Detail of costs of an internal management activity associated with a helpdesk ticket

An expense line is generated for each helpdesk ticket activity.

Describing an internal management cost using a work order

Internal management costs can also be described using an **Internal support** type work order. Make sure a work unit has been defined for the technician (**Technician** field, SQL name: **Technician**)—if not expense lines will not be created. All operations performed for the work order and which generate a cost—are listed in the **Cost** tab of the work order detail.

To see all the expense lines describing internal management costs resulting from work orders, you can filter the **fv_seTcoPurpose** feature. Expense lines for which this feature is set to 52 result from this type of operation.

Work order #: W00 Notified on: 20/0 Expected resol.:	000001 08/1999 01:04:53 👱	Priority: Urgent Status: Closed Awaiting an asset			
General Tracking	Acquis. Consumption	n Cost Requests H	History Workflow		
△Date	Title	_ △ Debit	△ Credit	<u> </u>	
20/08/1999	Installation		50,00	4	
24/09/1999	Work order internal cost	2	400,00	1	
•			•	·	
			2/2		
		Total cost of expen	ses: US\$2 450,00	÷8	
		Cumulation with sub-ta	sks: US\$2 450,00	* <mark>8</mark>	

Detail of costs of an internal management activity associated with a work order

One single expense line is generated for the whole work order.

Evaluating an asset's TCO

The **cf_AverageYearlyTco** calculated field evaluates the annual TCO of an asset.

Calculation formula

The calculation formula used to estimate the annual TCO of an asset depends on how the asset is assigned (**In use**, **In stock**, **Retired asset**). There are two possible situations:

• If the asset is **In use** or **In stock**, the calculation formula is as follows (durations are expressed in years):

Average annual TCO = Σ expense lines linked to acquisition of asset * Planned lifespan of asset + Σ other expense lines of the asset * (Current date-Installation date)

where the planned lifespan of the asset is equal to :

Planned retirement date - Installation date

Note that the Scheduled retirement field must be populated.

• If the asset is **Retired asset**, the calculation formula is as follows:

Average annual TCO = Σ expense lines associated with the asset throughout its effective life

The effective life of an asset is calculated as follows:

Effective retirement date - Installation date

Displaying the average annual TCO of an asset

Considering the level of complexity involved in calculating this value, we recommend that you filter the table of assets so that only the appropriate asset is displayed, then to display the **cf_AverageYearlyTco** field using the **Configure list** command.

Note that this calculated field is also available for products.



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